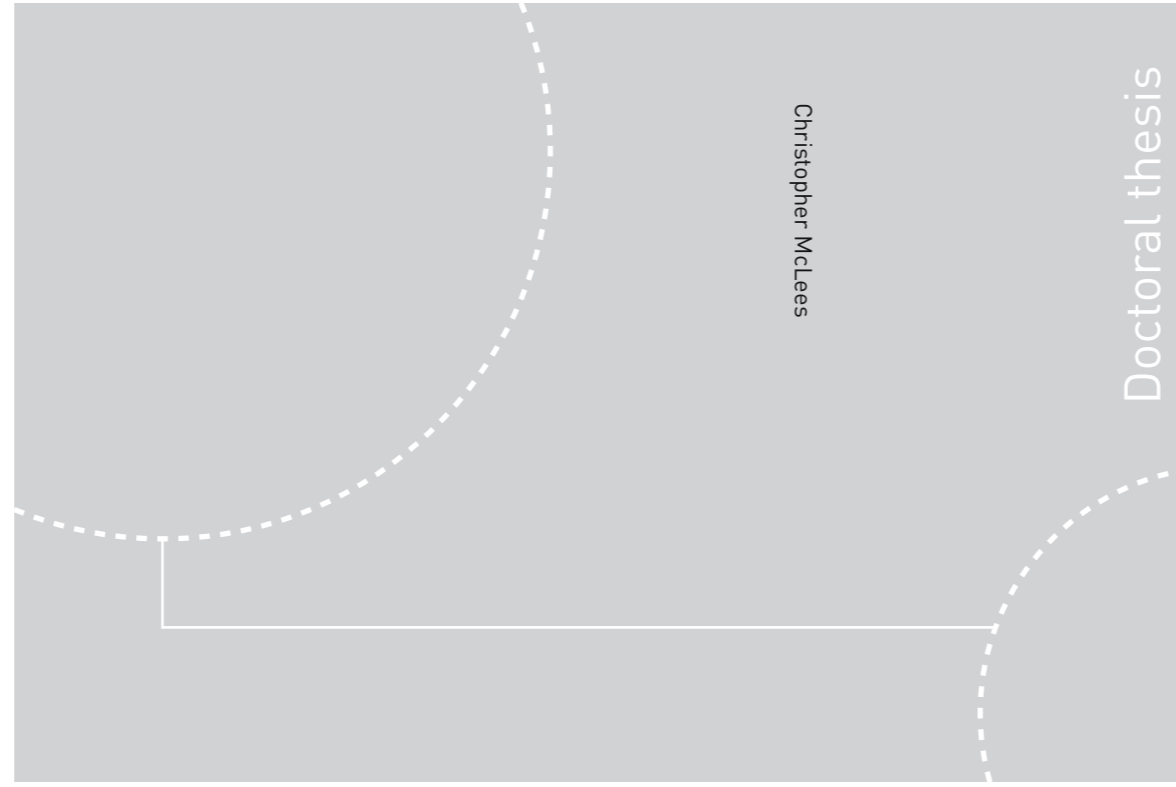


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Christopher McLees

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An Archaeological Contribution to the
Study of Post-Medieval Norway

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*Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.*¹

While perhaps not coinciding with the poet's intended meaning, these words, taken in isolation, express the personal significance of my decision to embark on this particular research path. It is a road trodden by few, and was one that I never anticipated I would travel. However, on reaching journey's end, I can conclude that it has been personally enriching beyond measure. Regardless of whether my expedition down this less-travelled path makes a difference in the wider world or not, it has certainly held meaning for me. The end of the long and winding road is at last in sight, and I must now mop my brow, draw breath, and thank those who have helped me along the way.

The journey began in 2009 when NIKU² was awarded a research grant by the Norwegian Research Council (NFR) to examine a central anomaly in current Norwegian cultural heritage management practice: namely, the neglect by heritage management and academia of terrestrial buried archaeological remains that post-date the Reformation of 1537, and their exclusion from academic discourse regarding the last 500 years of Norwegian history. This arbitrary negation of a valuable, vulnerable and irreplaceable source material has disheartened Norwegian archaeologists for decades, particularly those like myself who regularly watch this rich repository of knowledge being machined away undocumented. That frustration inspired NIKU's application to the Research Council which was rewarded by its recognition that this is indeed an inconsistency in current conservation management in urgent need of examination.

Those who were instrumental in initiating NIKU's grant application were Knut Paasche and Inga Fløisand, to both of whom I am immensely grateful for having the vision, enthusiasm and practical talents to establish our four-year research project *'The post-medieval archaeological resource in and around Norwegian towns: heritage potential, protection and management.'* Knut led the project, and I thank him for having the required mix of faith and recklessness to allow me to pursue this doctoral study. I can only apologise that it has taken a bit longer to complete than he had hoped!

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My good friends and colleagues in NIKU and Riksantikvaren who have helped me along the way are also deserving of thanks for their encouragement. I would particularly like to mention those who have contributed freely of their time, knowledge and expertise: notably Julian Cadamarteri, Lars Jacob Hvinden-Haug, Ian Reed, and Jens Rytter. In addition, I would like to thank Lars Roede and Jo Sellæg for their invaluable help in analysing the buildings of Kongsgården's provisioning managers which form the subject of my case study, and to Jonny Kregnes for helping to decipher historical sources. I add the proviso that none of these individuals is in any way responsible for any error encountered in my analysis of the material presented during the course of this study.

¹ The concluding lines in Robert Frost's poem 'The Road Not Taken' (1916).

² Norsk institutt for kulturminneforskning/Norwegian Institute for Cultural Heritage Research

I have also benefited greatly from the generous help of former head librarian Tore Moen at NTNU's Gunnerusbibliotek. Of great practical assistance with accessing historical and other sources and material were Sølvi Løchen (Gunnerusbibliotek), Astrid Løvlien and Elin Jacobsen (Statsarkivet i Trondheim), Hege Brit Randsborg (Riksarkivet), Ole Bjørn Pedersen (NTNU Vitenskapsmuseet), Birgitta Gran (Nidaros Domkirkes Restaureringsarbeider), and Thomas Roland (Copenhagen Museum). Others who provided invaluable help and support along the way have been Ian Page, John Finlay and Tor Grønbech.

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This has been a challenging odyssey for me, both intellectually and personally. I could not have completed it without the support of my three wonderful girls - Jorun, Sunniva and Hanna - who have had to shoulder the burden of a preoccupied husband and father. My greatest supporter has been my wife, Jorun, who has encouraged me all the way. I affectionately dedicate this work to her and to my daughters, as well as to the memory of my parents.

Trondheim 15th August 2018

Chris McLees

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PART 1

The Study: Background, Aims and Research Questions

Chapter 1

Introduction to the study

1.1. The study's background, aims, and main research questions

This thesis was conceived as a central component in the Norwegian Research Council research project '*The post-medieval archaeological resource in and around Norwegian towns: heritage potential, protection and management*'.³ The project was initiated in 2009 to investigate a central problem in Norwegian heritage management: namely, the lack of formal legal protection for terrestrial archaeological remains that post-date the Reformation in 1537.⁴ This legal lacuna has led to the neglect - by both heritage management and academia - of a unique buried archive of material remains associated with multiple aspects of society during this period of almost 500 years. This undocumented archive of knowledge is being destroyed and depleted on an almost daily basis, particularly in historic urban centres such as Trondheim, a principal subject of this study.

The research project and this thesis consequently have as their *raison d'être* the demonstration of the value of archaeology as a source of knowledge of the recent past⁵ in Norway, with the aim of informing future managerial and research strategies for the proper protection and utilisation of this diminishing resource.

In this context, this thesis aims to contribute to both administrative and academic discourse in the sphere of archaeological heritage research and conservation. It will have a didactic purpose in presenting to a Norwegian readership a measure of insight into the problematical nature of the differential treatment of archaeological remains in the current national heritage management regime. To this end, it will present the background to the current managerial dichotomy whereby all archaeological remains pre-dating 1537 enjoy exemplary comprehensive conservation, while, with certain exceptions, those after this arbitrarily defined cut-off date have none. In addition, it will present a survey of current international research trends within the field of post-medieval archaeology (also known as Historical Archaeology), and in so doing highlight the research potential that lies within Norway's neglected archaeological source material for the modern period.

That said, the thesis's scope and aims are primarily academic, concerned with the production and presentation of new knowledge using archaeological material and methods of inquiry in an area of research previously almost exclusively regarded as the preserve of historians, architectural historians and ethnologists; namely, the history of post-Reformation Norway. This period is co-extensive with the emergence of the modern world during the course of the past 500 years, an era of human history characterised by increasing social, economic and material complexity and interaction on a global scale; a phenomenon which also encompassed Norway. It is a central contention of this study that the exclusion of archaeological source material and an ontology of 'the material' from current historical discourse diminishes our understanding of the complexity of the historical development of modern Norwegian society.

³ LAND: The post-medieval archaeological resource in and around Norwegian towns: heritage potential, protection and management. A 'Miljø 2015' project. NFR project number 190818/S30.

⁴ With the exception of Sámi sites older than 100 years.

⁵ The term 'recent past' is used throughout the study to denote the past 500 years of history.

The social and economic changes associated with emergent modernity⁶ had particular consequences for the constitution and development of Norwegian society. These consequences manifested themselves within the socio-material worlds of individuals, social groups and institutions, and at local, regional, and national scales. As centres of dense population, and as crucibles of new ideas and impulses, urban communities in particular were susceptible to processes of social and cultural change, many of which have left material traces in the urban archaeological archive.

By virtue of its material composition, complexity of formation, accessibility through archaeological method, and its inherent time-depth, the urban archaeological archive provides a rich source of material for the study of past society, and human sociality and social practices in particular. The archaeological archive of one important Norwegian urban centre of the period - namely Trondheim - provides the empirical basis for the present study.

The materialities of practice are a central concern of this study. Drawing on current theories of social practice, social space and materiality, the study's underlying premise is that *social practices and material culture are co-constitutive of society, and that processes of change or continuity in the reproduction of human sociality in the past are enacted and constituted materially*. Crucially, the material residues of these processes can be retrieved and analysed archaeologically to provide a productive body of information about past human lives.

By examining the materialities of practices associated with processes of change and continuity within a representative urban context in the centuries following the Norwegian Reformation, the study aims to *provide an archaeological reading of the nature of the transition to modernity in Norway*. To this end, and principally using social and archaeological theory, methods and material, the study will explore the material nature of practices, identities and power relations in Early Modern Trondheim that survive in archaeological traces of the built environment and particular configurations of material culture in space and time.

With this aim and approach in mind, the principal questions addressed by the study are as follows:

- What kinds of evidence and knowledge of the recent past can archaeology provide?
- Can we define the last 500 years or so of history in terms of a process called 'modernity' rather than by conventional forms of historical periodisation?
- How do we set about identifying, characterising and interpreting material remains of the discourses and practices of modernity in the archaeological archive?
- What particular information can this material convey regarding the nature of social practices and social space within Early Modern Trondheim?
- What value does this material resource have for our understanding of Norwegian society during the last 500 years?

In addressing these overarching questions, I will seek to draw out and investigate the specific perspectives that archaeological material and interpretive methods can contribute to the study of the historical period in question, and to the generation of alternative and more complex readings and understandings of materiality and society.

Empirical evidence and theoretical tools will be employed to examine the ways in which society, in the form of individual actors, groups and institutions, actively engaged with and deployed material culture and the built environment within the dynamic context of the modern world's increasing social and material complexity. This presupposes that there exists a raft of characteristics and conceptions which we can define as being representative of 'modernity', be it in terms of political, social and economic discourse and organisation, prevailing cultural norms or mentalities, changing identities, the structure and conduct of everyday life, or particular 'ways-of-being' in the world, for example. In addition, it presupposes that an explicit correlation of forms of material culture with particular social practices carried out by individual actors, groups or institutions can be made.

⁶ For the purposes of my study this term functions as a heuristic device or trope that collectively identifies the diverse array of processes, practices and materials that during the last 500 years transformed society into what we today experience as modern Western society (see Chapter 3.2).

Definitions of 'modernity' and the choice of theoretical framework for the study will be examined and articulated in the theoretical discussion (chapters 3 and 4). The aim will be to formulate a sound theoretical and methodological basis for presenting and interrogating the material in order to illuminate the complex constitution, reproduction and transformation of society through social practice, and the active role of materiality in that process.

The study's paramount requirement was a well-defined historical and social context in which to examine the material practices and spatial configurations of modernity in microcosm; a place in the modern world where the multiple and contingent materialities of larger social processes can be observed on a smaller, human scale. In order to draw out these and other perspectives relating to the modern material world, the study required a representative body of source material with sufficient empirical variety and time depth to facilitate both high-definition micro-analysis and a long-term perspective.

Given the aims of the study, and the need to have access to a representative and spatially and temporally contextualised corpus of archaeological and historical data, the research potential provided by a major urban centre of the time was deemed the most suitable context of study. As mentioned, the urban centre chosen as offering the greatest potential for research is the mid-Norwegian city of Trondheim. In contrast to other Norwegian cities and towns, Trondheim possesses a range of curated post-Reformation archaeological material retrieved from closely identifiable contexts during the course of medieval urban excavations. Trondheim's unbroken history as a major urban centre spans over 1000 years, a period of communal habitation which has generated an accumulated archive of archaeological and documentary source material. This archive is fragmentary and incomplete, but provides a basis for a spatially, temporally, historically and demographically definable analysis aimed at identifying diverse social, cultural, economic, demographic, and material phenomena, traits and trends in a long-term perspective and on a range of temporal and spatial scales.

The material remains derived from this urban context will be interrogated in order to answer the main questions regarding the ways in which society and its practices were materially constituted in the transition to modernity, and how the materialities of modernity were entwined in everyday lives and practices on a number of levels, both locally, regionally and nationally. To this end, the specific interrelated questions asked of the available material are as follows:

- How did past generations of citizens in Trondheim engage with their socio-material worlds during this period of time? In what ways are material culture and built space entangled with the enactment of social practices, personal and collective identities and power relations?
- What do the material remains of these practices reveal about individual and collective lives and the nature and transformation of society in Trondheim and in Norway in the centuries following the Reformation?

1.2. The structure and content of the study: a synopsis

As mentioned above, the study has an ambitious and wide-ranging set of agendas designed to position it within its wider epistemological and research context. Two are aimed specifically at addressing the NIKU research project's joint overarching aims: Firstly, examining the problems associated with the current dichotomy in Norwegian archaeological conservation legislation, and secondly, demonstrating the research potential that lies within the post-medieval archaeological resource.

The former requires an examination of the history, nature and impact of the managerial neglect of post-medieval archaeology, and an assessment of current status. The latter requires introducing Norwegian readers to the current research trends in international historical archaeology which my own study and any future studies must take into account, a discussion of historical periodisation and the notion of 'modernity', and the provision of a study of a body of Norwegian material which draws on these and other theoretical and methodological approaches.

A third important agenda not previously mentioned is closely tied to the latter, but is aimed at reaching beyond the sphere of historical archaeology: namely, to outline a theoretical framework of the materiality of practice which will hopefully be of wider interest to my fellow archaeologists generally.

The study is subdivided into a series of main parts in which these and other aspects are dealt with individually within the narrative arc as a whole. Although the sections deal with interdependent themes and are intended to support each other, each may be read independently.

Present **Part 1** comprises an introduction to the study's background, aims and main research questions, and a summary of its structure.

Part 2 ('Post-Medieval Archaeology in Norway: Its Heritage Context, Conservation Status and Imperatives for Change') provides the reader with an overview of the current heritage management regime for archaeology in Norway with particular emphasis on the history of the processes by which post-medieval terrestrial archaeology came to be excluded from it. Specific reasons – or *imperatives* – why the current conservation dichotomy should be discontinued are advanced. These include heritage-management related imperatives, as well as the intrinsic knowledge-value of materiality - and hence archaeology - in the study of the past. A growing engagement with post-medieval archaeology by the professional archaeological community is identified, a development particularly evident in the field of urban archaeology.

In *Chapter 2*, I define the central legal dichotomy at the heart of current archaeological conservation management and protection (2.1). I argue that a number of recent developments within the spheres of heritage management and social scientific research provide imperatives which heritage managers and academic archaeologists cannot ignore with regard to the protection and activation of material remains *regardless of age* as unique sources of knowledge about the recent past (2.2, 2.3). I provide an account of how post-medieval archaeology has been marginalised within Norwegian archaeological heritage management practice and legislation since the end of the 19th century, and how recent engagement with post-medieval archaeology by various actors has begun to challenge the long-accepted status quo (2.4, 2.5).

As a further imperative for change, I assert that archaeology has a valuable role in providing a distinctive materialistic perspective on the constitution of society in the past as part of a wider interdisciplinary project of 're-materialising' the past in the present (2.6). In particular, archaeology has contemporary social relevance as a *creative act of intervention in the present*, providing current generations with tangible material manifestations of multiple, painful and otherwise hidden pasts. This chapter also provides overviews of the status of post-medieval research and recent post-medieval excavations in Norway which demonstrate the range of material histories of the past which archaeology can provide (2.5, 2.7, 2.8).

Part 3 ('Towards an Archaeology of Modernity: Theoretical Points of Departure') addresses the specific potential of archaeology as a valuable source of knowledge by identifying its central contribution to the study of the past, principally in terms of method, material and theory (*Chapter 3*). I see this as drawing firmly on a current multidisciplinary emphasis on theories of materiality and practice that espouse the material constitution of society and social practice, as well as archaeology's particular methodologies which provide a means of operationalising and integrating multiple and interlocking dimensions of inquiry, most notably in terms of materiality, practice, historicity, time and space.

The study of the complex and multiplying materialities enmeshed in the emergence of the modern world during the last 500 years or so is the concern of the international archaeological sub-discipline currently operating under the banner of 'Historical Archaeology'. The period in question has also been the subject of much theorisation by scholars in a wide variety of disciplines whose aim has been to explain the nature of the modern world, or 'modernity'. In view of this, I provide an introductory overview and discussion of the slippery and well-travelled notion of 'modernity' as it has been employed in multidisciplinary theorisation and discussions of the recent past (3.2). I conclude that the concept offers a useful heuristic tool for scholars of the past, including archaeologists, providing as it does a means of characterising a particular historical transformational process while also transcending the traditional disciplinary compartmentalisation of history into distinct periods and sub-periods – something which lies at the core of Norway's current conservation dichotomy.

Following on from this, I define how archaeologists approach the task of recovering and interpreting the material residues of modernity, and what characterises archaeology's specific methodological contribution to the study of the past, and the study of the past within urban contexts in particular, since that is the chief focus of this study (3.3). Given increasing interdisciplinary recognition

that materiality is integral to social practice, archaeology's core methodologies, which are aimed at the close and systematic spatio-temporal recording and study of the material residues of past social practices, can provide scholars of the past with a range of relevant empirical data. By closely contextualising material residues in time and space, archaeologists can assemble particular socio-material configurations of humans, objects, spaces and buildings. This provides a basis for interpretation of the ways in which human and material entanglements shaped the lives of individuals and communities at particular times and in specific places.

I subsequently outline and discuss some theoretical and methodological developments in the field of Historical Archaeology that have contributed to its maturation as a contributor of sophisticated 'material histories' of the recent past that provide alternative readings of historical processes formerly regarded as the domain of historians and their texts (3.4).

The discipline is distinguished by a particularly innovative range of applications of social and material theory, often combined with close empirical and textual analysis. The result has been the production of an eclectic, theoretically- and materially-grounded array of approaches to the study of people, places and things at a number of scales and in a variety of social, local and global contexts, including Scandinavia. The discipline's current concerns and research directions are too various and complex to detail in the present work, but I identify some of the themes, theories and concerns that I see as particularly relevant to my own, and future, studies of archaeological residues of the recent past in Norway.

These new directions are anchored in much recent multidisciplinary theorisation focused on materiality, practice and agency in particular, and the current social-scientific material turn - or 'return to things'. As stipulated in my research questions, my study focuses on the materialities of social practices in a particular urban context during its transition to modernity. As such it aims to reveal the materialities of practices and social discourses that were implicated in the production of this particular locality in the modern world, and the specific identities, actions and experiences of the people who inhabited it.

This analytical focus on the materialities of social practice and identity is closely aligned with relational and symmetrical concepts of agency and materiality. Practices are essentially alliances or arrangements of embodied knowledges, skills and materials that assume specific configurations and significances in time and space. This forms the basis for the specific theoretical framework and methodology for my own study (3.5), in which I have sought to balance a relational materialist ontology with an emphasis on establishing the unique forms of *materiality*, *human competence* and *meaning* inherent to particular configurations of objects and physical space encountered within archaeological material found in Trondheim. In addition to objects, this theorisation also encompasses buildings and urban spaces, and theories of space and place are necessary tools for their analysis.

Part 4 ('Archaeologies of Modernity in Trondheim: Method, Material, Analysis') continues to explore archaeology's theoretical and methodological contribution to the study of the recent past, but narrows the focus to the particular empirical basis for the study. *Chapter 4* clarifies the way theories integrating the material and the social may be applied to the archaeological material from Trondheim that is presented and analysed in chapters 5 and 6 by providing a methodological and thematic framework for the material study. The analysis of the material takes the form of identifying multiple enactments of practice that constituted post-medieval Trondheim by characterising and discussing their *practice-material arrangements*: namely, the surviving objects and built spaces entangled with past practices, and their configurations in the historical urban context.

In order to draw out and highlight particular areas of practice with which the majority of my material is associated, I have defined a number of 'contexts of practice': essentially practice-related themes involving the interplay of people, ideas, objects and the built environment. These identify and discuss practice-material arrangements associated with the interrelated spheres of dwelling, sustenance and sociability, personal appearance, and health (4.3). The urban household is a key locus of practice, and material aspects of its domestic practices and consumption are central areas of inquiry in the present study. These themes underpin the discussions about the materialities of practice in chapters 5 and 6.

The range of material that forms the empirical basis for the study is presented in *Chapter 5*. This is the first attempt to characterise the nature of Trondheim's post-medieval archaeological resource,

and it is essentially a categorised inventory of the range of curated and archaeologically documented material that could be accessed at the present time.

An introductory overview of Trondheim's documented post-medieval historical development based on historical and topographical material is provided (5.2). The qualitative and contextual (social, depositional, spatial and temporal) limitations of the available data determine the analytical scope of my study, and a review of the dataset's source-critical aspects is presented (5.3). This section also outlines the methods I use for categorising and presenting the material-culture dataset.

The material is presented in two sections designed to highlight the nature of urban space and the material culture associated with everyday life. The first (5.4) presents the evidence for the *built environment* (architectural material culture) derived from excavations. Where relevant, this is presented in two time-slices, placed before and after a major urban re-planning in 1681, and incorporating macro- and micro-spatial scales.

Portable material culture (objects) is presented in the next section (5.5) in accordance with a defined range of functional categories which are intended to provide useful tools in the analysis of practices conducted in Chapter 6. Finally, an analysis of the materialities of practice observable in the material archive is undertaken, framed in accordance with the analytical themes set out in Chapter 4 (5.6).

In *Chapter 6* I attempt to operationalise the available archive of urban archaeological material by discussing the materialities of social practices (or 'practice-material assemblages') associated with a particular urban social setting. The aim is to interrogate a diversified, but contextually specific sample of material implicated in various social practices at a particular social and spatial location in Trondheim during this period. This is essentially a detailed contextual micro-study which combines a variety of archaeological and historical evidence.

My chosen case study is the military depot at Kongsgården. For much of the 18th century, it was the home and workplace of civil-military officials - the provisioning managers - who were responsible for managing the military supplies and materiel stored here. A systematically excavated body of material is available which, with associated documentary evidence, provides a complex body of evidence suitable for close contextual characterisation and discussion of domestic lives and practices. This material is presented and discussed at varying scales of analysis, ranging from individual objects to large-scale spatial configurations in the military depot's precinct. This comprises an attempt to produce a 'practice-material history' of this place and the forgotten lives of those who lived and worked here.

Part 5 ('The Value of Post-Medieval Archaeology: Concluding Remarks') provides a coda to the study, reflecting on the limitations and possibilities inherent to a material perspective on the recent past, as well as the 'value' of post-medieval archaeology in the current heritage managerial and political context (*Chapter 7*). The value of archaeological material is discussed, both in terms of its academic contribution to national and global historical archaeologies of modernity, and in terms of its social value and relevance in the present.

PART 2

Post-Medieval Archaeology in Norway: Its Heritage Context, Conservation Status and Imperatives for Change

Chapter 2

Post-medieval archaeology in Norway: heritage management history, conservation status and imperatives for change

2.1. The problem: the lack of legal protection for post-medieval terrestrial archaeology

The specific area of concern that inspired this study is the current lack of legal protection of terrestrial archaeological deposits originating after AD 1537, the year of the introduction of the Protestant Reformation in Norway, and the date chosen as the chronological limit for automatic legal protection of archaeological deposits. This deficiency stands in contrast to the comprehensive legal protection and management provided for prehistoric and medieval archaeological deposits by the Norwegian Cultural Heritage Act of 1978.

It also stands in sharp contrast to heritage policies, legislation and practice in neighbouring Scandinavian countries which do not have a comparable 500-year legal lacuna. In Sweden there is at the time of writing an upper chronological limit for the protection of archaeological remains set at 1850.⁷ In Denmark there is no formal age limit, although in practice the majority of automatically protected archaeological sites and monuments that may be excavated using developer funding are - with multiple and noteworthy exceptions - prehistoric and medieval.⁸

⁷ A provision in the Swedish Historic Environment Act applicable since 01.01.2014 stipulates that remains assumed to have been established in 1850 or later are not covered by the general protection for ancient monuments. However, county heritage authorities (*länsstyrelser*) may designate remains from 1850 or later as ancient monuments if their cultural heritage value merits it. Cf. *Kulturmiljölag 1988:950*: http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Lag-1988950-om-kulturminnen_sfs-1988-950/. See Larsson 2011 for a critical discussion of Swedish cultural heritage law and practice with regard to post-medieval archaeology written prior to the introduction of the 1850 age limit.

⁸ The Danish Museum Act distinguishes between archaeological sites and monuments which can be removed following archaeological investigation (as defined in the Act's Chapter 8) and those which are automatically listed/protected (compare Ch. 8a). Regarding the former, there is *in principle* no limit concerning the type or age of archaeological contexts which can be investigated by developer-funded excavation (compare the very broad definition in the Act's § 27, stk. 1, based on the Valletta Convention's formulation regarding the range of archaeological heritage). Since there is no time limit, this may also include post-medieval sites/monuments if sound arguments for their archaeological/historical value are put forward. In *practice*, however, the majority of archaeological excavations undertaken in Denmark are prehistoric or medieval, although a number of post-medieval sites and monuments have been excavated in accordance with the Act's § 27, particularly sites of 17th- and 18th-century date, with rarer examples of more recent date. Regarding the second category, namely listed/protected sites and monuments (compare Ch. 8a): a list of automatically protected sites/monuments is provided in a supplement (bilag) to the Museum Act; these are predominantly visible prehistoric or medieval site/monument types (Bilag 1, Kap. 1, Nr. 1-10). A second list of sites/monument types which may be protected on condition that the landowner is formally notified of their presence is also provided (Bilag 1, Kap. 2, Nr. 1-17); these encompass sites/monument types which may be of post-medieval date. In practice, the protection of any particular site in this category must be assessed individually regarding its heritage value, and as a result, only a selection will ultimately be protected. Although age is not formally a defining criterion, in practice it is primarily sites/monuments that are older than 100 years that are considered for protection. Problems may arise if one wishes to protect a type of site/monument which is not included in these lists. Standing historical buildings pre-dating 1536 are automatically protected by the Building Conservation Act (*Bygningsfredningsloven*), while later buildings require individual assessment. See <https://www.retsinformation.dk/Forms/R0710.aspx?id=162504>; <https://www.retsinformation.dk/Forms/R0710.aspx?id=162504#Bil1>

The dichotomy inherent within Norwegian archaeological heritage legislation is somewhat paradoxical. Over the course of over 100 years, Norway has pioneered and developed what in many ways can be regarded as an exemplary cultural heritage legislation, currently formalised in the Cultural Heritage Act of 1978 (revised in 1992 and 2000).⁹ The Act's statutory provisions extend only to archaeological and architectural monuments and sites and cultural heritage environments that require special protection on the grounds of their *national* value.¹⁰ Prehistoric and medieval archaeological sites, buildings and structures (Norw. *faste kulturminner* – 'immovable/fixed cultural heritage') originating prior to 1537 are currently automatically protected by law, as are standing buildings and structures constructed between 1537 and 1649, and all Sámi sites more than 100 years old. Cultural-historical objects (Norw. *løse kulturminner* – 'portable cultural heritage') are not formally protected in the same way, although prehistoric and medieval objects, coins pre-dating 1650, Sámi objects older than 100 years, and ships and their cargoes more than 100 years old are protected by being regarded as State property.¹¹

Excluded from the list of automatically protected cultural heritage types are *terrestrial* archaeological deposits and their content of cultural-historical objects which originated after the Protestant Reformation in 1537. Buried archaeological deposits in urban and rural contexts that are deemed to have formed after 1537 are consequently not automatically protected by law, and - in contrast to their pre-Reformation counterparts - may be removed without archaeological registration.

All forms of cultural heritage - including the forms of archaeological heritage listed in the Act's § 4 - that are not automatically protected can in principle be potentially protected by statutory resolutions or temporary protection orders granted on a case-to-case basis.¹² A recent government white paper states that: 'Boats, buildings, other types of cultural heritage sites and environments from after the Reformation (1536) can be protected by an individual resolution after a concrete evaluation (§§ 14a, 15 and 20)' (my translation).¹³ Indeed, the Act's § 15 expressly states that structures and sites which are valuable architecturally or from the point of view of cultural history - including all types listed in the Act's § 4 - may be protected *regardless of age* using a protection order.¹⁴ In addition, provision is made under the Nature Conservation Act, and in respect to State property, chosen technical and industrial sites and monuments, and marine vessels.¹⁵ However, these available conservation options have only been used in highly exceptional instances to protect *archaeological* sites or monuments later than 1537.¹⁶

In addition, cultural heritage types with an important regional or local value may be protected by local and regional councils through the use of the Planning and Building Act.¹⁷ Although some strong

⁹ Lov om kulturminner av 9. juni 1978 nr. 50 og lov av 3.3.2000 nr. 14 (kml). Holme 2001b: 10-12. For English version of the Act see: <https://www.regjeringen.no/en/dokumenter/cultural-heritage-act/id173106/>.

¹⁰ 'kulturhistorisk eller arkitektonisk verdifulle kulturminner og kulturmiljøer (§ 2 tredje ledd)'. Holme 2001b: 10.

¹¹ Cf. Cultural Heritage Act § 4. Holme 2001b: 10-12. A list of sites and monuments earlier than 1537 and standing structures dating to between 1537 and 1649 that are automatically protected is provided in § 4, paragraph 1, a-j.

¹² 'fredes vedtak' (§§ 15, 20 og 22 a); §19; §22 nr 4. Holme 2001b: 10; Kahn 2011: 62.

¹³ 'Båter, bygninger, andre typer kulturminner og kulturmiljøer fra etter reformasjonen (1536) kan fredes ved enkeltvedtak etter en konkret vurdering (§§ 14a, 15 og 20)'. (St.meld.nr.16, 2004-2005. Leve med kulturminner, kap. 2.).

¹⁴ 'The Ministry may protect structures and sites or parts of these which are valuable architecturally or from the point of view of cultural history. Structures and sites that may be protected in accordance with the first paragraph include monuments and sites as described in Section 4, first paragraph, a-j, regardless of their age, special sites such as parks, gardens, avenues, etc. and public memorials, and other places with important historical associations.' Extracted from Cultural Heritage Act § 15.

<https://www.regjeringen.no/en/dokumenter/cultural-heritage-act/id173106/>. See Kahn 2011: 64-65.

¹⁵ Lov om forvaltning av naturens mangfold (naturmangfoldloven). 'Fredningsverdige kulturminner kan også være sikret gjennom verneplaner for statens kulturhistoriske eiendommer, særlige statlige satsinger på tekniske og industrielle kulturminner og vern og vedlikeholdsavtaler knyttet til fartøy.' (St.meld.nr.16, 2004-2005, kap. 2.).

¹⁶ Writing in 2001, Jørn Holme notes that no cases existed for the use of § 15 to protect typical archaeological sites or monuments, and an investigation by Michael Kahn in 2011 suggested the same, although some instances of indirect protection through protection of standing buildings and structures or pre-Reformation heritage are known. Holme 2001b: 151; Kahn 2011: 63-64.

¹⁷ Lov om planlegging og byggesaksbehandling (plan- og bygningsloven) 27.6.2008 nr 71. Holme 2001a: 230.

arguments can be advanced for this act's relevance as a heritage management tool for post-Reformation archaeology,¹⁸ this option has not been actively considered or utilised in that respect (see further below). As the lawyer Michael Kahn has pointed out the lack of implementation of the provisions provided in § 15 of the Cultural Heritage Act is particularly enigmatic (see 2.4).¹⁹

The neglect of post-Reformation terrestrial archaeology in terms of heritage legislation and practice has resulted in the ongoing physical deterioration and destruction of a buried archive of material remains of post-medieval society (both urban and rural), a lack of academic research and generation of new knowledge, and the under-utilisation of the post-medieval archaeological resource as a public asset and source of value creation.

Due to the limitations placed on excavation and academic research by current conservation legislation, terrestrial archaeological material deriving from the last 500 years has rarely entered historical discourse, and has contributed comparatively little to our understanding of Norway's more recent past. In Norway, the study of post-Reformation society has been conducted almost exclusively using historical, architectural and ethnological sources and approaches. Archaeology's particular contribution, namely the insight it offers into the material dimensions and practices of past society, has been largely unexplored by researchers in this period of Norwegian history.²⁰ Consequently, the archaeological remains which make up a large part of the material heritage left by generations who lived in Norwegian urban and rural communities during the last five hundred years are situated in an epistemological and ontological vacuum.

2.2. Imperatives for change

A central contention of this study is that the current dichotomy in Norwegian archaeological heritage protection has profound and irreversible consequences for the survival of material remains of the recent past and impedes our fuller perception and understanding of that past. This predicament is anachronistic and unsustainable in terms of both modern conservation principles and current paradigms in the field of historical and social scientific research; themes which will be explored in the course of the following sections which define the context for this study.

As will be argued in more detail below (2.4.1), current legislation regarding the conservation and protection of archaeological remains perpetuates a view of history and a conservation philosophy rooted in 19th-century thinking and ideologies, and fails to recognise historical complexity or the source value and relevance of material remains for our understanding of the recent past. This situation has become increasingly untenable in the light of qualitative developments in the fields of conservation policy and academic research during recent decades.

In my opinion, developments on three fronts in particular provide compelling imperatives for change in conservation legislation and practice regarding post-Reformation archaeology in Norway. These are:

- International legal conventions which have established new global conservation criteria which regard all forms of archaeological heritage - *regardless of age* - as potential sources of cultural-historical knowledge and social value-creation
- Directives and statements within modern cultural-heritage management - both national and international - which promote the implementation of targeted, value-based and knowledge-based conservation policies and practices, and the conservation of a representative cross-section of heritage types
- New research directions within the social sciences generally in which materiality is regarded as a central component in the study of society, both past and present. This includes the emergence of the sub-discipline of 'historical archaeology', in which traditional historical and

¹⁸ Kahn 2016.

¹⁹ Kahn 2011: 61-76.

²⁰ Though see Schia 1981a; Nordeide 2000a; Nordeide 2003; Bjørdal 2006; Berglund 2007 and more recent examples cited in 2.5 below.

disciplinary boundaries have been eroded, and in which material remains are regarded as valuable sources of knowledge in a more holistic and contextual exploration of our recent past. Related to this is an increasing understanding of archaeology's social relevance as a creative act of intervention in the present.

These imperatives, and their relevance for future conservation policy and practice, will be explored in more detail in the course of the following sections.

2.3. Recent developments in heritage management and the study's research context

Modern management of global cultural heritage, and archaeological heritage in particular, has been influenced profoundly by the Convention on the Protection of the Archaeological Heritage of Europe²¹ and other international heritage provisions. Changes reflect new perceptions regarding cultural heritage's diversified character, values and roles in a complex, fast-developing and changing modern world. The manifold nature of cultural heritage is recognised today by academics, the public, politicians and heritage managers, and the scope of what is considered cultural heritage is continually being revised and expanded, and is no longer limited to a narrow range of individual objects or periods.²²

There is widespread acknowledgement of the principle that cultural heritage should not be subject to chronological limitation, and that it should comprise a wide typological and chronological range of material heritage - including archaeological remains - that contain and convey intangible values and meaning for current generations: namely, *'all the physical evidence of past human activity, and its associations that people can see, understand and feel in the present world.'*²³

Cultural heritage as such has been transformed into a vehicle for the advancement of contemporary generations' cultural creativity and self-awareness, and is perceived as integral to contemporary social issues such as inclusion, sustainability, local and national identity creation and social, racial and cultural diversity. As a form of discourse, cultural heritage has become an exercise in the performance and negotiation of multiple identities, values and senses of place. It constitutes a cultural tool that nations, societies, communities and individuals use to facilitate the self, identity and belonging. Concurrent with this is the recognition that cultural heritage is multiple, ambiguous and contested, perceived and experienced as it is from the varied standpoints of, among others, academics, politicians, heritage managers, and the general public.²⁴

Similar notions, sentiments and intentions are expressed in comparatively recent Norwegian government and heritage-authority statements and directives, including a stated ambition to conserve a representative cross-section of the nation's diverse forms of material and immaterial cultural heritage, regardless of age.²⁵

However, it can be contended that the current conservation dichotomy regarding pre- and post-Reformation archaeology is in contravention of the spirit and letter of the Valletta Convention, ratified by Norway in 1995. Signatory countries, including Norway, are pledged to regard all traces and remains of the archaeological heritage as worthy of protection as 'a source of the European collective memory and as an instrument for historical and scientific study'.²⁶ In contrast to the Norwegian Cultural Heritage Act, the Valletta Convention places no chronological limits on what can be defined as archaeological heritage. As the lawyer Jørn Holme stated clearly some years prior to his appointment as Director General of the Directorate for Cultural Heritage (Riksantikvaren) in 2009, Norway's ratification of the

²¹ Valletta Convention, Council of Europe, 16.1.1992.

²² Willems 1998; Holme 2001a; Darvill 2004: 415-423; Symonds 2004; Andersson 2006; Brattli 2006; Larsson 2006a; Schofield & Johnson 2006; McLees 2006; McLees 2007; Smith & Waterton 2009; Andreassen et al 2010; Larsson 2011; Fagerland 2011.

²³ English Heritage 2000b: 5; Smith & Waterton 2009.

²⁴ Symonds 2004; Larsson 2006a; Larsson 2006b; Brattli 2006; Brattli 2011; Smith & Waterton 2009: 292-293; Guttormsen & Hedeager 2015; Brattli & Larsson 2016.

²⁵ NOU 2002: 1; St.meld.nr.16 2004-2005; Riksantikvaren 2010, 2015.

²⁶ Valletta Convention Article 1.1.

Convention obliges it to safeguard its post-Reformation archaeological heritage.²⁷ Norway's obligations and omissions in this regard were also highlighted by a national Cultural Heritage commission in 2002, placing particular emphasis on the lack of protection of, and knowledge about, the post-Reformation archaeological resource.²⁸

In light of this, it is difficult not to conclude that the persistent neglect of a source of knowledge which can contribute to social, scientific, cultural and economic development constitutes a major anomaly in the areas of national and international conservation policy and academic research. The archaeological resource's ongoing physical deterioration and the imperatives constituted by international conventions and national recommendations regarding the archaeological heritage's value, and the need to preserve a representative sample of this resource *regardless of age*, require that this anomaly be urgently addressed, and new approaches to the resource's management, protection and use explored.

Attempts to highlight the current dichotomy and its contradictions were made during the first decades of the 21st century by the Norwegian Institute for Cultural Heritage Research (NIKU) and other heritage actors (see 2.4.4). The need to address the problem in depth was at last given authoritative public recognition and support in 2009 with the awarding of a substantial Norwegian Research Council grant to NIKU with the express purpose of investigating the legal dichotomy and the conservation requirements and heritage values of post-Reformation archaeology in Norway.²⁹

The four-year research project's stated aim was to throw light on what it characterised as a central problem area in current Norwegian cultural heritage management: namely the absence of legal protection and conservation management of terrestrial archaeological remains which accumulated following the Protestant Reformation in 1537. Its main objectives were to examine and evaluate current conservation practice and legislation, and explore the reasons why the current disparity in archaeological conservation came into being. In addition, it aimed to characterise the forms of cultural-heritage potential represented by the post-Reformation archaeological resource, and in particular demonstrate its value both as a source of knowledge and as a public asset worthy of legal protection and heritage management. Through examination of its potential as a source of knowledge and values which can be utilised in a number of areas, the project aimed to demonstrate the need for the upgrading of the resource's conservation status, the establishment of better conservation management practices, and the benefits of greater public utilisation of the resource.³⁰

This thesis forms one of two doctoral studies connected to the project. One was to focus on reviewing current legal frameworks, directives and praxis within the area of national and local cultural heritage management. Its aim was to assess whether there are legal and managerial grounds for improving the management of the post-medieval archaeological resource and if so, to suggest future criteria for conservation and new management measures and practices required to protect and manage this resource.³¹

As already stated, my own study's central aim is to demonstrate the knowledge and research potential of terrestrial archaeological deposits laid down after 1537, and particularly archaeological remains in urban contexts. This study is the first attempt at a broad characterisation and assessment of the nature and value of the urban archaeological resource of the post-Reformation period in Norway,

²⁷ Holme 2001b: 151.

²⁸ *'Oppfølging av Malta-konvensjonen og etterreformatorisk arkeologi. Gjennom å ratifisere Malta-konvensjonen, har Norge forpliktet seg til å sikre også den arkeologiske kulturarven som ikke blir fanget opp av den automatiske fredningen. Denne delen av kulturarven vil utfylle og berike de skriftlige kildene som fins fra de siste 500 årene. Fram til i dag er denne kulturarven ikke underlagt noe formelt vern, og mye er gått tapt uten at den kulturhistoriske verdien er dokumentert eller sikret på annen måte. Et registrerings- og dokumentasjonsprosjekt må settes i gang for å skaffe et grunnlag for å prioritere mellom de ulike arkeologiske kulturminnene fra tiden etter reformasjonen.'* (NOU 2002:1 Fortid former framtid. Utfordringer i en ny kulturminnepolitikk. Kap. 3.4.).

²⁹ LAND: The post-medieval archaeological resource in and around Norwegian towns: heritage potential, protection and management. A 'Miljø 2015' project. NFR project number 190818/S30.

³⁰ Unpublished application to The Norwegian Research Council 2008. See also Paasche 2011: 9-11.

³¹ Kahn 2011; Paasche 2011:12.

and it is hoped that it will ultimately contribute to national research agendas and inform policy reviews and assessments in the future.

2.4. The legal dichotomy: origins, evolution and critiques

How did today's chronological differentiation in the protection of archaeological deposits arise? To what extent has it been criticised? Are there any signs of change in perceptions regarding this knowledge resource in current academic, professional and managerial circles?

To address these questions, this section provides a narrative overview of the historical development of Norwegian archaeological heritage legislation from the time of the first Cultural Heritage Act to the present day, as well as certain critical responses to it. This review primarily examines issues of management and value-estimation associated with the first two imperatives for change outlined above. It is not exhaustive, and for more in-depth detail and analysis of particular legislation and statements the reader is referred to the literature and documents cited in the text.

Current responses and efforts by the professional community to engage with post-medieval archaeology are set out in 2.5. The third imperative mentioned above, namely the growing recognition of the centrality of materiality in the study of the past, and the social relevance of the material past in the present will be addressed in 2.6.

2.4.1. Early cultural heritage legislation

The chronological limit for the automatic legal protection of archaeological heritage set by the current Cultural Heritage Act perpetuates the prioritisation of protection for pre-Reformation remains established in Norway's first cultural heritage act of 1905,³² the provisions of which were expressive of contemporary idealism, ideologies and pragmatism. As characterised by the historian Ola Svein Stugu, lying behind the first act's conservation criteria was a contemporary historical synthesis; a grand narrative of Norwegian national progress, decline and resurrection.³³

The legislation was inspired by the desire of a small conservation-minded intellectual elite to establish a new, scientifically-based knowledge of the people and culture of the past as a basis for building and legitimising the newly independent Norwegian nation's national identity, pride and self-respect.³⁴ The past was regarded optimistically as a resource for modern nation-building, but paradoxically, a resource that was also in need of statutory protection from the impact of those self-same modernising forces. Archaeologists of the time were preoccupied with legally securing prehistoric remains, and the principal impetus for including the medieval period as worthy of protection under law came from within antiquarian circles whose principal interests lay in medieval art- and architectural history.³⁵

These heritage custodians were profoundly influenced by the national-romantic historical ideology that underpinned the nation-building project of their time. Historians of the 19th and early 20th centuries were primarily interested in the Viking age and the high medieval period, the latter in particular being perceived as the proud heyday of a politically independent and culturally vibrant Norway. This stood in contrast to a period of perceived cultural decline between the Reformation in 1537 and Norwegian independence in 1905, during which Norway lay under Danish and subsequently Swedish rule. Although national decline was thought to have begun with the Kalmar Union in 1397, the Reformation - which saw the removal of Catholicism and the powerful archbishopric, as well as the decline of the aristocracy - was regarded as a catastrophe for Norway, whose high culture succumbed to a 'long winter sleep' under Protestantism and Danish rule prior to 1814.³⁶

How might one explain the pre-eminence of the medieval in the contemporary curatorial mind? Utilising the anthropologist and sociologist Bruno Latour's critique of the concept of modernity, it might be suggested that underlying it were modern metaphysical conceptions of time and history: in particular,

³² Lov 13. juli 1905 '*Om fredning og bevaring av fortidslevninger*'.

³³ Stugu 2011: 87.

³⁴ Stugu 2011: 77-92; Fagerland 2011: 93-105; Trøim 2005.

³⁵ Stugu 2011: 90-91

³⁶ Stugu 2011: 88-89. The 'winter sleep' metaphor was coined by the historian Absalon Taranger in 1914.

modernity's self-conscious distinction between past and present, and what Latour calls the 'illness' of modern consciousness that is historicism, in which time is linear, teleological, and unfolding, and interrupted by temporal and cultural discontinuities. Time is conceived by moderns as an irreversible arrow of progress which creates an essentialised and static dead 'past', a living 'present' and a becoming 'future'. This notion of progress demands that modernisers make a total and irretrievable break with the decadent past. Paradoxically, however, those in the present are incapable of eliminating the past, and are somehow compelled to preserve and reconstitute it in the present.³⁷

In Latour's view, the modern antiquarian 'mania' of collecting and conserving is predicated on the assumption of a need for an absolute break with the past: 'maniacal destruction is counterbalanced by an equally maniacal conservation.'³⁸ The gap between past and present, the pre-modern and the modern, is asserted in traditional epistemology, and might be exemplified by the temporal distancing between archaeologists and the societies they study. Trained as they are to distance themselves from their subject, alienation of the past lies at the heart of archaeological methodology. However, the heterogeneity and irreducible 'otherness' of the past is marginalised by a desire to hold on and to order, to gain knowledge and control, and to familiarise the alien and unfamiliar.³⁹

To the Norwegian modernisers and nation-builders at the turn of the 19th-century, the unfamiliar past needful of familiarisation through conservation was the medieval, which in their eyes was firmly cut adrift from the modern. As the archaeologist Terje Brattli speculates, the 'modern' as then perceived presumably encompassed the centuries following the Reformation, which in social, religious and economic terms constituted an already more familiar past with ties to the present, and for whose historical remains there was consequently no strong compulsion to preserve. In sum, there existed too strong an identification with post-Reformation society for its material remains to be incorporated in the act of 1905.⁴⁰

The question that of course arises with regard to our own current heritage management predicament is whether current curators of the past will perpetuate the metaphysical rift between the past and the modern, the unfamiliar and the familiar, that their forebears attributed to the Reformation? Will an assumed familiarity of the post-Reformation period continue to mask its historical distinctiveness, ambiguity and specificity?

At the start of the 20th century, those cultural remains considered worthy of conservation and study - objects, buildings and the like - were preferably of national interest and possessive of a direct, original connection with Norway's far-removed putative 'golden' period of political and cultural independence and greatness which the conservation elite considered desirable to reconstitute in the present. Aesthetic qualities were deemed paramount, reflecting contemporary antiquarian preoccupations with art history, specifically those artistic and architectural traditions associated with medieval Norwegian high and popular culture, whether autonomous or influenced by European traditions. The unique, however, was regarded as of greater value than the everyday or mundane. In addition to their age, pre-Reformation remains' distinctive value also lay in their perceived comparative rarity compared to their post-Reformation counterparts.⁴¹

However, in addition to ideological grounds and criteria relating to age and aesthetics, pragmatism and practicalities also played a role in the formulation of conservation criteria, in ways remarkably reminiscent of today's situation. The protection of post-Reformation remains would impinge upon private property ownership, a potential source of social conflict it was thought important to avoid. Furthermore, museums could not compete financially with a growing market in antiquities at the time, and the addition of post-Reformation antiquities to their acquisition lists would have stretched their limited resources further. And of course, the protection of post-Reformation remains would also require

³⁷ Latour 1993: 68-69.

³⁸ Latour 1993: 69; Brattli 2011: 279.

³⁹ Buchli & Lucas 2001b: 9-11.

⁴⁰ Brattli 2011: 278-279.

⁴¹ Stugu 2011: 81-82; Fagerland 2011: 101.

a larger managerial apparatus and greater economic resources.⁴² Legal protection under the law of 1905 was consequently restricted to pre-Reformation cultural heritage.

While not explicitly formulated or stated, it can be surmised that - in terms of documenting the history of the post-Reformation period - a perceived epistemological hegemony of written historical sources over material sources was implicit within contemporary antiquarian and academic historical thought and practice. An exception lay perhaps in the sphere of popular, rural culture, where the craft products and buildings of rural communities were seen as perpetuating medieval traditions.⁴³ Indeed, the growing number of objects and buildings in the collections of local and national folk museums during the course of the 20th century represents a considerable body of material evidence of rural life, and a valuable source for ethnographic and architectural study.⁴⁴

Problems with the 1905 act were soon identified, notably the absence of legal provision for the protection of buildings in private ownership, and for post-Reformation cultural heritage. Another law - *Bygningsfredningsloven* - came into being in 1920 which extended legal protection to buildings that were more than 100 years old and had 'artistic or historic value'.⁴⁵ The 1905 law had already established a practical division between the management of archaeological heritage and buildings.⁴⁶ As the historian Tor Einar Fagerland points out in his overview and assessment of the historical development of Norwegian heritage management in the 20th century, the provision of two separate laws for the protection of pre- and post-Reformation cultural heritage created a structural disparity in the management of post-Reformation archaeological remains and historical buildings which persists to the present day (see further below).⁴⁷

2.4.2. Developments in Norwegian heritage management during the 20th century

For most of the 20th century, these laws and a number of revisions to them underpinned Norwegian heritage management.⁴⁸ A revision of 1951 was limited, although it placed responsibility for medieval archaeology under Riksantikvaren,⁴⁹ which subsequently instituted major medieval urban excavations in Bergen in 1955, and later in Oslo, Trondheim and Tønsberg.⁵⁰

New conceptions of what 'cultural heritage' comprised, and the definition of what criteria should be used for its conservation and legal protection, emerged during the 1960s and 1970s, and the need for a single, comprehensive cultural heritage law was recognised. Where previously predominantly single classes and types of sites and monuments were conserved and protected on the basis of historical and aesthetic grounds, conservation practice now adopted a broader and more socially-orientated conservation ideology. A more inclusive understanding and definition of what constituted cultural heritage saw a new emphasis on representativity and 'cultural environments' rather than single sites and monuments, notably exemplified by a pioneering comprehensive protection of medieval archaeological deposits in Norwegian medieval towns and cities.⁵¹

In keeping with this conceptual change, the character of archaeological material and its nature of protection by law were formulated and defined in greater depth and detail in the more comprehensive

⁴² Kahn 2011: 61; Stugu 2011: 90; Fagerland 2011: 101.

⁴³ Stugu 2011: 89.

⁴⁴ Detailed scientific ethnographic studies of Norwegian rural life and building traditions have a long and strong tradition in Norway, beginning in the mid-19th century with the pioneering work of Eilert Sundt, who, interestingly, differentiated regional traditions and traced their development back to antiquity while being at the same time deeply engaged in improving the living conditions of his own day (Christensen 1995: 5, 13).

⁴⁵ Lov om bygningsfredning av 3.12.1920; Gaukstad 2001: 132.

⁴⁶ Gaukstad 2001: 132.

⁴⁷ Fagerland 2011: 102.

⁴⁸ Fagerland 2011: 102; Gaukstad 2001.

⁴⁹ Prior to 1988 The Central Office of Historic Monuments in Norway; subsequently The Norwegian Directorate for Cultural Heritage.

⁵⁰ Gaukstad 2001: 133.

⁵¹ Lunde 1985; Fagerland 2011: 103-104; Christensson & Dunlop 2015; Johannesen & Eriksson 2015.

Norwegian Cultural Heritage Act of 1978 and its subsequent revisions. However, the termination of legal protection of archaeology at the year 1537 was retained.⁵²

2.4.3. Continuity and change at the turn of the millennium

Beginning in the 1990s, conservation management thinking and practice in Norway has consolidated around a central tenet, inspired by international environmental and heritage conventions and policies: namely, that a modern heritage management is a politically prioritised area which should protect a non-renewable resource that constitutes an important part of a holistic, sector-transcending environmental and resource management.⁵³ Archaeological conservation strategies, proposals and measures should ideally constitute a more considered, structured and theoretically-based praxis where values relating to knowledge, public experience and social and economic use-value provide the premises for conservation and are simultaneously protected by it. Aims and core principles along these lines have been formulated in Riksantikvarens strategic plans for archaeological conservation, a national heritage commission report of 2002, and governmental heritage white papers of 2005 and 2013, for example.⁵⁴

In the view of Terje Brattli, who has analysed current cultural heritage management policy and practice in Norway, the assimilation of cultural heritage into the new environmental management paradigm has resulted in its definition primarily as an environmental resource rather than a source for increasing cultural-historical knowledge. Knowledge-value is important, but primarily as a conservation criterion, and *in-situ* preservation of non-renewable archaeological deposits is prioritised over their excavation, a development which has arguably contributed to a decline in academic archaeological research, particularly with regard to medieval towns and cities.⁵⁵ This compulsion to preserve while maintaining a break with the past (by not facilitating the production of knowledge of that past) can be seen as another manifestation of the modern 'illness' of historicism.⁵⁶

That the anomalous status of post-medieval archaeology needed to be addressed in the wake of the new conservation regime was recognised by the National Commission on Cultural Heritage in 2002. Their Official Norwegian Report of that year identified post-Reformation archaeology as one of 17 prioritised areas in particular need of new heritage management policy. It recommended the compilation of a national inventory of the resource to provide a basis for a new strategy for its management.⁵⁷

The 2005 government white paper on cultural heritage recognised the ongoing loss of valuable national cultural heritage due to pre-existing limited conservation criteria. Citing Norway's obligations to the Valletta Convention (and others) in relation to a number of priority areas, it clearly formulated as a national aim the protection and securing of a 'representative' selection of cultural heritage sites and environments which document geographic, social, ethnic, economic and chronological breadth as sources for knowledge, experience, use and value creation.⁵⁸ The implementation of a new strategy aimed at establishing a framework and criteria for future management of an extended range of cultural heritage was specified. However, the extent to which post-Reformation archaeological heritage was to be included was not clearly formulated.

⁵² Gaukstad 2001: 133.

⁵³ Gaukstad 2001: 134-135; McLees 2006: 163; Brattli 2011: 275-276.

⁵⁴ Strategisk plan for forvaltning av arkeologiske kulturminner og kulturmiljøer 2011-2020 (Riksantikvaren 2010) - previous strategic plans are not publicly archived; NOU 2002:1 Fortid former framtid. Utfordringer i en ny kulturminnepolitikk; St.meld.nr.16 (2004-2005): Leve med kulturminner; St.meld. nr. 35 (2012-2013): Framtid med fotfeste.

⁵⁵ Brattli 2006; Brattli 2011: 276.

⁵⁶ Brattli & Larsson 2016: 16.

⁵⁷ NOU 2002:1 Fortid former framtid. Utfordringer i en ny kulturminnepolitikk. Kap. 3.4.

⁵⁸ 'Uten ny og høyere bevissthet om hva kulturarven i virkeligheten rommer av verdier på flere plan, vil landet miste verdifull kulturarv og kostbare ressurser... Regjeringens mål for kulturminnepolitikken er at mangfoldet av kulturminner og kulturmiljøer skal tas vare på som bruksressurser og grunnlag for kunnskap, opplevelse og verdiskaping (og) et representativt utvalg av kulturminner og kulturmiljøer som dokumentere geografisk, sosial, etnisk, næringsmessig og tidsmessig bredde skal gis varig vern gjennom fredning.' (St.meld.nr.16, 2004-2005. Leve med kulturminner: 15).

A clear statement in this regard was made in Riksantikvaren's ensuing strategic plan for the management of archaeological cultural heritage sites and environments 2011-2020, where it was expressed that in order to meet national aims at representativity, greater emphasis should be placed on securing the post-Reformation archaeological heritage and the knowledge resource it represents.⁵⁹ These documents signalled the start of a decade-long process leading to the instigation of a new national conservation strategy in 2015 (2.5).

Despite the coalescence of pre-existing laws within the current Cultural Heritage Act, and the recently adopted and formally stated recognition of the need for greater breadth and inclusivity regarding the conservation of cultural heritage, cultural heritage management has paradoxically become more sectorised and complex. In certain areas, this has resulted in differential treatment of heritage objects in a manner which conflicts with stated national aims regarding representativity and diversity, and a conservation policy ostensibly based on knowledge.⁶⁰

In his detailed presentation of Norwegian heritage management law and practice in 2001, Jørn Holme characterised the disparity in legal protection between standing post-Reformation buildings and archaeological remains as a weakness in cultural heritage management. He saw it as partly the result of the historical division of management responsibility and measures between different professions: namely, archaeologists on the one hand, and art-historians and architects on the other.⁶¹ The persisting organisational separation of the management of buried archaeological remains from that of historical buildings continues to have an adverse effect on the practice of cultural heritage management. As Tor Einar Fagerland concludes, post-Reformation archaeological heritage in particular has ended up in a managerial grey zone due to the history and sectorisation of the field of cultural heritage management.⁶²

Differentiation in the selective application of general conservation criteria between sectors was graphically demonstrated at the turn of the millennium in the form of a revision to the Cultural Heritage Act in 2000 in which legal protection was extended exclusively to buildings (including churches) constructed between 1537 and 1649.⁶³ The criteria that were formulated as grounds for this change are in themselves an instance of the application of the new heritage management philosophy of promoting knowledge as a decisive criterion for conservation, although in an arbitrary and exclusive manner.

The main compelling reasons for moving the limit for statutory protection forward to 1650 were that historical building research shows that tradition and continuity from the medieval period extended into the 17th century, and that the limit for automatic protection at 1537 failed to recognise and secure a building stock which was of great significance for research. Furthermore, the buildings were deemed to represent an important body of reference material for throwing light on the changes that occurred during this period.⁶⁴ The revision to the act shows that professional knowledge can play a decisive role in guiding decisions, and that biases identified by well-grounded professional inquiry can be rectified.

The question arises, however, as to why the same knowledge-based criteria were not deemed applicable to other material remains of the same period; specifically archaeological deposits and their contents of buried building remains? In partial explanation, one might see this omission as symptomatic of the long-established separation of research and conservation practices connected with historical buildings and archaeological remains in Norwegian heritage management noted above, and the

⁵⁹ *'Videre er det et uttrykt mål i Norsk miljøpolitikk at et representativt utvalg av særlige verdifulle arkeologiske kulturminner og kulturmiljøer fra ulike tidsepoker med deres egenart og variasjon skal sikres. For å nå dette målet må det blant annet legges større vekt på sikring av etterreformatoriske arkeologiske kulturminner og den kunnskapskilde disse representerer.'* Riksantikvaren 2010. Strategisk plan for forvaltning av arkeologiske kulturminner og kulturmiljøer 2011-2020.

⁶⁰ Sectorisation encompassing post-Reformation heritage includes maritime archaeology, Sámi archaeology, and technical buildings and structures, for example.

⁶¹ Holme 2001b: 151.

⁶² Fagerland 2011: 105.

⁶³ Lov av 3.3.2000 nr 14, § 4 tredje ledd. Holme 2001b: 10.

⁶⁴ *'...bygningshistorien viser tradisjon og kontinuitet fra middelalderen til utover på 1600-tallet. Videre at dagens grense for automatiske fredning ved 1537 ikke fanger opp og sikrer den bygningsmasse som har stor betydning i forskningssammenheng' [og at] 'de materielle restene representer et viktig referansemateriale i forhold til å belyse de endringene som skjedde...'*. Ot.prp.nr 50 1998-99, 14-15. (Proposition to the Odelsting, nr. 50).

privileged position of the former in conservation terms. One should also recognise that visible heritage, such as secular and religious timber buildings, have an innate advantage in this regard over the invisible heritage concealed in buried deposits, since their scientific and heritage values, physical deterioration and loss are more readily apparent and accessible to the curatorial 'gaze'.

The arbitrary and irrational nature of this differentiated conservation policy is exemplified by the paradox that, while a standing building and its cellar built prior to 1650 may be protected, surviving cellars of vanished buildings of the same age encountered on excavations are not. In addition to prioritising one class of cultural heritage and the interests of one professional area of expertise over another, the legislative revision of 2000 neglects the intrinsic historical connection between buildings and their spatio-temporal context; namely, the physically associated deposits and structures which contain material evidence relating to the buildings' construction, function and use. In urban contexts in particular, the physical juxtaposition of buildings, buried structures and closely associated deposits associated with their use comprises an *in situ* archive of great time depth and informational value (see my case study for example, Chapter 6).

Due to the sectoral divisions pointed out above, however, these two interrelated components - buildings and their physical contexts - are treated independently, each awarded a different legal status and knowledge value. While particularly detrimental to post-Reformation archaeology, it ironically also deprives building historians of a valuable archive of source material relevant to their own area of interest.

While on the theme of discriminatory and selective conservation practice, a particularly illustrative example is constituted by the way some heritage objects which are not legally protected by the Cultural Heritage Act's § 4 are nonetheless arbitrarily awarded protection. In the case of automatically protected church buildings, any internal fittings and furnishings (e.g. pews, pulpits, altars, baptismal fonts etc) which post-date 1537 are also regarded as protected simply by virtue of their physical and functional association with the building.⁶⁵ So, for example, even a 19th-century pew (*kirkebenk*) requires a special dispensation from Riksantikvaren to move it. This is justified as being necessary in order to provide an understanding of the church's history, as well as Christian traditions and important aspects of Norwegian cultural history, style history, use of materials and craft traditions extending from the medieval period to the present day.⁶⁶ On the other hand, objects and structures which lie in the ground beneath the standing church are subject to the same legal differentiation as archaeological remains, and are protected only if they pre-date 1537. This leads to a contradictory situation whereby important features associated with the church's use and history after 1537, such as the burials of its congregation and below-ground structural alterations, are not protected, while a 19th-century pew or grave plaque are. Yet again, we can detect the privileging of the visible over the invisible in the curatorial gaze.

This of course mirrors the dichotomy at the centre of this thesis, whereby post-1537 additions to an urban environment in the form of occupation deposits and buried structures lack protection, in contrast to post-1537 standing buildings and structures. However, the main criticism that can be levelled in this instance is that church furnishings and fittings post-dating 1537 are not awarded a different legal

⁶⁵ 'Ofte vil bare deler av det opprinnelige kirkebygget være bevart. Dersom dette er oppført før 1650, vil det normalt utløse fredning av hele kirken. Konstruksjonen og alle bygningsdeler herunder gallerier, korskranker O. L. Samt alt fast inventar som benker, prekestol, alterring, alter, orgel, døpefont m.v. vil i slike tilfeller være fredet. Dette gjelder selv om hele eller deler av dette inventaret er fra nyere tid.' Extracted from Rundskriv T-3/2000 Forvaltning av kirke, kirkegård og kirkens omgivelser som kulturminne og kulturmiljø, section 2.2., published by Kirke-, utdannings- og forskningsdepartementet and Miljøverndepartementet. <https://www.regjeringen.no/no/dokumenter/t-300-kulturminne-kirke/id278976/> (accessed 09.06.2018).

⁶⁶ 'Kirkebygget og dets utsmykning er i seg selv en kilde til tro for stadig nye generasjoner, samtidig som det er av stor betydning som ramme om det kristne trosliv, de kirkelige handlinger og som kilde til opplevelse. Et annet hovedhensyn er at kirkene med inventar og omgivelser synliggjør vesentlige sider ved norsk historie gjennom flere hundre år. Kirker og kirkegårder dokumenterer våre forestillinger og ritualer, vesentlige sider ved vår kulturhistorie, stilhistorie, materialbruk og håndverkstradisjoner fra middelalderen og frem til vår egen tid.' Extracted from Rundskriv T-3/2000, Forvaltning av kirke, kirkegård og kirkens omgivelser som kulturminne og kulturmiljø, section 1.1.

status to post-medieval urban deposits by the Heritage Act's § 4. Protection has been extended to them only by means of an arbitrarily selective and discriminatory *conservation practice*.

Furthermore, a number of churches built between 1650 and 1850 have been awarded a special conservation status, Riksantikvaren stating on its website that the fact that they are listed means they are defined as having national value and are worthy of conservation, and should be treated with the same respect as protected churches.⁶⁷

With the aforementioned revision of the Cultural Heritage Act in 2000 in which legal protection was extended exclusively to buildings (including churches) built between 1537 and 1649, this clearly demonstrates that standing buildings and structures are awarded preferential treatment over buried post-medieval archaeological deposits and their content in current conservation practice.⁶⁸ The question arises again as to whether this is a consequence of a sectoral hegemony of architectural historians and art historians in conservation policy and management?

A key related problem is the reluctance of heritage management practitioners to implement the provisions for protection of post-Reformation archaeology that exist in existing conservation management legislation: notably the current Cultural Heritage Act's § 15 and the 2009 Planning and Building Act's § 12-7.

With regard to the former, the lawyer Michael Kahn recently concluded that these provisions provide heritage management with the authority necessary to extend protection to all types of cultural heritage sites listed in the Act's § 4 without limitations and regardless of age. In Kahn's opinion, there is no weakness in the law itself; rather, the weakness lies squarely in heritage management's failure to implement the authority it affords them in this area.⁶⁹

In an attempt to explain this omission, he cites a number of obstacles to the use of § 15. These include the sectorisation of the professional and managerial regimes noted above, whereby one profession works exclusively with protected pre-Reformation archaeological heritage, while another works with the conservation of protected post-Reformation architectural heritage. A contributory factor in this context is the traditional prioritisation of non-archaeological sources in the study of the recent past, and the implications this has for prioritisation and value-setting in a heritage-managerial regime. In addition, he suggests that the less a managerial regime uses an existing provision, the harder it becomes to change and implement it as time goes by, due to the self-reinforcing institutionalised nature of established practice and routines: a form of managerial inertia, in other words. Furthermore, and not least, a major factor is the burden of time and resources required to apply the provision in individual cases, an impractical addition to the workload of an already overburdened and under-resourced heritage management.⁷⁰

These factors are important, but this managerial inertia is essentially rooted in, and perpetuated by, the fact that Norwegian heritage management authorities are not under any formal obligation to apply § 15 in the case of post-Reformation archaeological heritage. This is partly due to ambiguity in the wording of the relevant text, notably the use of the word 'may' rather than 'shall' (ie. 'The Ministry may protect structures and sites...' and 'Structures and sites that may be protected...'), and the fact that in conservation assessments, cultural-historical values must be weighed up against other socio-economic interests in each case.⁷¹

An overall conclusion that actors within national, regional and local heritage administration lack the incentive, guidelines or resources to determine or secure the heritage values of post-medieval archaeology in their planning procedures using existing legislation was supported empirically by the results of an interview survey of relevant managerial institutions conducted for the NIKU research project. Post-medieval archaeology is seldom taken into consideration due to an institutionalised perception that, because it does not enjoy the same degree of protection as pre-Reformation

⁶⁷ 'At en kirke er listeført, innebærer at den er definert som verneverdig og har nasjonal verdi. Det betyr at de skal behandles med like stor respekt som fredete kirker.' <https://www.riksantikvaren.no/Tema/Kirker> (09.06.2018).

⁶⁸ See also prioritisations in national urban conservation surveys outlined in 2.7 below.

⁶⁹ Kahn 2011: 69, 75-76.

⁷⁰ Kahn 2011: 70-73.

⁷¹ Kahn 2011: 73-74.

archaeology, it has no heritage value worth considering. In addition, interviewees were uncertain how protection using existing legislation might be implemented in particular instances.⁷²

Another legal avenue which Kahn suggests heritage management authorities could and should utilise in this respect is the Planning and Building Act's § 12-7 (hereafter PBA). He claims that because this particular provision places few restrictions on which kinds of cultural heritage sites can be protected, it opens for a distinctly more comprehensive approach to what can qualify for legal protection, including post-Reformation archaeological sites.⁷³

This act's intention was to supplement national conservation legislation by extending greater and more versatile local and regional heritage management responsibilities to local authorities through the use of the local councils' planning system and the PBA's provisions. In Kahn's opinion, the PBA's provisions open for assessment of the heritage and conservation value of post-Reformation archaeological sites on the basis of *local or regional heritage value*. This is in contrast to the Cultural Heritage Act, by which only post-Reformation archaeological sites which are deemed to have national or exceptional regional value may be considered for protection (but rarely are).⁷⁴

Kahn bases his claim on his interpretation of PBA's § 12-7 nr. 6 which provides councils with legal grounds for their own locally determined heritage conservation through 'provisions to safeguard the conservation values of buildings, other cultural heritage sites and cultural environments.'⁷⁵ Unlike the Cultural Heritage Act, no formal chronological limit is set for the objects to be considered worthy of conservation. Kahn sees no reason not to regard the term 'cultural heritage sites' in any other way than it is stipulated in the Cultural Heritage Act. Consequently, he concludes that, in practical terms, it is reasonable to assume that this paragraph can provide protection for cultural heritage sites, including archaeological sites, which are *not normally protected by the Cultural Heritage Act*, notably those that are deemed to have a local heritage value and that post-date 1537. Furthermore, he argues that the use of the term 'safeguarding' opens both for conservation of an archaeological site's heritage values by preservation *in situ* or, where deemed necessary, by other means, such as excavation.⁷⁶ The extent to which Kahn's interpretation of PBA's validity in this context withstands institutional scrutiny remains to be seen, however.

Kahn also points to other major stumbling blocks that are impeding broader implementation of existing law, or the extension of protection in the form of new legislation. By ratifying the Valletta Convention, the Norwegian government has pledged in principle to regard all traces and remains of the archaeological heritage *regardless of age* as worthy of protection. As Kahn notes, however, Norway is not under any legal obligation to fully ground its heritage policy in the Convention's articles, or to implement the Cultural Heritage Act's § 15 specifically in the case of post-medieval archaeology. This is because that, where a conflict between existing Norwegian legislation and the Convention arises, Norwegian law will take precedence, particularly in instances where the Convention is regarded as encroaching on the human rights of Norwegian citizens. Since any fuller implementation of § 15 by heritage management to actively include post-Reformation archaeological heritage would be likely to constitute a greater infringement on the property rights of its citizens, for example, this places limits on the extent to which Norway's heritage management policy and practice are bound by the articles of the Valletta Convention.⁷⁷

To my mind, pragmatic economic and political considerations have long been decisive factors driving the retention of the current conservation limit set at 1537; factors also deemed important by Kahn.⁷⁸ A concern to avoid impinging on private property rights has been noted in connection with the 1905 act, although this was to some extent overridden in the revision of 1920. However, while one might conjecture that concern for the socio-economic impact of an extension of legal protection has played a

⁷² Håpnes, Stomsvik & Kahn 2016.

⁷³ Kahn 2016: 37.

⁷⁴ Kahn 2016: 31-32.

⁷⁵ *'..bestemmelser for å sikre verneverdier i bygninger, andre kulturminner og kulturmiljøer..'*. Kahn 2016: 29-31.

⁷⁶ Kahn 2016: 31-32.

⁷⁷ Kahn 2011: 73-75.

⁷⁸ McLees 2006: 164-165; McLees 2007: 142; Kahn 2011: 73-75.

significant role in subsequent decision-making, explicit statements in that regard are to my knowledge rare.

One glaring exception, however, is an unambiguous statement in the government document dealing with the heritage act revision undertaken in 2000 mentioned above.⁷⁹ A suggestion made during the revision's consultation stage that the new limit of 1650 should encompass all forms of post-Reformation archaeological heritage and not just standing buildings and structures was rejected by the then Department of the Environment on the grounds that, while comparatively few buildings were affected by this change

*'the extension of protection to also include all types of cultural heritage would result in major restrictions on spatial planning and land use. In addition the need for, and consequences of, a more comprehensive extension have not been looked at. Against this background, the Department does not wish to allow all heritage sites pre-dating 1650 to be regarded as automatically protected.'*⁸⁰

In my opinion, this statement gives explicit expression to a tacit political assessment that the restrictions and costs already placed on private individuals, companies and public authorities by existing archaeological heritage protection were significant, and that any extension of this burden would be economically and politically unsustainable.

In his analysis of the Cultural Heritage Act's § 15, and heritage management's reluctance to implement it with respect to post-Reformation archaeology, Michael Kahn identifies economic and political considerations as principle obstacles, most notably the factor that any impact on private property needs to be firmly politically grounded. As he points out, since legal protection requires that restrictions are placed on private property, it is dependent on firm political acceptance.⁸¹ In the absence of such acceptance, heritage management has succumbed to inertia, and has opted not to activate available legislation.

The increasing socio-economic costs and restrictions associated with the management and excavation of medieval urban archaeology from the 1970s onwards has presumably featured in this managerial assessment. If so, one might conclude bluntly that the resources devoted to the comprehensive protection of pre-Reformation archaeology exist at the expense of post-Reformation archaeology.

2.4.4 Calls for change

In response to this managerial inertia, there have been a number of attempts to promote the value of post-Reformation archaeology during the past four decades. Critiques of the persistent omission of post-Reformation archaeology in Norwegian conservation policy and legislation have emerged intermittently from the late 1970s on. These have attempted to demonstrate that post-medieval archaeological remains possess a value as a unique source of knowledge of the recent past, and as a medium for public engagement with, and experience of, that past.⁸²

The archaeologist Erik Schia, writing a year in advance of the new Cultural Heritage Act of 1978, cogently presented the situation faced by urban archaeologists interested in tracing the longer historical lines of Norwegian urbanisation and providing a more socially representative record of the materiality of urban life in the post-medieval period.⁸³ As Schia pointed out, although strictly in contravention of the law, archaeologists in the course of their work in the medieval cities often documented and collected post-Reformation material for pragmatic reasons in the field; namely the practical difficulty in precisely

⁷⁹ Ot.prp.nr 50 1998-99 (Proposition to the Odelsting, nr. 50).

⁸⁰ (My translation). *'En utvidelse av fredningene til også å omfatte alle typer kulturminner vil bety store bindinger i forhold til arealplanlegging og arealdisponering. I tillegg er ikke behovet for og konsekvensene av en mer omfattende utvidelse nærmere utredet. På denne bakgrunn ønsker ikke departementet å gå inn for at alle kulturminner eldre enn 1650 skal anses som automatisk fredet.'* Ot.prp.nr 50 1998-99, 16.

⁸¹ Kahn 2011: 73, 75.

⁸² Schia 1978; Schia 1981a; Fasteland & Myhre (eds) 1983; Christophersen 2000; Roede 2001; McLees 2006, 2008; Fagerland & Paasche 2011; Paasche 2016.

⁸³ Schia 1978.

distinguishing the year 1537 in the deposits! However, this arbitrary 'grey zone' was not applicable in the case of urban centres founded *de novo* in the post-Reformation period – such as Christiania (the baroque precursor to modern Oslo), founded in 1624 – or of course, the rural communities of the period.

Although a few excavations took place in Christiania's *Kvadraturen* (its Renaissance-inspired grid plan) in the 1970s and early 1980s, these were mostly *ad hoc* rescue digs, although one systematic excavation at Revierstredet 5-7 was financed by the Norwegian National Bank (Norges Bank) in special



Figure 2.1. Excavations of caisson foundations at Revierstredet 5-7, Oslo. Photo: Riksantikvaren

circumstances (Fig. 2.1 and see further below). Interestingly, Schia refers optimistically in his article to the existence of a draft proposal for the new Cultural Heritage Act which opened for the designation of legal protection for fixed and moveable archaeological material on scientific or cultural-historical grounds *regardless of age*.⁸⁴ Needless to say, this proposal was not included in the Act's final draft. However, that it was formulated at all denotes that there was some level of concern within heritage management circles at the time regarding the conservation status of an archaeological resource that was demonstrably vulnerable in the face of Norway's accelerating modern urban development.

In 1981, Schia followed up his first published critique with the publication of the report for excavations at Revierstredet 5-7 in *Kvadraturen* in 1977.⁸⁵ He repeated his criticism, and with a number of colleagues, produced an exemplary multi-disciplinary study of the site and its material culture discussed in its historical, socio-economic and cultural context.⁸⁶ However, the excavation, post-excavation analysis and publication were funded by an extraordinary voluntary grant by the bank. Although it provided a qualitative standard in all respects (also for medieval urban archaeological reports of the time!), this

process and product proved to be exceptional and unrivalled until the equally exceptionally funded excavations in the Archbishop's Palace in Trondheim during the 1990s (see further below).⁸⁷

Following close on the heels of the Revierstredet publication came another ground-breaking attempt to raise the profile of post-Reformation archaeology in the form of a seminar held by the Association of Norwegian Archaeologists in 1982 which addressed the question 'Do we need a post-Reformation archaeology?'⁸⁸ The contributors sought to provide an assessment of archaeology's inherent value as a source of knowledge and its comparative value vis-à-vis other sources for the period, stressing the strengths and weaknesses of all sources, and the areas where archaeological material might contribute to a more comprehensive and detailed understanding of the period.

The need to better demonstrate and disseminate archaeology's information value to fellow scholars of the past, heritage managers and the public was stressed, as was the need to establish better interdisciplinary practices, and to actively exploit the unique research potential provided by the diverse range of source materials available for the period. The key problems of the expense of excavation, and museums' limited storage and conservation capacity in the face of the potential production of a voluminous finds material were also addressed. These obstacles - as well as a desire to establish research questions as guidelines for a more selective conservation policy generally within archaeology - would require archaeologists to establish clear professional aims and research questions to allow for and guide

⁸⁴ Schia 1978: 42.

⁸⁵ Schia 1981a.

⁸⁶ Though see Redin 1982 for a critique of its knowledge value.

⁸⁷ Nordeide 2000a; Nordeide 2003.

⁸⁸ Fasteland & Myhre 1983.

prioritisation, as well as attract potential private funding for post-Reformation excavations.⁸⁹ The seminar also presented a varied range of examples of the archaeological potential in a number of post-Reformation urban and rural contexts.

As this synopsis reveals, this seminar raised a range of topics that are still highly relevant for current evaluations of post-Reformation archaeology. The archaeologist Reidar Bertelsen's paper in particular demonstrated a sophisticated and prescient theoretical appreciation of post-Reformation archaeology's information and research potential, both within the field of archaeology itself and in an interdisciplinary context, and its potentially positive role within a research-grounded archaeological conservation policy.⁹⁰ However, that this view was far from widely shared in Scandinavian archaeology is evidenced by contemporary professional and academic voices espousing contrary opinions regarding its value.⁹¹ Indeed, the lack of academic engagement with post-Reformation archaeology in the decades following this must be regarded as a major contributory factor to its continued neglect by heritage management.

Following these attempts at raising post-Reformation/post-medieval archaeology as a subject of concern and debate in both heritage management and professional circles, no further major collaborative efforts at addressing the problem were made until the very end of the 20th century. We can presume that the immovable monolith of the Cultural Heritage Act, the lack of academic engagement, and the recalcitrance of politicians and cultural heritage management proved disheartening, and the small, overburdened archaeological profession's preoccupations with an ever-increasing workload in the area of medieval urban archaeology during the 1980s and 1990s diverted their attention from the problem. For instance, none of the contributors to a major professional seminar entitled '*Norwegian urban archaeology into the 1990s*' made any reference whatsoever to post-medieval archaeology!⁹² That said, some engaged professionals offered occasional valiant attempts to raise its banner, notably Erik Schia and fellow archaeologist Øystein Ekroll who used archaeological material from post-Reformation Oslo to highlight archaeology's potential as a means of questioning conventional historical- and architectural-based notions regarding urban development there in the 16th and early 17th centuries.⁹³

Post-Reformation material was nevertheless recorded and collected during the course of the country's many urban archaeological excavations (as Schia pointed out already in 1978), although this was a largely *ad hoc* and far from universal practice, and the excavated material was rarely, if at all, properly reported, let alone systematically analysed or curated.⁹⁴ One significant exception was the major excavation project in the precinct of the Archbishop's Palace in Trondheim during the 1990s where the entire stratigraphic sequence was excavated systematically, including all post-Reformation deposits and their content of structural remains and objects. This was facilitated by the site's national importance as the administrative centre of the medieval archbishopric, and, following the Reformation, as the regional centre for royal and military power. The excavations provided an extraordinary wealth and range of material evidence for a variety of activities in the precinct during the 500 years following the Reformation (see chapters 5 and 6).⁹⁵

The issue of protection re-emerged at the turn of the millennium with the call (unheeded) for legislative change made during the consultation stage for the revision to the Cultural Heritage Act in 2000 mentioned above. The disparity was again addressed at high bureaucratic level in 2002 with the publication of the National Cultural Heritage Commission's recommendations that post-Reformation

⁸⁹ See in particular Sørheim 1983; Sognnes 1983; Bertelsen 1983.

⁹⁰ Bertelsen 1983.

⁹¹ Christophersen 1981; Redin 1982.

⁹² Myrvoll et al 1991.

⁹³ Schia 1988; Ekroll 1991.

⁹⁴ Though see Schia 1987 for a report detailing post-Reformation material excavated in Oslo. Post-Reformation contexts were recorded arbitrarily on the Library Site in Trondheim, one of Norway's largest urban excavations of the 1970s and 80s. A summary excavation report of 1988 included an overview of post-Reformation structural evidence, but no such overview was offered in the Library Site research project's final publication in 1994. Christophersen et al 1988; Christophersen & Nordeide 1994.

⁹⁵ Nordeide 2000a; Nordeide 2003.

archaeological heritage be inventorised, and a representative selection safeguarded in line with Norway's obligations under the Valletta Convention.⁹⁶ The need for the inventorisation of the post-Reformation archaeological resource was also stated by Riksantikvaren the same year in an internal needs-evaluation document, though no further practical steps were taken at the time.⁹⁷

That the value of post-Reformation archaeology was now a topic of internal consideration within Riksantikvaren is also shown by the fact that in 2004 Riksantikvaren formally allowed NIKU to excavate post-medieval deposits and human burials at two urban sites in Trondheim by means of special dispensation. Riksantikvaren explicitly cited the value of post-Reformation archaeological remains as a source of knowledge in these particular contexts as grounds for their decision.⁹⁸ However, these remain exceptional instances, and the vast majority of urban and rural archaeological dispensation cases still allow post-medieval terrestrial deposits to be removed without archaeological documentation (although see 2.5 for some recent national developments).

A more concerted attempt at raising the problem began in connection with an internal multidisciplinary research project on cultural heritage administration and research conducted by The Norwegian Institute for Cultural Heritage Research (NIKU) between 2001 and 2005.⁹⁹ My own contribution focussed on the continuing impasse with regard to the protection of post-Reformation archaeology, identifying it as a central problem in Norwegian heritage management and historical research which was in need of urgent appraisal. My article in the project's final report provided a critical account of the current managerial inertia, as well as a suggested method for characterising the urban archaeological resource and assessing its information potential.¹⁰⁰ This was followed in 2007 by the publication of my article entitled 'The neglected cultural heritage: post-Reformation archaeology' in Norwegian cultural-heritage management's flagship periodical in an attempt to highlight the problem in a heritage management forum.¹⁰¹

This groundwork inspired and informed NIKU's successful application to the Norwegian Research Council for a grant to conduct in-depth research into the management and research potential of the post-Reformation archaeological resource, the 4-year interdisciplinary research project (2009-2012)¹⁰² that has provided the *raison d'être* for the present study.

This project published its first anthology of papers in 2011, covering a range of topics and perspectives within the fields of post-medieval archaeological management and research, both nationally and internationally.¹⁰³ The aim was to present the nature of the current heritage management problem from historical, legal, managerial and archaeological perspectives; examine developments and comparative practices in the area elsewhere in Scandinavia (principally Sweden) and Europe; and provide a first attempt at evaluating current Norwegian management practice and archaeological research potential.

A second anthology in 2016 followed up the same themes.¹⁰⁴ It placed particular focus on policies and practices that marginalise post-medieval archaeological heritage management in Norway, and outlined a legal alternative to the Cultural Heritage Act which potentially offers an alternative means of securing post-medieval archaeology. It also examined the role of materiality and archaeology in

⁹⁶ NOU 2002:1 Fortid former framtid. Utfordringer i en ny kulturminnepolitikk. Kap. 3.4.

⁹⁷ Riksantikvarens behovsanalyse 2002. Now absent from Riksantikvaren's website. McLees 2006: 169.

⁹⁸ TA2004/13 & 15 Nordre gate 11, and the site of the Visitors' Centre at Nidaros Cathedral (TA2004/21). At the former, the source value of both medieval and post-medieval deposits up to 1841 and an intact vaulted 17th-century stone cellar were judged to be best secured through an individual decision based on CHA's §15 ('vedtaksfredning') which allowed for the combination of archaeological excavation with the establishment of a protected area. McLees 2006: 168.

⁹⁹ Egenberg et al 2006.

¹⁰⁰ McLees 2006.

¹⁰¹ McLees 2007.

¹⁰² LAND: The post-medieval archaeological resource in and around Norwegian towns: heritage potential, protection and management. A 'Miljø 2015' project. NFR project number 190818/S30.

¹⁰³ Fagerland & Paasche 2011.

¹⁰⁴ Paasche 2016.

providing a fuller understanding of the recent past, and presented a variety of case studies detailing archaeology's contribution.

Writing in the project's 2011 publication, Terje Brattli concluded that, despite a growing appreciation of the information potential of post-Reformation archaeology resulting from theoretical developments within the discipline of archaeology, the continued lack of legislative change probably results from the fact that the Cultural Heritage Act has been, and still is, a significant stabilising factor which has contributed to a form of 'discursive exclusion' of post-Reformation archaeology.¹⁰⁵ In an actor-network-inspired analysis of post-Reformation archaeology and its place within the current heritage management discourse, Brattli asserts that at the core of our current dilemma lies the fact that post-Reformation *archaeological material* has not - and may never - become incorporated fully in the conservation phenomenon he refers to as the 'heterogeneous quasi-object' *Nyere tids arkeologi* (Post-medieval archaeology). This quasi-object is a complex relational network formed and defined by the interaction of numerous human and non-human participants (actants), including many not normally associated with archaeological material.¹⁰⁶ Legislation and institution-building are two particularly dominant factors in this definition process. In his opinion archaeological material's role as actant in the formation of the conservation object *Nyere tids arkeologi* is significantly more limited than is desirable or necessary seen from a research perspective.¹⁰⁷

According to Brattli, the dominant actant in the formation of the quasi-object is heritage management, and the way it defines the conservation object - namely as a non-renewable environmental resource - is not compatible with the archaeological research community's definition of it as a source of cultural-historical knowledge. In a worst-case future scenario, there is a danger that the latter definition may become irrelevant or marginalised in the definition and practice of future cultural heritage policy in this area, where post-medieval archaeology becomes a conservation object without any significant demand for generating archaeological knowledge. The end result may be the definition of an archaeological material that, in a current manifestation of Latour's 'illness' of historicism referred to above, represents a past with which we have no connection, and which will consequently become the subject of modern 'maniacal conservation'.¹⁰⁸

Despite his pessimism regarding the amount of value placed in the generation of cultural-historical knowledge by the current managerial regime, Brattli does note that there are signs that post-Reformation archaeology is at last becoming a viable topic for consideration in a modern discursive context; a development signalled in particular by the Norwegian Research Council's grant to NIKU's post-medieval research project.¹⁰⁹ The following section will detail some further recent developments.

2.5. Current status: growing engagement, knowledge production, limited conservation

NIKU's Research Council-funded project has placed post-Reformation archaeology firmly on the heritage-management agenda, representing as it does high-profile recognition of a major problem in Norway's heritage management regime and archaeological research environment, and an incentive to address it fully. The Norwegian Research Council's interest and support must be seen in the context of the climate of growing engagement with the archaeology of the last 500 years by the international archaeological community during the first two decades of the 21st century.¹¹⁰ This is a development which is also belatedly, and tentatively, manifesting itself in professional, academic and managerial circles in Norway.

This nascent engagement in Norway has been born of professional frustration at the ongoing loss of source material whose value has been abundantly demonstrated in the course of a global wave

¹⁰⁵ Brattli 2011: 280.

¹⁰⁶ Other actants connected with this heterogeneous quasi-object include politics, economy, law, social science, technology, power relations, natural sciences, and the past. Brattli 2011: 272-275; Brattli & Larsson 2016: 13.

¹⁰⁷ Brattli 2011: 275.

¹⁰⁸ Latour 1993: 69.

¹⁰⁹ Brattli 2011: 272-275, 280.

¹¹⁰ For a concise overview of developments internationally, see Gaimster 2011.

of wide-ranging exploration of the material remains of the recent past, and the theoretically revitalised discipline of historical archaeology in particular (see 2.6 and 3.4). It has gained momentum in the form of a broadening and accelerating scale of information gathering and dissemination by Norwegian archaeologists and others attached to a number of non-academic cultural heritage institutions. In addition to NIKU, the Norwegian Maritime Museum, the City of Oslo's Cultural Heritage Management Office¹¹¹ and a number of county councils have excavated and reported an increasing number of post-Reformation contexts. The following examples show their variety: a royal manor house; the mansion in which the National Constitution was formulated and signed in 1814; rural farmhouses and crofts; urban plots and houses, streets and town squares; graveyards; a mining town; a small provincial seaport; fortifications in urban and rural contexts; Nazi concentration camps; harbours and waterfronts; craft and industrial sites; battlefields; and even rubbish dumps at the artist Edvard Munch's country house.¹¹²

Oslo has seen a particular density of archaeological investigations, many of them large-scale, which have dealt with post-medieval archaeological remains. The majority have been concentrated in the harbour area (Bjørnvika) in connection with substantial urban redevelopment, but investigations have also been conducted in and around the 17th century baroque grid of Christiania.¹¹³

It is interesting - though disappointing - to note that the impetus and inspiration for this growing national engagement with post-medieval archaeology has largely lain outside Norway's academic institutions. However, the University of Tromsø has spearheaded an extension of academic interest into the field of 'contemporary' archaeology, including a study of the abandoned 20th-century mining town of Pyramiden in Svalbard, while the University of Trondheim has explored the 'painful archaeological heritage' of a Nazi concentration camp near Levanger in central Norway.¹¹⁴

The yield of this erratic archaeological harvest may not be great in terms of numbers or volume, but the variety of remains revealed by these projects has provided a multiplicity of materially informed histories at a range of scales and in a diversity of social and historical contexts. For example: the nature of rural and urban households, urban plots and neighbourhoods, the organisation and output of craft workshops, the previously undocumented development of Oslo's early post-medieval harbour, and even aspects of the artist Edvard Munch's domestic and artistic life. In the process, this has demonstrated just how much of the recent past is otherwise undocumented. For example, the mundane and extraordinary practices of everyday lives of individuals and communities that are represented in the material detritus they left behind; material signatures of power and its contestation; the material nature of wealth and poverty; and the character of urban and maritime infrastructure.

Of especial interest is the emergence of new, archaeologically-inspired histories at small-scale rural and urban levels. For example, the surprising discovery at an isolated 18th-century rural smallholding in Telemark of a range of imported goods that must have been obtained through trade and contact with urban areas, indicating the occupants were not of as modest means as written sources would suggest. In addition, the production of a range of new insights into the post-medieval social, economic and topographical development of the small coastal seaport of Son in Østfold through fine-detailed, close cross-disciplinary collaboration by historians and archaeologists. Encouragingly, these cases were recently published in Norway's leading journal for local and regional history.¹¹⁵ Indeed, that post-medieval archaeology and contemporary archaeology are now gaining recognition within mainstream archaeological academic consciousness is evidenced by the unprecedented inclusion of a thematic section on these topics in a recent issue of a prominent Norwegian archaeological journal.¹¹⁶

Despite this encouraging trend, it should be noted that most of these excavations, surveys and watching briefs have been undertaken in exceptional circumstances where it was possible to utilise

¹¹¹ Norsk maritim museum; Byantikvaren i Oslo.

¹¹² E.g. Karlberg 2006; McLees 2006: 178-180; Lia 2010; Pettersson 2010; Pettersson 2014; Solem et al 2011; Vangstad 2011; Amundsen et al 2012; Falck et al 2012, 2013; Stomsvik 2014, 2016; Hesjedal 2016; Molaug & Risåsen 2016; Rommetveit Celius (unpublished); McLees et al 2015; Vangstad et al 2016; Eliassen et al 2016, 2017; Sethre 2017.

¹¹³ Vangstad 2011; Hauge & Sjørgård 2016.

¹¹⁴ Andreassen et al 2010; Jasinski et al 2012.

¹¹⁵ Sethre 2017; Eliassen et al 2016, 2017.

¹¹⁶ *Primitive tider* 18, 2016.

existing legislation or gain funding by means of private or institutional donations or state grants. Information of comparable value to that which they have produced disappears elsewhere without record on a daily basis.

Major recent excavations in the harbour area of Oslo (Bjørnvika) are a case in point, amply demonstrating the arbitrary and contradictory nature of a heritage legislation which is not predicated on knowledge value, but primarily on the protection of a specific class of heritage object. Excavations in marine deposits here have brought to light a plethora of material remains - including waterfront structures, maritime vessels, traded commodities and urban refuse - which have provided new and previously undocumented insights into Oslo's early post-medieval development.¹¹⁷ Paradoxically, these excavations, and the documentation and curation of the post-Reformation material deriving from them, have been facilitated by a 'grey zone', or loophole, in existing legislation principally designed to protect wrecks and their cargoes from plundering by divers.¹¹⁸

The Cultural Heritage Act's § 14 automatically protects ships, boats and their cargoes that are more than 100 years old. The management authorities have chosen to interpret archaeological material which rests in marine deposits on the seabed in the harbour area as material which derived from ships' cargoes, deemed to have been either thrown overboard, or having entered the deposits from sunken vessels. Conversely, any material judged to have entered the marine deposits from land, through rubbish dumping or land-reclamation processes for example, does not enjoy the same protection. Neither do the waterfront structures that post-date 1537 which form the chronologically, spatially and activity-related context for these deposits, and which comprised essential material components of urban social and economic development of the time.¹¹⁹

This is arguably an example of an evolving form of dispensation practice that selectively interprets the law in ways that extend protection further than lawmakers originally intended. While this evolving interpretation of the ambiguities in the law has the merit of allowing the investigation of parts of a material archive that has undoubtedly added to our understanding of Oslo's historical development, it throws into stark relief the irretrievable loss elsewhere of contemporary material remains with equivalent information potential. This selective dispensation practice represents an arbitrary and contradictory differentiation of archaeological material, the value of which is acknowledged and realised purely on the basis of a tenuous and fortuitous connection with a particular legally-defined protected context. Material of comparable age and information value that is associated with other contexts, such as the dwellings, backyards or workshops of urban inhabitants, cannot enter the historical discourse to provide insight into the multiplicity of urban practices and social and economic developments in the urban area situated behind the waterfront.

The growing engagement and desire to highlight the varied information potential in the archaeological resource and its ongoing loss to modern urban development in particular, is also extending to attempts to map its character and potential in wider contextual terms, rather than simply responding piecemeal on a case-by-case basis. In 2014 the City of Oslo's Cultural Heritage Management Office (Byantikvaren) established a research project funded by Riksantikvaren designed to map and assess the archaeological resource in and around historic Christiania (early modern Oslo), and communicate its knowledge value to planning authorities and the public.¹²⁰

Riksantikvaren has involved itself in this process of engagement intermittently, occasionally turning its gaze from the conservation of the post-medieval built environment towards the investigation

¹¹⁷ Vangstad 2011; Falck et al 2012, 2013; Vangstad et al 2016.

¹¹⁸ Furan 2012: 8. The ambiguities in the law have opened for varying and shifting interpretations by management authorities as to what can be excavated and which professional body should be responsible for excavating it in a competing regime of land-based archaeologists (NIKU) and marine archaeologists (NMM). This is too complex to go into here, but see Furan 2012 for a detailed analysis.

¹¹⁹ Furan 2012: 8-12. A number of structures have nonetheless been documented, due mainly to the difficulty during excavation of determining which side of 1537 they were built! Furthermore, the difficulty of determining prior to or during excavation whether material in marine deposits derives from boats or not is demonstrated by the fact that a proportion of the finds material retrieved has transpired to be objects used elsewhere and dumped here as refuse.

¹²⁰ Hauge & Sørsgård 2016.

of the associated buried archaeological archive. This engagement has to date been somewhat *ad hoc* and mixed in terms of success and meaningful managerial significance, as three cases from mid-Norway outlined below will illustrate. Before turning to them, however, it should be acknowledged that Riksantikvaren has recently set in place a more fundamental and wide-reaching managerial strategy which explicitly encompasses post-medieval archaeology: namely its national conservation strategy for cultural heritage management for the 5-year period up to 2020.¹²¹

As already mentioned, the need for a national inventory of the post-Reformation archaeological resource as a basis for future conservation value assessments was identified by the National Cultural Heritage Committee in 2002. This was followed up in part in the government white paper of 2004-2005 by a decision to compile an updated and more culturally, socially and chronologically representative list of heritage sites for automatic protection by 2020, including post-Reformation archaeological sites.¹²² The process was instigated by Riksantikvaren in 2011 in the form of a strategic plan, and the latest government white paper on national cultural heritage management galvanised the process further, identifying a range of heritage areas and objects requiring prioritisation in terms of care and protection. Notably, it explicitly identified post-Reformation archaeology as one of the prioritised areas of concern in need of attention, inventorisation and legal protection.¹²³ The result of this process was formalised with the publication in 2015 of Riksantikvaren's aforementioned national conservation strategy. This document lists ten thematic areas which are prioritised in a new national conservation programme. Post-Reformation archaeological remains form one priority area; more specifically, archaeological deposits in towns and other centres, farm mounds (*Nor. gårdshauger*), and important post-medieval churchyards and graves/grave monuments. In addition, the majority of the other thematic areas are likely to contain post-Reformation heritage remains worthy of legal protection.¹²⁴ The programme's plan of action includes the development of methods for the mapping, evaluation and prioritisation of post-Reformation archaeological heritage sites.¹²⁵

This document demonstrates that post-Reformation archaeology is now recognised as an area of strategic policy interest and planning by Riksantikvaren.¹²⁶ It can be regarded as a welcome managerial acknowledgment of the imperatives driving the recent years of professional engagement with post-medieval archaeology outlined above. It is also a long-overdue nod towards Norway's obligations with regard to the Valletta Convention and the stated intention of the government white paper of 2005 to implement a conservation policy based on the preservation of a representative selection of the nation's cultural heritage resource.

That said, a critical note must be sounded. Riksantikvaren's new conservation strategy is restricted to permanent heritage sites of national value which are protected by provisions in the current Cultural Heritage Act. It yet remains to be seen exactly what types of site and material it will encompass, and how comprehensive and effective the conservation process will be in practice. Major uncertainties and questions remain in this respect: for example, what range of material remains will be considered; which conservation criteria and laws will apply; and what will constitute a 'representative' sample?

¹²¹ Fredningsstrategi mot 2020 for kulturminneforvaltning. Riksantikvaren 2015. The strategy is limited to sites and monuments which can be protected under the Cultural Heritage Act's §§ 15, 19, 20, 22a and 22.

¹²² St.meld.nr.16 (2004-2005): Leve med kulturminner.

¹²³ St. meld.nr.35 (2012-2013): Framtid med fotfeste: 24, 26-38. '*Det er også behov for å prioritere arkeologiske kulturminner fra tiden etter 1536, det vil si det som finnes av fysiske spor i bakken etter for eksempel tidlig industri, skogbruk, militær virksomhet og byenes utvikling særlig fra 15- og 1600-tallet...*'. (My translation: There is also a need to prioritise archaeological sites and monuments from the period after 1536; that is to say, that which is to be found of physical buried traces of for example early industry, forestry, military activity, and urban development particularly during the 16th and 17th centuries....).Ibid.: 37.

¹²⁴ Defence and military history; National minorities; Outfield heritage sites; Trade; Community and democracy; Recreation, leisure and public health; Mobility; Industry; Post-industrial settlement.

¹²⁵ Riksantikvaren 2015: 13.

¹²⁶ Riksantikvaren's research programme for medieval archaeology published in 2015 also identifies post-Reformation archaeology as an area which is academically and methodologically closely tied in with medieval urban archaeology and in need of research. Johannessen & Eriksson 2015: 8, 178.

It is also important to note that the strategy aims at instituting a form of permanent protection on what in national terms will inevitably be a limited number of *selected* sites. Consequently, while providing welcome and much-needed protection, these sites' terms of protection will still prohibit their investigation by scientific excavation. Consequently, their cultural-historical information potential will lie dormant and unrealised, and while protected from destruction or damage through building work, for example, they will still be prone to long-term environmental degradation. Furthermore, given that the Heritage Act's 1537 limit will still apply to *unselected* post-Reformation terrestrial archaeological heritage sites and material, the vast majority of the resource will continue to be subject to deterioration and destruction without archaeological registration.

That the exact nature and extent of this strategy's legal and practical implementation is currently uncertain, and subject to wider socio-political considerations, may be inferred from the fact that, at the time of writing, Riksantikvaren has still not initiated its survey of the resource to identify objects for conservation which was supposed to begin in 2016. Furthermore, as will be outlined below, the recent pioneering attempt by Riksantikvaren to integrate post-medieval archaeology within a plan for an urban conservation area in the mid-Norwegian town of Levanger utilising the national strategy's plan of action has recently been rejected by the Ministry of Climate and Environment. These obstacles give grounds for concern regarding governmental commitment and intentions, the future effectiveness and implementation of the strategy, and the extent of protection it will in reality afford post-medieval archaeology.

As stated, the managerial and legal processes regarding the protection of post-medieval archaeology laid out in the 2015 national conservation strategy document have recently been applied and tested in relation to the historic town of Levanger. In 2008, Riksantikvaren set in motion a process aimed at instituting a comprehensive 'cultural environment' (*kulturmiljø*) conservation plan for the built environment in the town centre. As an example of a well-preserved historical regional town, the aim was to highlight its urban development, cultural history and architecture, and protect its unique stock of late 19th-century timber buildings.¹²⁷

Levanger grew from a medieval settlement, the remains of which are already protected. However, moves were eventually made to extend protection to post-medieval archaeological deposits as part of an attempt at conserving the material evidence of urban development in a holistic, collective and long-term perspective. The conservation process sought and received active and enthusiastic engagement from the local council and population, and NIKU and the County Council undertook trial excavations to define the nature and extent of deposits.¹²⁸

In 2014, Riksantikvaren sent out a conservation plan proposal for consultation.¹²⁹ This explicitly included selected areas of post-medieval archaeological deposits within its list of valued conservation objects. Riksantikvaren's argumentation and procedure related to this case are consistent with the criteria enshrined in its newly framed national conservation strategy. While it primarily identifies the Cultural Heritage Act's § 15 as the legal basis for the protection of post-medieval archaeological remains, the strategy document also refers to a passage in *Stortingsmelding nr.16* (2004-2005) which states that (my translation and emphasis) 'boats, buildings, *other types of cultural heritage monuments and environments* from after the Reformation (1536) can be protected by an individual resolution after a concrete assessment (§§ 14a, 15 og 20)'.¹³⁰ Reference to § 20 here is broad and not confined to buildings, and in its Levanger argumentation, Riksantikvaren has chosen to regard post-medieval archaeological deposits as 'other types of cultural heritage monuments' covered by § 20.

Although no legal basis is cited, the clearly stated recognition in the most recent government white paper on cultural heritage management of the need to protect post-Reformation archaeological heritage, including traces of post-medieval urban development, provides a further point of departure

¹²⁷ <https://kulturminnesok.no>. Levanger sentrum kulturmiljø (K22) / Fredet kulturmiljø (accessed 04.05.2018).

¹²⁸ Brattli & Brendalsmo 2016: 62-65.

¹²⁹ <https://www.riksantikvaren.no/Aktuelt/Hoeringer-og-kunngjoeringer/Sentral-hoering-Levanger-kulturmiljoefredning>. (04.05.2018).

¹³⁰ *Båter, bygninger, og andre typer kulturminner og kulturmiljøer fra etter reformasjonen (1536) kan fredes ved enkeltvedtak etter konkret vurdering*. St.meld.nr.16 (2004-2005) Leve med kulturminner: 13.

for the Levanger conservation plan.¹³¹ In the national conservation strategy document itself, Levanger is identified as an example where Riksantikvaren is actively working to conserve post-medieval archaeology in selected relevant conservation cases.¹³²

Under a number of the national conservation areas, or themes, specified in the strategy programme, post-medieval archaeology is identified as a central object of conservation, for which the Cultural Heritage Act's § 20 is seen as being the relevant legal basis. In addition, the strategy states that, in choosing what and how much should be conserved in order to improve representativity, the main criteria to be given weight (in addition to conservation value) are cultural heritage monuments or environments which *evince completeness and connections*.¹³³ These criteria could in this instance be interpreted as encompassing the historical record of urban development represented in the buried soil archive as well as the visible architectural archive. In other words, these deposits' essential value in this context lies in their being part of a *collective* body of source material about a particular historical development in time and space.¹³⁴

The case for protecting Levanger's post-medieval deposits as an integral part of the historic urban cultural environment was formulated in a manner consistent with the aims and provisions stipulated in the new national conservation strategy. Unfortunately, despite Riksantikvaren's efforts, Levanger's post-medieval deposits will not gain protection under Norwegian heritage law. After prolonged review, the Ministry of Climate and Environment has recently decided that § 20 cannot be used to protect post-Reformation archaeological deposits as part of an urban cultural environment (kulturmiljø). In the department's view, existing political and legal documents regarding protection of cultural environments, including § 20 itself, refer only expressly to the *visible - 'external' - values* of heritage objects and environments as valid criteria or objects which can be protected under cultural heritage law. Consequently protection cannot be extended to *non-visible* heritage objects or environments, such as archaeological deposits, even if they are regarded as important sources of knowledge.¹³⁵

The previously noted bias of the curatorial gaze towards privileging the conservation values and status of the built, the tangible and the visible over those of the invisible is again detectible in this top-down bureaucratic interpretation of the wording and practice of existing legislation, and its perceived limitations regarding the invisible heritage archive and its value. Despite ultimately failing as an exercise in establishing a holistic management and protection of post-medieval urban cultural heritage, the

¹³¹ St.meld.nr. 35 (2012-2013): Framtid med fotfeste: 37.

¹³² Riksantikvaren 2015. Fredningsstrategi mot 2020 for kulturminneforvaltning, Vedlegg 2: 5.

¹³³ '...kulturminner og kulturmiljøer som viser helheter og sammenhenger': Riksantikvaren 2015: 6.

¹³⁴ The case for preservation along these lines is clearly and publicly stated in Riksantikvaren's searchable cultural heritage databases *Kulturminnesøk* and *Askeladden*: (my translation) 'The archaeological deposits that are preserved in the centre of Levanger are an important source of knowledge about the development of this place. They show that urbanisation trends existed in the area for more than 1,000 years, from its origins as a farm/church site to a coastal settlement, rural settlement and finally market town. There is great dynamism in the development of coastal settlements, trading places, towns and cities in Norway between the 16th century and the 1800s especially, with a shifting transition between "countryside" and "town" and many forms of transition. Archaeological deposits younger than 1536 currently have no formal protection. We will have a large gap in our understanding of Levanger's history and development if the archaeological deposits in the centre are not preserved, and it is therefore important to secure them as a source.' [https://kulturminnesok.no/Levanger-sentrum-kulturmiljo-\(K22\)/Fredet-kulturmiljo](https://kulturminnesok.no/Levanger-sentrum-kulturmiljo-(K22)/Fredet-kulturmiljo) (accessed 04.05.2018).

¹³⁵ 'I departementets vurderinger av lovforslaget (s. 16) vises det til at bestemmelsen vil hjemle "vern av både ulike former for kulturlandskap og helhetlige bygningsmiljøer". I dette ligger det at det er miljøenes ytre uttrykk som søkes bevart. I departementets merknad til selve bestemmelsen (s. 25) beskrives formålet slik at det er sammenhengen og helheten i miljøet som skal tas vare på. De eksempler som er brukt er alle knyttet til ytre, synlige verdier; så som et bygdesentrum, en gård, et seterlandskap eller et gateløp. Dette er alt de sammenhengende kulturminnenes synlige ytre rammer. Det er ingen holdepunkter i dette lovarbeidet for at kulturmiljøets rekkevidde også kunne omfatte kulturlag.... Slik § 20 er formulert, beskrevet i forarbeidene og praktisert er det etter departementet syn ikke hjemmel for at etterreformatorisk kulturlag kan inngå i en kulturmiljøfredning.' Extracted from *Rekkevidden av en kulturmiljøfredning*. Memorandum from the Ministry of Climate and Environment dated 28.11.2016. (Public document provided to the author by Riksantikvaren).

Levanger project may nonetheless be deemed more successful as an experiment in democratic heritage decision-making at a local level, bringing together experts and non-experts in a mutually beneficial discursive constellation. Although acting with different motives and goals, local people, politicians, and archaeologists from the Directorate for Cultural Heritage and NIKU found common ground and engagement in their shared desire to find new ways to promote and protect Levanger's historic remains, both visible and invisible.¹³⁶

Two other cases in mid-Norway in which Riksantikvaren has played an enabling role demonstrate the ambivalent situation in which post-medieval archaeology still finds itself. While they undoubtedly constitute an encouraging recognition of the archaeological resource's knowledge value, and facilitated the recording and collection of material which would otherwise have been removed without documentation, they nonetheless represent exceptional, limited and *ad hoc* instances of special managerial treatment.

Røros mining town, founded in the mid-17th century c. 100 km to the south-east of Trondheim, is a World Heritage Site, a status awarded due to its well-preserved historic timber buildings, mines, slag heaps and other traces connected with over 300 years' copper mining and smelting. Until 2013, conservation authorities directed all their efforts exclusively towards the built environment and industrial sites, while the buried urban archaeological heritage was largely neglected. Previous observations in the town indicated the existence of archaeological deposits and structures. When a major infrastructure renewal project was planned by the local council in a number of streets, South-Trøndelag County Council asked Riksantikvaren for extraordinary funding to finance a watching brief of the work, citing an agreement signed by all relevant authorities to strive for 'best practice' in managing the town's post-medieval cultural heritage. Funding was allocated, and the watching brief took place in 2013 and 2014 (Fig. 2.2). Among other things, the results revealed traces of earlier road surfaces, indications of changes in the urban plan and street topography, and possible traces of the original copper smelting works.¹³⁷



Figure 2.2. Watching brief excavations in Bergmannsgata, Røros in 2013.¹³⁸

No public statement exists in which Riksantikvaren explains why it chose to fund this project. I assume, therefore, that this decision resulted from the fortuitous convergence of several factors: namely, Røros's special status as a World Heritage site; the County Council's engagement and initiative; and Riksantikvaren's internal formulation process with regard to their new national conservation strategy for 2015-2020.

¹³⁶ Brattli & Brendalsmo 2016: 67-68.

¹³⁷ Stomsvik 2014; Stomsvik 2016.

¹³⁸ Photos: C. McLees, NIKU.

The council's initiative arose from their long-term involvement with the heritage of Røros, and their participation in NIKU's NFR-funded research project into post-medieval archaeology. Their awareness of the problems and contradictions associated with the neglect of archaeology in a place where much heritage management 'capital' had previously been invested, prompted them to suggest the implementation of the 'best practice' agreement in this context, thus providing a suitable means of circumventing the problem. This coincided, I surmise, with a desire by Riksantikvaren (unstated) to apply a more holistic heritage management strategy appropriate to Røros's special status, a step in keeping with the thinking behind their then-evolving future national conservation strategy. This was possibly also allied with a sensitivity to the conspicuousness of the physical consequences of the current conservation dilemma in this internationally listed heritage site. Although it would have been consistent with Norwegian law *not* to allow archaeological documentation, this would have resulted in a very publicly visible process of undocumented destruction of a large part of Røros's buried archaeological heritage. This would have compromised the integrity, spirit and meaning of the town's international heritage status, and, arguably, also the professional integrity of the national authority charged with its conservation.

Although a commendable rare exercise in recording the archaeology of a provincial town, this was conducted in the form of a watching brief, with restrictions on the level of documentation and retrieval of material for museum conservation. It also remains to be seen whether future public infrastructure projects in the town, or even more crucially, removal of deposits within the residential properties and industrial sites, will be subject to archaeological documentation.

There are some signs that this may occur to some extent. Occasional small watching briefs have been undertaken recently, the result of an understanding between the local council and the county council that this can take place in appropriate evaluated instances. A process is underway to revise the current urban regulatory plan to formalise rules and regulations by which the town's archaeology can be taken into account in future infrastructure projects and the like.¹³⁹ As proposed in the case of Levanger, certain parts of the town may perhaps be designated as archaeologically sensitive areas with some form of protection. This is a slow process, however, and it remains to be seen how this might be implemented in a town with conflicting interests linked to its heavy dependence on tourism.

Another case in which post-medieval urban deposits were officially allowed to be excavated occurred recently in Trondheim. In 2015, Riksantikvaren and Trondheim City Council provided extraordinary funding to cover the archaeological documentation and retrieval of post-medieval deposits and finds material at the city's main market square (*Torvet*). This arose as a result of the local council's plans to refurbish the square, a central element in the baroque urban plan laid out after a major urban fire in 1681.

The square was constructed over earlier post-medieval, medieval and prehistoric deposits. Following normal practice, the council was granted legal dispensation to remove medieval and prehistoric deposits prior to building work, on the condition that these were excavated and documented archaeologically. The overlying, unprotected post-medieval deposits would normally have been removed by machine with little or no documentation. However, in its dispensation document, Riksantikvaren stated that it would be providing extraordinary funding of 2 million kroner to document the 'important' post-medieval remains, and strongly encouraged the council to contribute an equivalent sum, which it did.

While stressing that this was not a legal requirement, Riksantikvaren provided detailed grounds for their decision, emphasising in particular the deposits' unique character, complexity and information potential, especially with regard to providing new knowledge of urban development in this otherwise poorly documented part of the early post-medieval city.¹⁴⁰ This extraordinary funding was nonetheless

¹³⁹ K. Stomsvik pers. comm.

¹⁴⁰ 'De etterreformatoriske kulturminnene representerer unike kilder til historier om byens utvikling etter middelalderen. Byen brant i 1681, og fram til denne perioden er kildeomfanget begrenset. En del av de skriftlige kildene ble ødelagt i brannen i 1681, og det som fremdeles finnes gir ikke et helhetlig bilde av historien. Det er her de samtidige arkeologiske kulturminnene kan gi oss verdifulle ny kunnskap'. Innvilget søknad om dispensasjon for graving i forbindelse med utskifting av dekket på Torvet.... Riksantikvaren ref: 07/00814-63. 10.03.2015, s. 6.

not sufficient to cover the costs of full and detailed systematic excavation of the post-medieval deposits, and Riksantikvaren asked NIKU to design and execute an excavation procedure which allowed them to be excavated quickly with a minimum level of methodological quality.¹⁴¹

The excavations attracted great public attention, and much valuable information that would have been lost was retrieved (see Chapter 5). While this case constituted a welcome intervention by the authorities on behalf of post-medieval archaeology, it represents yet another variant in a number of *ad hoc* approaches to the management and investigation of post-medieval urban deposits.

A further important development that should be mentioned is the founding in 2008 of the National Committee for Evaluation of Research into Human Remains.¹⁴² This independent body was established in response to ethical concerns arising from the University of Oslo's research into Sámi human osteological material stored in the Schreinerske collections, and the Sámi community's demands for the return of parts of this material. The committee decides on ethical aspects of research in which the source material includes human remains (intact skeletons, parts of skeletons, and other human material) held at public museums and collections, or which will be recovered in the course of future archaeological and other investigations. Its primary concern is buried material obtained through archaeological excavations, or human remains that have been stored above ground in coffins or sarcophagi.¹⁴³

Given the current conservation and research limitations inherent to the current Cultural Heritage Act, human osteological material post-dating 1537 is not automatically protected.¹⁴⁴ While post-medieval burials have been occasionally excavated and stored in museums, permission has been granted in an *ad hoc* manner.¹⁴⁵ The fact that a large body of material with huge potential for scientific research into past human lives and society is currently without formal protection raises serious ethical, conservation and research-value issues. This is particularly urgent at a time when post-medieval graveyards are increasingly subject to urban redevelopment, or, as is the case already on Svalbard, the impact of climate change, and at a time when the scientific community is showing increasing interest in research into past populations, notably with regard to the study of ancient DNA. However, since the Committee has no legal authority to restrict or regulate those wanting to destroy burials in post-medieval graveyards in the course of development, or use post-medieval osteological material in various forms of research, its authority rests only in requiring actors to abide by the ethical guidelines it has set.¹⁴⁶

To summarise and conclude: The recent productive engagement of a variety of actors with Norwegian post-Reformation archaeology has demonstrated its value as a source of knowledge, and has undoubtedly contributed to its redefinition as a potential conservation object by regional and national

¹⁴¹ See NIKU's project description for project 1020343.

¹⁴² Nasjonalt utvalg for vurdering av forskning på menneskelige levninger ('Skjelettutvalget'). Established by the Ministry of Education and Research, following a proposal from the National Research Ethics Committee for Medicine (NEM) and the University of Oslo.

¹⁴³ The committee bases its work on ethical guidelines on research prepared by national and international bodies, as well as provisions contained in existing legislation, such as the Cultural Heritage Act and the Burials Act, as well as international conventions Norway has ratified, notably the European Convention for the Protection of Archaeological Heritage (the Valletta Convention). Cf. Sellevold 2009 and the committee's research guideline document: Nasjonalt utvalg for vurdering av forskning på menneskelige levninger 2016.

¹⁴⁴ With the exception of Sámi material older than 100 years, material found in connection with shipwrecks older than 100 years, material on Svalbard and war graves.

¹⁴⁵ E.g. material from Nidaros Cathedral graveyard (Reed et al 1998; TA2004/21), as well as material from graveyards connected with Christiania *Tugthus*/workhouse, Heddal *prestegård*/rectory, and Kristiansand Cathedral.

¹⁴⁶ The Committee sent out a proposal for a guide for dealing with finds of human remains ('Veileder ved funn av menneskelige levninger') for consultation in 2017. This elicited support from many institutions and bodies regarding its assessment of current legal, ethical and professional challenges in the management, retrieval and treatment of human remains, and its standpoint that current legislation and managerial responsibility for the protection of burial sites and human remains are not comprehensive and are unclear.
<https://www.etikkom.no/Aktuelt/Nyheter/2018/ser-behov-for-skjelettveileder/> (accessed 09.06.2018).

conservation authorities, notably Riksantikvaren. As we have seen, current heritage management policy in Norway aspires *in principle* to a conservation regime in which knowledge-value forms a criterion in the selection of a representative cross-section of its cultural heritage. This policy now for the first time explicitly encompasses some selected post-Reformation archaeological remains, although how and when this conservation strategy will be implemented in practice remains unclear, and the governmental rejection of Riksantikvaren's attempt to apply new conservation principles in Levanger raises some concern in this regard.

Paradoxically, however, the redefinition of the conservation object *Nyere tids arkeologi* by the management authorities, and the strict terms of its protection are such that the extent to which its knowledge potential can actively be realised in practice through excavation and research will be restricted. Consequently, we seem to have arrived at a state of affairs resembling the Latourian scenario predicted by Terje Brattli (see above): In response to a metaphysical shift in the boundary between past and present, the practice of modern conservation as *environmental resource protection* continues to undermine and suppress the knowledge-generating potential of post-Reformation archaeology in its new-found compulsion to conserve those fragments of a more recent past now redefined as being suitably detached from the present.

2.6. The centrality of materiality to our understanding of the past in the present

If redefinition and reconfiguration of the 'quasi-object' post-Reformation archaeology (*Nyere tids arkeologi*) results nonetheless in the continued destruction of unprotected parts of the resource, the restriction of the production of cultural-historical knowledge, and a limited realisation of the resource's potential, is there any course of action open for those whose primary concern is the fuller exploration of the recent past using archaeological material?

To my mind, one way forward requires an active highlighting of two further interrelated imperatives for change in the neglected status of post-medieval archaeological material in the current conservation regime: namely, the social relevance of archaeology as a creative act of intervention in the present, and the contribution that it can make to a wider, interdisciplinary project of 're-materialising' the social.

2.6.1. Archaeology's role in the present: re-materialising the social

The increased engagement with the archaeology of the recent past noted above has produced a variety of material manifestations and narratives of past human life for academic, bureaucratic and public scrutiny. This is expressive of archaeology's contemporary role as an active participant in the process of writing and mediating the multiple histories of the past for a broad and receptive audience in the present. As the archaeologist Ian Hodder reminds us, historians have recognised that each age writes its own history, and that this is a political act. While this writing can often be construed as a disconnected intellectual pursuit, the survival of things into the present and their tangible materiality forces a contemporary engagement with the past.¹⁴⁷ Archaeology and the social are inextricably intertwined, archaeology being simultaneously an academic pursuit and a social practice with contemporary relevance; in effect, a socially active science of humanity.¹⁴⁸

This relevance arises from the essential nature of the archaeological act. Archaeologists traditionally engage in a process of retrieval of the material remnants of a 'hidden' or 'lost' past. However, as Victor Buchli and Gavin Lucas point out in their manifesto for an archaeology of the very recent past and the present ('contemporary archaeology'), it is a discipline that also works in the context of the present, extending beyond an ontology of 'discovery' towards one of intervention in the form of 'creative materialising'. The materialisation brought about through the archaeological act has been aptly described as the 'presencing of absence'; namely, the materialising of that which is forgotten or concealed and thereby 'enfranchising it as an object of social discourse.'¹⁴⁹

¹⁴⁷ Hodder 2001: 189.

¹⁴⁸ Preucel & Mrozowski 2010: 1-2, 34.

¹⁴⁹ Buchli & Lucas 2001c: 171, 173-174.

This is a practical and essentially social act that attempts to constitute and articulate hidden histories, lives, events and voices formerly excluded from historical and social discourse. Allied with this must be the awareness that we cannot assume a familiarity with the past, even the recent past. Archaeologists cannot 'recover' a familiar and knowable past, a hidden reality awaiting discovery; they must consciously defamiliarise themselves from their subjects. Furthermore, archaeology, as a practice in the present, has a political duty to convey a sense of otherness - or alterity - in order to challenge accepted truths, and to make the present itself unfamiliar.¹⁵⁰ Nonetheless, rather than the temporal discontinuities and irreversible break with the past envisaged by Latour in the metaphor of time's arrow of progress (see above), this promotes a hybrid understanding of reality, in which present, past and future are entangled.

Given that all people may potentially leave material traces of themselves in the world, the material record is essentially inclusive. These are predominantly traces of mundane everyday practices, often overlooked in conventional histories which emphasise the great, the important or the unusual, whether in terms of people or events. Materiality's inclusivity resonates with the democratisation of cultural heritage noted earlier, and its multiple, ambiguous and contested nature. Furthermore, the nearer one approaches the present, the greater is the engagement and multivocal contestation of its nature and meaning with regard to contemporary concerns such as identity, power, authority, class, gender, commodification and so on.

As Hodder points out, there is increasing recognition that archaeological methodology - the systematic recording of material traces and their study in relation to contexts of time and space - offers a particular perspective on the world around us. More than simply being a discipline devoted to the study of the material traces of the past, it is concerned with the materiality of life - including contemporary life - something which opens up new areas in which archaeology has a relevant contribution to debate and interpretation.¹⁵¹

For example, Buchli and Lucas propose that the creative act of archaeology itself has particularly profound redemptive and therapeutic powers when it constitutes objects for the formation of discourses about absent, concealed or denied subjects in the present. This comprises an intervention which can 'help individuals and communities cope with painful contradictions that otherwise would remain unarticulated.'¹⁵² An example of such a 'painful contradiction' in Norway's recent past lies in the erasure from the landscape and the collective memory of the 500 Nazi concentration camps where some 20,000 foreign prisoners of war died during the Second World War.¹⁵³ The post-War historical consensus has instead chosen to accentuate Norwegian resistance and heroism, a narrative which has recently been challenged by a multidisciplinary research project involving archaeologists, historians and folklorists.¹⁵⁴

Looking further back in time, as the present study will, archaeology has the capacity to articulate the undocumented or partially documented origins of present circumstances and contradictions. It can also document forgotten painful contradictions, such as those bound up in the differentiated material nature of the living and working conditions experienced by past generations in the transition to modern life.

2.6.2. A social ontology of things

These concerns are not the exclusive preserve of archaeology, and archaeologists work within an increasingly interdisciplinary environment. The emergence of a social ontology in which material things are of central concern is currently a major feature of research across the social sciences and humanities.¹⁵⁵ This includes sociology, whose theories of how humans live together and collectively create modern society have until recently paid materiality scant regard; a neglect rooted in Durkheim's

¹⁵⁰ West 1999: 1; Hicks & Beaudry 2006:4; Mayne 2008: 103; Shanks & Tilley 1987.

¹⁵¹ Hodder 2001: 190-191; Symonds 2004.

¹⁵² Buchli & Lucas 2001b: 17.

¹⁵³ Hesjedal 2016.

¹⁵⁴ 'Painful Heritage. Cultural landscapes of the Second World War in Norway'. Jasinski et al 2012.

¹⁵⁵ Schatzki (2010b: 123-124) defines a social ontology as 'a statement or understanding of the nature or basic features, structures, or constituents of social phenomena. It is an explication or understanding of what, ultimately, there is to social life'.

famous dictum that social facts can only be explained by social facts.¹⁵⁶ Work in sociology and in disciplines affected by the 'cultural turn' at the end of the last century - with its emphasis on language, texts and discourse in shaping experience - did not entirely ignore the role of things. However, the immaterial has been privileged over the material, the abstract over the concrete, and things and the material have remained undifferentiated and 'black-boxed'.¹⁵⁷

The material world has tended to be marginalised, perceived as a passive backdrop to a reality disconnected from the physical where the real social action takes place between human subjects, and which involves abstract socio-economic or cultural processes and forces, such as capital and capitalist social relations, for example. Given this preoccupation with immaterial social, cultural or economic determinants, material things have been conceived variously as the outcomes or *representations* of such forces, their mediators, or symbolic bearers of cultural meaning. While these are undoubtedly material functions, materiality itself - the forms, states and qualities of matter, and importantly, its agency - has until recently been underexplored analytically, and humanity's lived and practical relations with things has been overlooked.¹⁵⁸ Until comparatively recently, historians' interest in objects has been dominated by their role as communicators of personal and social identities. This focus on the meaning and symbolic communication of historical material culture studies has inevitably placed more emphasis on culture than the material world.¹⁵⁹

As a reaction to this 'dematerialisation' of the social, new multidisciplinary work rooted in phenomenology, science studies, post-Marxist materialism, anthropology and material-culture studies has stimulated the formulation of a new social ontology combining materiality and relationality which has resonated across the social sciences and humanities.¹⁶⁰ At the core of this strongly interdisciplinary, post-humanist and anti-structuralist paradigm is the recognition that materiality is a central and active component in the constitution of society, both past and present.

Things exist in the world and play a different constitutive role for our being-in-the-world than texts and language. Rather than simply being inert entities, appropriated by people and passively reflecting social and cultural reality, natural and man-made materials and things are now conceived as being actively and relationally entwined with all aspects of human life and sociality. This encompasses the performance of social practices, the formation of cultural norms and values, the creation of identities, and the negotiation of social and economic relationships, for example. By means of their affordances¹⁶¹ things are entangled in the routines of everyday life and repertoires of behaviour and practice intrinsic to sociality. Society's constitution, and its diversity and changes, are outcomes of *alliances* of the material and the immaterial, the human and the nonhuman, in ever-changing relational configurations in a restless process of becoming.¹⁶²

Tied in with the 'rematerialisation' of the social in this new ontology is a concurrent theoretical concern with social practice and materiality's role in practice. Practice theories emphasising the generative potential of human agency, and the routinised and performative character of action and its dependence on tacit knowledge and implicit understandings are long-established in anthropology and

¹⁵⁶ Preda 1999; Dant 2005: 11-13; Schatzki 2010b: 126-127; Shove et al 2012: 23; Lukes 2013.

¹⁵⁷ Their complexity is made opaque, taken for granted and unexamined. Latour 1999: 304; Otter 2010: 43.

¹⁵⁸ Schatzki 2010b: 126-127; Otter 2010: 38-46; Dant 2005: 10.

¹⁵⁹ Trentmann 2009: 288.

¹⁶⁰ For examples in anthropology, archaeology, geography, history, literary studies, material culture studies and science studies cf. Brown 2003; Dant 2005; Latour 2005; Meskell 2005; Miller 2005; Harvey 2009; Trentmann 2009; Bennett & Joyce 2010; Hicks & Beaudry 2010; Olsen 2003, 2010; Schatzki 2010b; Bridge & Watson 2011; Shove et al 2012.

¹⁶¹ Their capacities to help people do things by inviting and enabling particular actions. For example, air affords breathing, water drinking or swimming, solids afford different kinds of manufacture and manipulation depending on their state, horizontal rigid surfaces afford support, equilibrium and the maintenance of posture in the acts of standing or walking, and varieties of objects have differing affordances dependent on their physical form i.e. a cup with a handle can be grasped, rigid edged objects can be used for cutting or slashing, a graspable rigid object can be used to throw or strike in the course of play (e.g. a ball) or conflict (e.g. a hand grenade) (Gibson 2014).

¹⁶² Schatzki 2001: 12; Olsen 2003, 2010; Dant 2005; Latour 2005; Schatzki 2002; Schatzki 2010a; Schatzki 2010b; Ingold 2007; Ingold 2011b; Webmoor & Witmore 2008; Gibson 2014; Shove et al 2012: 9-10.

sociology, but have been criticised for their neglect of materiality and paucity of empirical demonstrability.¹⁶³ Recent work in sociology is addressing this, notably that of Theodore Schatzki and Elizabeth Shove, among others, who espouse the entanglement of things and practices, and the notion that social phenomena are enacted through nexuses or arrangements of human practices and materials.¹⁶⁴ Their ideas form an important plank in my own theoretical platform (3.5).

This ontology has as much relevance for the study of sociality in the past as it has for the present, and a recognition that tangible cultural heritage was and is complicit in a plurality of social practices and discourses opens for an understanding that there is a *multitude of possible pasts*. The results of actions arising from the meetings between humans, nonhumans and materials are necessarily unpredictable, ambiguous, and time- and situation-specific. Agency is more symmetrically distributed between the human and nonhuman,¹⁶⁵ and social processes and practices unfold in the form of performative enactments and events rather than a continuum of linear causal change.

Importantly, and particularly so in the context of the specific national conservation problem under review here, this ontology requires us to abandon the idea of a fixed and unchanging heritage, and opens up for dialogue about difference, multivocality, discord and diversity in the past. Anachronistic conventional historical periodisations, imposed grand narratives of seamless historical progress, or the arbitrary privileging of particular sources of knowledge over others as embraced and perpetuated in Norway's archaeological management policy, both past and present, are no longer valid criteria for heritage management practice. Today's approach to cultural heritage should instead revolve around the negotiation of the diversity of the past in all its integrated materialisations and immaterialities, the facilitation of new 'ways of seeing', and the telling of stories and histories that 'matter'.¹⁶⁶

2.6.3. Summary: Archaeology's creative role as provider of historical materialities of practice

The multidisciplinary material turn has revitalised the discipline of archaeology theoretically and methodologically, and the materialist social ontology outlined above lies at its heart. A more symmetrical understanding of the relational entanglement of humans, nature, objects, buildings, places and spaces in historical and contemporary social processes and the production and articulation of social relationships has empowered it as a provider of material and material-based research of value to the wider research environment and modern society as a whole. It has particularly energised study into the archaeology of the modern world (encompassing the last 500 years or so), with the emergence of the vibrant international sub-disciplines 'historical archaeology' and 'contemporary archaeology'. This development has seen the erosion of traditional historical and disciplinary boundaries, and the recognition that material remains are as valuable as other sources of knowledge in a more source-rich, symmetrical, multi-scalar and inclusive exploration of our recent past. As will be demonstrated below (3.4), historical archaeology comprises a particularly productive and dynamic field of inquiry, providing fresh and innovative ways of discerning and mediating the interpretive significances of what previously were often perceived as mundane and familiar things with only supplementary value in historical discourse.¹⁶⁷

2.6.4. Conclusion: how can archaeology contribute to a fuller exploration of the recent past today?

Returning to the question posed at the outset of this section regarding the nature of future action: The interdisciplinary materialist ontology outlined above forms a compelling imperative for fundamental change in how the past is conceived, and how the material remains of the past are managed, researched and utilised in the present. It provides a sound theoretical and methodological platform on which all those engaged in understanding Norway's recent past in all its manifold manifestations - material and immaterial - can stand.

¹⁶³ Bourdieu 1977; Giddens 1984; Schatzki et al 2001; Shove et al 2012: 23.

¹⁶⁴ Schatzki 2002: 106; Schatzki 2010b; Shove et al 2012: 22-23.

¹⁶⁵ Olsen 2003; Olsen 2010.

¹⁶⁶ Amin & Thrift 2002; Olsen 2003; Hicks 2004; Symonds 2004: 35; Smith & Waterton 2009: 295.

¹⁶⁷ See for example Tarlow & West 1999; Hall 2000; Olsen 2003; Hall & Silliman 2006; Hicks & Beaudry 2006; Ersgård 2007, 2011; Mayne 2008; Gaimster & Majewski 2009; Horning & Palmer 2009; Nordman & Pettersson 2009; Lihammer & Nordin 2010; Preucel & Mrozowski 2010.

Archaeology is one of many disciplines engaged in what Robert Preucel and Stephen Mrozowski characterise as a pragmatic project to justify and establish the relevance of the social sciences for the modern world. This project recognises that all meaning and knowledge was and is partial, unstable and constantly under negotiation. It acknowledges the limitations of meta-narratives of structural change as explanations of social life. It deploys social categories and methodologies which seek to examine multiple identities, agencies and practices in addition to system and structure, and it aims to challenge conventional distinctions between time, space, process, materials, nature and people. By highlighting the multiple and shifting constellations of these and other phenomena in the recent past, we can address the complexities of contemporary issues, many of which have arisen within the context of historical processes of modernity, such as capitalism, industrialisation and globalisation.¹⁶⁸

In this socially engaged way, the archaeology of the recent past can gain recognition and relevance among a wider audience and community of interpreters. Globally, archaeological remains are increasingly recognised as sources for the construction of national, regional and local materially-based interdisciplinary dialogues and narratives in a number of spheres, such as that of urban renewal, for example.¹⁶⁹ As the recent engagement with post-medieval archaeology in Norway that I have charted above demonstrates, tangible materiality and various social, cultural and political associations and resonances in both the past and the present facilitate current generations' access to, and their appreciation, use and valuation of, their cultural heritage, whether local or national, urban or rural.¹⁷⁰

To my mind, the task of all those involved in 'rematerialising' the past, whether we are archaeologists or historians, architectural historians or ethnologists, is to attempt to tell our own pragmatic stories in which the material, human and social worlds are not separated from each other in Cartesian fashion. Wherever possible we should draw on the material evidence available to us to demonstrate that it has an essential role in a more transdisciplinary, multiply-sourced, multi-scalar and kaleidoscopic exploration of past society than has hitherto been the case.

Consequently, if Norway wishes to be regarded as a modern curator of heritage value in a globalised context of historical knowledge of the modern world in which materiality forms an essential and indispensable component, the contribution of archaeology can no longer be ignored.

2.7. The urban archaeological resource: current approaches to management, investigation and study

Our historical towns and cities constitute major repositories of material remains which were intricately entangled with the particular forms of human sociality and practices that transpired there. The primary focus of my study is the Norwegian urban archaeological resource, a buried archive of material evidence which is particularly vulnerable to deterioration and destruction through environmental degradation as well as the impact of increasing population growth and urban development.

Although referring only generally to 'cultural-historical assets', a recent Norwegian government white paper stated that the challenges faced in urban areas 'requires a conscious attitude to the values and qualities which already exist, and knowledge of the historical context of which they are a part'...and that the manner in which these challenges are met 'will be decisive for the urban environment and urban qualities in the future' (my translation).¹⁷¹ As recently pointed out by Riksantikvaren with regard to medieval urban archaeological remains, although the white paper does not mention them specifically, these will be similarly affected, and they will require equivalent attention.¹⁷²

In accordance with the Valletta Convention's recognition of the threat to the European archaeological heritage and the resulting need for national inventories of the archaeological heritage,¹⁷³ surveys of the archaeological resource generally, and the urban archaeological resource in particular,

¹⁶⁸ Preucel & Mrozowski 2010: 34.

¹⁶⁹ Larsson 2006a; Larsson 2006b; Larsson 2006c.

¹⁷⁰ For example the projects in Levanger, Son, Røros and others cited above in 2.5.

¹⁷¹ St. meld. nr. 35 (2012-2013): Framtid med fotfeste: 44-45.

¹⁷² Johannessen & Eriksson 2015: 19.

¹⁷³ European Convention on the Protection of the Archaeological Heritage 1992: Preamble and Article 2i.

have been initiated in a number of European countries. These include, for example, English Heritage's Urban Survey and Urban Characterisation Programme, the Dutch Belvedere Strategy and the EU's Interreg IIIb initiative Planarch and Sustainable Historic Towns - Urban Heritage as an Asset of Development - projects.¹⁷⁴ These have surveyed the urban archaeological resource with a view to providing a knowledge base for the protection and enhancement of the historic environment, and an assessment of how it may be integrated into modern land-use and urban planning and development schemes.

In Norway, the survey and assessment of cultural heritage resources in towns and cities became a priority area during the two decades around the turn of the millennium, and survey programmes and tools were developed, especially for use in connection with municipal planning, local and regional spatial planning, cultural heritage and landscape management and environmental impact assessments.¹⁷⁵ Place analyses (Nor. *stedsanalyser*) and cultural heritage analyses (*DIVE-analyses*)¹⁷⁶ are now established methods used for mapping and assessing urban heritage qualities as development assets and for the selection of valuable heritage structures and environments that can be considered for protection under the Planning and Building Act. However, archaeological deposits *per se* are rarely mentioned as an object worthy of consideration in these surveys. Archaeology's potential contributions to local identity-building, tourism, the enhancement of the quality of the urban environment, and its value as a resource and premise for urban planning and development, for example, are neither identified nor explored.¹⁷⁷

Examples of various forms of resource mapping and assessment include a national project examining sustainable municipal urban planning (*The Sustainable Cities Programme/Miljøbyprogrammet*), a recent *DIVE* analysis of the historic city of Tønsberg, and a municipal cultural heritage plan designed for the historic city of Trondheim.¹⁷⁸

The *Sustainable Cities Programme* included an inventorisation of listed buildings and urban plan elements in five historic Norwegian city centres (Bergen, Oslo, Tromsø, Fredrikstad, and Kristiansand). The survey, however, was based solely on a national database of historic buildings, and did not take archaeological deposits or buried post-Reformation plan components into consideration. The *Dive* analysis of Tønsberg included the medieval archaeological resource in its assessment. The only post-Reformation heritage taken into consideration was the extant built heritage, with no attempt to assess the nature, extent or potential of the post-Reformation archaeological resource.

While emphasising the importance of the urban cultural heritage in a variety of socio-economic areas, the recent cultural heritage plan for Trondheim is confined principally to the built heritage and visible heritage environments. Only passing reference is made to the buried medieval archaeological resource, and there is no consideration whatsoever of the buried post-Reformation remains which lie in close physical association with many of the historic buildings and environments incorporated in the overview.¹⁷⁹

¹⁷⁴ Thomas 2006; <http://www.belvedere.nu>; <http://3b.nweurope.eu/page/projet.php?p=31&id=559>; Lehtimäki, M. (ed.) 2006.

¹⁷⁵ Erlie 2006.

¹⁷⁶ Reinart 2006. DIVE is a method for the cultural analysis of landscape, towns and villages, used in local and regional spatial planning, cultural heritage and landscape management, environmental impact assessments, project development etc. The acronym DIVE encapsulates the method's main steps: Describe, Interpret, Valuate, Enable.

¹⁷⁷ With respect to cultural heritage's social utility in a Norwegian context, in 2006 the Directorate for Cultural Heritage (Riksantikvaren) and the Ministry of the Environment initiated the programme 'Creating New Assets in the Cultural Heritage Sphere' (Verdiskapingsprogrammet) aimed at seeing how cultural heritage can be used as a resource in the development of vibrant local communities, and as the basis for new economic development. The values associated with a number of the pilot projects are exclusively linked to the visible, built heritage, with no reference to the role that might be played by the buried archaeological heritage, particularly in the case of small provincial towns. The programme represents current national heritage management aspirations from which the archaeological resource, capable of offering equivalent social and commercial values, is excluded.

¹⁷⁸ Riksantikvaren 2000; Asplan Viak 2013; Trondheim kommune 2013.

¹⁷⁹ Kommunedelplan for kulturminner og kulturmiljøer. Trondheim kommune 2013: 50-51.

Due to the sectorisation of heritage management noted above, urban municipalities have no responsibility for archaeological remains within their jurisdictions, and this is reflected in their omission from municipal heritage surveys such as these, an omission that currently characterises all forms of heritage resource inventories and value assessment in Norway.

That the proper management, investigation and study of urban archaeological remains have yielded much new knowledge of great intellectual and social benefit has been amply demonstrated by the systematically excavated material retrieved from Norway's medieval towns and cities. Medieval archaeological source material - including structural remains, deposits, artefacts, ecofacts, and human osteological remains, for example - has provided new insights into the material and immaterial aspects of human life during the earliest phase of urbanisation in Norway. A variety of aspects associated with Norway's earliest urbanisation phase have been mediated to the public, and have acted as a source of inspiration for urban planners and developers (e.g. Ruinparken and Vannspeilet in Oslo).¹⁸⁰

This knowledge potential is as relevant in the context of the new, and in some ways more complex, phase of urbanisation that occurred in Norway in the centuries following the Reformation in 1537. In contrast to the medieval period, during which eight recognised cities and towns were established within the borders of modern Norway, the period between c. 1500 and c. 1800 saw the emergence of a larger number of urban centres, both large and small, with a more comprehensive geographical dispersal and greater complexity of urban functions, population, resource exploitation, industrial activity and commercial networks. The Norwegian stock of cities and towns of the period represents a particularly broad diversity in these terms, and the emergence of a plethora of smaller towns is a phenomenon which stands in sharp contrast to the urban stagnation evident in contemporary Europe.¹⁸¹ However, research into these and other developments of the period is confined principally to the partial record provided by written sources and surviving standing buildings and structures. Furthermore, many towns and cities contain few visible remains of older urban structures, and existing remains have in many instances not been enhanced or exhibited. Consequently, few modern urban dwellers are conscious of the former character and complexity of their own city or town's history. The archaeological resource's capacity for enhancing their material and immaterial well-being, notably in terms of a knowledge- and materially-grounded sense of place and sense of belonging, is largely under-exploited, though some examples where attempts have been made have been mentioned above and in section 2.5.

A wider understanding of urbanism as an ongoing and ever-changing social phenomenon can act as a stimulus for modern urban populations' appreciation and utilisation of their cultural heritage. Recent international research into urban centres has contributed a rich variety of new perspectives regarding the character and development of towns in the recent past, the past lives of their inhabitants, and the value of this knowledge for present generations of urban dwellers and planners.¹⁸²

Modern archaeological research into towns and cities in Sweden, for example, is increasingly concentrating on the phenomenon of urbanism in all its forms and expressions, with little emphasis on the strict artificial delimitations imposed by traditional historical periodisation. Instead, urbanism is understood as a multi-faceted and dynamic social phenomenon which can be analysed across time in local, regional or global contexts. Its study is increasingly interdisciplinary, and the results are aimed at a wider array of social applications and 'users', such as architects and urban planners, for example.¹⁸³ In this way, too, individual towns gain specificity and distinctiveness, and are not simply perceived as by-products or secondary effects of deeper larger processes.¹⁸⁴

Viewed against this background, a key national challenge is to heighten awareness and appreciation of the value of Norwegian post-medieval urban archaeological heritage at a number of levels. In particular, emphasis should be placed on its value to multidisciplinary research and the stimulation of collective historic memory, and its role as a social and economic asset, notably as an

¹⁸⁰ Christophersen & Nordeide 1994; Molaug 2002; Molaug & Ulriksen 2002.

¹⁸¹ Eliassen 2006; Brendalsmo et al 2009.

¹⁸² O'Keefe & Yamin 2006; Yamin 2008; Larsson 2006a: 29-87, Larsson 2017.

¹⁸³ Larsson 2006a-d; Larsson 2017; Larsson & Anglert 2008; Englund et al 2014; Cornell et al 2015.

¹⁸⁴ Otter 2010: 40.

inspirational source of public knowledge and historically sensitive urban regeneration. In order to achieve this, new, well-balanced and integrated national strategies of research, management and dissemination are required. A key challenge internationally is to contribute actively to the increasing stock of knowledge about the *global* phenomenon of urbanism. Norway, with its unique history of urbanisation on the European periphery throughout the last thousand years, has many new perspectives to offer current international multi-disciplinary approaches.

A chief aim of the present study is to characterise the untapped potential for historical and socio-cultural knowledge that lies in the Norwegian post-medieval archaeological resource, particularly that associated with its urban centres. To this end, the post-medieval historic-topographical and archaeological potential of the historic city of Trondheim will be mapped, described and itemised in a detailed characterisation (Chapter 5), followed by a detailed micro-study of the archaeology of a particular place in Trondheim (Chapter 6). In anticipation of these, a brief general survey of the current state of archaeological knowledge of post-medieval urban development in Norway will be presented.

2.8. Post-medieval urban archaeology in Norway: a short overview

2.8.1. Introduction

There is no established research tradition with regard to post-medieval archaeology in Norway. The grounds for this lie in the restrictive legislative, managerial and academic situation presented above. Post-medieval archaeological material has nevertheless been recorded and retrieved, either arbitrarily or more systematically, during the past 50 or so years. This has primarily occurred in connection with medieval urban excavations, although also more recently in exceptional cases of special dispensation, as referred to above; at first by a few engaged individuals, and more recently in the context of a broader awakening of interest among professional practitioners and heritage management authorities.

While most material recorded so far derives from urban contexts, the encouragingly expanding range of contexts in which archaeological material is currently being documented has been listed briefly above (2.5). Given the scope of the present study, the following chapter will confine itself to a short survey of excavations and research involving post-Reformation archaeology found in urban contexts in Norway since 1970. It is not exhaustive, and aims to provide a selection of the more important work and results in this area.

2.8.2. Post-medieval urban archaeology in Norway from c. 1970 to the present day

Most post-medieval archaeological material has been encountered in connection with excavations conducted in medieval towns and cities, where medieval structures and deposits have been the prioritised object of investigation. With some noteworthy exceptions, this material has been recorded and curated somewhat arbitrarily in the course of rapid excavation down to medieval deposits.

Reports or publications that mention, let alone discuss, post-medieval archaeological remains uncovered during excavations in Norway's medieval towns and cities are extremely rare in comparison to the plethora dealing with medieval archaeology. Exceptions do occur, most notably in connection with work in the medieval cities of Oslo, Trondheim and Bergen. The late Erik Schia's efforts to ignore the 1537 divide and incorporate the archaeology of 16th and 17th-century Oslo and Christiania within reports and publications must be highlighted and commended.¹⁸⁵ In Trondheim, reports and works of synthesis on urban archaeology conducted prior to 1970 and during the 1970s and 1980s have incorporated descriptions and discussions of post-medieval topographical and structural components revealed by archaeology, though in less detail than that awarded the medieval material.¹⁸⁶ Systematic excavations of post-medieval contexts in Bergen include phases 8 and 9 at Bryggen and a large stone-built wine cellar belonging to the city's original city hall.¹⁸⁷

Two of the most systematic investigations of post-medieval urban contexts yet undertaken were conducted at Revierstredet in Oslo (1977) (Fig. 2.1) and the Archbishop's Palace (post-Reformation Kongsgården) (1991-1995) (Fig. 2.3), both of which received extraordinary funding. Their reports include

¹⁸⁵ E.g. Schia 1981a; Schia 1987; Schia 1988; Schia 1991.

¹⁸⁶ Moen 1971; Lunde 1977; Christophersen et al 1988; Christophersen & Nordeide 1994.

¹⁸⁷ Herteig 1990; Herteig 1991; Ekroll 1990; Høie 2006.

detailed documentation and analysis of the wealth of deposits, structures and artefacts associated with them.¹⁸⁸ Some of the material associated with the latter is included in the material survey in Chapter 5 and case study in Chapter 6.

More recently, excavations at Trondheim's city square (*Torvet*), also specially funded, produced well-documented structural and artefactual evidence connected with the early use of the square and



Figure 2.3. Excavations at the Archbishop's Palace/ Kongsgården in 1992. Excavation of the first provisioning managers' residence (building K334 - early 18th century) in progress. Looking NW. Photo: E.Baker/Riksantikvaren.

various pre-1681 domestic and industrial activities on the urban periphery (Figs 5.10 and 5.38). A sample of excavated finds will be curated, and analytical accounts of the excavation and excavated material will be published in the future.¹⁸⁹

Otherwise, artefacts from post-medieval urban contexts excavated in the medieval cities since c. 1970 have been only intermittently photographed, catalogued and stored in museum collections, although few detailed analyses of this material have been undertaken. Occasional specialised studies of particular post-medieval artefact groups from these and other urban sites have appeared in recent decades, a development linked to the aforementioned awakening of interest in the information value of this material, and the large-scale excavations in the Oslo harbour area in particular.¹⁹⁰

The managerially and professionally entrenched neglect of post-Reformation archaeology during the last century or so has contributed to the perpetuation of ahistorical and poorly-grounded assessments of urban development in Norway's medieval towns and cities in the period following the Reformation. Few historical sources and a lack of systematically excavated material have nurtured self-reinforcing assumptions and circular argumentation regarding the information value of the material remains of the period. A case in point is the notion that urban centres experienced severe socio-economic decline and decimation of their populations, building fabric and infrastructures. In the case of post-Reformation Oslo, for example, observations of poorly-preserved structures and deposits, that until recently characterised the minimal recorded body of evidence for the period, were regarded as representing a decline, since they stand in stark contrast to the more extensive, well-preserved and materially productive deposits of medieval Oslo in its heyday.¹⁹¹

The archaeologists Erik Schia and Øystein Ekroll have sought to counter these assumptions by discussing the changing urban topography of Oslo in the period from 1537 to 1624, working on the basis

¹⁸⁸ Schia 1981a; Schia 1981b; Nordeide 2000a; Nordeide 2003.

¹⁸⁹ TA2016/13 & TA2017/11.

¹⁹⁰ E.g. Høie 2006 (glass vessels); Johansson 2008 (glass vessels); Loktu 2009 (clay pipes); Reed 2009; Reed in prep (ceramics); Vangstad 2012 (ceramics); Melsom 2012 (glass); Johannessen 2012; Johannessen 2016 (clay pipes); Engen 2012 (shoes).

¹⁹¹ Ekroll 1991; Ekroll 2015.

of older and more recent archaeological observations in the old city.¹⁹² This is the period prior to its enforced removal and rebuilding by Christian IV on Renaissance-inspired lines on new ground to the west following destruction by fire. As stated, the period immediately preceding and following the Reformation is conventionally seen as a time of comprehensive and deep urban decline, and, with the exception of Bergen, Norway's few urban centres experienced a period of crisis.¹⁹³

In the view of both Schia and Ekroll, however, the archaeological evidence, fragmentary though it is, in fact provides a rather more nuanced picture of developments in 'Renaissance' Oslo, particularly during the later 16th century. While the depredations on the medieval urban space and its buildings caused by population decline since the 14th century, wars and numerous fires were severe, the changes in its spatial organisation and building stock that are visible in the archaeological record are indicative of *change* rather than terminal decline. With the exception of its grid-like street plan, many of the architectural and building-related features and traditions that appeared in the new urban centre of Christiania after 1624 were already in place in 16th-century Oslo.¹⁹⁴

The drastic reduction in the Church's economic power and property ownership following the Reformation, growth in foreign trade and local industry (timber and mining in particular), and the rise of an entrepreneurial urban citizenry during the later 16th and early 17th centuries formed the context in which changes to Oslo's urban fabric occurred. Although timber was still presumably the predominant building material, many of Oslo's now ruinous monumental medieval stone buildings were plundered for material that was reused in a profusion of new stone cellars and a significant number of houses above them. These were presumably the properties of an emergent burgher class, and numerous 16th-century urban properties in Oslo contained stone buildings or cellars.¹⁹⁵

Domestic buildings were erected on the sites of abandoned churches and churchyards. New building techniques such as half-timbering appeared, and houses with cellular ground plans and 'svalgang' houses (two-storeyed houses with an external passage) became common. These were larger than medieval building types, and they housed more functions. The stone cellars had important storage and security functions, and their appearance seems to have contributed to the disappearance of traditional storage 'loft' buildings from the urban stock of buildings. The increase in cellar numbers, often one per property, freed-up space between free-standing dwelling houses, creating a less intensively built-up area than had been the case in the densely packed medieval city. Open spaces were now often paved with cobbles (rather than timber as previously), or were devoted to urban gardens. More and more houses were equipped with tiled roofs, chimneys and window glass, and ceramic-tiled stoves were used among an increasingly wider cross-section of the urban population. As Ekroll states, all this is suggestive of a city undergoing strong growth and development rather than languishing in its sickbed.¹⁹⁶ This critique of presumed urban and societal decline has recently received material support in the form of excavated major infrastructural developments at the Oslo waterfront during the 16th century, comprising harbour developments possibly linked to the aforementioned growth in the timber trade in particular.¹⁹⁷

Indeed, the Oslo waterfront has been the prime generator of post-medieval archaeological material in the city during the past two decades in connection with the huge urban redevelopment projects that have taken place here. Excavations conducted in the marine sediments have retrieved thousands of post-medieval artefacts classified in managerial terms as lost cargo (and therefore protected by law), as well numerous wrecked and scuttled timber boats and ships, and large *caisson* foundations for waterfronts and quays of medieval and post-medieval date.¹⁹⁸

¹⁹² Schia 1981a; Schia 1987; Schia 1988; Schia 1991; Ekroll 1991; Ekroll 2015.

¹⁹³ Eliassen 2006: 150.

¹⁹⁴ Schia 1988: 118; Ekroll 2015: 263, 266, 268-269.

¹⁹⁵ Schia 1988: 118. 60 stone cellars are currently registered; Ekroll 2015: 266.

¹⁹⁶ Ekroll 2015: 268.

¹⁹⁷ Ekroll 2015: 266.

¹⁹⁸ Falck et al 2012; Falck 2012; Gundersen 2012; Vangstad et al 2016. The Senketunnelprosjekt in Oslo harbour produced 7160 catalogued small finds, of which 53% comprised ceramics, 29% glass, 10% clay pipes and 5% leather shoes (see Falck et al 2012 for an exemplary specialist finds reports).

Few excavations have been conducted in Christiania, the new planned city established to the west of medieval Oslo by royal decree in 1624. Following his call-to-arms on behalf of post-medieval archaeology in 1977, Erik Schia and his colleagues published a report for excavations conducted at the Revierstredet site in this part of Oslo, which to this day stands as an exemplary product combining stratigraphic and material analyses and a detailed contextual interpretation. This and another excavation conducted nearby at Kontraskjæret provided insight into developments in early Christiania.¹⁹⁹

The Revierstredet site revealed the structural arrangements used to consolidate the ground prior to house-building in the form of large timber-built caisson foundations. These were filled with dumped domestic rubbish which provided a rich assemblage of material providing insight into, among other things, the urban population's living conditions, trading connections, and forms of consumption. Little else in archaeological terms has been done here, although occasional watching briefs and small-scale excavations have recently been undertaken in and around old Christiania by the City of Oslo's Cultural Heritage Management Office (Byantikvaren). As of 2016, some 31 archaeological reports detailing post-medieval material have been produced.²⁰⁰ As mentioned above, the Office has also initiated a project designed to map and characterise the potential of post-medieval archaeology here.²⁰¹

Each urban context has its own unique composition and history of development, and many similar and additional aspects of post-medieval urban development touched upon above in respect to Oslo will feature in my own review and characterisation of post-medieval material recorded in Trondheim (Chapter 5).

The restriction of archaeological activity, limited as it is, to the long-established medieval towns and cities has its roots of course in the legal framework and the archaeological profession's preoccupation with medieval managerial and research questions, principally those associated with Norway's early urbanisation and urban development prior to the late medieval period.

This is particularly unfortunate, since it has led to the neglect of archaeological material associated with a completely new phase of urbanisation experienced in Norway from the 17th century on. While some new large towns were established, this phase was characterised chiefly by the proliferation of small new urban centres at both inland and coastal locations, many containing only a few hundred inhabitants. Many owed their origins to the growth of new international commercial enterprises, such as the trade in copper and timber, for example. This vibrant form of small-scale urban development is a phenomenon practically unique to Norway, distinguishing it from the urban stagnation that characterised contemporary Europe.²⁰²

Archaeological investigations conducted in Norwegian urban centres established after the Reformation have until recently been practically non-existent for obvious reasons, although historical research has sought to highlight the information potential that these small but important centres contain with regard to social and economic developments in Norway during the post-medieval period.²⁰³

The value of this resource has recently been revealed by literally ground-breaking work undertaken in the small coastal town, or seaport, of Son in Østfold. A series of small-scale, but systematically conducted excavations, initiated by Akershus Council, have produced archaeological evidence which has cast new light on its post-medieval development, and has amply demonstrated the value of close collaboration between archaeologists and historians in the process of compiling enlightening new urban histories from fragmentary material and documentary sources.²⁰⁴ As already mentioned, there have recently been archaeological investigations in the small provincial urban centres of Røros and Levanger, though their scale and results have been more restricted.

¹⁹⁹ Schia 1981a; Sørheim & Sæther 1980.

²⁰⁰ Hauge & Sjørgård 2016: 132.

²⁰¹ Hauge & Sjørgård 2016.

²⁰² Eliassen 2006: 145-147.

²⁰³ E.g. Eliassen 2006; Brendalsmo et al 2009; Bull 2009a, 2009b.

²⁰⁴ Eliassen et al 2016, 2017.

2.9. Summary and conclusions

The foregoing sections have offered a quasi-genealogy of the place of post-medieval archaeology in the power-knowledge-object nexus of Norwegian heritage management over the last century or so. The gaze of the small conservation-minded elite who sought to modernise conservation practice and policy in the new Norwegian state at the turn of the 20th century was firmly centred on a culturally-vibrant distant past. In their eyes, this was firmly separated from the more 'familiar' present by the Protestant Reformation and the establishment of Danish rule, after which indigenous Norwegian culture and society fell into a centuries-long 'winter sleep'.

For much of the 20th century, conservation efforts centred predominantly on selected monuments, buildings and cultural-historical objects redolent of that distant past, and which possessed an inherent aesthetic, architectural or ethnological value. This resulted from the dominance of building specialists, art-historians and their sources in the prevailing conservation discourse. Even the buried archaeological archive of deposits, objects and structural remains of medieval date remained largely unprotected and underexplored due to the firmly entrenched hegemony of textual and architectural sources of the past in historical discourse. This changed during the second half of the 20th century, when medieval archaeology - particularly in the historic towns and cities - attained conservation status, ultimately formally enshrined in the Cultural Heritage Act of 1978.

However, despite an increased heterogeneity in terms of the actors involved in heritage management, and a shift to a more sector-transcending, environmentally-grounded national conservation policy during the late 20th century, the management of the built and buried heritage has remained essentially sectorised along long-established, impermeable lines. The 1537 limit on the legal protection of terrestrial archaeological deposits survives intact to the present day, and will probably remain so in the foreseeable future.

The persistence of an entrenched sectoral imbalance in influence was exemplified at the turn of the current millennium when the building-historical sector secured an extension of protection for timber buildings built prior to 1650. Although the buildings' knowledge-value in cultural-historical and architectural terms was cited as a criterion for conservation in this instance, it is clear that an equivalently justifiable extension of protection to archaeological deposits was ruled out on socio-economic grounds. While there are other contributory factors, notably customary managerial inertia and inflexibility with regard to the fuller application of existing legislation or initiating change, it is evident that the potential economic burden to society forms the fundamental impediment to political acceptance of change in current legislation. This is deemed implicitly to outweigh any social, economic or knowledge values (public and professional) that may be judged intrinsic to the post-Reformation archaeological resource.

Internationally, archaeological heritage is now firmly placed within the socio-cultural domain, where the transformation of physical remains of past generations into their living descendants' 'cultural heritage' is increasingly understood as a social and cultural project, and not just a mechanical process of data retrieval or an isolated academic exercise. In contrast even to its Scandinavian neighbours, the potential value to this project of the post-Reformation archaeological resource has nonetheless continued to be largely ignored in Norway, despite an increasing focus on the multiple social and economic values of cultural heritage in the national conservation discourse during the past 20 years or so.

For example, post-Reformation buildings and their contents are preferentially granted extended protection, and national and municipal surveys of cultural heritage assets in urban contexts deal primarily with the visible, built heritage, and explore and express its value for urban planning and renewal. In recent years, however, the marginalisation of the post-Reformation archaeological resource, by both heritage management and academia, has been actively challenged. This has been spearheaded chiefly by increased interest and engagement by non-academic archaeologists working in the contractual sphere who have sought to question the status quo by demonstrating the resource's knowledge potential in case-by-case instances. This work is also showing that archaeology can provide new sources and types of information in a variety of historical contexts and scales, including urban and rural, the collective and the individual.

This 'underground' activity is inspired by professional frustration at the ongoing destruction of the resource, and the way Norway remains stubbornly cut adrift from current international developments in the conservation of, and research into, the archaeology of the recent past. That Riksantikvaren itself also recognises that the current situation is incompatible with modern national and international conservation policies and practices might be inferred from some recent initiatives regarding its own policy and practice. This can be discerned in a small number of *ad hoc* administrative decisions following the turn of the millennium where the excavation of post-medieval archaeology was allowed in special cases, and more explicitly and formally by the publication in 2015 by Riksantikvaren of a new five-year conservation strategy which makes reference to post-medieval archaeology.²⁰⁵

Appearing exactly 20 years after Norway ratified the Valletta Convention, this strategy document expresses a formal intention to extend legal protection to some post-medieval archaeological remains. While this is a welcome development, there are still unanswered questions regarding the exact range of archaeological remains which will be chosen for legal protection, the pace of implementation, and how much of the surviving resource will remain unprotected.

The Strategy is a belated response to major structural changes in international conservation policy and practice, and the growing national engagement with post-medieval archaeology within the archaeological profession noted above. However, its provisions are, to my mind, half-hearted and limited, and at the time of this study's submission (summer 2018), they have yet to be implemented in practice. Furthermore, when implemented, the Strategy will paradoxically continue to impede the full realisation of the archaeological resource's value as a source of knowledge of the recent past, since buried deposits, objects and structures will remain inaccessible to excavation and scientific research, though still prone to long-term environmental degradation.

In light of this, there is evidently still a need to make a case for archaeology's value and relevance in a political environment that continues to doubt that the fragmentary remains of an ostensibly familiar and well-documented past are worth the economic cost of their recovery or protection. As pointed out, the contemporary relevance of the archaeology of the recent past lies in its function as an act of intervention: a *creative materialising of the past in the present*. This can have a unique impact on current generations by creating tangible ways for them to reflect upon the nature of their present lives in the context of differences and continuities inherent to the ebb and flow of material history in time and space. This is exemplified particularly by its capacity to uncover and articulate the hidden, unwritten and often painful histories of the conflicts of the last century, and the small, unrecorded material histories of ordinary forgotten lives in cities, small towns and rural communities since the Reformation.

Archaeology and the material remains of the recent past consequently have a natural and prominent place within the current multidisciplinary intellectual realignment known as the 'material turn'. This has revolutionised the way in which the past and the present are perceived and analysed, building on a greater appreciation and understanding of the role of the material in the constitution of society, and modern society in particular. It has rematerialised the social, and opened up for multiple pasts, voices and histories, and it challenges the hegemony of grand narratives and linear teleological accounts, such as those which brought about the current anomalous dichotomy in Norwegian archaeological conservation legislation.

²⁰⁵ Fredningsstrategi mot 2020 for kulturminneforvaltningen (Riksantikvaren 2015).

PART 3

Towards an Archaeology of Modernity: Theoretical Points of Departure

Chapter 3

Modernity, materiality and practice: key concepts framing the material study

3.1. Introduction

A characterisation of the knowledge potential of the archaeological resource relating to Norwegian society of the recent past²⁰⁶ can only be formulated using an explicit theoretical framework for inquiry and interpretation. As the title states, this is an *archaeological study*. As such its primary focus is on examining and interpreting the character and constitution of past society using archaeological material and methods of analysis.

The *materiality of social practices* stands centre stage. This involves the analysis of the material traces - chiefly objects and structural remains - of past social practices which, using archaeological methods, can be located in specific contexts of space and time. My central aim is to identify and characterise particular configurations - or arrangements - of materials and social practices, and their integrated roles in the constitution and experience of urban life in Trondheim during the course of the past 500 years.

The present chapter aims to contextualise my own study, both methodologically and theoretically, and to establish its fundamental point of departure and position within the increasingly multidisciplinary field of historical studies generally, and the sub-discipline of Historical Archaeology in particular. It lies squarely within the theoretical and methodological field of current historical-archaeological practice, and is aligned with current research trends within the discipline, most particularly the materialist ontology introduced above (2.6.2). Underpinning and informing this material analysis are a number of overlapping concepts and theories which incorporate archaeological, sociological, anthropological and historical perspectives.

Materiality and modernity are explicit overarching themes, and with theories of practice and space, these form the main planks in the theoretical platform. The interrelated theories introduced below are of central relevance for a study dealing with the materiality of human practices within a historically specific urban context during the transition to the modern world. However, it is my hope that this extensive theoretical chapter will present a body of ideas which can be applied more widely within the archaeological community.

In order to position my study firmly within a particular cross-disciplinary academic approach to the study of the recent past, I begin this chapter with a survey and discussion of one of the principal themes of the study: namely, the concept of 'modernity', and its value as a heuristic framework for sociological, historical and archaeological analysis, and for my own study in particular (3.2).

This discussion introduces a number of relevant concepts regarding historicity and periodisation, as well as changing and conflicting notions of the nature and formation of modern society, encompassing both foundational sociological theories and more recent post-structural social theories advanced by theorists from a number of fields. The aim is to establish an alternative socio-historical theoretical context in which the materialities of modern social practices recovered archaeologically in Trondheim might be analysed: namely, a context which provides an alternative to traditional historical periodisation,

²⁰⁶ Throughout the study I use the term 'the recent past' to describe the last 500 years or so of historical time, in contrast to 'the contemporary past', for example, which denotes historical time within living memory (Burström 2007: 12-14).

which in the case of current Norwegian conservation legislation, has created an artificial, and in many ways arbitrary, divide between differentially valued segments of historical time.

This is followed by a statement of archaeology's principal and unique methodological contribution to the study of the past; namely, its capacity to locate, quantify and scrutinise material remains of past social actions closely in time and space (3.3). Following this is a section providing an overview of the nature, current concerns and directions of the sub-discipline of Historical Archaeology (3.4). This sets out some of the principal themes and theoretical and methodological approaches which have informed recent archaeological research, including my own. The particular theoretical framework for my own material study is then formulated (3.5).

3.2. The concept of 'modernity': a valid framework for the study of the recent past?

3.2.1. Introduction

I have chosen to locate this study within the context of 'modernity', principally as a means of subverting and circumventing the traditional historical periodisation which lies at the root of the present archaeological conservation dichotomy in Norway.

Modernity is a much-debated concept across many disciplines, and these debates have a profound bearing on how the past is conceived and understood in the present. I consequently provide a presentation of key aspects of this multidisciplinary debate, identifying particular theories of modernity which I see as providing justification for its use as an interpretational tool for the study of the recent past. These also have relevance for archaeological interpretation. The key theories are primarily sociological, and with only one exception, materiality plays only a supplementary role in their accounts. Indeed, the neglect of materiality in social theory has come under criticism in recent decades, and theories of society and social practice which take more account of materiality to form a new materialist social ontology which underpins my own study are presented below (3.4.3 and 3.5).

3.2.2. Modernity: an enduring but contested concept

The well-travelled notion of 'modernity' is a key enduring concept in social and cultural analysis, and continues to be the subject of much multidisciplinary debate. In academic and intellectual circles, the use of 'modernity' and the related terms 'modern', 'modernisation', 'modernism', 'postmodernity' and 'postmodernism' has become distinctive, referring collectively to a broad socio-cultural configuration that is historically recent.²⁰⁷

Since early sociological accounts formulated by, among others, Marx and Weber, the development of Western society has traditionally been discussed in the context of 'modernity', a term widely understood as encompassing a general transformation of Western society since about AD 1500: in effect, a complete economic, political, cultural and psychological break from earlier time periods and non-western cultures. Starting in the 17th century, a faith-based, millenarian religious worldview was displaced by the evidence-based method of science, a crucial paradigm shift that ushered in the modern age. In addition to the scientific revolution, this transformation included, for example, the emergence of religious pluralism, capitalism, industrialisation, parliamentary democracy, the bureaucratic state, colonialism and the fragmentation of kin-based communities.²⁰⁸

However, there is no consensus regarding its nature or temporality. Multiple definitions and critiques of modernity have been proposed by, among others, sociologists, anthropologists, historians, archaeologists and geographers, and the term has been 'twisted and turned to serve a variety of scholarly constituencies'.²⁰⁹ The social sciences 'abound in theories of modernisation – social, economic, political, psychological and cultural explorations of how and through what process that which has been termed modern society emerged.'²¹⁰ Consequently, radically differing positions have emerged in the philosophical discourse of modernity and a great variety of processes, institutions and experiences are claimed as modern.

²⁰⁷ Waters 1999: xi-xii.

²⁰⁸ Hess 1997: 128.

²⁰⁹ Wilson 1995: 70.

²¹⁰ Frisby 2001: 3.

As a scientific field of inquiry into the nature of human society and human interaction with the world, archaeology as a discipline is intimately connected with the modern rational experience. Tied into notions of materiality, mind, identity, nature and history that characterise the modern era, it emerged as a discipline that is principally analytical, objective and scientific. Given this, recent critical evaluations of the modern condition have been significant for the development of the discipline.²¹¹ These critiques open for alternative approaches to the study of the past, many building on scepticism towards totalising grand narratives, including the very notion of 'modernity' and its constituent processes.

This is naturally of interest to archaeologists who deal with the materialities of socio-cultural configurations of the last 500 years or so, many of whom explicitly define their field in terms of 'the modern world' or 'modernity' as a catch-all or narrative for explaining and periodising their material.

The concept of modernity has been particularly enthusiastically adopted by some archaeologists working in Scandinavia, where the archaeology of the last 500 years has, until recently, been relatively neglected and under-researched.²¹² This particular field is currently undergoing a process of self-definition here, attempting to assert and position itself vis-à-vis the more established sub-disciplines of medieval and prehistoric archaeology. Both in Scandinavia and internationally, providing a generally-agreed definition and characterisation of the archaeology of the last 500 years has been controversial, largely due to difficulties in closely defining and characterising the transition from the 'medieval' to 'post-medieval' periods. The term customarily used in Norway - '*etterreformatorisk arkeologi*'/post-Reformation archaeology - is particularly problematical, since it represents a too narrowly defined temporal and socio-cultural division.²¹³ The use of the term 'historical archaeology' is currently most favoured internationally, acknowledging the desirability of combining both material and historical sources in the study of the past 500 years or so.

In Sweden, however, 'historical archaeology' - established as a taught subject at the University of Lund since 2005 - has a significantly broader chronological context. In an attempt to discard traditional period-based disciplinary boundaries, the former department of medieval archaeology has redefined its role as teaching 'an archaeology at the methodological meeting of material culture, texts and pictures'; essentially, the productive dialogue between written and material sources.²¹⁴ Inspired by recent interest in archaeologies of modernity and contemporary archaeology, it now encompasses historical and archaeological evidence and methodologies from the late Iron Age to the present, and has an expanding global perspective.

Unlike a number of his fellow Swedish archaeologists, however, Jes Wienberg, one of the Lund academics involved in this restructuring, is somewhat sceptical regarding the use of the concept of modernity to define the archaeology of the recent past. He sees it as yet another 'grand narrative', which like 'the medieval' is a simplistic metaphor that promotes and preserves historical discontinuity, preferring instead a seamless, open and inclusive 'historical archaeology' encompassing the last thousand years.²¹⁵

The contested nature of 'modernity' - and doubts about its very existence as a phenomenon - makes its adoption as a means of collectively denoting a distinctive set of socio-historical processes problematical. Given the lack of philosophical consensus regarding the nature and chronology of modernity, it is clearly important that historical archaeologists examine the concept closely and critically. In the following section, therefore, I want to address the issue of periodisation, and discuss a number of central definitions and critiques of the concept of modernity relevant to an assessment of its value and validity as a framework for our archaeological readings of the more recent past. In particular, I want to demonstrate the tensions between classical meta-theories of modernity which promote totalising narrative accounts of the progressive 'march of the modern', and those theories which recognise modernity's ambiguities, particularities and inconsistencies. The latter importantly assert the need to re-

²¹¹ Thomas 2004.

²¹² Ersgård 2007; Lihammer & Nordin 2010; Anthony 2016.

²¹³ McLees 2006; McLees 2007.

²¹⁴ Wienberg 2015: 165; Andrén 1998: 155.

²¹⁵ Wienberg 2015: 155, 167-169.

theorise modernity in terms of particularity, difference and contingency in order to avoid essentially ahistorical grand narratives of the past.

In common with their colleagues in the neighbouring disciplines of history, anthropology, geography and sociology, historical archaeologists are increasingly seeking to activate multiple sources and voices in their quest to understand the complex, entangled temporalities, mentalities and materialities of 'modern' society, an aim shared by the present author. The ambiguity that inevitably arises in providing more historically specific and contextualised accounts of past lives runs counter to the coherent, linear and totalising histories of traditional grand theories and narratives.

3.2.3. Theorising and periodising modernity: a selective review

3.2.3.1. Emerging notions of modernity, historicity, rationality and society

As the historical geographer Miles Ogborn has observed: 'Modernity is most often a matter for grand theory and for portentous pronouncements heralding either its origin or demise'.²¹⁶ This pithy statement succinctly characterises the nature of the wide-ranging debate which has preoccupied social analysts from at least the 16th century to the present day. The debate has centred principally on defining the nature and temporality of a notion of modernity that signifies, together with its kindred terms 'the modern' and 'modern culture', something particular and distinctive: namely a western social formation, condition or cultural pattern perceived as being prevalent in recent historical time.²¹⁷

The notions of Antiquity, the Middle Ages, and Modernity were established in philosophical enquiry already by the late 16th century, but it was particularly from the 18th century on that European social commentators, and increasingly the population at large, became conscious that they and their society were experiencing an entirely new form of existence.²¹⁸ This sense that life in the present was quite different to the lives of past generations constituted a historically new consciousness of the difference and separation of past and present, instigating the dawn of historicity.²¹⁹ The term 'modern' designated the self-consciousness of an epoch that conceived itself as having made a transition from the old to the new, as exemplified by the Renaissance. During the course of the Enlightenment the recognition dawned 'that the past, and antiquity, is neither superior nor inferior, but simply different.' In the view of the literary critic Frederic Jameson, this historically new consciousness of historical difference marks the moment of the birth of historicity.²²⁰

To the sociologist and philosopher Zygmunt Bauman, it is this consciousness of its own historicity that defines modernity as an era, contributing to its central characteristic: namely, a constant and self-conscious striving for change, improvement and progress in 'an ascending line of human development'.²²¹ Science and technology were the principal sources and instruments of political, social, cultural, and moral progress, and were both the expression and vehicle of human ascendancy over nature.²²² The transformational forms of rationality engendered in the scientific revolutions of the early 17th century prepared the way for the eighteenth-century Enlightenment philosophical project in which the spheres of science, morality, law and art were progressively developed in accordance with their respective inner logics in order to achieve a rational organisation of everyday social life.²²³

Integral to the rise of rationality and a liberal humanist world-view was the recognition of the 'social' and the idea of 'society'. For the early social theorists this was the defining aspect of modernity; thinkers of the 16th and 17th centuries, such as More, Hobbes, and Locke, and of the 18th-century Enlightenment, such as Rousseau, Kant and Hegel conceived modernity in terms of the rise of civil society as a political utopia.²²⁴ Again, this was framed in terms of historical discontinuity: in earlier times, such

²¹⁶ Ogborn 1998: 1.

²¹⁷ Østerberg 2001:11; Waters 1999: xi.

²¹⁸ Morley 2009: ix; Koselleck 2004:17; Østerberg 2001:16.

²¹⁹ Jameson 2002: 22, 24.

²²⁰ Jameson 2002: 22.

²²¹ Bauman 2001: 164.

²²² Bauman 2001: 165.

²²³ Smart 1990: 17; Ogborn 1998: 4.

²²⁴ Delanty 2000: 21.

a society, distinct from kinship, economic and military functions, the state, or religious attachments, did not exist. 'Society' or 'civilisation' were now seen as coherent entities, and consequently susceptible to analysis in terms of their structures and organising principles.²²⁵

By the 19th century, the term 'modern' consequently no longer simply signified a *temporal* separation with the ancient or medieval past, but represented a *qualitative* break in terms of the nature of knowledge, invariably evaluated as positive. The science of the 17th century, the philosophy of the 18th century and the economy of the 19th century were claimed as 'modern' knowledge, qualitatively superior, and of more relevance to contemporary concerns than what had gone before.

3.2.3.2. Classical theories of modernity, modernisation and society

Many theoretical models of modernity emphasise an inner dynamism and a capacity for change and self-improvement as its central characteristics.²²⁶ Since the Enlightenment, the principal concern of most social commentators was to understand their own society in order to further its progress or address its deficiencies. They attempted to reveal universal principles in the apparent chaos of human history, and to understand the origins, nature and dynamics of their own time. Indeed, as the historian Neville Morley puts it:

'the sheer variety of political systems, social structures, forms of economic behaviour, cultural activities, and even emotions and values across human history has led many of these commentators to historical discontinuity far above continuity.'²²⁷

Since for them the present was clearly distinguished from the past, these commentators frequently expressed their social theories of modernity 'in totalising terms that assert a well-defined historical break - a 'Big Ditch' - between premodern and modern societies. The break that institutes modernity is based most frequently either on forms of rationality, or modes of production and consumption.'²²⁸ These are central notions in the formulation by classical social theorists of a theory of modernity which characterises it as a *process of modernisation*. This process is essentially a conceptualisation of historical periodisation, proposing a linear model of social change and juxtaposing accounts of traditional and modern societies and static and dynamic socio-economic formations. As such, it represents a view of the rise of the social in the form of the progressive unfolding of transformative structures in a functionally integrated society.²²⁹

Modernisation theory comprises two main models of change: the evolutionary model formulated by Spencer and adopted by Durkheim and Weber, and the conflict model formulated by Marx.²³⁰ The modernisation tradition from Comte through Spencer to Durkheim was strongly functionalist and stressed the idea of *differentiation* as the distinguishing feature of modernity: namely, the progressive differentiation of social functions into specialised spheres in the evolution of industrial society. The fundamental concept in the sociology of Max Weber was *rationalisation*, in which modernity entailed the unfolding of processes of rationalisation in the spheres of religion, economy, law, and bureaucracy which led to society becoming more regulated, more normal, more routine, and more administered.²³¹ For Marx, on the other hand, the distinctive feature of modernity was *commodification*, or the penetration of capitalist social relations into all spheres of life.²³² What specifically distinguishes modern capitalism - the 'mode of production' which shaped modernity - from pre-modern forms of economy was the exploitation of free wage-labour by the owners of capital, rather than enslaved labour, as was previously the case.²³³

²²⁵ Morley 2009: 51.

²²⁶ Bauman 2001: 166.

²²⁷ Morley 2009: x.

²²⁸ Ogborn 1998: 3.

²²⁹ Frisby 2001: 3; Delanty 2000: 42-43.

²³⁰ Burke 2005: 142-144.

²³¹ Traits shared by Norbert Elias's concept of the civilisation process. Turner 2000b: 14.

²³² Delanty 2000: 38.

²³³ Morley 2009: 42.

Spencer and Durkheim were explicitly evolutionary, emphasising a shift from the simple, unspecialised and informal, to the complex, specialised and formal. Although Weber avoided the term evolution, he nonetheless viewed world history as a gradual and irreversible trend towards more complex and impersonal forms of organisation, such as bureaucracy and capitalism. In his view, rationality and the rationalising dynamic transformed lives, spaces and practices, expanding across the entire spectrum of social life, and Western culture in particular possessed a 'specific and peculiar rationalism'.²³⁴

The sociologist Bryan Turner identifies Weber's theory of rationalisation as the key component of modernisation theory.²³⁵ Weber provides a sophisticated systematisation of multiple processes of societal modernisation and their integration in a periodised narrative scheme. However, as Turner points out, the essential feature of Weber's view of modernity is its *ambiguity*:

'Paradoxically, modernisation brings with it the erosion of meaning, the endless polytheistic values, and the threat of the iron cage of bureaucracy. Rationalisation makes the world orderly and reliable, but it cannot make the world meaningful.'²³⁶

In this Weber anticipates the end of modernity, pre-empting the post-modernist critique. As such, his understanding of modernity is a dominant paradigm for understanding the 'dilemmas, contradictions and tensions of the processes of modernisation.'²³⁷

3.2.3.3. Critiques of grand narratives: contingency, discontinuity and multiple modernities

Since the Second World War, the prominence of structural-functionalism and modernisation theory as models of explaining and periodising modernity has been challenged by criticism of unilinear evolutionary models, particularly historical materialism and theories of modernisation. Criticism has centred on the overly schematic and dualistic contrasts of 'traditional' and 'modern' and the systematisation of historical processes of modernisation claiming its progressive unity, preferring instead to stress differences between regimes and cultural models of knowledge. This has been brought about by a more historically informed social theory, which has also rejected more recent claims, such as that made by Jürgen Habermas, that modernity in all its complexity can be explained simply in the form of a paradigm shift in Western metaphysics represented by the Enlightenment 'project'. The rise of a liberal humanist world-view is instead seen as only *one of many* components of modernity, which has also been shaped by the relative impacts of a myriad of institutions and processes, such as, for example, industrialisation, capitalism, revolutionary politics, state-formation, socio-religious institutions and militarism.²³⁸

Post-War theorists sought to explain modernity's main sources of change and institutions more comprehensively by employing theories of non-deterministic social development and discontinuity. Crucially, they attempted to problematise more adequately than before 'the historically contingent

²³⁴ Burke 2005: 142; Ogborn 1998: 4.

²³⁵ Turner 1990b: 6. Turner (ibid.) eloquently summarises its main features: 'Modernity is thus the consequence of a process of modernization, by which the social world comes under the influence of asceticism, secularization, the universalistic claims of instrumental rationality, the differentiation of the various spheres of the life-world, the bureaucratization of economic, political and military practices, and the growing monetarization of values. Modernity therefore arises with the spread of western imperialism in the sixteenth century; the dominance of capitalism in northern Europe, especially in England, Holland and Flanders in the early seventeenth century; the acceptance of scientific procedures with the publication of the works of Francis Bacon, Newton and Harvey; and pre-eminently with the institutionalization of Calvinistic practices and beliefs in the dominant classes of northern Europe. We can follow this process further through the separation of the family from the wider kinship group, the separation of the household and the economy, and the creation of the institution of motherhood in the nineteenth century. Although the idea of the citizen can be traced back to Greek times via the independent cities of the Italian states, the citizen as the abstract carrier of universal rights is a distinctively modern idea....'

²³⁶ Turner 1990b: 6-7.

²³⁷ Turner 1993: vii.

²³⁸ Mandalios 2000: 391; Habermas 1996; Árnason & Wittrock 2012: 13.

nature of contemporary norms, self-understandings and conduct.²³⁹ This historical social inquiry employed a greater interdisciplinary approach to theory, culture and society, as evidenced in the writings of writers such as Marc Bloch, Fernand Braudel, Immanuel Wallerstein, Michel Foucault, Jürgen Habermas, Norbert Elias, Anthony Giddens and Michael Mann, to name but a few.

Central to their writings is the idea that in order to properly investigate social structures and social interaction, one requires an historical perspective which allows a more *reflexive* understanding of the social world and its investigation. This could be achieved by reflecting on the historicity of a given practice or institution, and understanding that 'the order of things differs according to the place (culture) and time (historical juncture).'²⁴⁰

In the opinion of Bryan Turner, the work of Michel Foucault is crucial to understanding the post-structuralist critique of modernity. Through a number of studies of discourses (of psychology, penology, and sexuality, among others) he 'challenged the rationalist pretensions of modern systems of power'.²⁴¹ By reflecting on its repressed aspects, he attempted to illuminate the distinctive character of modernity, defamiliarising it, questioning the apparent 'normality' of modern existence, and demonstrating its arbitrariness.²⁴²

Foucault subscribed to a *discontinuous* historical ontology whereby history does not involve progress, and has no intrinsic unity. He regarded the progressive unity of history as a product of the liberal social sciences, whose central role was to vindicate modernity. Instead, he saw history as being cut across by ruptures which separate epochs from one another completely. Each epoch acted according to different principles or rules of organisation - or discourses - which transformed at decisive moments in time. Consequently, each culture and each historical period has its own contingent discourses which order all the natural and social objects of any particular society. All classification systems are random, including the apparently rational modern one.²⁴³ Foucault contended further that the liberal human sciences failed because they took the objects constituted by the discourses of modernity - such as madness, criminality and individuality - to be self-evident when in fact they are the product of specific historical discourses.²⁴⁴

The social anthropologist Bruno Latour, on the other hand, espouses a radical *anti-modernist* critique, asserting that 'we have never been modern', although we have convinced ourselves that we are.²⁴⁵ He questions the existence of any historical break or 'Great Divide' between 'rational' modern societies and 'irrational' pre-modern ones. He contends for example that there are in fact no divergent, mutually exclusive modern and pre-modern 'nature-cultures', where the modern keeps nature and culture separated, mediated by rational science, while the former binds nature and culture together by animist magic.

For Latour, the Great Divide is a rationalist invention which hides the continuities between past and present. The differences between the knowledges and practices labelled modern and pre-modern are not the result of major transformations in ways of thinking in the form of a transition to modern rationality. Instead, differences result from the growth of 'networks' of people, practices, knowledges and objects which extend to involve more and more actors at more and more sites. Networks are the tracks along which knowledge and power run, circulate and accumulate. The more extensive the networks, the more likely that certain knowledges and practices are conceived to be true and 'rational', while those in less extensive networks are construed as 'local', 'traditional', and 'premodern'.²⁴⁶

The current *post-modernist* critique of modernity might be characterised as being essentially a question of the possible limits of the process of modernisation.²⁴⁷ The dissolution of Enlightenment culture, and the shift from the modern to the post-modern has been proposed by Jean-Francois Lyotard,

²³⁹ Mandalios 2000: 390.

²⁴⁰ Mandalios 2000: 391.

²⁴¹ Turner 1990b: 3.

²⁴² King 2004: 43.

²⁴³ King 2004: 43-45; Foucault 2002.

²⁴⁴ King 2004: 43-44.

²⁴⁵ Latour 1993.

²⁴⁶ Ogborn 1998: 6-7.

²⁴⁷ Turner 1990: 4.

among others, for whom the 'grand narratives' of the modern era – namely, reason, emancipation, autonomy and revolution – have lost their credibility and legitimating role. In his view, modernity was an ambitious project that tried to legitimise social development and political order through the promise of collective emancipation and happiness. However, the stories told to justify the order-building and chaos-conquering projects of modern power have been invalidated by the 'dark side' of modernity itself; notably its use of force, coercion and violence, most infamously in the form of the Holocaust.²⁴⁸

Politically radical writers, such as the geographer David Harvey, note that the radically different experiences that co-exist within the 'reality' of modernity have been obstructed by the modernist drive to order, control, and regulate society. This has resulted in the repression of 'other worlds' and 'other voices', such as women, blacks, gays, colonised peoples, and so on. This recognition has led to a post-modernist emphasis on notions of 'otherness', 'multiplicity', 'multivocality', and 'heterogeneity'.²⁴⁹ As the historian Peter Burke concludes:

'As a result of the scholarly discoveries of the people, women and the colonized, we have seen the collapse of the so-called Grand Narrative of the human past, essentially the story of human emancipation told in the Enlightenment.'²⁵⁰

3.2.4. Contextuality, ambiguity and multiple modernities: new perspectives for historical inquiry

Contemporary scepticism regarding positivistic and schematic narratives of modernity has spilled over into historical and archaeological discourse. This is cogently expressed by the historian Kathleen Wilson, who argues that modernity must be re-theorised in more sensitive ways in order to avoid totalisations that produce ahistorical accounts:

'Although heuristically useful in sketching in some fundamental shifts in Western culture, the "modernity as modernisation" perspective is a conceptual dead-end for historians less interested in structural determinacy than in the specific meanings, ambiguities and significance of a period's configurations... Modernity need not be seen as one particular moment, whose "origins" and characteristics can be identified with certainty and mapped onto a specific temporality between the sixteenth and twentieth centuries... *Instead of a checklist of modern structures, the textures of modern life and the notion of modernity can instead be conceptualised as an unfolding set of relationships – cognitive, social, intellectual, economic and technological – that are constantly made and remade, contested and reconfigured...*'²⁵¹ (my emphasis).

In terms of historical inquiry, therefore, it is important to emphasise the specificity and complexity of any chosen period of time and avoid reducing that span of time to a unitary story of progress, stability and decline.²⁵² Instead of seamless linear and evolutionary models of modernisation, modernity should instead be seen as being in a constant process of negotiation and renegotiation, articulation and rearticulation. Modern society's vast and complex structures and institutions, while real and powerful, are ultimately reducible to the complex and contingent social relations and practices involving its members. Crucially, as I will argue below (3.4.3), materials and natural phenomena are also essential and active participants in this process.

3.2.4.1. Modernity's complexity, heterogeneity and hybridity

Kathleen Wilson refers to a number of recent studies which have challenged dominant narratives and periodisations of western history 'by stressing the complexity, heterogeneity and hybridity of modernity at the moments of its various historical articulations'. In particular, the work of post-structuralists and post-modernists, including Foucault, whose inquiries have 'located in the discursive and institutional matrices of power and resistance shaping late eighteenth century European societies the genealogies of

²⁴⁸ Elliott 1999: 25; Bauman 1989.

²⁴⁹ Cited in Elliott 1999: 25.

²⁵⁰ Burke 2005: 181.

²⁵¹ Wilson 1995: 70-71.

²⁵² Ogborn 1998: 26.

their own ages' discontents and transfigurations'.²⁵³ In other words, the integration of experience and modernity's institutional structures are legacies of that era's forms of knowledge and power. This has resulted in the replacement of 'the stable and knowing 'bourgeois' subject beloved of the master narratives of Western modernity with the fractured, decentered, and destabilized subject of post-modernism...'.²⁵⁴

Viewed from this perspective, modernity 'refers to the cultural practices and representations that produced certain kinds of subjects and objects of knowledge, upheld widely-shared notions of space and time, or facilitated the formation of cultural identities that resulted in pluralities and contradictions as well as unities and coherence.'²⁵⁵ So, for example, the discontinuity and plurality of the eighteenth-century experience was characterised as much by slavery as it was by liberty; by racial, class and gender exclusions as by universality; and by fractured and 'double' identities as much as unitary ones.²⁵⁶

The contention is therefore that there is no unitary 'modernity' experienced by everyone everywhere in a prescribed and uniform way. Instead, there are variations and discontinuities in modern experience, since modern subjectivity and identity are decentred and plural, often split along lines of gender, race and social class. Furthermore, the modern subject is located in historically and geographically specific and complex configurations of individualisation and embodiment. Recognising this, historical researchers are adopting new forms of multi-vocal narratives to capture the decentredness and multiple perspectives of human experience, and a more fragmented modernity is understood more in terms of issues of difference, power and position.²⁵⁷

In the view of Miles Ogborn, by conceptualising modernity in this way we open up 'whole new grounds for theorising and understanding our histories without denying the specificity of a period's configurations.' He stresses the specificity, contextuality and contingency of historical change, and characterises the modern world and the places in it as being hybrid and cosmopolitan, 'forged from a multiplicity of flows and networks of people, material objects and ideas.' Unique intersections of people, processes, materials and practices transform the places and spaces they circulate through and between in varied ways. In other words, modernity was experienced in different ways from place to place, resulting in a 'multiplicity of modernities', each shaped by specific contextual circumstances. By way of illustration, he claims that rather than there being one Enlightenment experience around which modernity was constructed, one can discern a plurality of experiences. This arises from the recognition of the many locations of Enlightenment 'knowledges': for example, the different ways in which they were involved in colonial encounters or adopted in different countries, and the specificity of the sites (such as museums, laboratories, botanical gardens) where knowledges were produced. In addition, one might note the partiality of Enlightenment knowledges, and their limited circulation among certain people for particular purposes.²⁵⁸

This plurality and contingency encompasses a plethora of factors that engender complexity and difference within the collective identity, institutional arrangements and culture of a specific society. Examples might include particularities of natural or built topography, forms of dwelling, the influence of nature, the impact of conflict, and inherent socio-cultural tensions along the lines of class, race or gender, all of which are areas with which archaeology deals, and some of which will be explored in the course of this study.

3.2.4.2. Historical archaeology and multiple modernities

Ogborn has also explored how the often aspatially conceived processes of individualisation, the making of public spheres, commodification, bureaucratisation, state formation and the control of information were constituted in the places and spaces of 18th-century London. His aim was to understand how

²⁵³ Wilson 1995: 70.

²⁵⁴ Wilson 1995: 70.

²⁵⁵ Wilson 1995: 71.

²⁵⁶ Wilson 1995: 71.

²⁵⁷ Ogborn 1998: 14-15; Burke 2005: 180-181.

²⁵⁸ Ogborn 1998: 19-20, 26, 70-71.

dimensions of modernity, in the form of ideas, social processes and cultural practices were differentially produced in and through the city's spaces and, in turn, shaped the city.²⁵⁹

Historical archaeologists exploring the recent past across the globe also deal closely with the material configurations of social interaction within specific historical and geographical contexts, and examine the ways in which materiality is entangled with institutions and human experiences of modernity.²⁶⁰ They are also increasingly aware that, while major historical transitions associated with deep structural transformations in societies and cultures are apparent, these boundaries should not be drawn too firmly.²⁶¹ In the view of the archaeologist Gavin Lucas, the reason that archaeology has traditionally sought totalising histories is linked to a conception of history based on a model which sees time as 'a linear, singular and universal container for events, which needs to be filled out.' New approaches may help to traverse these boundaries, viewing periodisations as 'contingent and multiple rather than absolute and singular'.²⁶² This is particularly resonant in the context of the central problem addressed in this study; namely, the historical religious discontinuity that persistently divides and defines Norwegian historical and cultural heritage discourse.

It is also recognised that an over-emphasis on grand narratives produces totalising histories that flatten out local diversity and particular histories.²⁶³ As the archaeologist Matthew Johnson puts it: while 'large phenomena' (such as global capitalism) are an integral part of the study of the historical origins of modernity '...the fascination and challenge of historical archaeology lies in its *particularity* - a series of concerns that lead us away from world systems and categories and towards a sense of the power of material culture in different local contexts.'²⁶⁴ Rather than focusing on an exclusively larger scale, Johnson sees historical archaeology's main task as being to 'grasp the relationship between the small-scale and local [and the] wider processes of transformation.'²⁶⁵

This understanding has increasingly characterised the writing of historical archaeologies in recent decades (see 3.4). In common with historians and geographers, an appreciation of the diversity of experiences of modernity is leading archaeologists to adopt a sceptical attitude towards models of its uniqueness and coherence.²⁶⁶ Rather than explaining their data primarily in terms of large-scale, totalising processes of modernity, they prefer to focus on detailed 'contextualised histories of the modern' which show that people's experiences and practices were rather more complex, tentative and uncertain in the turbulence of everyday life. Recent work is revealing the often ambiguous nature of the evidence which highlights 'difference, hybridity and contestation' rather than a 'smoothed-out' history emphasising the 'normal' and the 'representative'.²⁶⁷

In summary, therefore, current approaches to the historical, archaeological and geographical study of the recent past emphasise issues of *context*, *specificity*, *difference* and *contingency*. An emphasis on multiple narratives and voices, and on the specific and the individual, allows us to dissect modernity and analyse its material configurations in a variety of ways. As a result, this offers a differentiated and plural understanding of change that disperses its various transformations temporally and geographically, a fragmentation at odds with a totalising framework.

In light of this, however, one might ask whether 'modernity' has become so fragmented that it has little value as a concept for defining, however tentatively, an era of human history and experience?

3.2.5. Alternative modernities: the differential experience of modernity

As we have seen, modernity is a term associated with grand philosophical and sociological debates. I would contend, however, that its recent reappraisal, particularly in historical and historical-sociological

²⁵⁹ Ogborn 1998: 12; 232.

²⁶⁰ Johnson 1999; Mrozowski 2006; Beaudry & Symonds 2010.

²⁶¹ Courtney 1997: 9-23; Lucas 2006: 46.

²⁶² Lucas 2006: 46.

²⁶³ Lucas 2006: 39.

²⁶⁴ Johnson 1999: 35.

²⁶⁵ Johnson 2006: 318.

²⁶⁶ Hicks & Beaudry 2006b: 4.

²⁶⁷ Jeffries et al 2009: 329-332, 340-341; Mayne 2008: 111-112.

circles, where emphasis is placed on the writing of critical contextual accounts of modernity without reducing it to a seamless, unitary narrative, still allows for its retention as a valid analytical framework.

We have arrived at an *alternative* way of conceptualising modernity which sees it as an ‘alliance of experience and structures’, allowing us to investigate the connections between socio-material processes, practices and institutions associated with modernity, and the myriad of different individual and collective human experiences of this modernity at specific junctures in space and time. According to Shmuel Eisenstadt, this has resulted in ‘multiple modernities’ which are not reducible to a single definition, or set of definitions.²⁶⁸

Modernity is also kaleidoscopic in character because ‘the modern’ is never constituted by a *single* dimension or socio-historical phenomenon, such as capitalism, bureaucracy, or democracy, for example. However, we must always allow for their connection and entanglement at varieties of scale. Consequently, I would suggest that, in order to diminish the fragmentation implicit in the term ‘multiple modernities’, and to emphasise that we are dealing with differing configurations and experiences of shared processes, it might perhaps be more useful to frame our analysis in terms of *alternative* modernities. Their investigation might serve ‘to draw attention to long-term processes of social change, to the multi-dimensional yet often systematic interconnections between a variety of cultural, political, and economic structures.’²⁶⁹

Classical modernisation theory presented these connections in a ‘celebratory rather than a critical light’, where modernity was understood to be coherent, inevitable, progressive and Western. New thinking, however, emphasises *difference*, and the contradictions in the historical experience of modernity.²⁷⁰ Miles Ogborn concludes that:

‘the experience of modernity is not simply the experience of a particular form of temporality or historicity, but the experience of living in worlds organised and transformed by certain, if multiple, sorts of ‘institutional’ arrangements. These arrangements shape how temporality and historical consciousness are lived, but that does not exhaust the experience of modernity.’²⁷¹

Consequently, although the experiences of modernity have differing impacts on individuals and particular social groups in differing times and places, for example, their disparate histories are nonetheless still histories of modernity.²⁷²

For Ogborn, a geographer interested in past experiences and transformations of spaces, places and cityscapes, the notion of modernity usefully denotes the intersection between particular material changes and human experiences of them. Citing Marshall Berman, he notes that it is a matter of the ‘open-ended development of self and society, [the] incessant transformation of the whole inner and outer world.’²⁷³ As he notes, inner and outer worlds - social process and subjective experience - are inseparable. The term ‘modernity’ captures the essence of both the cultural and the subjective experience of society and all its contradictions, in the way that simply employing an alternative, but more restricted, term such as ‘capitalism’ cannot. At the same time, in drawing attention to the inseparability of the ‘structural’ and the ‘experiential’, modernity emphasises that neither accounts for the shape of ‘the modern’ alone, and that these experiences are differentiated ones.²⁷⁴

A comparable conception of, and analytical approach to, modernity can be utilised in the field of historical archaeology where the incessant transformations inspired by the tensions between social process and subjective experience can be explored in the material worlds of past generations. As I have argued above in respect to a social ontology of things and the centrality of materiality to our understanding of the past (2.6), as archaeologists, we can offer an essentially materialist perspective to characterising these multiple processes and practices. Our methods and material allow us to emphasise

²⁶⁸ Eisenstadt 2002, 2003; Ogborn 1998: 9-10.

²⁶⁹ Felski 1995: 7-9.

²⁷⁰ Felski 1995: 7-9; Ogborn 1998: 11.

²⁷¹ Ogborn 1998: 11.

²⁷² Ogborn 1998: 15.

²⁷³ Ogborn 1998: 11-12.

²⁷⁴ Ogborn 1998: 12.

to an even greater degree their materially integrated nature by exploring how dimensions of modernity and their experience inescapably involved particular alliances of things, spaces and human lives (3.3 and 3.4). In my own study of the transition to modernity in Trondheim, these configurations of people, objects and space are understood as being intimately integrated with the performance of social practices and entanglements of materiality, human competence and meaning (3.5).

How, then, might one concretely - though succinctly - define the nature and experience of processes and dimensions of modernity in the context of Norway and Trondheim in particular, and what associated materialities might one hope to detect in the archaeological archive? At the risk of formulating one of the 'checklists of modern structures' critiqued above, I feel it is nonetheless helpful for the purposes of characterising the knowledge potential of my material to attempt to identify a small selection of defining features, including some which will be examined during the course of this study.

It might be natural at the outset - given its enshrinement in Norwegian heritage law as a 'Great Divide' between past and present - to include the Reformation and the transformation in prevailing belief systems from Catholicism to Protestantism as a principal dimension of modernity, representing as it does an ideological premise for many aspects of social life and practices during the last 500 years; not least in terms of its contribution to the rise of capitalism. In common with many of the large-scale social phenomena associated with the transition to modernity, we can of course question the extent to which this change usurped former religious practices in the minds of people at the start, and indeed to what extent it impinged on the daily lives and practices of ordinary people.

Materialities of this transition might for example be sought in surviving religious and devotional objects and architectural structures and remains, or in changes to burial practices and so on. Trondheim, a medieval city with an urban population administratively, economically and spiritually closely associated with a powerful medieval archbishopric, undoubtedly underwent profound and lasting socio-economic change following the Reformation.

Another paradigm shift often identified as ushering in the modern age is displacement of the faith-based religious worldview by the evidence-based method and ideas of science. The Enlightenment ethos and the rationalities, technologies and materialities of the scientific revolution were enmeshed with innumerable spheres of social practice, ranging from improvements in medical care to the improvement of the self and agricultural, craft and industrial equipment and practices, to name but a few.

The rise of capitalism, and the globalisation of trade and consumption within a rapidly diversifying 'world of goods' is another feature of our period. Abundant material traces of these processes survive in the form of an increasing volume and variety of consumer commodities that reached Trondheim, as well as distinctive transformations of its increasingly commodified and institutionalised built space. Increasingly intricate flows of new ideas, skills and materials engendered new ways of living, self-fashioning and sociability, exemplified by new forms of domestic space, as well as equipment used for practices such as eating, drinking and smoking. The rise of the bureaucratic nation-state and the prevalence of inter-state violence had innumerable material components and outcomes, exemplified in Trondheim by the radical autocratically-imposed restructuring of its medieval urban plan in 1681, and its transformation into a fortified baroque planned city on the periphery of the Danish-Norwegian state. A particular characteristic of post-Reformation or Early Modern Norway, is that, in contrast to much of Europe, it experienced a significant increase in urbanisation (a trebling by 1800), with the establishment of many small provincial urban centres being a particular feature.²⁷⁵

This brief survey covers only a fraction of the phenomena that characterised the transition to modernity in our particular context. In the course of this process, Norwegian society - its people, institutions and their diverse practices - were increasingly freed of previous constraints of time and place as they were drawn into, and actively participated in, a globalised network of new ideas and material goods. We might conclude that a distinctive feature of modernity in Norway, as elsewhere, is an accelerating pace of interconnection of local places and people with global ideologies and practices and their associated constantly shifting material and spatial configurations and formations.

²⁷⁵ 11 medieval urban centres at c. 1500, increasing to 20 in the mid-17th century and 30 by 1800. Eliassen 2006: 146.

Indeed, the integration of a proliferating variety of materials within an increasingly fluid and shifting kaleidoscope of material practices is a feature of modernity. Exactly how these processes and their materialities manifested themselves in particularities of time and space is an area where archaeology can contribute to historical knowledge. As I argue below, it is through examining particular material configurations in time and space that archaeology can contribute to documenting aspects of how these processes were entangled with the daily lives and practices of past generations.

3.2.6. Conclusion: modernity's relevance as a framework for the study of the recent past

To conclude therefore, we might, with the archaeologist Julian Thomas, define modernity as a loose chronological division of human experience, distinguished by characteristic ways in which human beings operated socially. Instead of a monolithic block of time with 'hard edges', modernity might be thought of as a *process* in which certain qualitatively distinctive practices and relationships - cognitive, social, material, intellectual, institutional, economic and technological - emerged over time, operating as principles around which people structured their lives and understood their place in the world.²⁷⁶

However, as has been emphasised, modernity is neither spatially, temporally or experientially homogeneous, and the forms of organisation, understandings and practices which matured - though did not necessarily originate - in Western Europe were transformed, contested and reconfigured in multiple ways in the course of their globalisation. Consequently, many are paradoxically simultaneously familiar to, and different from, the ways we live our lives today. Nonetheless, we might perhaps justifiably claim that histories or archaeologies of modernity are in many ways histories or archaeologies of ourselves.²⁷⁷

Engaging with the concept of modernity offers a framework other than the normatively historical in which we can explain our material, allowing us to transcend conventional historical boundaries that have been marked out between the 16th century and the present; as exemplified by the Norwegian Reformation in our particular geo-historical context. By providing an open-ended and fluid temporal framework, the notion of modernity facilitates a long-term perspective in which we can trace the origins and trajectories of ideologies, material practices and innovations, many of which are not delimited by conventional periodisations.²⁷⁸ While this notion of modernity would not require a 'Great Divide' between modern and pre-modern in terms of scientific rationality or any other neat periodisation or historical rupture, significant transformations are nonetheless identifiable. As the archaeologist Sarah Tarlow states, we 'need to balance...an awareness of the deep roots of the processes [we] examine with the recognition that specific circumstances, developments and innovations do make the eighteenth century, for example, different to the thirteenth.'²⁷⁹

As such, the notion of modernity provides us with 'multiple meanings and configurations' at a variety of scales which can be explored archaeologically.²⁸⁰ These range from overarching structures of modernity, such as capitalism, industrialisation and so on, to aspects of group ideology, gender relations and individual identity, to name but a few. Many are interlinked in a complex unfolding web of differentiated, contested and constantly reconfigured set of relationships and practices - social, intellectual, economic and material - while alternative aspects and experiences of modernity existed simultaneously.

Importantly for our particular discipline, these are constituted materially. Human sociality has always been inextricably enmeshed with materiality, but modernity might perhaps be characterised as a process by which the embodied world in which we live has been fashioned into a *material* society.²⁸¹ As archaeologists of the modern world, we deal with (and live in) a geo-historical context characterised by an increasingly rapid and growing proliferation of things, and a correspondingly greater complexity and differentiation of human and material entanglements.

²⁷⁶ Thomas 2004: 2-4; Wilson 1995: 70-71; Hall & Silliman 2006b: 2-3.

²⁷⁷ Hall & Silliman 2006b: 6.

²⁷⁸ Verhaeghe 1997: 25-44.

²⁷⁹ Tarlow 1999: 181.

²⁸⁰ O'Keefe 2009: 74.

²⁸¹ Dant 2005: 147.

3.3. Socio-material configurations in time and space: archaeology's methodological contribution

3.3.1. Archaeological method: the rematerialisation of the past in the present

This thesis's overarching aim is to highlight archaeology's value as a practice capable of providing a source of material and knowledge necessary for generating a more comprehensive historical understanding of the modern world. How then do we as archaeologists approach the task of recovering and interpreting the material residues of modernity? What characterises archaeology's specific methodological contribution to the study of the past, and the study of the past within an urban context in particular, since that is the chief focus of this study? Before outlining some of the theoretical tools utilised by historical archaeologists to facilitate interpretation, I would like to identify some central tenets that underpin archaeological practice in general.

As I hope to demonstrate, archaeology's contribution lies in the possibilities arising from the understanding that much of human sociality is materially constituted. As will be dealt with in more detail below (3.4.3 and 3.5), there is widening interdisciplinary recognition that materiality is integral to social practice, both in the present and the past. By definition, all social practices are *embodied*, which means that they always involve engagement with particular moments in time and points in space: people and objects exist in spatio-temporal relation to each other.

This means that archaeology's core methodologies, which are aimed at the close and systematic spatio-temporal recording and study of the material residues of past social practices, can provide scholars of the past with a range of relevant empirical data.²⁸² By closely contextualising material residues in time and space, archaeologists can assemble particular socio-material configurations of humans, objects, spaces and buildings. These configurations provide a basis for interpretation of the ways in which human and material interaction shaped the lives of individuals and communities at particular times and in specific places.

The integrated categorisation of space, artefacts and time lies at the core of archaeological practice and interpretation. *Space and time* in particular form the conceptual dimensions central to the structuring of archaeological interpretations of the material and immaterial aspects of past human lives. Crucially, stratigraphic logic and archaeological systematisation facilitate both diachronic time depth and synchronicity, allowing us to view the differential emergence, endurance and disappearance of material residues and their social correlates in closely definable chronological and physical contexts and at a variety of spatial and temporal scales. Traces of other times and places literally 'resurface', or rematerialise, through archaeological investigation. The systematic recovery and dissection of the archaeological record in a particular locality engenders a 'time-thickening' which contributes to its becoming a 'place' that has significance and affective connotations.²⁸³

3.3.2. The urban-archaeological palimpsest

The material residues embedded within visible and buried urban landscapes form a particularly fertile source for archaeological investigation. The polyvalent interpretational potential of this archive of complex material laid down in temporal events can be described by invoking the metaphor of the palimpsest. The concept of the landscape as palimpsest is long-established in historical geography, drawing on the analogy of a medieval manuscript on which later writing has been superimposed on or effaced earlier writing.²⁸⁴

In urban-archaeological terms, this describes the ongoing and often arbitrary process by which historical events, practices and processes will alter, add to or erase pre-existing material configurations in space and through time, and which will in their turn be subject to alteration, addition or erasure. Pursuing the textual analogy, the urban landscape is 'written' and overwritten, each process of

²⁸² Friedland & Boden 1994: 6; Larsson 2000.

²⁸³ Larsson 2000: 31-68; Lock 2009: 170-171.

²⁸⁴ Hoskins 1955. In more general terms, something reused or altered but still bearing visible traces of its earlier form.

'inscription' leaving traces of itself and fragments of past inscriptions, both material and immaterial, archaeological and cultural.

A city or town is consequently not a *tabula rasa*, but a palimpsest containing the traces of other times and spatialities, a place where past and present, ideas and matter merge within a complex matrix of fragmented materialities, significances and meanings.

The significance of time in the formation of space is evident in the architecture and archaeology of any city. Space, and its more ideational counterpart place (3.5.9), have physical and temporal depth. Urban environments are differentially textured and stratified by 'accumulated times': the 'sediments', detritus, monuments and markings of past and present activity.²⁸⁵ In geographical and architectural terms, the historic palimpsest is observed on the visible surface of the present-day landscape, upon which contingent, materialised 'moments' in the emergent process of 'becoming' are inscribed. Archaeological method extends our gaze into the historical depths of the palimpsest by literally uncovering its accretions, traces and gaps, and revealing earlier and previously hidden moments in the long process of becoming that has brought us to the present.

This accretive archive provides opportunity for analysis on the lines of the anthropologist Clifford Geertz's 'thick description',²⁸⁶ by making explicit the nuances and patterns of human-material and human-spatial entanglement. Crucially for historical authenticity, archaeology's contribution also encompasses the materialities of even the most mundane of everyday practices. Indeed, it is recognised increasingly that one of the archaeological archive's most valuable assets for historical research is that it encompasses the lives, practices and experiences of *all* sections of human society. Furthermore, this archive's relegation within a hegemonic hierarchy of historic value or significance is in the process of being rejected by modern scholarship, where previously, a monumental and legitimate political and economic 'History' of the powerful and literate was prioritised over the practices, knowledges and everyday experiences of the powerless and anonymous.

Using material derived from archaeological investigations within the historic palimpsest that is Trondheim, my study will present and examine material traces of past lives that contributed to its formation during the course of the past 500 years (Chapters 5 and 6).

3.3.3. Archaeology's focus: the historical nature, contingencies and consequences of materiality

Archaeology is concerned with materiality and its patterning in time and space, and is consequently uniquely equipped to differentiate and identify historical continuities and changes, both material and immaterial, observable at a variety of spatial and temporal scales (3.4.2). Procedures of retrieval and analysis, such as controlled stratigraphic excavation and artefact studies, can produce evidence which may confirm, supplement or contradict received historical narratives, and, as pointed out above, contribute new knowledge which may have implications in wider social, political and cultural terms in the present. Archaeology's focus on the historical nature and consequences of materiality is a particularly valuable contribution to multi-disciplinary discourses that share an interest in investigating the nature of society, both past and present.²⁸⁷

Through the theoretical interrogation of spatially and temporally located material traces, archaeologists offer their own particular interpretation of history from a material perspective. Inferences about past social practices are increasingly derived through the combined application of social theory, close empirical analysis of the material record, and its contextualisation through combination with historical and other sources.

Archaeologists' engagement with their material is increasingly orientated towards revealing the human and material agency that is 'congealed' within it, and characterising the recursive role of things in constituting human action. As will be outlined below (3.4, 3.5), some of the most innovative work has moved research beyond the mechanical categorising and typologising of material culture to engage concepts of materiality with theories of agency and practice which promote a more dispersed and symmetrical understanding of the role of things and humans in creating the world. Deterministic,

²⁸⁵ Certeau 1984: 108; Østerberg 1998.

²⁸⁶ Geertz 1973.

²⁸⁷ Jones 2009: 98.

structuralist and functionalist interpretive paradigms have been abandoned, and archaeological evidence is now viewed as the residual remains of a widely diverse range of materialities whose nature and meanings are contingent and contested, both in the past and in the present.

Archaeological evidence is no longer regarded in presentist fashion as an inscribed 'record' of 'meaningful statements' which originated in the past, and which can be authentically deciphered in the present. The analogy of the palimpsest evoked above, for example, does not imply that archaeologists are in possession of a readily interpretable 'inscribed text'. Archaeologists may recover material by excavation, but this gathering of data is a 'scholarly artifice' and does not equate with a straightforward 'recovery of the past' that provides a direct link or continuum to a familiar and hence easily knowable and recoverable past.²⁸⁸

Rather, we recover fragmentary traces of a diverse range of materialities with which lives were enmeshed. These were involved with people with diverse assumptions about the nature of the world, the validity of which was experienced through practices: processes and actions involving multiple bodily, material, sensory and discursive dispositions. As will be explored during this study, the task of archaeologists is to retrieve and identify the materialities of these practices, and ask how these materialities and practices might have been known and experienced, and what their nature and consequences were.²⁸⁹

Given their diversified source material (both material and textual) and range of available methods and theoretical tools, historical archaeologists are now in a position to produce their own agendas, some of which will be presented in the next section.

3.4. Historical archaeologies: current concerns and theoretical directions

3.4.1. 'Historical' Archaeology: an introductory overview.

This thesis aims to contribute to raising awareness of the value of an archaeological perspective to the study of Norway's recent past. In order to define my study's place within the current historical-archaeological discourse, it is necessary to examine and characterise the context and concerns of that discourse. This is a far too complex field to survey comprehensively here, and in the course of the following sections I will confine myself to identifying what I see as central developments that have been instrumental in defining the discipline in epistemological, ontological and methodological terms, and to those particular developments which have informed my own work. Furthermore, given that currently no Norwegian university archaeological department teaches a 'historical archaeology' which encompasses the period after AD 1537, this summary may also have pedagogic value in providing Norwegian students and scholars with insight into current developments in the archaeological study of the period elsewhere.

So, what defines Historical Archaeology as currently practiced? What are its distinctive epistemological grounds and theoretical and methodological approaches, what issues is it addressing, and what interests and methodologies does it share with neighbouring disciplines?

Historical archaeology has only comparatively recently emerged as a sub-discipline of archaeology, with which it shares as its central purpose the study of the material traces of past human societies. Perhaps as a consequence of the fact that it is still 'coming of age', there is no simple or unified definition of 'historical archaeology' as such (hence the 'archaeologies' in the present section heading). It means different things to different people, and one's perspective depends on how one defines the field.²⁹⁰ For example, as already mentioned, in Sweden an inclusive and seamless historical archaeology encompasses the study of historical and archaeological evidence from the late Iron Age to the present day.²⁹¹

That said, until recently, historical archaeology as practiced outside Scandinavia was almost exclusively characterised as providing a materialist perspective on the post-Columbian history of the colonial and post-colonial world. This was preoccupied principally with the European global diaspora

²⁸⁸ Mayne 2008: 103.

²⁸⁹ Barrett 1994: 90; West 1999; Moreland 2001; Buchli & Lucas 2001b.

²⁹⁰ Orser 2002: 270; Hall & Silliman 2006b: 1; Hicks 2003, 2004; Wienberg 2015.

²⁹¹ Wienberg 2015.

that began with Columbus in 1492 and the cultural interactions which triggered an ongoing transformative process that shaped the modern world.²⁹²

Parallel with this, historical archaeology was principally defined as a method combining archaeological sources (material remains) and 'historical' or textual sources (documents, stelae and inscriptions).²⁹³ The study of things is integrated with the study of textual evidence, a combination of tasks that succinctly encapsulates the processes of historical archaeology; namely, a 'text-aided archaeology that uses a combination of archaeological and historical methods, sources, and perspectives to study the recent past'.²⁹⁴ The archaeologists Martin Hall and Stephen Silliman also note that for some, historical archaeology 'is the outcome of the rich play between word and object, text and artefact',²⁹⁵ although of course the correlation of historical periods with written cultures does compromise the post-Columbian focus that most historical archaeologists accept, neglecting as it does older global written cultures.²⁹⁶

Competing definitions, disciplinary boundaries and nomenclatures have been hotly debated by archaeologists in recent decades.²⁹⁷ In Britain, for example, archaeology's strong connection with history led to the subdivision of the post-Roman era into classic historical-epochal specialist blocks, namely Anglo-Saxon, medieval and post-medieval. Post-medieval archaeology dealt with the period after c. 1500 and up to c. 1750 and the onset of the Industrial Revolution, the archaeology of the latter being monopolised by technocentric 'Industrial' archaeologists. The archaeology of the 20th century was until recently the domain of archaeologists dealing with the material remains of the two world wars.

A consensus has recently emerged within British circles that the traditional sub-disciplines are essentially engaged in a common project of studying the material heritage of post-1500 Britain and Ireland.²⁹⁸ Addressing the rift between Industrial and post-medieval archaeologists in particular, but in so doing identifying the universal challenge for the discipline, the British archaeologist Matthew Johnson stressed the necessary perspective provided by a *relational* understanding of materiality and the social:

'A mature discipline rejects the either/or of "social life" versus "machines". Social life is nothing if not materially expressed and embedded; machines can never be properly understood outside the context of the social relations of production.... The implication for archaeologists of industry and for all post-1500 archaeologists is clear: we cannot study social life without a deep understanding of technical processes, and we cannot understand technical processes without a deep understanding of social context.'²⁹⁹

As discussed above (3.2), the transition from the medieval to the modern worlds is fluid and contingent. Conventional disciplinary boundaries rooted in historical or cultural determinants, such as the Columbian expedition, the Renaissance or the Reformation, are increasingly disregarded by archaeologists who detect diverging and conflicting patterns of continuity and change in the material record of the transition to the modern world.³⁰⁰ Furthermore, historical archaeologists are extending their interests right up to the present day,³⁰¹ and in 2003, the Contemporary Historical Archaeology and Theory (CHAT) group was established, whose inclusive 'antidisciplinary' stance and eclectic approach has extended the archaeological remit to our own time. Some academic archaeologists use terms such as 'later historical' archaeology or the 'later historical period', which serves to distinguish an area of interest (post c. AD 1500) while maintaining a sense of a continuum within historical archaeology as a whole.³⁰²

²⁹² Orser 1996; Orser 2002: 270; Mayne 2008: 95.

²⁹³ Orser 2002: 270; Andr n 1998.

²⁹⁴ Orser 1996: 279.

²⁹⁵ Hall & Silliman 2006b: 1. Compare the definition of historical archaeology at Lund University (Wienberg 2015).

²⁹⁶ Andr n 1998; Mayne 2008: 97; Johnson 2006: 314.

²⁹⁷ Tarlow & West 1999; Hall & Silliman 2006a; Beaudry & Hicks 2006; Horning & Palmer 2009; Wienberg 2015.

²⁹⁸ Horning & Palmer 2009: 5.

²⁹⁹ Horning & Palmer 2009: Foreword.

³⁰⁰ Gaimster & Stamper 1997; Gaimster & Gilchrist 2003.

³⁰¹ Buchli & Lucas 2001a; Burstr m 2007; Harrison & Schofield 2010.

³⁰² Johnson 2006: 314; Johnson 2009.

Writing in 2006, Hall and Silliman settled on a definition of historical archaeology as an 'archaeology of the modern world', a framework suited to organising their book which, in its range of articles, illustrates the breadth of themes which currently characterises the discipline.³⁰³ While this concept is not new and has been used within the context of other definitions, it is here used explicitly to gather a disparate array of ideas and concepts and methodologies which might be regarded as eclectic by some, but which Hall and Silliman regard as a healthy state of being for the discipline. As they also point out, an inadequacy of the 'post-Columbian' focus of historical archaeology has been an emphasis on period or epoch as a means of disciplinary definition. In their opinion, which I share (3.2.6), emphasis should instead be upon *process*, unrestrained by conventional specialisation or traditional sharply-defined periodisation: rather than emphasising an era or a condition, archaeologists should explore 'differing perspectives on the processes that have formed and shaped modernity, and the way that the past is understood from the perspective of the present'.³⁰⁴

As I argued in section 3.2.6, by thinking about modernity as process rather than period, historical archaeologists can avoid the methodological restrictions imposed by their discipline's modernist epistemology. Being a science rooted in Enlightenment values, its empirical approaches have tended towards identifying and classifying the 'typical', 'normal' and 'representative', and discounting evidence for more ambiguous histories on society's margins and in times of transition. Attempts to identify normative patterns and types of material culture as definitive and diagnostic of periods, for example, or identifying 'worldviews' and 'orders' can 'sacrifice process - the interpretation of history and the awareness of change - to classification and stasis.'³⁰⁵ The American archaeologist James Deetz's structuralist interpretation of changes in early North American material culture that expressed new emphases on balance, symmetry and individuation as being diagnostic of a comprehensive shift to a Georgian worldview ('The Georgian Order') which provided a cultural template for emerging colonial identities is a case in point.³⁰⁶

As mentioned above (3.2.4.2), European and Scandinavian archaeologists have recently urged the adoption of the 'modernity' trope as a useful way of side-stepping the rigidities of conventional periodisation. This means of defining the area of interest has been particularly enthusiastically adopted by archaeologists working in Sweden and Finland, and it forms a central plank in the theoretical framework for the present study.³⁰⁷

Writing in 2008, the historian Alan Mayne concluded that:

'The overlapping preoccupations of historical archaeologists with the dynamics of power and inequality in a modernizing world have resulted in a near-consensus over recent years that if historical archaeology is to be regarded as the archaeology of the modern world, the historical process it best describes is global capitalism. The framework for historical archaeology has become mercantilism, industrialism, urbanization, colonialism, and postcolonialism.'³⁰⁸

While this assessment of the overarching historical-contextual framework is broadly correct, the scales, tensions and issues currently dealt with in historical archaeology, and the theories and methodologies used, are becoming more diverse and complex by the day. The explanatory hegemony of grand historical themes and narratives is increasingly being challenged by smaller 'material histories' utilising archaeological sources, and the recognition that this material heritage was enmeshed in a plurality of social practices and discourses which comprise a wider multitude of possible pasts.

The next sections present research directions in this expanding intellectual field that are of particular relevance to the aims and scope of my study, and which have shaped the analysis of my own material. Some central concerns which I share are: investigating how different materialities were

³⁰³ Hall & Silliman 2006b: 2.

³⁰⁴ Hall & Silliman 2006b: 2.

³⁰⁵ Hall & Silliman 2006b: 3-4; Thomas 2004; O'Keefe 2009.

³⁰⁶ Deetz 1996 [1977].

³⁰⁷ Ersgård 2007, 2011, 2013b; Herva, V-P. & Nurmi, R. 2009; Lihhammer & Nordin 2010; Lihhammer 2011; Wienberg 2015: 167-169.

³⁰⁸ Mayne 2008: 98.

engaged with, and experienced by, people in the past; which practices enrolled those materials; and what consequences arose from those practices.³⁰⁹

3.4.2. Disciplinary realignment and intersecting dimensions of inquiry: materiality, scale, contextuality and interpretation

Writing in 1999, the British archaeologist Matthew Johnson criticised dualistic definitions centred on single issues or sets of themes as providing too simplistic a basis for defining and uniting an historical archaeology. In defining a way forward, he concluded that all historical archaeologists work within *a series of tensions* which should be viewed as challenging and productive of new insights into the past: for example, tensions

‘between global networks of capitalism and local contexts, between the presence of the large, all-embracing structures of modernity and the sharper focus on agency and the individual that our material offers, tensions within the narratives that archaeologists write and other academics and the public read, across the use of different classes of material, between master narrative and irony’.³¹⁰

In the years since the publication of this article, these and a multitude of related issues and themes have inspired research within a growing and intellectually vibrant discipline. In the following sections, I will outline what I regard as the chief features and approaches associated with this realignment. These include recent developments within the established and interrelated research directions known as ‘contextual’ and ‘interpretive’ archaeologies, which respectively reflect close links to historical and anthropological methodologies, the latter in particular emphasising an ‘ethnographic’ approach to the study of people and the things that they shape and are shaped by.³¹¹ Other main developments that denote the active integration of social theory into historical-archaeological inquiry are a concern with the materialities of historical social discourse by interpretive archaeologies, and the adoption of relational and network approaches to, and conceptions of, agency, materiality and spatiality.

3.4.2.1. Contextual and interpretive historical archaeologies: connecting things, people and ideas in their historical particularity

This disciplinary realignment has occurred during the last three decades, when, rather than unifying around a common set of issues, archaeology as a whole experienced a fragmentation of theory and practice, moving away from restrictive, deterministic and positivistic views of discourse.³¹² Many of the issues, tensions and ironies outlined by Johnson in 1999 have been recognised, developed and supplemented, and historical archaeology has matured and diversified as a result of the outward-looking and inclusive realignment he and other proponents of a ‘contextual’ approach have espoused. Johnson’s claim that historical archaeology would re-emerge from a process of rethinking ‘as a wide-ranging set of practices within an interdisciplinary theory of material culture whose very diversity makes it intellectually vibrant’³¹³ is in the process of being realised.

The concern with contextuality,³¹⁴ varieties of scale and the active role of material culture in social discourse and practice has been operationalised by practitioners of the so-called ‘interpretive’ approach to historical archaeology.³¹⁵ This influential research direction has been in place since the early 1990s, and has been most actively pursued in North American and Australian archaeology, where material and textual sources are particularly detailed and can be readily integrated in specific, data-rich, and closely-examined case studies.

Writing in 2010, one of its chief proponents, the American archaeologist Mary C. Beaudry, claimed that this approach must be seen as a disciplinary distancing from the largely ahistorical

³⁰⁹ Barrett 1994: 90.

³¹⁰ Johnson 1999: 24-25, 31.

³¹¹ See for example Yentsch 1994; Mayne & Murray 2001; Yamin 2001.

³¹² Johnson 1999: 27-28.

³¹³ Johnson 1999: 32.

³¹⁴ For closer definitions of contextuality, see below.

³¹⁵ See for example Yentsch & Beaudry 1992; Beaudry 2006; Beaudry & Symonds 2010a.

'generalizing mode' and 'broad views such as world views and capitalism' espoused by James Deetz's cognitive structuralism and Mark Leone's critical theory, for example. In addition, it denotes a general acceptance of the multiple strands of thought incorporated in post-processual theory, and a greater use of ethnographic and historiographic methods, with particular emphasis on closely detailed 'documentary archaeologies' and micro-histories.³¹⁶

Crucial to new understandings of how people not only *responded* to external stimuli and structures, such as capitalism or Deetz's Georgian Order, for example, but in fact *initiated* action and constructed themselves and their worlds has been the development of 'a theoretical framework which privileges their humanity and knowledgeability, while acknowledging their place within history (and society).'³¹⁷

For the British archaeologist John Moreland, the post-processual school within archaeology, with its emphasis on human creativity and the role of objects in the construction of humanity, has developed a contextual framework in which human agency and the active nature of material culture in the construction of meaning and identity are central. This emphasises that human beings act on the basis of their knowledge of the world, and through the structures and material culture they have created.³¹⁸ Contextual and interpretive archaeologies have thus adopted a 'humanising' perspective, emphasising the importance of *people* (rather than 'society' or 'culture') and the fluid and complex nature of being human, both in the past and in the present, as we as archaeologists attempt to understand the past. This requires accepting ambiguity and contingency rather than the certainties of positivism, and the importance of contextuality to our interpretations and understandings of past meanings; namely, that our notions of materiality are enmeshed with interpretations and meanings that are historically specific, and culturally and socially situated and constructed.³¹⁹

A core strand of rethinking with regard to agency and materiality within 'contextual' and 'interpretive' archaeologies draws on the practice theories of Pierre Bourdieu and Anthony Giddens,³²⁰ promoting the notion that material culture is neither a passive element in social practice nor a passive mirror of behaviour, but is rather 'meaningfully constituted' and is itself an active intervention in the production of community and self. In other words, it embodies meaning, is the product of meaningful action, and is involved recursively in the reproduction of meaningful action in specific social and historical contexts.³²¹

Consequently, contextual and interpretive archaeologies seek to connect things, people and ideas in their historical particularity. Meaning is not inherent to any particular object: it derives essentially from relationships between objects, and between objects and people. Readings of these objects by people in the past were facilitated and constrained by these relationships - their 'context' - which the archaeologist Ian Hodder has defined as the 'totality of the relevant environment' of an artefact.³²² Contextual and interpretive archaeologies demand close and detailed engagement with data, and often result in histories reminiscent of the anthropologist Clifford Geertz's thick description and historical micro-histories, whereby one can draw 'large conclusions from small, but densely textured facts.' This requires using all the data we have available, and, importantly, not privileging one dataset over another.³²³

For Moreland, writing, for example, is both a technology of oppression and a vehicle for liberation and self-expression, and is as such a significant 'reality' in the construction of the self and society. This active process of social reproduction involves the interaction of a number of such 'realities' or media in a 'complex (contextual) weave of routines, objects, relationships, texts, ceremonies and

³¹⁶ Beaudry 2010: 144-145.

³¹⁷ Moreland 2010: 46

³¹⁸ Moreland 2010: 46-48, 67-68.

³¹⁹ Lock 2009: 177-178.

³²⁰ Bourdieu 1977; Giddens 1984.

³²¹ Hodder 1986: 4; Moreland 2001.

³²² Hodder 1992: 14.

³²³ Geertz 1973: 28; Moreland 2010: 62, 195.

rituals'. As products of human creativity, texts and material culture were produced and distributed within social relationships, and were crucial instruments in attempts to reproduce or transform them.³²⁴

A dialectic, or interplay - rather than opposition - of document and artefact, and their close combined empirical examination within their specific historical situation, lies at the heart of contextual and interpretive approaches. The *a priori* distinction between text and artefact and history and archaeology is removed by combining multiple sources – such as historical maps, place-names, printed books, iconography, technologies, to name a few – to add interpretive strength to material studies.³²⁵

3.4.2.2. Recent developments: eclecticism, multiple scales and interdisciplinarity

In a 2008 review of the discipline that sought to address both the archaeological and historical communities, the historian Alan Mayne asserted that historical archaeology in the early 21st century had transcended the sterile debates regarding its supposed secondary status as 'the handmaiden of history'. He attributes this to a better definition of its epistemological and empirical grounds, its systematic engagement with other disciplines in the humanities and social sciences, and its growing research output covering themes and issues which extend beyond its previously almost exclusive preoccupation with descriptive accounts of excavation data.³²⁶ This vibrancy is reflected in the quantity, range and sophistication of international research publications during the last three decades. Numerous academic articles and multi-authored volumes reveal a discipline engaging with multiple forms of evidence and conceptual frameworks in order to analyse a wide range of practices, times and places.³²⁷

These studies combine diverse data sets, a close emphasis on material-culture studies, multiple scales (particularly the local-global dialectic and an emphasis on micro-studies, including studies of individuals) and the application of new conceptions of agency, practice and materiality. Historical archaeology now has a presiding interest with the 'social life of things',³²⁸ and, drawing on recent work in social theory and material-cultural studies, an emphasis on the material qualities of buildings and objects and the ways in which they actively participate with humans in constituting the world and society. This interest in materiality is eclectic, ranging from objects situated within personal, domestic and industrial spheres to varieties of buildings and landscapes. Importantly, this focus allows the discipline to interact productively with cognate disciplines – such as history, sociology, anthropology, material-culture studies, and geography - in which a greater appreciation of the social significance of materiality and the intermeshed nature of the human and material worlds is coming to the fore (see 3.4.3).³²⁹

Together with a more theorised appreciation of materiality, the question of scale, and particularly the interplay of local and global scales, lies at the heart of recent interpretive and contextually-minded historical-archaeological analysis.³³⁰ Following on his assertion of the analytical power inherent in archaeology's particularity, Matthew Johnson observed that the major task facing historical archaeologists is 'not to shift focus on an exclusively larger scale, but to grasp the relationship between the small-scale [and] wider processes of transformation...'.³³¹

Johnson's own influential study, *An Archaeology of Capitalism*, explored in exemplary fashion the intricately entangled materialities of capitalism in a wide range of contexts across local and global scales in Britain and the eastern seaboard of North America.³³²

³²⁴ Moreland 2010: 2.

³²⁵ Johnson 1999: 31-32.

³²⁶ Mayne 2008: 93-94.

³²⁷ E.g.: Gaimster & Stamper 1997; Tarlow & West 1999; Hall 2000; Mayne & Murray 2001; Buchli & Lucas 2001a; Gaimster & Gilchrist 2003; Hall & Silliman 2006a; Hicks 2003; Beaudry & Hicks 2006; Tarlow 2007; Horning & Palmer 2009; Gaimster & Majewski 2009; White 2009b; Hicks & Beaudry 2010a; Beaudry & Symonds 2010; Lihammer & Nordin 2010; Olsen 2010; Harrison & Schofield 2010; Alberti et al 2013; the Journal of the Society for Post-Medieval Archaeology 2000-2018.

³²⁸ Appadurai 1986b; Gosden & Marshall 1999; Hicks 2010.

³²⁹ Dant 2005; Miller 2005; Styles & Vickery 2006; Harvey 2009; Ingold 2011b.

³³⁰ Hall & Silliman 2006b: 8; Orser 2009: 8; White 2009b.

³³¹ Johnson 2006: 318.

³³² Johnson 1996.

Martin Hall's *Archaeology and the Modern World*³³³ constitutes a particularly sophisticated attempt at a synthesis of historical archaeology's six main 'dimensions of inquiry' proposed by Hall and Silliman; namely, scale, agency, materiality, meaning, identity, and representation.³³⁴ Using colonialism as the context for his material analysis, his multi-scalar interpretation of the meanings and representations embedded in surviving texts and material culture is informed by the interplay between localism and globalism. By focusing on 'intensely local systems of meaning' embedded in material culture, Hall aims to reveal 'the complex discourses of colonialism' and the complex ways in which localities and individual and group identities were created within global systems of distribution and cross-cultural engagement. In the spirit of James Deetz, he argues that

'historical archaeology has long been concerned with landscapes, houses and the 'small things' of everyday life, and also with the ways in which such material things circulated in the global networks that colonial settlement brought.'³³⁵

Local case studies in material culture explore relationships of power and inequality within urban societies, and the broader dynamics of trade and colonialism in the modern world. A number of important archaeological analyses of urban sites have offered alternative accounts of lives of previously marginalised social actors, notably studies centred on communities at the Boott Cotton Mills at Lowell, Massachusetts, the Five Points enclave in New York, and slumlands in South Africa and Australia.³³⁶ Interpretations of the material record of mundane and routine activities at these marginalised places provide eloquent and provocative contradictory historical narratives of lives that were alienated by dominant contemporary discourses. In Scandinavia, Anna Lihammer has provided a pioneering archaeological study of marginalised communities in Swedish society.³³⁷

This work demonstrates an optimal approach to writing historical archaeology; namely, by situating specific studies within their general contexts, and engaging general ideas to illuminate particular archaeologies of the past. Furthermore, due to the ambiguities of our source materials, both textual and material, it is important to bear in mind that we cannot offer an *actual* reconstruction of the past. At best, we can attempt to construct one of many potential 'imagined' and incomplete narratives of the past.

3.4.2.3. Historical ethnographies of people and their things

Looking particularly at the points of conceptual intersection for collaboration between archaeology and history, Alan Mayne identifies three key points; namely an ethnographic interest in integrating different scales of analysis to reveal social process; a sensitivity to human agency; and engagement with marginalised communities.³³⁸

Writing in 2003, the British archaeologist Dan Hicks contended that historical archaeology has established a strategic role in the social sciences based upon the 'ethnographic observation of the active role of objects in social life.' The field's essential strength lies in its ability to produce 'historical ethnographies of "people and their things"' by interpreting past social worlds through the study of material culture.³³⁹

This approach is rooted in James Deetz's pioneering work that asserted that it is 'in the seemingly little and insignificant things that accumulate to create a lifetime, [that] the essence of our existence is captured.'³⁴⁰ In her seminal study of life in the Chesapeake, the American archaeologist Anne Yentsch developed this to demonstrate how detailed archaeological and documentary research could be

³³³ Hall 2000.

³³⁴ Hall & Silliman 2006b: 7-15.

³³⁵ Hall 2000: 2-3, 70, 193.

³³⁶ Mrozowski et al 1996; Murray & Mayne 2001; Yamin 2001, 2006.

³³⁷ Lihammer 2011.

³³⁸ Mayne 2008: 104-105 (citing Geertz 1983: 57 among others).

³³⁹ Hicks 2003: 325, 318.

³⁴⁰ Deetz 1996: 259.

combined to produce 'richly detailed ethnographies.'³⁴¹ American archaeologists in particular have produced nuanced studies of the complex histories and contextual meanings of simple and commonplace artefacts, such as ceramics, sewing equipment and shoes, which ground their analysis upon the dictum 'Small Finds, Big Histories'. They pursue a multi-scalar ethnographic interest in building interpretation from the small, the local, and the particular, and extrapolating to wider historical contexts and processes.³⁴²

Such analyses have revealed innumerable unequal social worlds - 'a mass of local contingency' - that are nevertheless connected by the global flows of things, people, and ideas.³⁴³ These flows are fluid, volatile, and multiple. By stressing process, indeterminacy, and reflexivity rather than structure, function or system, the analytical dynamic has shifted from one of 'being' to one of 'becoming', and towards processes of continuity and change.³⁴⁴

3.4.2.4. Historically-situated micro-studies and the diversity of social experiences

The current diversity of interpretive approaches within historical archaeology has prompted disciplinary assessment. Writing in 2009, the American archaeologist Laurie Wilkie maintained that there is no 'school' of interpretive historical archaeology, but rather a number of practitioners with a range of theoretical perspectives 'who share a commitment to constructing archaeological interpretations that are empirically rigorous, historically situated, and socially relevant.'³⁴⁵

These interpretations employ multiple intersecting lines of evidence that may be rich in data. They are historically situated both in the sense of attending closely to the historical, cultural and social contexts in which people and objects existed, while acknowledging the archaeologist's own socio-political situatedness and the need to conduct a discourse about the past with other interested parties in the present. Rather than being a subdiscipline, it is a 'congeries [collection] of strongly interdisciplinary, data-driven and theoretically grounded approaches to doing and writing historical archaeology'.³⁴⁶

According to Wilkie, interpretive historical archaeologies contribute most by focusing on 'the microscalar levels of society – households and small communities – to understand the diversity of social experiences' rather than aiming for the grand narratives.³⁴⁷

Indeed, contextual and interpretive historical archaeologies have been criticised for trying to downplay or tidy up the complexities, contradictions and diversity they encounter in their material at the smaller scale by squeezing interpretation into broad, generalising explanatory narratives of global social process, such as colonialism, capitalism, improvement or consumerism, for example. Dan Hicks has characterised this as a 'residual structuralism' which reduces the complexity of knowledge to the illustration of models of the material constitution of social relations. As a result, he has called for archaeologists to abandon trying to reconcile their material with big deterministic questions and conventional narratives, and instead use their material boldly to tell 'stories that matter'. These are stories that subvert grand narratives and celebrate their fragmentation and complexities by revealing localised manifestations of these totalising concerns, such as the conflicting materialities of social improvement, or the construction of personal worlds through consumer goods, for example.³⁴⁸

That said, interpretive historical archaeologies are 'intrinsically multiscalar' and broader concerns are often addressed successfully, but they should always attempt to 'illuminate the textures and nuances in society rather than ... create blanket characterisations of the past'.³⁴⁹ Emphasis should be placed on producing accounts of the past 'that deal meaningfully with all the richness of the material at hand, rather than explanations which reduce that richness to a few main points that might have

³⁴¹ Yentsch 1994.

³⁴² Beaudry 2006, 2010; Hodge 2006, 2009; White 2009a.

³⁴³ Hicks 2003: 324.

³⁴⁴ Mayne 2008: 107.

³⁴⁵ Wilkie 2009: 335.

³⁴⁶ Beaudry & Symonds 2010b: xiv.

³⁴⁷ Wilkie 2009: 337.

³⁴⁸ Hicks 2010: 71; Hicks 2004.

³⁴⁹ Wilkie 2009: 338.

broader explanatory power.³⁵⁰ In this lies a recognition that 'we construct the past; it isn't there waiting to be discovered. We take the fragments...and weave them into stories of what might have been.'³⁵¹

As a vehicle for the practice of a contextual, interpretive archaeology, Mary Beaudry favours the micro-historical approach, which she sees as being more a 'style or manner of practice' than a method. As an 'exploratory stance' it comprises the intense examination of a single event, place or life with the aim of yielding 'insights across scales of space and time', since fine-grained detail often has the capacity to reveal how larger processes operate. Events are examined as parts of chains of events, and the exploratory stance engenders a multiple perspective sensitive to the many ways in which individuals react to and initiate events or situations. This mode of investigation is particularly suited to those critical of the ability of top-down, generalising histories to capture the complexities, uncertainties and open-endedness of history.³⁵²

By employing a 'microscopic approach', historical archaeologists can pinpoint specific material evidence of the individual and the personal, the alliance of the material and the personal being a particularly powerful means of gaining insight into past lives.³⁵³ As Beaudry suggests, this does not mean that the archaeological study lacks broader historical significance; rather, it simply entails a different way of understanding objects whereby archaeologists can comprehend the historical and social contexts in which objects functioned. By reconstructing contexts at the microscale we can provide authentic insights into how people used objects to construct identity, fashion the self and shape social interaction, and in some instances even allow us to reconstruct 'material biographies' of otherwise historically anonymous individuals. An explicit aim of the contextual, interpretive approach is, in Beaudry's words, 'to nudge archaeologists out of ingrained assumptions about artifacts and people in the past'.³⁵⁴

3.4.2.5. Material culture as discourse and multiple lines of inquiry

According to Beaudry, it is necessary to understand how objects functioned in their social settings by weaving together multiple lines of evidence which allow us to consider what people did, or hoped to do, with the objects in their possession. By attempting to understand peoples' intentions, aspirations, and ambitions, it is possible to forestall interpretation that conforms to standardising analytical frameworks and presentist viewpoints reflecting our own modern assumptions or subjectivities rather than those of the people we are studying. By emphasising specific cultural and historical contexts, individuals and groups can be seen as active agents with active voices, people who made conscious choices in response to varieties of personal experience, such as alienation, discrimination, and imposed gender ideologies, for example.³⁵⁵

In her interpretive micro-studies, Mary Beaudry also favours an approach to artefact interpretation that involves the detailed construction of the historical and ethnographic contexts of artefact use, and the reconstruction of 'cultural fields' in which objects and people acted and interacted. A critical reading of cultural texts is required to establish 'action contexts' where objects were deployed as symbols in negotiation and discourse and as elements in the construction of identity. This approach intersects with 'the notion that material culture constitutes a form of discourse, between and among people as well as between materials and people'. Furthermore, it incorporates aspects of performance theory, practice theory, and feminist theory, and stresses embodied experience and the integration of multivocality and differing perspectives.³⁵⁶

Discourses about identity and personhood were enacted through many types of objects which were charged with meaning and significance, and which through their implication in normative behaviours and embodied practices, conveyed messages about the self, gender identity and social rank, for example. Objects could be invested with multiple meanings, and through their materiality (form,

³⁵⁰ Joyce 2006: 49.

³⁵¹ Yamin 2008: 3.

³⁵² Beaudry 2010: 145.

³⁵³ Beaudry 2010: 146; Yentsch 1994; Cornell & Fahlander 2002; Yamin 2001, 2008; Beaudry 2006, 2010; White 2009b; Hodge 2009.

³⁵⁴ Beaudry 2010: 146-147.

³⁵⁵ Beaudry 2010: 147.

³⁵⁶ Beaudry 2010: 148; Hall 2000; Meskell 2005; Miller 2005.

substance, qualities) and deployment in interactive strategies, with power. For the purposes of analysis, their meanings in person-to-person relations might be less relevant to our interpretations than what roles objects, through their material affordances,³⁵⁷ played in affecting how people interacted with them or were acted upon by them. Central to this is recognising the embodied experience of identity construction and the diversity of 'meaning-making' through material objects that are used in, and affect, daily behaviours and practices.³⁵⁸

Contextual and interpretive approaches bypass assumptions regarding the existence of a culturally embedded and universalised register of human experience and roles, such as essentialised or objectified conceptions of womanhood, manhood, or childhood, for example, or that people form an undifferentiated group that shares the same experiences, and whose actions are defined and dictated by the objects they use. Instead, they offer nuanced and multiple ways of interpreting material culture that reveal differentiated and changing subjectivities and responses to life experiences, brought about at least in part by how people interacted with, and were acted upon by things.³⁵⁹

The interpretive approaches espoused by Beaudry in particular provide a template and point of departure for aspects of my own study. However, the multiple lines of inquiry and close empirical and analytical detail of her own material studies is difficult to replicate in my own analysis, which draws on a more fragmentary and temporally and spatially dispersed range of material. Nonetheless, some aspects will be touched upon in my own study of the materialities of practices in Trondheim and 18th-century Kongsgården (5.6 and 6).

And finally: although Beaudry and other practitioners of interpretive archaeology aspire to a relational approach to materiality and social context which recognises the active role of material in sociality, their emphasis on human intentionality and the social meaning of material culture is currently being questioned by a new wave of radical post-humanist thinking. This is a development in the current cross-disciplinary 'material turn' which has important consequences for a materialist discipline such as archaeology. Developments with relevance for my own study are outlined below.

3.4.3. The 'return to things': materiality, networks and 'material histories'

3.4.3.1. Post-humanist critiques of contextual and interpretive archaeologies

The current social-scientific material turn - or 'return to things'³⁶⁰ - embraces a radical post-humanist emphasis on non-representational ontology, the physicality of things, and a relational understanding of the enmeshed role of humans, nonhumans and natures in an emergent world of constant change and flux.³⁶¹ This turn has spawned critiques of what is regarded as a *subject-centred* discourse within material-culture studies and contextual and interpretive archaeologies, characterised by a continued privileging of human intentionality and agency, and an over-emphasis on representation and meaning.

To proponents of a non-representational social ontology, these 'social-constructivist' approaches have resulted in 'culturalist studies of material culture that reduce things to meaning', or 'surprisingly static and formal visions of past life'³⁶² in which the material world is seen as channelling human intentionality and enabling human action within a context of inherited structures. This constitutes a one-way process running from the actor to the acted upon, from the active to the passive, from mind to matter.³⁶³

Critics maintain that some interpretive archaeologies perpetuate the representational impulse and social-constructivist distinctions between the ideational and the material, and between subject and object. They do so by trying to fix the meaning or social use of objects or structures in particular moments of time, and by regarding things as essentially expressions of cultural, religious, or political orders,

³⁵⁷ The qualities or properties of an object or environment that provide the possibility of action.

³⁵⁸ Beaudry 2010: 150-155.

³⁵⁹ Beaudry 2010: 154-155.

³⁶⁰ Witmore 2007: 559.

³⁶¹ Social reality is conceived as fundamentally relational, and it is therefore the relationships among the elements, and not the elements themselves, that lie at the heart of analysis.

³⁶² Hicks & Beaudry 2010b: 2; Jones & Alberti 2013: 18. See also Olsen 2003, 2010; Witmore 2007; Ingold 2007.

³⁶³ Jones & Alberti 2013: 19.

discourses or identities. They place emphasis on the structure of symbolic meaning, or cultural representation, and how the symbolic orders of the social or the cultural are realised in the distribution of meaning and value which reinforce, legitimate and facilitate unequal distributions of goods, opportunities and power. The collective symbolic order is that by which knowledgeable actors make sense of the world, within which they organise their lives and legitimate their actions. Objects of investigation - things, landscape, urban space or place - are 'texts' which are read in terms of the realisation or contestation of ideas, ideologies and identities, and understood as part of the impulse to self-realisation by social groups, classes or nations.³⁶⁴

By ascribing particular social functions to objects and privileging moments at which social relations or particular meanings can be identified, there is still a tendency to focus on those moments when things become important for humans, become involved in social relationships, and are charged with meaning. Things are consequently reduced to consequences - or representations - of human thought, action and beliefs. The world only has significance for the privileged, interpreting human subject if it is converted into symbols and representations. At best, according to these critics, this type of archaeology provides a history of '*material* culture': a narrative of how things were transformed through changes initiated in the social, cultural or ideational spheres, often by powerful individual or institutional actors or abstract 'social forces'.³⁶⁵

3.4.3.2. Relational and non-representational ontologies and theories

Understandings of how the world unfolds, and the relationships of people, things and the environment, are currently being reconfigured in response to the recognition that humans are 'caught up in the fabric of the world'.³⁶⁶ Furthermore, the constitution of 'the social' is conceived less in terms of human intentionality or cognitive deliberation and more as the result, or *effect*, of multiple embodied and material affordances, arrangements, routines and habits. This is an emergent relational process, meaning that humans are enmeshed in constant relations of modification and reciprocity with their physical and natural environment. In other words, things and people transform one another, and in so doing bring the world into being. The emphasis shifts from the symbolic value placed on things to what people *do* with them, and how their interactions shape their embodied selves, practices and relationships.³⁶⁷

Recently formulated relational theories and ontologies conceive the constitution of social process, actions or events in terms of heterogeneous relationships that transcend multiple dualities such as society and nature, technology and society, and human and non-human actors, for example. Instead, these relationships comprise complex collectives, configurations, networks or assemblages of humans, nonhumans, natures, knowledges and practices, for example. Duality of 'subject' and 'object' is rejected: human, non-human and material 'lives' exist in the same world, and should not be construed as ontologically different, or placed within separate ontological domains. Essentialist objects and subjects are replaced by relational identities, persons or entities without *a priori* boundaries. The interface

³⁶⁴ Anderson & Harrison 2010b: 4-5.

³⁶⁵ Hicks 2010: 81-82; Stahl 2010: 154; Jones & Boivin 2010: 336-337; Jones & Alberti 2013: 15-17, 19.

³⁶⁶ Merleau-Ponty 1962: 256. Writing in the 20th century, Heidegger and Merleau-Ponty questioned the boundaries between things and humans, emphasising their embodied relationship. For Heidegger materiality was not distinct from human existence (*Dasein*), but rather part of an active organic relationship (see 'The Thing' in Heidegger 1971 and Heidegger 1962: 95). Merleau-Ponty identified the body as a material entity, connected with the material world around it through touch, sight and hearing which impart a unique sense of being and bodily knowledge (Merleau-Ponty 1962).

³⁶⁷ Some scholars of materiality have sought to distinguish between objects and things, including Heidegger (1962: 95-102) for whom *things* reveal their value, or 'thingness', in the process of being handled and put to use, and so proving their readiness to the human hand (ready-to-hand), whereas *objects* exist in a state of distant presence or intellectual contemplation (present-at-hand). Heidegger claims that we do not fully realise the true being - or 'thingness' - of the hammer as a tool until it is actively utilised; we are simply confronted with a curious lump of inert physical stuff. When actively manipulated in the act of hammering, however, the object is turned into a thing, releasing a form of embodied knowledge. See also Brown 2003.

between humans and nonhumans is instead regarded as being contingently permeable, and they are enmeshed in so-called 'bundles' of entangled strands of action in an emergent world.³⁶⁸

Despite their relational approach, even Giddens' structuration theory and Bourdieu's practice theory are regarded as perpetuating the duality of human and non-human. They do so by privileging human agents, rules and resources, not giving sufficient prominence to the properties and affordances of materials, and failing to adopt a fully symmetrical conceptualisation of how materials and humans are produced by the same processes, and are consequently *co-productive* of the world.³⁶⁹

Central to non-representational approaches is an insistence on ascribing agency to things, and the symmetrical dispersal of agency between humans and non-humans. In terms inspired by actor-network theory (ANT), humans and nonhumans are themselves assembled and enacted into being within relational networks of heterogeneous or hybrid actors, or 'actants'.³⁷⁰ ANT's decentred notion of *agency as network* means that people, things, technologies, knowledges, institutions, natural elements and other-than-human forces, for example, are no more than *relational, or network, effects*.³⁷¹

The degree to which these networks are maintained depends on the extent to which they are able to '*translate*' situations.³⁷² The work of translation is the creation and instantiation of new types of beings, hybrids blending nature, culture, things, deities and so on. These components, or 'materials of association',³⁷³ include socio-technical innovations which are able to act at a distance (e.g. writing, paper, cartography, navigation, ocean-going vessels, cannons, telephony etc.), thus constructing time and space within the networks.³⁷⁴

ANT is consequently essentially a 'sociology of associations'. As Latour states: 'there is no society, no social realm, and no social ties, *but there exist translations between mediators that may generate traceable associations*.'³⁷⁵ Paradoxically, despite Latour's rejection of all things 'social', one might argue that much of what ANT includes in its process of 'translation' equates closely with notions and definitions of social practice (see 3.5). ANT does not explicitly use the term 'practice', presumably because it would require an acknowledgement of the existence of a wider entity or formation beyond its networks called 'society'.³⁷⁶

In contrast to ANT, social practices *per se* form a central concern of my own study. The following sections will introduce notions of performativity, enactment and practice, and the role of materiality within the nexus of practices and material arrangements through which human coexistence (ie. society) comes into being.

3.4.3.3. Materiality, practice, and society as emergent relational effect

As mentioned above and in 2.6, social-constructivist concerns with the meanings or significance of 'material culture' to people and the human enrolment of objects in social relations are being challenged by an emphasis on *materiality* and its integration with *social practice*.

³⁶⁸ Mol 2002; Olsen 2003; Olsen 2010; Latour 2005: 65; Anderson & Harrison 2010: 7; Ingold 2000; Ingold 2007; Webmoor & Witmore 2008; Law 2009; Hicks 2010: 81-82; Schatzki 2010b.

³⁶⁹ Jones & Alberti 2013: 19; Schatzki 2010b; Larsson 2017: 204-205.

³⁷⁰ According to Latour (1996: 373) an actant is 'something that acts or to which activity is granted by others ... [An actant] implies *no* special motivation of *human individual* actors, or of humans in general. An actant can literally be anything provided it is granted to be the source of action.' Agency is essentially a distributed effect and decentred; ie. it is not specifically located or centred in humans or anything else (Bosco 2006: 137).

³⁷¹ My role (and identity) as an archaeologist, for example, is an effect - an outcome - of a particular actor-network assembling a relational association of the human and the nonhuman: namely, theoretical and practical knowledge, books, earth deposits, artefacts, excavation equipment, computer hardware and software, a professional network, my institution etc. Without this network, I would not be able to act as an archaeologist.

³⁷² 'Translation' is the mechanism by which the social and natural worlds progressively take form, a process that brings together, defines and orders the actors and intermediaries, human and otherwise, that are needed to assemble a large and powerful network and delete the efforts of other networks. (Thrift 1996: 23-26).

³⁷³ These may be both material and immaterial.

³⁷⁴ Law 2009: 145; Thrift 1996: 23, 221; Meskell 2005: 6.

³⁷⁵ Latour 2005: 108.

³⁷⁶ Schatzki 2002: 70 ff., 238-239; Schatzki 2010b: 129, 134-135.

'Materiality' is a contested term, but it usually entails an emphasis on the physical properties and affordances of material objects and environments; their effects; what they do and how they do it; the role of materials in everyday practice, performance and memory; and their impact on society.³⁷⁷

This new 'ontology of things' moves beyond the observation that meaning is contingent upon context to suggesting that certain physical or functional properties of objects also define how they are understood and how they operate in social life. Objects' own life histories, or biographies – their physical constitution and transformation and their intended and unforeseen uses and effects, for example – have trajectories, consequences and meanings of their own. According to this view, objects are not simply enrolled and given meaning in the lives of humans; rather, human and material lives are routinely relationally interwoven in an ongoing flow of permeabilities, and things themselves can constitute contexts which are not necessarily distinctively human or social contexts. In other words, by virtue of their material qualities and affordances things may themselves produce contexts or situations by conditioning practices that actively create continuities or discontinuities with the past; for example, by actively mobilising familiarity and traditional practice, or novelty and transformation, often simultaneously.³⁷⁸

Central to this ontology is the notion that objects act as active mediators whose meaning is not necessarily stable, but rather emerging, changing and dissolving in practice. The meaning of things comes less from their place in a structuring symbolic order and more from their enactment in contingent practical contexts. Consequently, 'the social' is brought into being, sustained and changed through emergent relational processes and multiple actions involving heterogeneous actors rather than deterministic human intentionality, structure or 'structuration'. Social hierarchy or capitalism, for example, are not intrinsic to people, but mediated by relational assemblages of heterogeneous actors, materials, knowledges and practices.³⁷⁹

This has profound consequences for how we conceive 'the social' and 'the cultural', as well as notions of 'space', 'power' and 'resistance', for example. Things, knowledge, agents, institutions, organisations, and society as a whole are essentially *relational effects*: the generated outcomes of relations that are *enacted*, or performed, through heterogeneous combinations of humans and non-humans. Consequently, "modes of production", "structures", "classes", "interests", and the like are not treated as the carriers of events but rather as a set of effects arising from a whole complex of network relations...'.³⁸⁰ These effects are also contingent phenomena, and inherently provisional since they constitute themselves for a period only.³⁸¹

This understanding of the emergent, contingent and integrated nature of practice and materiality lies at the core of my own study, and will be elaborated on below (3.5).

3.4.3.4. Following things and writing 'material histories'

Current trends within the fields of archaeology and material-culture studies are, as we have seen, reversing the long-established emphasis on how *people* make things by questioning how *things* make people: how things mediate social relationships; how things create particular social contexts; and, ultimately, how things possess a form of subjectivity and agency of their own.

Furthermore, rather than approaching the material and cultural world through the thoughts, experiences, and actions of human agents (as is undertaken in classic anthropological methodology), for many the core focus is instead on the object agents as a means of providing insight into the social. The primary ethnographic gaze is directed instead on an individual object, a class of objects, or a discrete community or assemblage of objects in what the anthropologist Arjan Appadurai has referred to as a 'methodological fetishism', returning our attention to the objects themselves. Consequently, in analysing the societies in which they circulate

³⁷⁷ Jones & Boivin 2010: 337; Hicks 2010: 77-79.

³⁷⁸ Hicks 2010: 83-84; Stahl 2010: 151, 155.

³⁷⁹ Jervis 2013: 219-220.

³⁸⁰ Bosco 2006: 136.

³⁸¹ Thrift 1996: 24.

'...we have to follow the things themselves, for their meanings are inscribed in their forms, their uses, their trajectories. It is only through the analysis of these trajectories that we can interpret the human transactions and calculations that enliven things. Thus, even though from a *theoretical* point of view human actors encode things with significance, from a *methodological* point of view it is the things-in-motion that illuminate their human and social context.'³⁸²

In recognition of this - and the materialist ontology outlined above - the attention of historical archaeologists and material-culture scholars is increasingly centred on identifying the material consequences (both intended and unintended) of practices that are mediated, facilitated and articulated by relational engagements and permeabilities between configurations or assemblages of humans and nonhumans. In other words, the *effects of things*, and *things as the effects* of material practices. The efficacy of things relates to material durability, for example, and the transformational effects on physical substance of residuality, decay, fragmentation, repair, destruction and the ways in which they engage with the human senses.³⁸³

The life histories of things and the contexts they constitute accommodate what Dan Hicks calls 'material histories'.³⁸⁴ Rather than providing histories of material culture, the shift of epistemological and ontological emphasis in material-culture studies and historical archaeology from the representational to the material and material practices facilitates the production of *material* histories of past lifeworlds.

While still attempting to understand the changing social uses or meanings of things, this shift allows us to examine the aspects of the life histories of 'incoherent' artefacts, buildings and landscapes; namely, material histories of things that are not immediately identifiable as socially significant or culturally meaningful. According to Hicks, this represents a way to ground archaeological research in the recognition that much that is significant, including human ideas and discourse, is unspoken and undocumented, but nonetheless leaves material traces because it *requires material enactment in order to be accommodated in the world*. This often occurs contingently and in a way that involves the physical affordances of things and the materials they are made from.³⁸⁵

While not denying the validity of social or cultural histories, *material* histories involve an historiography which emphasises material change and enactment, and how practices – such as those related to the construction, use and abandonment of a building, for example - involve heterogeneous and evolving assemblages of humans, materials, technologies, natures and forces. Rather than simply illustrating social history, or providing sociological studies of practice to reconcile structuralism and semiotics, for example, closely studied depictions of human and material configurations in the archaeological record can provide an 'archaeology of life' by describing how particular sites, situations and lives were enacted materially in a contingent manner.³⁸⁶

3.4.4. Concluding statement: the points of departure for my own theoretical framework

In Mary Beaudry's opinion, the recent process of theoretical realignment within historical archaeology has led to its emergence as a creative hybrid field: a 'multifaceted congeries [collection] of contextual, politically and socially engaged approaches to the study of human lives and experiences.'³⁸⁷ This echoes the claim made by Hall and Silliman that historical archaeology is 'an eclectic discipline, lacking a dominant theoretical consensus', which in their view is something to be celebrated.³⁸⁸ This has become even more disparate with the increasingly radical anti-constructivist, materialistic ontology that is being adopted by many practitioners within the field.³⁸⁹

³⁸² Appadurai 1986a: 5

³⁸³ Ingold 2007:13; Hicks & Beaudry 2010b: 1-21; Hicks 2010: 74-75; Herva & Nurmi: 2009; Nurmi 2011.

³⁸⁴ Hicks 2010: 85.

³⁸⁵ Hicks 2010: 85-86.

³⁸⁶ Hicks 2010: 85-86; Stahl 2010: 151.

³⁸⁷ Beaudry 2010: 143-145.

³⁸⁸ Hall & Silliman 2006b: 11.

³⁸⁹ E.g. Alberti et al 2013.

My own material study (chapters 5 and 6) will be somewhat eclectic, drawing on the diversity of interpretive and non-representational theoretical approaches outlined above. In addition, it will utilise specific current sociological theories that seek to closely integrate practice and material agency, as well as theories that deal with the social production of space. These are outlined in the following section. This eclecticism is an attempt to characterise and discuss interrelated material and social particularities and generalities within what is a limited and contextually dispersed range of material at my disposal.

This study's main focus is on the *materiality of practice*, however. This reflects a desire on my part to recognise important non-representational imperatives inherent to the recent material turn and the relational and network approaches outlined above. However, it differs from actor-network approaches, which do not recognise 'practice' as such, and for which society (or 'networks of association') is generated through processes of 'translation' within networks of actants.

By focusing instead on *practice* as the principal generative context of 'the social', I aim to retain the interest in human agency and creativity, embodiment and the creation of identity that is the hallmark of current 'interpretive' approaches that seek to produce closely contextualised archaeologies of social discourse and practice. Following the sociologist Anthony Giddens's dictum that 'the basic domain of study of the social sciences...is neither the experience of the individual actor, nor the existence of any form of social totality, but social practices ordered across space and time',³⁹⁰ practice will form the basic domain - or analytical context - for my own archaeological study.

Practice accounts recognise that phenomena such as 'knowledge, meaning, human activity, science, power, language, social institutions, and historical transformation' occur within, and are aspects or components of, the 'field of practices' - the total nexus of interconnected human practices. A 'practice approach' consequently regards the 'field of practices' as the place to study the nature and transformation of its subject matter.³⁹¹

Using available material traces and other source material, I will attempt to provide accounts of some of the components which constituted past 'fields of practice' in an historical urban context: in essence, what people in post-medieval Trondheim did at particular times and in particular places, and how material things and built spaces were integral to actions which organised individual lives and society at various scales of time and place. By focusing on the varieties of 'doings' - the organised or routinised activities in which humans, objects and built space were involved - this approach provides a point of overlap with the micro-scale of analysis of everyday activity and embodied practice favoured by interpretive archaeology practitioners.

3.5. Theoretical framework for the study: the materiality of social practice

3.5.1. Introduction: theories integrating the material and the social

As set out above (2.6), a central premise of this thesis is that the study of the recent past cannot be undertaken without taking into regard the materiality of that past, and that this forms a crucial imperative for strengthening post-medieval archaeology's conservation status in Norway. I have consequently chosen to focus on *materiality* in my analysis of archaeology's potential as a source of knowledge about the past, and to emphasise its close association with the *practices* through which past society was constituted, using material from Trondheim as an empirical basis for analysis.³⁹² In essence, my aim is to ask what my material can tell us about what people did at various times and places in the recent past, and how objects and places were entangled in social practices and formations.

The archaeologist Axel Christophersen has recently formulated an 'urban archaeology of practice' which aims to provide an alternative to processual and structural narratives of urbanisation in which the significance of everyday practices and people's interactions with their material surroundings are sublimated interpretively to overarching organisational and institutional forces. He adopts a practice-centred approach comparable to my own, which emphasises the intersection of materiality, human experiences and intentions. This approach prefers to see the urban environment as a dynamic

³⁹⁰ Giddens 1984: 2.

³⁹¹ Schatzki 2001: 11.

³⁹² See McLees 2016 for a preliminary excursion into this field.

performative social space continuously created and recreated through countless contingent practices, routines and events with which materials were intricately involved.³⁹³

The following sections will outline the practice-theoretical and space-theoretical frameworks I have chosen for analysing the range of urban material at my disposal at a number of scales or dimensions. They combine conceptions of materiality, agency and space similar to those adopted by relational or network approaches outlined above, although with some differences of emphasis regarding relationality and the nature of human and nonhuman agency, and how they combine to co-constitute social reality.

I have sought to balance a relational materialist ontology with an emphasis on establishing the alliances of *materiality*, *competence* and *meaning* inherent within unique configurations of objects and physical space encountered within archaeological material. To my mind, a theory of practice formulated by the philosopher Ted Schatzki provides just such a suitably balanced theoretical framework, augmented by related insights and a model of practice formulated by the sociologist Elizabeth Shove and her colleagues Mika Pantzar and Matt Watson. I suggest furthermore that this model has points of overlap with the spatial theory of the urban theorist Henri Lefebvre, which facilitates a close discussion of historical social practices within the context of space, a material and ideational component central to archaeological inquiry.³⁹⁴

These theories seek essentially to integrate the social and the material, Schatzki's in particular doing so to the extent of making redundant any notions of human-nonhuman 'interaction'. Although social practices - sets of 'doings and sayings'³⁹⁵ - are placed centre stage as the fundamental location of the social, any anthropocentric bias is tempered by the recognition that human intentionality amounts to nothing if humans do not have the materials required to put their intentions into practice. Furthermore, agency is not regarded as being inherent to either people or objects. Instead, it is temporary, contingent, and *enacted through social practices* which are constituted by emergent and recursive alliances of human activity and material things – so-called *practice-material arrangements*. In Schatzki's view, understanding practices 'always involves apprehending material configurations.'³⁹⁶ This, of course, is music to the ears of any archaeologist! In the course of the following, I will make the case for the relevance that a materially-grounded theory of practice has for my own study of historical social practices in Trondheim, and how it can be allied with historical-archaeological approaches of the types outlined in the previous section.

This requires working with a social ontology that recognises that materiality is an integral part of society, or human sociality, and treats materiality as an indispensable ingredient of social phenomena.³⁹⁷ The social simply cannot exist without the material. Materiality-cognisant relational and network theories³⁹⁸ have corrected social theory's earlier neglect of materiality, and erased the traditional humanistic boundary, or dualism, between society and materiality. However, in Schatzki's view they still fail to provide a satisfactorily integrated concept of sociality and materiality, and neglect the centrality of practices in constituting social phenomena. Theories that he terms 'interactional' still treat society and materiality (including nature) as *separate* realms between which interactions and relations exist. They highlight *interactions*, *mutual dependencies* and *determinations* between entities in two distinct sets. Hybrid phenomena - neither pure material nor pure social entities - that are produced through relational interaction blur the boundary between the material and the social, but are nonetheless still regarded as the outcome - or combinations - of entities, properties and events that are either social or material-natural.³⁹⁹

³⁹³ Christophersen 2015a; Christophersen 2015b.

³⁹⁴ Schatzki 2001; Schatzki 2002; Schatzki 2010a; Schatzki 2010b; Shove et al 2009; Shove et al 2012; Lefebvre 1991a.

³⁹⁵ Schatzki 2002: 73.

³⁹⁶ Schatzki 2001: 3; Schatzki 2010b; Ingram et al 2007.

³⁹⁷ A social ontology is not an explanatory theory, but provides a description, statement or understanding of what there is to social life: the basic features, structures, or constituents of social phenomena. Schatzki 2002: xvi; Schatzki 2010b: 123-124.

³⁹⁸ Giddens's structuration theory, Bourdieu's theory of practice and actor-network theory, for example.

³⁹⁹ Schatzki 2010b: 133-135.

Although he doesn't identify structuration as a specific example, it can be argued that Giddens's theory retains a certain duality,⁴⁰⁰ and in material-culture studies, the relational theory utilised by the anthropologist Daniel Miller⁴⁰¹ in essence promotes a dialectical or recursive relationship between humans and objects. On the other hand, actor-network theory's (ANT's) networks do comprise symmetrical configurations of interdependent human and nonhuman actors which simultaneously constitute the reality in which humans live and coexist. These include social phenomena, although in essence, the arrangement of entities (humans, artifacts, organisms, things - alternatively labelled actors and intermediaries) in 'assemblages', 'collectives' or 'networks' is seen by network theorists as being the principal compositional feature of social life rather than 'society' as such. Each network is a constellation of particular components, and reality is consequently a vast array of interconnected sets of particulars. Social phenomena, or assemblages, are seen as sets of associations between actors assembled and made durable by agency that is distributed, formed and maintained through these associations, change occurring through a reconfiguration of these formations. Human and nonhuman actors (actants) are *intermediaries* in this process, acting as media by which messages are transmitted.⁴⁰²

For Schatzki, however, the significance of materiality in social life does not just lie in the constitutive and causal relations between actors - both human and nonhuman - but also in how material entities are *inherently incorporated within temporally and spatially extended manifolds, or sets, of organised human actions; namely, practices*. Rather than being *intermediaries*, humans and nonhumans are *integral* to sociality, emerging, changing, and dissolving as they are enrolled in practices. As he points out, ANT does not recognise the existence of practices *per se* in the constitution of the world. Rather, actions are conceived as the transactions, or doings, of and between particular actors. ANT's social nominalism rejects the existence of any wider entity that actions make up, or of any constitutive context in which actions take place: networks are essentially the *effects* of the doings of network components. Since it does not recognise their existence, ANT cannot therefore be used to study practices, and in Schatzki's view consequently fails to capture a central feature of human social life - namely, *the integrated human practices and material arrangements that constitute social phenomena*.⁴⁰³

3.5.2. Human intentionality, nexuses of practice and materials, and 'sites of the social'

While recognising the intellectual importance of the post-humanists' nominalist 'distrust of the "human"' and their embrace of nonhumans as co-constituents of social life, Schatzki argues strongly that they are wrong to discredit what he calls 'the integrity, unique richness, and significance of human agency'.⁴⁰⁴ While ANT's symmetrical dispersal of agency corrects a misguided humanism that proclaims people as the sole agents in the world, in asserting that nonhuman entities are possessed of the same type of agency as humans it simultaneously subverts 'the unique richness of the intentional, deliberate, planning, and self-conscious agency humans enjoy'. This is self-evidently not the case: scallops, chimpanzees, humans, electrical storms and computer networks are all agents/actants, in the sense that they are all 'doers', but they do not all possess *intentionality*.⁴⁰⁵

Consequently, while strongly affirming the propriety of attributing agency to nonhumans, Schatzki insists that these attributions must respect *differences*, since entities act in categorically different ways. Indeed, he is firmly of the opinion that human actions have *constitutive, causative, and prefigurative* priority over the actions of nonhumans. Nonetheless, he asserts that all social life (ie. human co-existence) transpires as part of a 'nexus' - or mesh - of interlocked practices and material arrangements in which practices determine, but are also dependent on and altered by, material arrangements.⁴⁰⁶

⁴⁰⁰ King 2004: 7.

⁴⁰¹ Miller 2005.

⁴⁰² Schatzki 2002: 68; Latour 2005: 39, 65; Witmore 2007: 555.

⁴⁰³ Schatzki 2002: 70-88, 238-239; Schatzki 2010b: 129, 134-135.

⁴⁰⁴ Schatzki 2002: xv-xvi.

⁴⁰⁵ Schatzki 2002: 200-201.

⁴⁰⁶ Practices and material arrangements are tied together as nexuses through four types of relations: causality, prefiguration, constitution, and intelligibility. Human practices intervene *causally* in the world and create, alter, or rearrange material entities. Nonhuman entities also exert causal effects; for example when people react to

These integrations or *nexus*es of social practice and material arrangements form 'sites of the social': the socio-material contexts which facilitate the 'hanging together' of human lives. Social phenomena are slices or aspects of such *nexus*es, and all these *nexus*es, or sites of the social, are incorporated within wider nets of *nexus*es which compose elaborate social phenomena or formations, such as governments, financial networks and farming, for example; a web that in its entirety is co-extensive with socio-historic time-space.⁴⁰⁷

My own case study will draw on this materialist social ontology to examine practice-material arrangement *nexus*es present at the 'sites of the social' constituted by the 18th-century residences of the provisioning managers of the military depot at Kongsgården in Trondheim (Chapter 6). The nature of such practice-material arrangements will be unpacked further in the following sections.

3.5.3. Practices, activity timespace and material arrangements: some definitions

Schatzki defines practices as 'organised spatial-temporal manifolds of human activity', or more simply, 'organised bundles of human activity'. A practice is an integral, but contingently evolving and temporally unfolding domain comprising a *nexus* of a variety of activities which are organised by common and orchestrated understandings, rules, normative teleologies and 'teleoaffectivities'.⁴⁰⁸ These activities comprise bodily actions, doings and sayings, the 'moments' of practice which are performed in the chains of action by which people's lives are caused to hang together (for example: the performative chains of action linking modern football players or - more pertinent to this study - an Early Modern household). Importantly, what people do has a history and a present setting while also being future-orientated, all three aspects being united in the moment of practice, a notion Schatzki calls 'activity timespace'.

However, these practices cannot take place in an abstract vacuum, and to exist they must be integrally engaged with what he calls 'material arrangements'; namely, sets of interconnected material entities, including humans, artifacts, organisms, and things of nature (for example: the players, officials, managers, supporters, balls, goals, grass, chalk lines and stadiums involved in the practice of playing football). It is through the *ongoing enactment or performative meshing of practices and material entities in activity timespace that human lives hang together and social life comes into being*.⁴⁰⁹

material properties of entities or events that affect entities. The properties of material entities or the events that occur to them lead people to perform actions (or not!), and practices to take certain trajectories. *Prefiguration* denotes how the social present shapes or influences the social future through the delineation of multiple possible paths of action, such as easy/hard, obvious/obscure, short/long, prescribed/proscribed, acceptable/unacceptable, and so on. Material arrangements prefigure the course of practices too; for example, their physical properties may make it easy for one practice to be performed, while simultaneously making it more difficult for another. Material arrangements *constitute* practices by being essential to them in the sense that the particular practices could not be carried out without them (e.g. footballs are essential to the playing of football), or by being involved in particular practices at particular times and places. For example, saddles and stirrups are not essential to the practice of horse-riding, but these have been widely used during a broad period of geohistorical space-time. They help to constitute particular practices in portions of geohistory, and indeed, most practices would not exist or would have taken other forms and trajectories but for the presence in them of particular material entities. The reverse also applies: certain material arrangements would not exist or would have had different forms were it not for the particular practices that they are incorporated within. Practices and arrangements are consequently *co-constitutive*. The final relationship between practices and arrangements is *intelligibility*: namely, that the material entities that comprise arrangements are intelligible to humans and that this intelligibility is instituted in the practices they perform among these entities. Ultimately, the world is made intelligible to humans through practice (Schatzki 2002: 41-47, 225-226; Schatzki 2010b: 139-141, 146).

⁴⁰⁷ Schatzki 2002: xxii, 70, 200-203; Schatzki 2010b: 128-130.

⁴⁰⁸ Schatzki 2002: 59, 70-72; Schatzki 2010b: 128-129. Examples of 'organised bundles of activities' include cooking practices, political practices, manufacturing practices, recreation practices, religious practices, medical practices etc. 'Teleoaffectivities' or 'teleoaffective structures' - ranges of normativised and ordered ends, projects, and tasks, allied with emotions and moods - link the doings and sayings of a practice. A practice always has a set of ends that participants should pursue, projects they should carry out to meet those ends, and tasks to perform for the sake of those projects. An example of a teleological regime permeating social life is hierarchical authority (Schatzki 2002: 70, 80; Schatzki 2010a).

⁴⁰⁹ Schatzki 2010b: 129-130; Schatzki 2010a; Shove et al 2012: 24.

3.5.4. Materiality as a dimension of social life

For Schatzki, the materiality of social life is its 'stuff' i.e. its compositional matter. He suggests that materiality's role in social life can be acknowledged in three distinct but related ways: by recognising the role of physical entities and their properties in social life and theory; by taking the 'stuff', or basic composition, of social phenomena into account; and by considering the role of nature - biological and physical phenomena - in social life and thought.⁴¹⁰

A materialist social ontology recognises that materiality has compositional significance in social life since society - human coexistence - comprises states of affairs or events that involve, or happen to, material objects. In subtle contrast to the relational and network theories I have outlined previously, however, Schatzki recognises that any thing, property, or event can in itself be *simultaneously* social and material-natural.

Something is *social* if it is part of the nexus of practices and material arrangements through which human coexistence is enacted and brought into being. Something is *material* if it is physical, biological, or natural (ie. subject to principles or laws not of human making). The 'somethings' involved can be *objects, things, properties, events, or processes*. Any material entity that is part of the practice-arrangement nexuses is simultaneously a social entity. Indeed, *any entity at all* can in theory be simultaneously social and material-natural. The distinction between social and material (or natural) consequently does not signify a differentiation of things, properties etc. into two substantially distinct realms or categories. Importantly, there is no 'interaction', 'exchange' or 'dialectical relationship' between the social and the material or nature. Materials and nature are furthermore not 'interwoven' or inevitably and ubiquitously linked with social life. Materiality is essentially *inherent to* social phenomena; materials and nature are *dimensions* of social life.⁴¹¹ There is no 'material world' distinct from the 'social world'.

All social phenomena have a material dimension made up of the arrangements of material entities in which these phenomena partly consist. This material dimension encompasses the physical-chemical composition of these entities, which individually or in combination can affect the course of practices and contribute to the shape or progress of social life. The practice of shoeing a horse, for example, is closely tied to the physical properties of the blacksmith, the horse, the horse's hoofs, the horseshoes and nails, as well as the practical knowledge, or competence, possessed by the blacksmith.⁴¹² In more general terms, attention to, and knowledge of, material properties are crucial to the production, maintenance and repair of buildings and objects, for example.

Furthermore, natural processes will degrade materials, causing them to deteriorate. The physical composition of materials can render combinations and sequences of action physically impossible, easier or harder, painful or pleasing, for example.⁴¹³ The *physical compositions and affordances* of humans, artifacts, organisms and things of nature will exert an influence on what actions may be performed, and where, when, how and for what purpose they are carried out. Likewise, physicality and durability can determine the location and longevity of practice-material arrangements in time and space. Consequently, for example, the physical composition of such disparate entities such as human bodies, viruses, mould, houses and other physical and biological entities are important determinants of continuity, longevity and change in human practices.⁴¹⁴

Another way in which materiality is integral to society is in the form of *physical and biological 'flows'* through practice-arrangement nexuses; for example, flows of matter-energy and of organisms and genes. Material arrangements are to some extent *crystallisations of matter-energy flows*, and they capture moments of biological flows. Examples of the former might be forms of matter-energy (water, coal, oil, gas etc) involved in powering machinery or fuelling heating systems, while viruses, parasites, and pests are examples of organisms that can flow through practice-arrangement nexuses. Indeed,

⁴¹⁰ Schatzki 2010b: 125-126.

⁴¹¹ Schatzki 2010b: 133-134, 141.

⁴¹² Schatzki 2010b: 136.

⁴¹³ By permitting or preventing certain actions, materials and things 'configure' their users. Ingram et al 2007:5.

⁴¹⁴ Schatzki 2010b: 135-137, 141.

specific practices may be responsible for mediating these flows: through cooking, eating, heating, constructing, transporting, waste management and cultivation, for example.⁴¹⁵

3.5.5. Social phenomena as entangled practices, technologies and materiality

According to Schatzki, it is important to recognise that human activity and technology draw materiality into social life, and that technology is embedded in many of the practices which mediate these flows. Technology itself represents an incorporation of materiality-nature into human practice, since technological objects are alterations of natural things, transformations of natural things into artifacts, or reworkings of things derived from nature. Technologies are important in *stabilising and transforming* practices. However, the mediating role of labour and technology should not be overemphasised, since organisms and matter-energy flow through practice-arrangement nexuses regardless of whether or how labour and technology channel, shape, or capture them. Because the entities that compose arrangements are physical in character, materiality pervades social life regardless of the ways in which labour and technologies contribute to its presence.⁴¹⁶

All social phenomena consequently comprise an entanglement of practices, technology, and materiality-nature. As stated, technologies mediate and stabilise human practices and materiality-nature. Heating systems, for example, mediate between the physical-chemical composition of metal, ceramics, wood, oil or gas and the practice of the warming of buildings which makes buildings amenable for other practices carried out in them, such as cooking, eating, working and so on. However, technology and materiality-nature also depend on human 'sayings and doings' to mediate and orchestrate them: the heating systems in which materials combust are themselves products of human activity. In addition to this mutual mediation, materiality-nature enables human practices, technology, and relations between them. Heating systems, such as iron or ceramic stoves, heat buildings by virtue of their physical properties; the same properties and affordances that allow them to be manufactured by human activity and technological processes.⁴¹⁷

3.5.6. A complementary practice model: integrating materials, competences and meanings

Schatzki's practice-material approach is complemented by other theorists who view emergent 'doing' - practice - as the principal framework within which to analyse the co-constitutive and co-evolving nature of material things and human sociality. For the cultural sociologist Andreas Reckwitz, for example, practice is a 'routinized type of behaviour' comprising a 'block' or 'a pattern... filled out by a multitude of...actions'. Practices emerge from, constitute, and make sense of 'forms of bodily activity, forms of mental activity, "things" and their use, background knowledge in the form of understanding, know-how, states of emotion, and motivational knowledge.'⁴¹⁸

Analytically, practice cannot be reduced to any one of these diverse elements alone, be it an individual, a given object or any form of distributed competence between them; they are essentially complex, interdependent amalgams. The practice of skateboarding, for example, combines the *materialities and affordances* of boards and street spaces, the *bodily competences* of the skateboarder, *rules and norms* that define the practice, and its *meanings* to practitioners and outsiders. Consequently, the practice exists as an *entity*: a conjunction or pattern of interdependent elements or resources that can be drawn on when 'doing' skateboarding. The 'skateboarding pattern' is recognisable to practitioners through the way the practice is carried out and by the elements involved in it. At the same time, skateboarding only exists and endures due to countless recurrent enactments, or *moments of performance*, each of which reproduces and sustains over time the pattern of interdependencies which comprises the practice-as-entity.⁴¹⁹

Building on Reckwitz, Schatzki, Giddens and others, the sociologist Elizabeth Shove and a number of colleagues have advanced a cogent definition of practice as interdependent effective integrations or configurations of *materials* (things, technologies, physical entities, the stuff of which objects are made),

⁴¹⁵ Schatzki 2010b: 137-138.

⁴¹⁶ Schatzki 2010b: 137-138; Shove et al 2012: 102.

⁴¹⁷ Schatzki 2010b: 138-139.

⁴¹⁸ Reckwitz 2002: 249-250; Ingram et al 2007: 5, 14.

⁴¹⁹ Shove et al 2012: 7.

competences (forms of understanding, skill and practical knowledgeability) and *meanings* (symbolic meanings, ideas, aspirations).⁴²⁰ These elements are broadly compatible with the range of socio-material entities integrated within Schatzki's practice-material arrangements, and are similarly construed as *integral dimensions of practice* rather than elements external to practice that structure it through interaction (as in structuration, for example).

For Shove *et al*, *meaning* comprises emotions, mental activities and motivational knowledge, and represents the social and symbolic significance of participation in any moment of practice.⁴²¹ These aspects of meaning are broadly equivalent to Schatzki's 'teleoaffective' structures mentioned above: the ends, projects, tasks, purposes, beliefs, emotions and moods which are central to organising practices and the location of practice in the amalgam of past, present and future that is 'activity timespace'.⁴²² Consequently, particular practices depend on, and are characterised by, *specific combinations of materials, competences and meanings* that are bound together and transformed through the spatio-temporal process of 'doing'.⁴²³

My own analysis will focus on this integrated triad of *materials, competences and meanings* in its presentation and discussion of historical practices observable in archaeological material configurations in post-medieval Trondheim (chapters 5.6 and 6). As the analysis will seek to demonstrate, the lives of this city's inhabitants unfolded and hung together through practices which involved particular combinations of materials, competences and social and cultural meanings.

The ways in which people, things and spaces are enmeshed in the generation of social practices and social phenomena will be outlined in the following sections.

3.5.7. People and things as 'carriers' of practice

Essentially, people and things are *jointly involved* in the process of 'doing' and should be regarded as the 'carriers' or 'hosts' of practice... 'and therefore the carriers of routinised ways of doing, understanding, knowing, and desiring.'⁴²⁴ In contrast to conventional approaches to practice and agency, Shove *et al* regard these as *attributes of practices*, and not qualities or personal attributes of the individual actors - human or nonhuman - who participate in them. For example, the significance, purpose and skill of skateboarding do not reside solely in the heads and bodies of skateboarders (à la habitus); rather, these features themselves constitute the practice of skateboarding, of which the skateboarder is merely the carrier.⁴²⁵ Carrying is not a passive process, however: practices are *active* and dynamic integrations of elements, and would not exist unless recurrently enacted by human beings. *Practices both facilitate and are themselves facilitated by human agency*, the nature of which is contained within the possibilities defined by historically specific complexes of practice.⁴²⁶

Practices may therefore be regarded as being sustained in time and space by provisional networks of competences and meanings carried by people, but, crucially, also including that which is embedded in material objects and built space. In such a model, objects and built space - whether designed to do so or not - comprise 'knots of socially sanctioned knowledge', and are entities that 'bind human actors and participate in developing specific forms of social order because they allow for common practices to develop, stabilise and structure time.'⁴²⁷

Furthermore, a practice-orientated approach on the lines set out above will avoid restricting the role of objects and buildings to an abstract one as symbols and carriers of meaning that make 'visible and stable the categories of culture'⁴²⁸ in terms of symbolic distinction and taste (as in Deetz's Georgian Order thesis, or Bourdieu's theory of doxa, for example). Instead, it allows more to be said about the

⁴²⁰ Shove *et al* 2012: 14.

⁴²¹ Shove *et al* 2012: 23.

⁴²² Schatzki 1996: 89; Schatzki 2010a: ix-x; Shove *et al* 2012: 23-24.

⁴²³ Shove *et al* 2012: 23-24.

⁴²⁴ Ingram *et al* 2007: 14; Shove *et al* 2012: 7.

⁴²⁵ Reckwitz 2002: 250; Shove *et al* 2012: 7-8.

⁴²⁶ Shove *et al* 2012: 126.

⁴²⁷ Preda 1999: 362, 355; Shove *et al* 2012: 9.

⁴²⁸ Douglas & Isherwood 1996: 38.

pragmatic and practical role of things, and about how they stabilise social and cultural phenomena through use, competence and practical knowledge as well as through exchange and display.⁴²⁹

3.5.8. Practices in time and space: enactment, stability and change

In essence, therefore, we can assert that peoples' lives hang together and are organised by the *materials, competences and meanings* that are inherent to the practices which they carry and enact. As structured, situated and enacted arrangements, however, practices are always in a process of formation, re-formation, or de-formation. They unfold, evolve and dissolve as their elements change. Change is in part a consequence of the integrative work involved and disruptions to it: ie. how, when and where links are made and broken between the constitutive elements of practice. However, while practices themselves may be in flux, their elements can be comparatively stable; materials, competences and meanings may circulate between places and endure over time. For example, we are surrounded by things, spaces, and buildings that have outlived the practices of which they were once a vital part. However, it is only through their active integration and enactment in practice (performative 'doing') that components are reproduced, eroded, or carried from one setting, population, or time to another. Rather than being *diffused* in time and space, however, the migration of practices might be better understood as occurring as a result of the *re-enactment* of their components by willing actors at multiple sites, a process which may result in their transformation.⁴³⁰

In addition, *complexes* of practices arise when a number of practices are performed in 'sequence, synchronisation, proximity or necessary co-existence.'⁴³¹ With re-enactment, this has particular relevance for archaeological studies of the dense, heterogeneous socio-material environments of cities and towns. Dynamic urban environments play host to concentrations of people, materials and competences situated in close proximity to each other, such as specialised complexes of practice in the form of communities of craftworkers, for example. Spatial proximity may facilitate interfaces of informal encounters and exchange of materials, knowledge, competence and ideas between people, contributing to unforeseen processes of innovation and creativity, and the ongoing formation, stabilisation and destabilisation of practices.⁴³² In addition, cities such as post-medieval Trondheim are characterised by multiple transformations in practice-material arrangements associated with the enactment of new and often exotic practices carried within an increasingly globalised flow of people, materials and ideas.

Having examined notions of practice in some detail, I will now look at how these can be allied with theories of space for the purposes of formulating an archaeology of practice within the urban spaces and places of Trondheim.

3.5.9. Space and practice: the theorisation of space and place

Space is of central importance to archaeological inquiry, and is a subject of much multidisciplinary theorisation. Post-structural theorists have rejected positivist conceptions of space as a constraint on, or determinant of, human behaviour, or as a passive, inert arena or stage for human action and the playing out of events. As Michel Foucault observed, space was treated as 'the dead, the fixed, the undialectical, the immobile. Time, on the contrary, was richness, fecundity, life, dialectic.'⁴³³

Space was passive and denied agency - a mere 'collection of things' - the product of human practice alone, existing to be mapped, cultivated, consumed, and to serve human needs in the teleological march of progress. For Foucault, the course of history was in contrast contingent and discontinuous, essentially the product of the exercise of power. Furthermore, since power was embedded in varieties of spaces, such as churches, theatres, gardens, prisons, hospitals, schools and factories, it could best be analysed through analysis of the control of space.⁴³⁴

As we have seen, material culture has been 'humanised', and construed by social constructivists as a representational strategy and generative force with a central role in the processes by which humans

⁴²⁹ Ingram et al 2007: 16.

⁴³⁰ Shove et al 2012: 24-25, 29-41, 43-44, 132.

⁴³¹ Shove et al 2012: 87.

⁴³² Christophersen 2015a: 125-130.

⁴³³ Foucault 1980: 70.

⁴³⁴ Foucault 1980: 77; Foucault 1977.

construct their experience and understanding of the world. Inspired by the sociologist and urban theorist Henri Lefebvre and others, space too has been widely perceived as being socially and culturally produced, mediated and contested, challenging previous conceptions of space in history as an essentialist category characterised by *a priori* properties linked to tradition and changelessness, and an abstract container for social phenomena.⁴³⁵

For Lefebvre, our understanding of space and its production lies in understanding its materiality and its representations. He sees space as a medium through which social life is produced and reproduced, and which is intimately tied up with the production of individual and collective identities, as well as power, domination and resistance. This is a complex and recursive process: 'Space is permeated with social relations; it is not only supported by social relations but it is also producing and produced by social relations'.⁴³⁶

Consequently, space is not merely a 'passive locus of social relations'; it has an instrumental role as the political use of 'knowledge and action...within the framework of the real - the framework of the existing mode of production'.⁴³⁷ Lefebvre aims to show how 'space serves, and how hegemony makes use of it, in the establishment, on the basis of an underlying logic and with the help of knowledge and technical expertise, of a "system"'. For Lefebvre, a Marxist, this primarily represents the space of capitalist society; but, in contrast to structuralist thinkers, for him it is neither a closed nor a cohesive system, free of contradictions; in fact, capitalist society is so 'open...that it must rely on violence to endure'.⁴³⁸

Lefebvre sought to write a history of the present and the shaping of modernity. In his view, every society in history has created its own distinctive social space that meets its intertwined requirements for economic production and social reproduction, and he formulated his own historical schema of the radical transformation of western society into 'urban society'. By the middle of the 20th century, he argued, an *abstract* capitalist space had been imposed on the *concrete* space of everyday life.⁴³⁹

For Lefebvre, *abstract* capitalist space is a consequence of central processes of modernity that ultimately infiltrate and configure all social space; namely commodification and bureaucratisation. An intensified commodification *of* space imposes a 'grid' of property relations and markets on space, while an intensified commodification *through* space installs economic grids of capital circulation through which abstract space inscribes abstract labour and the commodity form. Simultaneously, there is increased bureaucratisation *of* space, by which each administrative system marks out its own territory or sphere of action; and a heightened bureaucratisation *through* space, involving the formation of juridical-political grids by which social life is subjected to systematic surveillance and regulation by the state.⁴⁴⁰ As I will seek to demonstrate, similar aspects can also be discerned in pre-capitalist spatial formations in Trondheim (chapters 5 and 6).

Abstract space is consequently the commercialised, commodified space that emerges through capitalist social relations, and the territorialised space that emerges through the exercise of state military and police power.⁴⁴¹ According to Lefebvre, this increasingly pervasive space of the economy and the state constrains, frames and actively 'colonises' *concrete* space - the space of everyday life. Concrete - or social - space is 'the space of use values produced by the complex interaction of all classes in the pursuit of everyday life'.⁴⁴² It carries within it the traces and memories of other non-commodified and non-bureaucratized spatialities and other ways of being-in-the-world, but is constantly being infiltrated by the commodity form and other modes of reification. However, Lefebvre asserts that everyday life contests dominant ideologies and their spatial outcomes, and affirms itself through everyday practices conducted in concrete space, which remains 'a space of "subjects" rather than calculations'.⁴⁴³

⁴³⁵ Friedland & Boden 1994: 4; Pred 1984; Crang & Thrift 2000: 1; Lefebvre 1991.

⁴³⁶ Lefebvre 1991: 286.

⁴³⁷ Lefebvre 1991: 8-9, 11.

⁴³⁸ Lefebvre 1991: 11.

⁴³⁹ Lefebvre 1991: 31, 53.

⁴⁴⁰ Gregory 1994: 401; Lefebvre 1991: 341, 387; Friedland & Boden 1994: 39.

⁴⁴¹ I.e., through capital accumulation, institutionalised violence, bureaucratisation and commodification.

⁴⁴² Lefebvre 1979: 241.

⁴⁴³ Lefebvre 1991: 356, 362, 381-82; Gregory 1994: 402.

Although Lefebvre does recognise that space is more than a planned, rational and panoptic phenomenon, his notion of abstract space has been criticised for being too broad and totalising to capture the differentiated pluralities, ambiguities, contingencies and multivalency of urban spaces and places in the transition to modernity.⁴⁴⁴ However, as I will try to demonstrate, his theory can be utilised in tandem with more relational theories of space and 'place' which recognise contingency and differentiation of social practice and spatial formation, as well as integrated models of materiality and practice which allow us to 'populate' his spatial dimensions with differentiated and contextualised spaces of practice.

Rather than being a *product* of social forces or social action, space itself is regarded by other theorists as being active, and simultaneously the *medium and outcome* of social action. Social processes both produce space and are themselves produced, reproduced and changed in ways which involve distance, movement and spatial differentiation, for example.⁴⁴⁵

A relational understanding of space emphasises the encounters and mutual interactions between human actors and their material surroundings, and how these entanglements of mind and matter create unique material and conceptual configurations which transcend the quantifiable physicality of space. The identification of meaning embedded in material and symbolic spaces, and the ways human actors' personal, cultural and social circumstances and identities simultaneously *shape and are shaped by* those spaces, are central to certain notions of 'place' employed within geography and interpretive archaeologies, for example. In this sense, 'place' resonates with particularity and qualitative density and complexity, and emphasises the spatial 'situatedness' of all human practice.⁴⁴⁶

Writing in 1984, the geographer Allan Pred advanced his post-structuralist notion of *place as contingent process*.⁴⁴⁷ It has a number of affinities with the subsequent theories of practice espoused by Schatzki and Shove *et al*, although it is less overtly cognisant of the enmeshed nature of practice and materiality in the co-production of social life.

Pred chooses not to impose a single meta-narrative on what he regards as the plurality of histories and human geographies of the past. For him, place, like society, is constituted through human practice in time and space and is a historically contingent process

'... whereby the reproduction of social and cultural forms, the formation of biographies, and the transformation of nature ceaselessly *become one another*. Simultaneously, it is a process whereby time-space specific path-project intersections and power relations continuously become one another' (my emphasis).⁴⁴⁸

'Place' is consequently not a static material phenomenon or 'scene' of human action. Rather, it is a fluid process that involves the dynamic amalgamation of individuals, action, power relations and culture that converge (often fortuitously) in time and space rather than as the result of pre-determined meanings which actors conceive and respond to in prescribed ways.⁴⁴⁹ It is perpetually entangled in dialectical processes of 'becoming', resulting in constant transformations or modifications of the spatial environment which are laden with individual and symbolic meaning intelligible only in historically specific temporal and spatial terms. The 'identity of place' is consequently always temporary, uncertain, and in a constant state of flux, an envelope of space-time maintained only by the exercise of power relations in

⁴⁴⁴ Ogborn 1998: 21; Lefebvre 1991: 86.

⁴⁴⁵ Massey 1984: 4.

⁴⁴⁶ Pred 1984; Lock 2009: 178.

⁴⁴⁷ Pred 1984. Pred draws on Hägerstrand's time-geography, Bakhtin's discourse theory, Giddens's structuration theory, phenomenology, and Foucault's theories of discourse and power. He provides a counterpoint to Lefebvre's generalised conception of space by more explicitly imbuing space with the humanising qualities of place as 'process'. Although recognising the importance of Lefebvre's analysis of the production of space in terms of the materiality of social life (its 'material continuity' and 'physicality'), he regards the spatial analytics of Lefebvre's historico-geographical materialism as too monolithic to accommodate the vagaries and contingencies of everyday life as they unfold in place (Gregory 1994: 293; Pred 1984, 1986).

⁴⁴⁸ Pred 1986: 31; Pred 1984: 282.

⁴⁴⁹ Pred 1986: 79-80.

some form. Because places are culturally invented and reinvented historically, they are best interpreted in terms of constantly shifting articulations of social relations through time.⁴⁵⁰

For Pred, place is an outcome, or consequence, of perpetual on-going processes of historical time and the actions of individuals. This allows it to be situated in a non-teleological evolutionary context, as well as highlighting its essential contingency. Pred is primarily interested in the 'lived biographies' of people whose lives and actions are mediated through historically and geographically particular and contingent conjunctions of people, things, spaces and power relations, for example.⁴⁵¹

'Place' is consequently a multidimensional concept, and refers to the ways in which social practices are constituted in discrete material settings, and how this affects human activity and thought, including inspiring a 'sense of place'. Place consequently refers to discrete if 'elastic' areas in which settings (locales) for the constitution of social relations are located and with which people can identify. Furthermore, the 'paths' and 'projects' of everyday life provide the practical 'glue' for place.⁴⁵²

Interestingly, any dichotomy of planned and organic growth of urban centres is made redundant by this notion of place. Rather, all built environments can be construed as temporarily consolidated stages that carry within them both retentions (material and immaterial) from the past and potentialities for the future. This resonates with Lefebvre's dimension of 'lived space' (see below), as well as Schatzki's notion of 'activity timespace' (3.5.3). As soon as spaces come into being they are contested, a process which may result in their modification, destruction or replacement. Space is consequently continually shaped and reshaped both materially and discursively, perpetually entangled as it is in dialectic processes of becoming through which these spatialities acquire their spatially and historically specific meanings. Likewise, Pred's theory undermines conceptions of the urban environment as a consistent whole, seeing it instead as comprising inter-relational, contested, multivalent spatialities.

Fundamental to much recent theorisation of space and place, therefore, is the premise that 'no social process exists without geographical extent and historical duration', and that action is embedded in the world.⁴⁵³ In other words, social action and practices are always *situated*. As the geographer Edward Soja points out, regardless of the scale of social relations one is dealing with, be it 'class, family, community, market or state,' these remain abstract notions until they are spatialised.⁴⁵⁴

The nature and use of historical urban space is a central theme of my study of material remains in post-medieval Trondheim (chapters 5 and 6). As touched upon above, there are many ways of understanding how the diverse spaces and places of modern urban society emerge and are deployed within the sphere of social practice. Urban life is 'the irreducible product of mixture',⁴⁵⁵ and transformations of space - and particularly urban space - are expressive of the embeddedness of material and cultural life in a restless and contingent process that we might, with Miles Ogborn, call the 'reworking' of modernity.⁴⁵⁶

Indeed, urban spatial form, its function and its continuous material re-creation and re-imagining is central to the experience of modernity. Characterising London's 18th-century 'spaces of modernity', Ogborn states that modernity and its spatialities are differentiated, hybrid, cosmopolitan, multiscalar and multiform, and composed, among other things, of closely defined private territories and locales,

⁴⁵⁰ Massey 1995: 190.

⁴⁵¹ Pred 1984: 286-287; Friedland & Boden 1994: 28. Pred's study of the economic and social life of rural Swedish communities between 1750 and 1850 (Pred 1986) emphasised the shaping and reshaping of the features of those communities by the activities of individuals following their daily life-paths. He argued for the primacy of household-based local interactions and social projects over kin-based social interaction with nearby villages. He claimed that local processes underpinned differences in the organisation and execution of domestic and agricultural projects, and that these processes were also given geographically distinctive expression in other cultural and social forms, such as peoples' dress, hair- and beard-styles, diet, handicrafts, and superstitions and beliefs. He argued strongly for the agency of individuals, and demonstrated that the processes that allow them to act in their environments were infused with individual and social meaning.

⁴⁵² Agnew 1987: 28; Pred 1984.

⁴⁵³ Crang & Thrift 2000: 3.

⁴⁵⁴ Soja 2000: 9.

⁴⁵⁵ Thrift & Amin 2002: 3.

⁴⁵⁶ Ogborn 1998: 15, 20-21.

ordered public spaces, unstable spaces of fantasy and imagination, and increasingly widespread networks of commerce, people, power, and knowledge.⁴⁵⁷

In the spirit of Pred, more recent theories of space and place also espouse dynamic and fluid conceptions of 'space as process and in process'. Crucially, this combines space and time in an emergent process of 'becoming' that transcends geometrical constructions to create alternative spatialities and realities.⁴⁵⁸ Conceptions of space rooted in network theory explicitly seek to unite it more symmetrically with time, agency and practice and locate it at the heart of social analysis. Recent work within geography and urban studies, for example, has sought to align the discipline with ANT and the recent material turn, and highlight the active materiality of space and its central role in the constitution of the social.⁴⁵⁹

My own understanding of space and place - and, given the subject of this study, urban spaces and places in particular - will align itself similarly. Specifically, however, it will ally the models of practice advanced by Schatzki and Shove *et al* with the theories of space and place advanced by Henri Lefebvre and Allan Pred. Again, this eclecticism reflects my desire to combine a number of disparate theories that will facilitate fruitful discussion of my fragmentary and spatially and temporally dispersed material. The following sections outline this theoretical approach.

3.5.10. Space as a 'carrier' of practice

As we have seen, while spaces or buildings are often interpreted as representations or signifiers of *a priori* abstract notions or external forces (e.g. capitalism, the Church or State), their production and use involve more than this. In ANT terms (which does not recognise practice *per se*), space is an effect, or an outcome, of the relations and associations making up actor-networks, and not an underlying structure produced by capital relations or state strategies, as postulated by urban theoreticians such as Wirth, Lefebvre and Harvey, for example.⁴⁶⁰ Neither should it be considered in structuration terms as something independent from the set of practices that produced it, but rather as an attribute of particular actor-networks and urban sites.

While agreeing broadly with this underlying premise, I choose, in line with the practice-theoretical position outlined by Shove *et al*, to regard space itself as a 'carrier' of practice. Rather than being a product of pre-determined meanings and conceptions which actors respond to in prescribed ways, space is formed and transformed within the mesh of ongoing, dynamic and shifting convergences and alliances of people, ideas, materials and natural phenomena that *carry, enact and sustain* practices.

In other words, space is an integral part of the distinctive arrangements of *materials, competences and meanings* that constitute practice. In alliance with people and objects, materially defined and ordered space sustains and stabilises practices in time and space. Being situated, embodied phenomena, practices require a spatial context, locale or setting in which they can be enacted, and in which the essential elements of practice – *materials, competences, and meanings* – emerge, converge and unfold. Practice and space/place are consequently essentially *co-constitutive*. Space does not determine fully the nature of practices, and is it itself not determined fully by them. However, it is *defined* by what goes on within it.⁴⁶¹

The elements constituting spatial arrangements underpin practice in various ways. For example, through the physical location of *material* elements: practices connected with the use of water, for example, are usually located around wells, pumps, taps, drains, cisterns, conduits, and so on. Material infrastructures of water supply may bring a variety of practices together in ways that facilitate their mutual influence, such as the myriad of interconnected activities in a public swimming pool, for example, as will building materials and technologies of heating in a domestic setting, for example. Shared *meanings* and understandings may work in the same way: concepts and associations of taste, distinction, privacy and propriety are important for what happens where, and for the range of practices that are

⁴⁵⁷ Ogborn 1998: 19-22.

⁴⁵⁸ Crang & Thrift 2000: 3.

⁴⁵⁹ E.g. Fariás & Bender 2010; Bennett & Joyce 2010; Bridge & Watson 2011.

⁴⁶⁰ Wirth 1938; Lefebvre 1991; Harvey 1989.

⁴⁶¹ Shove *et al* 2012: 132.

likely to be reproduced in any designated space.⁴⁶² Different forms of *competence* and skills will similarly be both dependent upon and actively configure spatial arrangements, be it in the context of a house, a workshop or a church, for example.

The ongoing, emergent process of the co-constitution of space and practice through 'doing' may operate at a number of scales, ranging from a human body, to a building, a neighbourhood or an entire city, in which practices involving a diversity of 'carriers' (human and non-human) combined to form ever more extensive bundles and complexes.

For example, in Trondheim during the transition to modernity, the integration of new practices and imported goods and commodities into daily life was engendered through access to, and familiarity with, their constituent materials, competences and meanings. If we take the consumption of a new, exotic commodity such as tea as an example, the enactment - or, strictly, *re-enactment* - of its ritualised consumption in the home required access to appropriate knowledge, skills, ingredients, and equipment, and also the recurrent reproduction of practices of sociability within appropriate spatial contexts, or settings, of practice. This was a process which simultaneously redefined the spaces in which these rituals of sociability were enacted: in this instance, the organisation of the urban population's domestic spaces. In addition, the meanings and competences integral to imported practices and things could also be transformed through their differential appropriation and enactment by new actors in different times and spaces (see further below, 5.6 and 6).⁴⁶³

3.5.11. Space, practice and historical process: integrating theories of practice and Lefebvre's spatial triad

Practice has been defined above (3.5.6) as an interdependent effective integration or configuration of *materials* (things, technologies, physical entities, the stuff of which objects are made), *competences* (forms of understanding, skill and practical knowledgeability) and *meanings* (symbolic meanings, ideas, aspirations).⁴⁶⁴ As a 'carrier' of practice, the nature or identity of a particular space or place is consequently an outcome of the convergence of the generation and use of knowledge (competences), material environments (materials), and meanings. In other words, space is *enacted into being* through an alliance of practices connected with its abstract conception or representation and practices linked to its use, experience and transformation in everyday life. Space is essentially a nexus, or compound, of the matter of which it is composed, the bodies and minds that engage with it, and the ideas and meanings associated with its conception, representation and use. These elements are in constant flux through time, and the nature of space will change as the nature and composition of the processes with which it is involved change.

To my mind, these processes correspond closely with Henri Lefebvre's three dimensions of space production and social reproduction: namely, conceived (abstract) space, perceived (concrete) space, and lived (social) space.⁴⁶⁵ Integrated with, and modified by, the practice-material theories outlined above, and Pred's theory of place as contingent historical process, Lefebvre's model - or 'spatial triad' - provides a useful means of framing our understanding of the historical processes at work in the emergence and transformation of the historical spaces and places of modernity. In particular, it underpins the analysis of my historical case study, the Kongsgård military depot during the 18th century (Chapter 6).

Lefebvre's spatial theory has been introduced above (3.5.9). His conception of space (at least in part) as a *product* of dominant economic and political processes and structures is at odds with the more symmetrical appreciation of the agency of materials, nature and humans which underpins the practice-theoretical approach I have outlined above. Despite this, I feel that his *perceived-conceived-lived* triad overlaps usefully with the *materials-competences-meanings* triad of practice components outlined above, allowing for their integration in my own analytical model for the historical processes involved in the generation and uses of space.

⁴⁶² Shove et al 2012: 84.

⁴⁶³ Shove et al 2012: 131-133.

⁴⁶⁴ Shove et al 2012: 14. And similarly by Schatzki (2010b: 129-130) as a nexus, or integrated mesh, of practice-material arrangements encompassing materials, natures, humans, animals, and organisms.

⁴⁶⁵ Lefebvre 1991: xx-xxi, 21, 23-4, 48-50.

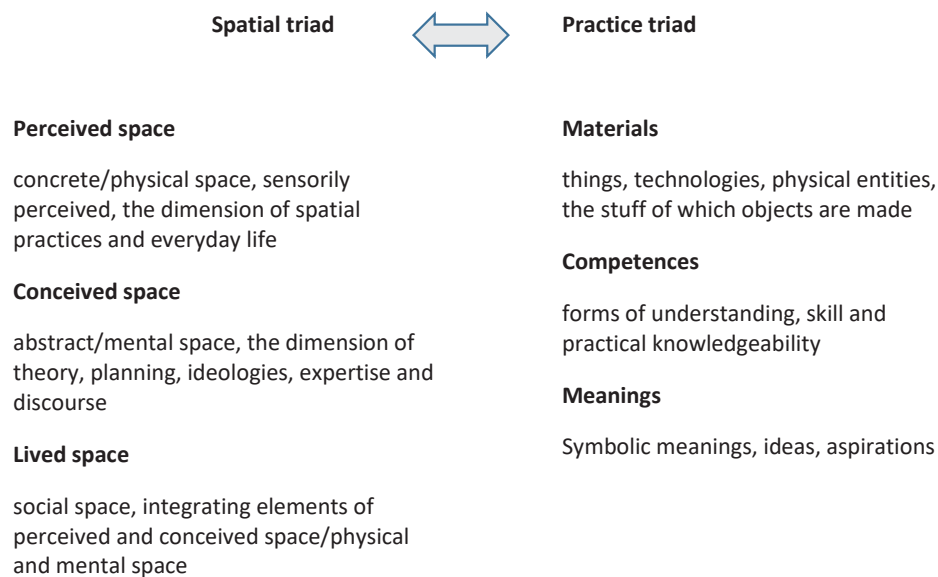


Figure 3.1. The essential definitions of - and broad correlation between - the components of Lefebvre's spatial triad and the practice triad of Shove *et al*

Lefebvre framed the modalities of the process of the colonisation by *abstract* space of what he calls the *concrete* space of everyday life in the form of three interdependent dimensions - or 'moments' - of social space: namely, his '*perceived-conceived-lived triad*'.⁴⁶⁶ This provides a useful typology of space, and an attempt to provide a 'unitary theory' of space as a product of knowledge, practice and human culture.

The triad (or 'trialectic') represents a spatialised expression of the dialectic of the lived and the conceived, the 'real' and the 'imagined', and the material world and our thoughts about it.⁴⁶⁷ In order to overcome the implicit dualism in these binary opposites, Lefebvre introduces the concept of *social space*: 'The fields we are concerned with are, first, the physical; ... secondly, the mental;and thirdly, the social.'⁴⁶⁸ These correspond respectively with his perceived-conceived-lived spatial categories, or dimensions, of space. Importantly, social space - the *lived space* of the triad - also combines elements of both the physical and the mental dimensions. Although meant as an explanatory model for the production of capitalist spaces, it can also offer a theoretical platform for analysing pre-capitalist urban space.⁴⁶⁹

The 'perceived-conceived-lived' spatial triad and its points of intersection with the practice triad require further explanation. According to Lefebvre, space is essentially a material product of being human, of 'being-in-the-world', and the result of what he defines as 'spatial practices': the situated and embodied human activities of production and reproduction and ritualised activities of daily life which are characteristic of particular societies. Interestingly, Lefebvre notes that spatial practices ensure continuity and cohesion, requiring levels of competence and performance.⁴⁷⁰ The geographer David Harvey offers his own characterisation of Lefebvre's spatial practices as 'the physical and material flows,

⁴⁶⁶ Also known as the spatial practice-representations of space-representational spaces triad. Lefebvre 1991: 33, 38-46; Gregory 1994; Lock 1998: 170-171.

⁴⁶⁷ Soja 1996: 61.

⁴⁶⁸ Lefebvre 1991: 11.

⁴⁶⁹ The following outline of Lefebvre's triad draws on Lefebvre 1991; Merrifield 1993, 2000; Gregory 1994: 402-404; Harvey 1989: 261-263; Lock 2009: 170-171; Mrozowski 2006: 13-15.

⁴⁷⁰ Lefebvre 1991: 33.

transfers and interactions that occur in and across space in such a way as to assure production and social reproduction.⁴⁷¹

These spatial practices constitute a socialised spatial ordering: the time-space routines and spatial structures, the sites and networks through which social life is produced and reproduced, and by which society 'secretes' its space through ongoing dialectical interaction with its material surroundings. It is the '...materialized, socially produced, empirical space...' ⁴⁷² created by material spatial practices, the concrete world in which work is conducted, goods are produced and transported, and daily life is lived. This is concrete space, *perceived* through the senses of those situated within it. It is simultaneously both the quantifiable physical space as it was perceived by its inhabitants in the past, and the material remnants that we perceive and analyse in the present; for example, the standing buildings, ruins or the buried archaeological remains we as archaeologists perceive and analyse for traces of past spatial practices.

This emphasis on the material situatedness and embodiment of routine spatial practices of everyday life, their requirements of knowledge and performance skills, and the concrete materiality of the spaces in which they unfold intersect with the *materials* and *competences* components in the practice triad outlined above.

This sensually *perceived*, physical space is distinct from Lefebvre's second spatial dimension; namely, conceptualised, or *conceived* space. This is abstract, mental space, the discursively constructed theoretical space of actors with a 'scientific bent', such as architects, planners, geographers and engineers.⁴⁷³ It refers to how planners and those who deal with spatial practices envision space in the abstract in the form of architectural drawings, plans and the ideas behind them. These 'representations of space' are associated with codes and constellations of power, knowledge and spatiality in which the dominant social order is materially inscribed (and legitimised). These spatial conceptions might represent planning strategies, ideologies of social engineering, surveillance systems, visibility and the creation of spectacle, for example, and is closely tied to signs, codes, and to 'frontal' relations.⁴⁷⁴

Lefebvre identifies this primarily as the space of capital, and conceived representations of space have a 'substantial role and specific influence in the production of space', and gains 'objective expression' in diverse monumental, industrial and administrative buildings and the 'bureaucratic and political authoritarianism immanent to a repressive space'.⁴⁷⁵ A point of intersection with the practice triad lies in the recognition that ideas, knowledge, and skills (*competences*) are inherent to the emergent enactment into being of the materiality of space. Furthermore, *materials* and technologies are of course involved in the production of ideas, plans and the like.

Lefebvre's third dimension in his spatial triad is *lived* space.⁴⁷⁶ Importantly, although different to the other two categories, it incorporates elements from both, and accordingly also has commonalities and intersections with the practice triad, including its third component - *meanings*. It is a difficult and elusive concept, but as I understand it, it is a space that resides simultaneously within the mind and the material world. It comprises the concrete social spaces and places of everyday life as they are experienced and imagined by their 'inhabitants' and 'users', both through their sensory perception of the physical world *and their social and cultural understanding* of that world's structures, symbols and signs. In other words, it 'overlies' physical space, and makes symbolic use of the physical world through non-verbal symbols and signs. This 'directly lived' space relates to moods, feelings and attitudes, and as such

⁴⁷¹ Harvey 1989: 218.

⁴⁷² Soja 1996: 66.

⁴⁷³ Lefebvre 1991: 38; Merrifield 1993: 523; 2000: 174.

⁴⁷⁴ Lefebvre 1991: 33; Merrifield 2000: 174. By 'frontal' relations Lefebvre means the overt materialisation of power relations, or relations of production, in the form of buildings, monuments and works of art, as opposed to covert or repressed relations. Lefebvre 1991: 33.

⁴⁷⁵ Lefebvre 1991: 42, 49.

⁴⁷⁶ Alternatively 'spaces of representation'; Gregory 1994: 404.

'...has an affective kernel or centre: Ego, bed, bedroom, dwelling, house; or: square, church, graveyard. It embraces the loci of passion, of action and of lived situations, and thus immediately implies time. Consequently ... it may be directional, situational or relational, because it is essentially qualitative, fluid and dynamic.'⁴⁷⁷

These *lived* social spaces become the loci, or settings, of social expressions and action. As 'affective' spaces, they encapsulate symbolic meanings, ideas, and aspirations by which space is used, contested and reclaimed, and new or alternative meanings and possibilities for spatial practice. For example, public spaces such as streets, squares and theatres may be the sites of collaborative or subversive acts, such as performances, demonstrations, or riots. Private spaces such as dwellings are also lived 'affective' spaces within which other forms of social practice and expression occur, less public in character, but potentially as socially dynamic, contentious or subversive.

According to Lefebvre, lived space does not obey rules of consistency or cohesiveness, and is felt more than thought. It is elusive, and may be linked to 'counterspaces' which accommodate the less visible, underground or clandestine sides of social life which challenge dominant spatial practices and spatialities.⁴⁷⁸ Importantly, lived space is the sphere of experience that conceived and ordered space and its agents (authorities, planners etc.) attempt to intervene in, rationalise, modify and colonise, and which may be contested by actors in the course of everyday life.⁴⁷⁹ It is also the object of description and analysis by the likes of artists, writers, ethnologists, geographers, anthropologists, and psychologists.⁴⁸⁰ We may of course add archaeologists to the list of those who explore these lived spaces, and their elusive meanings, through the medium of material remains!

Lefebvre has been criticised for being vague about the relationship between his spatial dimensions, particularly the *conceived* and the *lived*.⁴⁸¹ Nonetheless, he does envisage interaction and a non-privileged, unprioritised circulation of actors, ideas and material outcomes between all the dimensions.⁴⁸² According to Edward Soja, however, Lefebvre's spatial imagination, coloured by his neo-Marxism, implicitly favours *lived space* as the sphere of potential social struggle and contestation. This underscores Lefebvre's particular emphasis on political and economic processes and his dissection of space in terms of power, control, and the relation between the human subject and urban space.⁴⁸³

While taking such phenomena into consideration, by analysing my material within the framework offered by the integration of the spatial and practice triads, it is hoped that my own study will be able to characterise particular and differentiated spaces and places of modernity in Trondheim, and the processes involved in their emergence, at narrower scales of resolution.

3.5.12. Non-representational spatial theory: Urban assemblages and urban sites

While Pred's theory of place anticipates much of the non-representational and relational thinking intrinsic to current relational and material social ontologies, the impact of ANT has resulted in a radical reconceptualisation of urban space which also has relevance for the present study. ANT-influenced approaches have much in common with the practice theories outlined above, and similarly include an analytical micro-scale, or 'site' perspective. However, they are also contributing to the emergence of a radically alternative ontology of the urban as a variable, unstable, unbounded 'socio-material assemblage', an entity that is constantly made and unmade by heterogeneous actors at concrete sites of urban practice (homes, workplaces, markets, streets, institutions etc.). This occurs through a multiplicity of emergent processes of becoming, associations, socio-technical networks, and hybrid collectives that produce differing social realities at different sites and at different times.⁴⁸⁴

⁴⁷⁷ Lefebvre 1991: 39, 42.

⁴⁷⁸ Certeau 1984.

⁴⁷⁹ Lefebvre 1991: 39.

⁴⁸⁰ Merrifield 1993: 174.

⁴⁸¹ Merrifield 1993: 524.

⁴⁸² Lefebvre 1991: 40.

⁴⁸³ Soja 1996: 68; Merrifield 1993: 524.

⁴⁸⁴ Fariás 2010: 2, 14.

Importantly, the autonomy and explanatory priority of 'space' in urban studies is replaced by the notion of 'sites', which are not defined by spatial boundaries or scales, but by types and lines of activity, whereby spaces emerge through networks connecting different sites. The city becomes a decentred, multiple phenomenon, and no longer a bounded object, specific context or delimited site. It exists in no single space or scale, but is enacted into being in different ways at multiple sites. Space, time and the city are produced, or rather, emerge, in ways conditioned by the type and extension of the actor-networks operating at these local sites.⁴⁸⁵

Although this is a compelling analytical approach, this complexity cannot be fully caught or represented by the archaeological material available for the present study. Archaeological excavation and material analysis can rarely fully reveal or interpret all the elements and attributes that constituted networks or complex intersecting associations within or between urban sites. Rather, I suggest that, at least in terms of my own study, archaeology may capture and characterise some of the fortuitously preserved 'moments' of practice which contributed to the formation of past multiple social realities and urban experience, and in so doing expand, or offer alternatives to, our present understandings.

In the practice-theoretical terms adopted by this study, therefore, we might indeed regard the urban as a socio-material and socio-technical assemblage. However, rather than networks, this assemblage is brought into being, used and transformed through *practices* involving multiple arrangements, or configurations, of people, competences and materials at specific sites in space and time. The notion of 'assemblage' provides a heuristic analytical tool for grasping the city as a multiple entity, of which space is just one attribute among many in the assemblage. It conveys the sense of its multiple formative enactments through continually unfolding and transforming practices, involving contingent heterogeneous arrangements of objects, spaces, natural phenomena, technologies, bodies, subjectivities, symbols, and so on.⁴⁸⁶

3.5.13. Conclusion: archaeology as provider of historical dynamics of practice, scale, time and space

In light of the above, how might archaeological material be utilised to highlight the nature of practice within an urban assemblage, such as that represented by Trondheim? At the root lies archaeological methodology: archaeological excavation at specific sites within the assemblage has the capacity to reveal the accumulated, residual material consequences of practice in the spatio-temporal fabric of society; namely, surviving configurations of objects and physical space that frame or congeal moments of practice. As Axel Christophersen observes, developments of practice can be described and interpreted using archaeology's capacity to capture synchronous connections between the spaces, objects and structures that make up performative patterns - the 'events in the present' in Schatzki's notion of activity timespace. These captured arrangements allow us to observe the synchronous relationships between people, intentions, material resources, time and space.⁴⁸⁷ These fortuitously revealed spaces, sites, or practice settings, vary in area, complexity and physical composition. They may be bounded or open, and may have been a setting for a single practice or multiple practices, overlapping synchronically and/or diachronically.

In the context of the present study, for example, one might examine at various local sites the residual materialities of practices that have constituted the socio-material assemblage that is historic Trondheim in multiple ways. For example, such 'sites of the social' may provide insight into the materialities of specific practices through which the city was constituted as a landscape of power and power relations (social, economic, military etc.), or as a place of differing enactments of social differentiation and inequality. In addition, one might examine the material nature of the city's spaces and places of production and consumption, and its locations of domestic life, work and leisure, and its character as an environment hosting disease and poverty. Aspects of these broad topics, distilled into a number of analytical themes (Chapter 4), will be addressed in the course of the study of archaeological material at both macro- and micro-scales of analysis.

⁴⁸⁵ Farías 2010: 2, 6; Latour 2005.

⁴⁸⁶ Farías 2010: 14.

⁴⁸⁷ Christophersen 2015a: 118; Christophersen 2015b: 311.

In analysing material deriving from such sites, it is important to be aware of the dynamics of practice, scale, time and space inherent within what appears to be a static body of material evidence. As Schatzki's notions of prefiguration and 'activity timespace' suggest, configurations of time, things and space in the present are structured by past practices, which are simultaneously relevant in structuring future configurations.⁴⁸⁸ For example, Trondheim's baroque urban plan retains within it various residual medieval arrangements, and in the case study presented below (Chapter 6), a former monumental power centre - the medieval Archbishop's Palace – is reconstituted as a military depot during the period of the Absolutist State. The charting of the unfolding nature of material configurations in time and space is part-and-parcel of archaeological inquiry.

Traces of patterns and complexes of space-practice co-constitution may be sought in configurations of archaeological material at a variety of scales: from the space constituted by the body and the space surrounding it, to domestic space and public space, for example. Each location we reveal archaeologically provides a specific temporally and spatially contextualised 'practice-material history' of how materials, human competences and social and cultural meanings combined to enact and articulate practices, identities and social relations. Underpinning this is the recognition that *when*, *where*, and *how*, people live and co-exist are important factors in the production of selfhood, identity and human sociability, and that lives shape, and are shaped by, the time and physical context in which they are lived.

In the present study, for example, the domestic household comprises a main focus of interest (4.3 and Chapter 6). As distinctive 'havens within modernity'⁴⁸⁹ the particular practice-material configurations associated with urban dwellings revealed by close contextual analysis of archaeological and historical evidence can provide us with tangible manifestations of the significance of this particular form of social space. This significance lies not only in its function as a physical space of shelter, but as a polyvalent and multi-scalar medium simultaneously expressive of, and formed by, individual and collective practices and identities. By understanding the material context, in terms of surviving arrangements of both objects and built space, we may better comprehend the nature of the lives of the people, and the society, with which it was inextricably entangled.

The following section describes in specific terms the way in which material derived from the Trondheim urban assemblage will be presented and analysed.

⁴⁸⁸ Shove et al 2012: 134.

⁴⁸⁹ Taylor 1999: 100.

PART 4

Archaeologies of Modernity in Trondheim: Method, Material, Analysis

Chapter 4

Materialities of practice in Early Modern Trondheim: methodological points of departure

4.1. Aims of the material study

4.1.1. Materialities of practice in an urban context

A main aim of this thesis is to offer insight into the materiality of life at a specific place in the post-medieval world. This will be done by presenting, describing and examining a sample of the material available within the archaeological archive constituted by Trondheim's archaeological deposits. The following chapters will present a broad characterisation of the material and its potential as a source of knowledge about the urban assemblage that constitutes Early Modern Trondheim (Chapter 5), and a more in-depth contextual analysis of archaeological and historical material associated with a specific place, or 'site of the social', within the city; namely, 18th-century Kongsgården (Chapter 6).

Underpinning this archaeological study is a theoretical approach which forefronts the materiality of practice (3.5). This recognises the active and entangled role of humans, objects and built spaces in social reproduction, and that materials and humans are *co-constitutive* of the world through their enrolment in social practices. Human sociality is brought into being, sustained and changed, through emergent, ongoing performances of practices involving heterogeneous actors that assume specific configurations and significances in time and space: so-called 'practice-material arrangements'.

These historical configurations are mutable and contingent, and transform in time and space. Crucially for us as archaeologists seeking understandings of the nature of social practices that constitute social phenomena in past lifeworlds, these changing entanglements of practice and materiality have left tangible material traces and signatures in the archaeological archive. These represent 'moments' of enactment in the ongoing historical flow of emerging and disappearing practices that underpinned past human sociality.

Practice-material arrangements - the material configurations of past practices in the historical urban context of post-medieval Trondheim - are the chief subject of my material study. Cities have been conceived previously as socially-constructed, bounded and stable phenomena; for example, as a spatial form, an economic-political entity, a state of mind, a way of life or a cultural formation.⁴⁹⁰ As pointed out above, however, non-representational urban theorists prefer to characterise cities as 'urban assemblages', unstable entities that are constantly being assembled and disassembled by heterogeneous actors at concrete sites of urban practice. This is a contingent, non-teleological process that engenders a diversity of social realities at different sites at different times.⁴⁹¹

In recognition of this, a central purpose and challenge for any form of urban research, including an archaeological study such as my own, is to identify, describe, and analyse the multiple enactments of practice constituting towns and cities, and understand how they are articulated and made present in material terms. While this is a difficult enough exercise in studies of contemporary urban centres, it is made doubly problematical for studies of urban practices in the past, given that the practitioners themselves are deceased, and our only surviving sources - material remains and historical texts - are partial and fragmentary, and subject to differing interpretation. This task is, of course, made doubly difficult for scholars of the recent past in contemporary Norway, for whom access to relevant archaeological material is restricted by cultural heritage legislation.

⁴⁹⁰ See the well-known writings of Benjamin, Simmel, Wirth, Lefebvre, and Certeau, for example. Fariás 2010: 12.

⁴⁹¹ Fariás 2010: 2, 14.

4.1.2. The nature and limitations of the research material

The archaeological evidence available for my study has been recovered from scattered urban locations, and takes the form of excavated portable objects - encompassing both individual items and assemblages - and the material remains of the built environment, ranging from rubbish pits and cellars to buildings and streets, for example. Due to the legal restriction placed on the excavation of post-medieval material, most has been recovered haphazardly in an *ad hoc* manner, with only rare instances of systematic, well-documented site excavation and curation of finds. It consequently comprises a partial and chronologically and spatially dispersed sample of the objects, structures and structured spaces that constituted the urban assemblage in the recent past.

The currently available corpus of empirical evidence will consequently not allow the formulation of a comprehensive material history of post-medieval Trondheim during the transition to modernity. For example, its fragmentary character inhibits the tracing of all the interconnected components involved in the enactment of practices. Neither can it support a comprehensive mapping of materialities which might contribute to characterising the nature of large-scale, overarching social, economic or cultural phenomena, or networks or discourses of modernity (such as capitalism, for example) in Trondheim during the course of the past 500 years.

In addition to the intrinsic limitations of the archaeological material, there are limitations regarding the comprehensiveness of contemporary historical textual material (contemporary documents, building surveys, probate inventories, maps etc.). For example, the earliest building surveys connected with fire insurance date from 1766. Problems in directly correlating primary historical information with most of the sites, contexts or locations of recovery dealt with here means that it is only rarely possible to closely contextualise the archaeological material at the level of detail achieved by North American interpretive archaeologists using a micro-historical approach, for example. That said, I have identified a suitable candidate for a detailed micro-study where it has been possible to correlate a range of archaeological and historical data (Chapter 6).

4.1.3. Activating the material: 'practice-material histories' and 'contexts of practice'

In my view, my limited archaeological source material can be most fruitfully activated and problematised by offering accounts of how materials, in alliance with nature and human thought and action, co-constituted particular practice-material assemblages.

Ideally, where one has access to a complex dataset of archaeological and historical material, this might be attempted through the writing of *practice-material histories* of sites of social practice - or 'sites of the social' - at small spatio-temporal scales. The micro-study presented in Chapter 6 constitutes just such an attempt. However, much of the material presented in Chapter 5 cannot be as closely contextualised in time and space, although attempts are made where possible. Consequently, the writing of practice-material histories using this material is more restricted in complexity, although I have attempted to discuss this material in terms of particular practice-related themes, or 'contexts of practice' (see 4.3).

In both instances, by employing the theories of materiality, practice and space presented above (3.5), I attempt to explore particular historical configurations or patterns in the material remains, paying close regard their active contributions to social practice.

The practice-theoretical model I have chosen to inform my material analysis seeks explicitly to integrate understandings of *materiality*, *human competence* and the *meanings* of things (3.5.6). To reiterate: this is based on a social ontology that asserts that materiality is inherent to social phenomena, and that humans, knowledge, materials and nature are integrated *dimensions* of social life. It also strives to maintain a focus on context, embodiment and meaning, chiefly in terms of objects involved in social practice, and the organisation and use of space. Social practices and spatial formations are placed centre stage as the primary subjects of analysis.

The tracing of practice-related patterns and events in a fragmentary and spatially and temporally dispersed body of empirical data is problematical. Axel Christophersen has suggested a strategy for the identification in archaeological material of practice-related patterns based on the following premises: that the stabilisation of patterns of practice involves material resources which through their nature, scope and composition enable the identification of intent and purpose; that routinisation of practice

leaves traces in the form of distinctive wear patterns and/or arrangements of space; and that stabilised patterns of practice are linked to spaces that are constructed or adapted in accordance with intentions and meanings.⁴⁹² As touched on above, this implies that the integration of spaces and places in the performance of practices involving use of material resources and the exchange of experiences, ideas and meaning, is crucial to the formation, stabilisation and destabilisation of practice.

Being a study of the transition to modernity in an urban environment, my analysis aims to use the material to provide insights into specific and changing configurations of social phenomena and formations, both in terms of individual actors and the wider urban community. The material in general is not viewed and interpreted *primarily* within the context of vast and complex modern social narratives, structures and institutions. Rather, and in keeping with this study's understanding of the nature of 'modernity' and 'materiality' outlined above (Chapter 3), such structures are ultimately reducible to the complex, contested and contingent practices enacted into being by alliances of humans and non-humans. Consequently, the emphasis will be on characterising 'moments' in the unfolding sets of heterogeneous relationships - material, cognitive, social, economic and technological, for example - that may be observable within the available material assemblage, and which are integral to the enactment of social practices, some of which we might recognise as forming components of aspects of an emergent modernity. Where appropriate, however, the material's role and significance within wider historical networks and processes of modernity will be addressed.

Emphasis will be placed on the social and cultural specificity, contextuality and contingency of historical practices represented within the archaeological source material, while simultaneously viewing post-medieval Trondheim as a hybrid and emergent place constituted through the effects of multiple practices, and numerous flows and networks of people, materials, nature, and ideas enacted in time and space, both globally and locally.

4.2. The structure of the material study

As noted in the previous sections, the partial and dispersed nature of the material recovered from archaeological contexts in post-medieval Trondheim requires that it must be presented and examined at differing scales and degrees of analytical detail. To this end, Chapter 5 provides a broad thematic characterisation of the types of material derived from a variety of spatial and chronological contexts within Trondheim. This aims primarily at presenting an inventory of excavated material, while also providing an overview of potential sites or areas of future archaeological interest within the urban assemblage. Chapter 6 presents a more detailed micro-study of the materialities of practice at a particular place and time: namely, the Kongsgården military depot during the 18th century, and the residences of the depot's provisioning managers in particular.

A detailed contextual approach will be applied in the case study, where a varied body of material and historical evidence connected with a particular place can be drawn upon and analytically integrated. Such a detailed level of analysis is not possible in the case of most of the sites and material presented in the course of Chapter 5's broader urban characterisation, although attempts at discussing particular practice-material configurations within their wider socio-historical contexts will be made in that chapter's concluding section (5.6).

Consistent with its practice-centred approach, the material study will attempt to identify as broad an array of practice-material configurations within the corpus as possible. To this end, the material will be sorted, presented and discussed according to sets of analytical categories and themes.

In *Chapter 5*, the presentation of the urban archaeological material is divided between a survey of material relating to the built environment (spatial, structural and architectural material) and a survey of portable objects (portable material culture). The former is presented at both macro- and micro-scales, while the latter is presented in accordance with specified functional categories.

The survey of material relating to the built environment will characterise Trondheim's main historic-topographic features during the late medieval and post-medieval periods, its infrastructure and the urban fabric's changing organisation in space and time. Material found at particular sites will be

⁴⁹² Christophersen 2015: 118-119.

utilised to characterise the material nature of particular aspects of the built environment more closely, and identify their associations with varieties of practice. These comprise, for example, the sites of urban dwellings, urban crafts and industries, fortifications, secular institutions, and so on.

The survey of portable material culture is sorted into appropriate functional categories which have a close correspondence to specific areas of practice: for example, material associated with the preparation and consumption of food and drink, tobacco consumption, personal adornment, and health and hygiene (5.5.2).

Chapter 5 concludes with a thematically-based discussion aimed at synthesising the evidence for urban practices presented in the preceding material surveys (5.6). The themes for this discussion are designed to differentiate specific contexts or spheres of practice with which objects, structures and spaces may be associated. The themes form an overarching analytical framework in which empirical data can be presented and discussed at a variety of scales of resolution, and will also inform the analytical discussion for the more detailed case study presented in Chapter 6. These analytical themes - or 'contexts of practice' - are presented below (4.3).

The more detailed, data-rich case study presented in **Chapter 6** provides an opportunity to apply a more theoretically intricate analysis of practice in a specific locality during a hundred-year period. The aim here will be to compile a practice-material history of past lives at a particular location in time and space, adopting the closely contextual and micro-historical approaches outlined above (3.4.2), with a focus on multiple lines of evidence, multiple scales, embodiment and identity. While the permeabilities between people, objects, spaces, nature and technologies will be attended to as much as possible, I will also attempt to discuss configurations of humans, things and space within the wider social and cultural contexts of the time. To this end, relevant historical sources, and the sociological theories of practice and space outlined above (3.5) will be drawn upon.

In general, my study will concern itself with the following: undocumented or poorly documented everyday practices at particular social sites; the embeddedness and co-constitutive nature of the material and the social; the creative integration of multiple lines of evidence; and the relation of multiple temporal, spatial and subject scales, though with an emphasis on the micro-scale.

4.3. Themes, topics and scales of inquiry

4.3.1. Introduction

To facilitate the discussion of the disparate array of empirical data presented in Chapter 5 along the lines suggested above, I have formulated a number of practice-related themes (4.3.2). These draw out and highlight particular areas of practice with which the majority of my material is associated. As will be seen, a number of theoretical topics regarding the nature of practice underpin these themes, and they may be analysed at a number of scales.

'Contexts of practice' and scales of inquiry

Each chosen theme forms an analytical 'context of practice', or more specifically, a context for a *range* of practices, or social strategies and actions. These involve the interplay of people, ideas, objects and the built environment: the *materials, competences, and meanings* integral to the practice-theoretical model presented above (3.5.6). In most 'contexts of practice', the associated materials may be related to the negotiation and reproduction of multiple discourses and practices of consumption, identity and improvement, whether individual, collective or gender-related, for example. In such instances, strategies relating to choice and taste in the consumption and use of objects and built space may underpin practices in the specific contexts of the home (dwelling) and the body (appearance), for example. Changing forms and patterns of consumption of material goods and built space are central to many of the practices associated with a number of themes, and key aspects regarding the motivations and choices involved in consumption practices of the time are introduced below (4.3.3).

Furthermore, the practices associated with the themes may be examined at differing scales of inquiry. The nature of the archived material is such that inquiry is based on fragmentary building remains and objects derived from particular localities scattered in time and space. Of these, domestic contexts dominate, and it is in these contexts that material related to many of the practices highlighted in the

chosen themes is to be found. Important theoretical aspects concerning the domestic sphere as a particular dimension of inquiry will also be outlined below (4.3.4).

4.3.2. The analytical themes

The analytical 'contexts of practice' are as follows:

1. Dwelling: the organisation and use of urban domestic space. This theme concerns itself primarily with the practice-material arrangements associated with creating and inhabiting a particular kind of space, or place: namely, the home. It encompasses the planning, building, organisation and use of dwelling space, principally urban domestic plots and the buildings and structures associated with them. During our period, the household was an important social and economic unit in which much material culture was entangled with a diversity of social practices, and excavated households are a principle source of archaeological material. Important aspects regarding the household as a locus of comfort and associated practices of consumption, identity construction and sociability are laid out below (4.3.3 and 4.3.4).

A range of practices associated with dwelling is observable in archaeological material: For example, practices relating to planning, constructing, maintaining and living in domestic buildings. These reveal themselves in choices of architectural plans and features, the chosen locations of buildings, their formal physical character (type) and arrangement, structural modifications, building materials, means of heating and lighting, and types of ancillary structures, such as cellars, latrines, wells and rubbish pits. These aspects will come under particular scrutiny in the case study (Chapter 6). The application of integrated theories of space and practice as formulated above (3.5.11) is of particular relevance in this context.

2. Sustenance and sociability: practices relating to the consumption of food, drink and tobacco.

A major proportion of the archaeological material found on Trondheim's urban archaeological sites derives from practices relating to the storage, preparation and consumption of food and beverages. This includes the organic remains of foodstuffs, as well as a variety of equipment used to store, conserve, prepare, serve and consume food and drink. Varieties of food and drink sustained life in nutritional terms, but were also intricately involved in everyday and ritualised practices of domestic consumption and sociability during the period under review. The materiality of domestic consumption and sociability are central topics of inquiry in this study, touching on aspects of doxic practice, tasteful consumption, and the pursuit of comfort, for example (4.3.3 and 4.3.4).

Given their origins and their associations, the items associated with these practices comprise an informative material register of occurrences, patterns and trends in the local urban community's acquisition and use of an increasing range of goods and commodities that flowed through local, national and globalised networks of trade, and which were bought and sold locally. That said, the material reviewed here provides only a partial sample, and a more comprehensive catalogue of the nature and patterns of local consumption of foodstuffs and the equipment used to prepare and consume them must await future fuller comparative analysis of historical information and archaeological data.

While tobacco is not an essential item of human sustenance, it is a stimulant and social lubricant, and the smoking (or 'drinking')⁴⁹³ of tobacco has from its earliest adoption in Europe been a recreational practice which often allied itself with alcohol consumption. As well as being a solitary act, it could be a convivial practice when consumed in taverns or in social gatherings of friends and acquaintances, for example. Discarded clay pipes are a ubiquitous artefact in archaeological deposits from the 17th century on.

3. Personal appearance: clothing, adorning and grooming the body. The human body provides the most intimate scale of social practice, and the role of things in the development and projection of the self is central to human existence. In opposition to Cartesian philosophy, the self is not separated from the material world, but is touched and formed by things, which in their turn may carry associations with, or

⁴⁹³ <https://www.nps.gov/jame/learn/historyculture/tobacco-the-early-history-of-a-new-world-crop.htm> (23.05.2018).

traces of, their owners' personality and culture: an existential symbiosis one might characterise as the 'material self'. Owning, holding or viewing things - including items of clothing and adornment - can evoke a variety of emotions, passions or associations, both in the owner and in those who view them.⁴⁹⁴

Throughout history, personal identity and group or communal affiliation have been constituted and conveyed by personal possessions, including items of clothing, jewellery, and other objects of adornment. The negotiation of social status and relations through practices of self-fashioning and the grooming of personal appearance involving varieties of objects was a feature of much of our period, characterised as it was by practices of taste, gentility, fashion and social distinction within an elitist and rank-conscious social hierarchy. For example, specific items of clothing and objects of adornment were by virtue of their material qualities and cultural associations actively enrolled in doxic practices of taste and the accumulation and expenditure of economic, social and symbolic capital. However, ordinary people also invested much emotional capital in humbler items of clothing and trinkets, for example. Also included in this context of practice are clay pipes, regarded here as items of personal equipment carried and displayed about the body, and entangled in local manifestations of habitus.⁴⁹⁵

4. Health: hygiene, sanitation and health care. Urban environments engender numerous challenges arising from demographic pressures, and the physical proximity that characterises urban living. These include aspects of public and private hygiene and sanitation, and the health and medical care of the population. Central to confronting these challenges are individual and collective strategies regarding the disposal of waste generated by urban dwellers, the provision of safe water supplies, and access to medicines and medical care, for example. The study provides an overview of some of the material remains associated with practices of waste disposal, urban infrastructure and personal and public health. However, these are poorly represented in the available material, and this is compounded by the fact that it was not until the late 18th century that urban authorities, scientists and physicians began to address public sanitation and health seriously.⁴⁹⁶

A principal archaeological source of knowledge regarding an urban population's health and mortality consists of human osteological material derived from cemeteries and crypts, of which a handful have been partly excavated in Trondheim. However, due to a lack of appropriately detailed analytical data, this study can only concern itself in passing with some aspects of health and mortality gained from a few burial sites.

Other themes

Restrictions of time and the range of material available to me require that I have highlighted a limited number of main themes, concentrating on spheres of practice which are best supported by available material evidence in both Chapter 5's general survey and the case study presented in Chapter 6.

A central theme deserving of more attention is that of work and work-related practices. This encompasses the materialities of work-related practices and sites of production, most particularly spaces, places and equipment utilised during the performance of tasks of craft and domestic production. These include sites where traces of craft industries in the form of waste products or workshops have been registered. Where evidence is available, these are mentioned during the course of the material survey. However, this evidence is too fragmentary to support more detailed discussion, let alone an attempt at synthesis. That said, the case study (Chapter 6) examines Kongsgården, a medieval monumental space subsequently reorganised and occupied by a military institution, which contained two successive residential complexes occupied by the depot's provisioning managers. The manager's home was also his workplace, and these residences were also sites of gendered domestic production and agricultural practices.

Other themes that might have been discussed on the basis of Trondheim's material include, for example, commerce and exchange, leisure and pastimes, religious and spiritual practices, medical

⁴⁹⁴ Trentmann 2017: 231-234.

⁴⁹⁵ See 4.3.3. for explanations of doxic practices and habitus.

⁴⁹⁶ Legnér 2010: 271.

practices, or the use of public space, to name a few. These and other aspects will be touched upon where and when there is opportunity to discuss them in relation to material remains.

As has already been stated, *consumption* is a topic that permeates a number of the themes listed above. Theoretical aspects regarding consumption and consumer practices will be presented in the following section.

4.3.3. Consumption and consumer practices

Consumption – the acquisition, flow and use of things⁴⁹⁷ – is a defining aspect of the period and material under review here. The fact that the majority of things dealt with in the themes listed above are associated with varieties of consumer practice in domestic households during the Early Modern period makes this a central topic for the material study. An increasing number and range of goods and architectural forms were used in Norwegian households during the course of the period, and much has entered the archaeological record. The specific economic and social context regarding consumer practices in Trondheim aspects will be outlined in the introduction to Chapter 5. In the meantime, I would like to highlight certain aspects that might help to explain how these practices emerged; namely, choice, comfort and ‘breakability’. Again, the integrated components of practice - materials, competences and meanings - are central features of processes of consumption.

The pursuit of comfort

An important motivation inspiring choice in the consumption of particular household goods and the organisation of domestic space during the ‘long eighteenth century’ (1650-1850) has been identified by the historian of Early Modern consumption, Jan de Vries. He cites the desire to reduce pain or discomfort by pursuing comfort and pleasure - often in a single act of consumption - as a prime dynamic in household consumer behaviour of the period.

He further distinguishes between *personal comfort* and *social comfort*. The former denotes improvements in material surroundings, such as improved forms of housing, furnishings and provisions for heating and lighting, for example. The latter refers to an increased emphasis on the individual, privacy, emotional well-being and civil behaviour. Importantly, this engendered a more predictable and calm social environment, conducive to rational and constructive behaviour. It was facilitated in part by ‘conspicuous consumption’ of positional goods⁴⁹⁸ intended to distinguish particular individuals from others and strengthening claims to status, but also by ‘defensive consumption’, whereby goods were consumed to defend against the consequences of the consumption practices of others. This constituted a reactive striving for ‘respectability’ through the acquisition of positional goods that contextualised a broad range of consumption practices in the 17th and 18th centuries.⁴⁹⁹

Breakability

Through the testimony of contemporary probate inventories, de Vries identifies a broad and complex transformation in European material culture during this period which also encompassed the consumer behaviour of middle ranks and lower orders. While the striving for comfort and positional goods during this period is associated with a more refined, differentiated and specialised material culture, this process of elaboration was accompanied by a seemingly contradictory development of cheapening; namely, ‘breakability’. This took the form of the replacement of expensive, durable items with a high secondary market value by cheaper, less durable, goods. For example: the replacement of plates and drinking vessels of metal and wood with equivalents in ceramics and glass; the change in wall decorations from tapestries and paintings to paper hangings, and a shift from heavy hard-wearing woollens and leather items of clothing to clothes made of lighter woollens, linen, cotton and mixed fibres. In contrast to the small-scale production of high-quality goods, this trend saw the rise of the cost-effective production of an increasing volume and variety of semi-durable goods using lower quality materials by larger numbers

⁴⁹⁷ Trentmann 2016: 1.

⁴⁹⁸ Scarce or exotic goods, the consumption of which denies them to others. For example, individual eating utensils, books, clocks, paintings etc.

⁴⁹⁹ de Vries 2008: 21-22, 126-129.

of lower skilled workers. Declining quality and increased demand reduced prices, but reduced durability led to more frequent breakage and need for replacement.⁵⁰⁰

Concomitant with this was the fact that these semi-durable goods were more 'fashion-sensitive'. In terms of material, design and finish, each form of item - be it a tin-glazed ceramic dinner plate, a crystal drinking glass, or a cotton dress - embodied a shortened fashion life-cycle, being readily replaceable by alternatives featuring new stylistic elements in a range of competitively priced and attractively finished products. As de Vries acknowledges, however, 'breakability' should not be associated too closely with lower quality, since the shift to less durable materials did not necessarily reduce functionality. Furthermore, the use of new materials facilitated the introduction of stylistic elements that emphasised the differentiation of taste and fashion by design and craftsmanship.⁵⁰¹

Nonetheless, the depreciation in the value of goods increased. Where previously durable items of quality were bought as an investment, and could be handed down to the next generation, or were partly held as assets with significant scrap or resale value, items were now purchased purely for consumption. Jan de Vries defines new developments in material culture in the century after 1650 as being connected with a shift in consumer priorities away from the standard of the material (metal, wood, wool etc.) towards the standard of workmanship. The appeal of an object increasingly lay in its appearance rather than its intrinsic value, a process facilitated by the inventive ways by which craftsmen could manipulate materials to imitate luxury items, creating attractive 'semi-luxuries' of increasing variety, individualisation, fashionability and affordability.⁵⁰²

The shortening fashion lifecycle of durable and semi-durable goods provided urban elites with a continuously renewable range of material markers of their superior taste that were enrolled in reinforcing boundaries of social stratification. According to de Vries, elites were able to craft personal tastes as self-fashioning individuals materially through their personal cultural inheritance - or 'habitus' - and the erosion of former material constraints.

This was given new impetus and vigour by the shift from purchasing for investment to purchasing for consumption. However, the new range of goods also made it possible for society's middle ranks to selectively appropriate aspects of elite consumption. Importantly, because the new world of goods was so large and varied, it facilitated a certain freedom of choice, which resulted in a multiplicity of 'taste groups'. Rather than being constrained by the dictates of social class or slavishly emulating superiors, people chose to spend what they could afford on goods that could adequately express their social aspirations, often in innovative ways.⁵⁰³

Habitus, social fields, doxa and taste

Consumption choices and strategies of taste and distinction are linked to people's capacities to both integrate within and to transform their social worlds. These processes are facilitated by their acquisition of knowledge of how to operate in the world through the practical experience of living. This process of learning to understand their place in the world, and their relationships with others, takes the form of inculcation at the level of 'practical consciousness'; namely, individuals' acquisition of practical knowledge and habitual practices which form the basis of living and sociability. This process of internalisation was theorised by the sociologists Marcel Mauss and Pierre Bourdieu as *habitus*: a set of acquired 'dispositions' or patterns of thought, bodily habits, assumed values, behaviour and tastes acquired by individuals as the result of the interaction of the subjective self and the pre-existing social structures making up their social environment. In other words, *habitus* is tacit knowledge, derived from life experience, which actors habitually draw on.⁵⁰⁴

Bourdieu also unites practices and historical processes by offering an 'historicist ontology' which proposes an intimate connection between *habitus* and social 'fields' i.e. the economic, political, familial,

⁵⁰⁰ de Vries 2008: 129-133; Hutchison 2012: 143-144.

⁵⁰¹ de Vries 2008: 145.

⁵⁰² de Vries 2008: 145-146.

⁵⁰³ de Vries 2008: 148-149; Hodge 2009.

⁵⁰⁴ Bourdieu 1977; Sibeon 2004: 41; Morrall 2009: 53-54.

cultural or institutionalised social spaces in which people participate.⁵⁰⁵ Modern societies comprise a number of relatively autonomous social microcosms, or 'fields', each of which is a network of relations between positions based in certain forms of power, the possession of which allows access to certain historically-defined advantages available in that field. Fields are essentially specialist domains of practice with their own 'logic' that are constituted by a unique combination of forms of capital e.g. financial capital, symbolic capital (prestige, renown) or social capital ('connections'). The social world is a relational space, and each field is a relational space of its own. The fields are in constant dynamic tension because the relations between positions, what is regarded as an advantage, and the borders of the field are continually redefined in contestation between the agents within it.⁵⁰⁶ The field can be regarded as the *objectified* state of historic process, while habitus – the structured system of practices and expressions of agents in the field – is the *embodied* state. It is 'embodied history, internalised as a second nature...the active presence of the whole past of which it is the product'.⁵⁰⁷ It individuates the collective through embodiment and 'collectivises' the biological individual through socialisation. Crucially, habitus is not a role, but is incorporated in the field. Neither is it a set of norms or expectations existing independently of, and externally to, the agent. Through their innate habitus, actors' improvised strategies are made compatible with the structural requirements of the fields. Habitus is essentially a *practice-generating system*: 'a generative principle of regulated improvisations' called practice. Consequently, social agents act creatively, but within the constraints of habitus.⁵⁰⁸

Also within habitus, the naturalised 'relations of order' that structure internal and external worlds comprise what Bourdieu formulates as '*doxa*' or '*doxic practices*', among them the standards of taste governing practices of taste and social distinction.⁵⁰⁹ Doxa and taste are entwined, both being constituted through opinion.⁵¹⁰ Taste may be defined as an enacted, culturally embedded preference. Tastes are formed and challenged through the knowledgeable practices of social agents who reproduce their culture by making creative choices within a range of acknowledged and unacknowledged possibilities.⁵¹¹

Social distinction is produced through an ability to discern and discriminate between 'ranked and ranking objects'.⁵¹² To maintain and renew itself in the flow of competing regimes of value and authority, it is constantly dependent on endless supplies of new positional goods and ways of using them. Changes in available goods and practices cause changes in tastes, which in turn recursively prompt changes in goods and practices.⁵¹³ The introduction of new, alternative ways of being in the world – in the form of objects, behaviours, spaces, practices and so on – challenge doxic stability. Stable doxic practices comprise orthodoxies, while new practices that overtly challenge and destabilise previously naturalised doxic beliefs are termed heterodoxies.⁵¹⁴ Practices involving taste are those through which orthodoxies and heterodoxies are evaluated, manipulated and adopted.⁵¹⁵

In archaeological terms, objects and building remains can illuminate changing practices of taste and social distinction and the ways in which doxic social hierarchies and values were materially enacted and transformed at particular times and places.⁵¹⁶

Consumption and practice

As the materialist ontology informing my analysis stresses, and as de Vries also intimates, it is important to be aware that the motivations, choices and uses involved in consumption are themselves entangled

⁵⁰⁵ Thrift 1996: 14-15.

⁵⁰⁶ Hilgers & Mangez 2015: 5, 16.

⁵⁰⁷ Bourdieu 1992: 56; Thrift 1996: 14.

⁵⁰⁸ Bourdieu 1977: 78; Bourdieu & Wacquant 1992: 18-19; Thrift 1996: 15; Hilgers & Mangez 2015: 16.

⁵⁰⁹ Bourdieu 1996: 471.

⁵¹⁰ Loren 2001: 174.

⁵¹¹ Stahl 2002: 833.

⁵¹² Bourdieu 1996: 230.

⁵¹³ Bourdieu 1996: 230.

⁵¹⁴ Loren 2001: 175.

⁵¹⁵ Stahl 2002: 833.

⁵¹⁶ Loren 2001; Stahl 2002; Hodge 2009.

with the particular material qualities and affordances of the spaces and objects consumed. An object or building does not exist independently of social practice, and its social value resides as much in how it was used as in its meaning as a ranked or ranking object or positional good, for example. In looking at what people in the past consumed, one must look beyond the objects themselves as products or commodities, or any privileging of the habitus of the individual, and focus also on how things, users, competences, aspirations and desires are *coordinated* in practices. It is important to emphasise that consumption is not a practice *per se*, but is rather intrinsic to almost all social practices centred around achieving various aims or desires.⁵¹⁷ For example, de Vries identifies striving for personal and social comfort as targets or attributes of Early Modern consumption, and Shove concisely describes key consumption targets in practice as convenience, comfort and cleanliness.⁵¹⁸ A similar dispersal of consumption targets within a range of practices is apparent in my own material (5.6 and 6).

As I have pointed out above (3.5.7), it is difficult to reconcile the concept that objects and spaces are - *in equal measure to people* - also 'carriers' or 'hosts' of practice and routinised ways of doing with a social-constructivist privileging of the agency of the subject within a context of inherited, culturally-determined structures - as exemplified by habitus, social fields and doxic practices. In other words, individuals are not *independent* agents of rationalised choices, but rather carriers of the *attributes* of various social practices *in alliance with* other non-human 'carriers'. The 'social' is brought into being through multiple material affordances, arrangements, embodied routines and habits through which things and people transform one another. Emphasis shifts from the symbolic value placed on things to what people *do* with them, and how their configurations in time and space shape their embodied selves, practices and relationships. Social hierarchy, for example, is not intrinsic to people: it is mediated by alliances of heterogeneous actors, materials, and knowledges.⁵¹⁹

While recognising that *attributes of practice* are indeed inherent to humans and non-humans alike, I agree with other scholars of materiality that Bourdieu's concept of habitus as the embodied state of historic process nonetheless provides a useful framework for studying embodied relationships with the material stuff of life. The habitus of the modern individual in particular is constituted by a great variety of material things that are appropriated through the senses and actions of the body, a 'culture of materiality' shaping the social world and mediating social relations between individuals, but especially relations between individuals and broader society.⁵²⁰

Although it should be applied with a greater recognition of the symmetrical balance of attributes involved in practices, it provides a means to focus on aspects of human intentionality and processes of habituation and differentiation which characterise particular forms of consumption and sociality. As discussed above (3.5.2), Schatzki maintains that we should retain an interest in 'the integrity, unique richness, and significance of human agency', and is firmly of the opinion that human actions have constitutive, causative, and prefigurative priority over the actions of nonhumans.⁵²¹ For Schatzki the social 'is a field of embodied, materially interwoven practices centrally organized around shared practical understandings'. The maintenance of practices over time depends on 'the successful inculcation of shared embodied know-how' as well as on their continued performance.⁵²²

Other dimensions of consumption and practice

The chosen themes (4.3.2) encompass a number of dimensions of social practice and consumption, some of which have already been mentioned. On the one hand, these may include the negotiation of cultural norms, social status and social mobility, and the pursuit of personal and social comfort through the consumption of refined spaces, positional goods and commodities, and the adoption of genteel behaviours and polite manners, again in alliance with refined objects and spaces. On the other hand, the world of consumption during our period is also characterised by more inconspicuous spaces, items and

⁵¹⁷ Warde 2005: 137.

⁵¹⁸ Shove 2003.

⁵¹⁹ Jervis 2013.

⁵²⁰ Dant 2005: 27, 147.

⁵²¹ Schatzki 2002: xv-xvi.

⁵²² Schatzki 2001: 3.

practices, which are not governed by rational logics of habitus, doxa or genteel behaviour, for example, or individual choice, motivation, emulation, imitation and desire. These comprise objects and spaces enrolled in everyday habitual and routine practices, particularly those engendering the diffusion across social boundaries of materially more intensive and sophisticated forms of comfort and convenience, such as heating, lighting, and affordable luxuries, for example⁵²³ (see Chapter 6).

In addition, despite the increasingly geographically and socially dispersed availability of varieties of goods as globalised trade expanded during the Early Modern period, patterns of consumption were not uniform in geo-historical time and space. Objects and architectural forms could be enrolled in practice in multiple or contingent ways, and we should be aware of material inconsistencies and ambiguities that may accompany individual action, and localised, individualised, idiosyncratic or subversive practices and forms of behaviour.

These dimensions of social practice may span a number of the themes, or 'contexts of practice' defined here. This overlap is particularly marked in the domestic sphere where practices and materialities relating to dwelling, work, and personal appearance, for example, may occur within the same space-time locale. The home, for example, often also acted as a workplace, and a context for the creation of social and gendered identities. This makes the domestic sphere a particularly fertile zone of practice, and since much of my material derives from such contexts, it is consequently deserving of closer attention here.

4.3.4. The domestic household as object of inquiry

The domestic household is an important object, or scale, of historical and archaeological inquiry, including my own. Domestic buildings are places in which multiple social practices are contained, separated and combined, and the history of domestic architecture provides a complex record of how domestic space and daily life have been co-constituted, organised and changed through time. Indeed, as 'carriers' of practice, domestic buildings are intricately entangled in the historical trajectories of individual practices, notably with regard to the persistence of tradition or the emergence of innovative ways of living.⁵²⁴

In addition to architectural and structural remains, archaeology can extend the analytical range of practice-material arrangements associated with domestic life by the addition of objects used within domestic space. It can provide closely contextualised assemblages of space, objects, technologies, and their associated meanings and competences that are connected with enactments of practice at particular historical junctures. Configurations of practice-material arrangements associated with particular spatio-temporal domestic contexts in Trondheim will be presented and discussed in the following chapters, but most closely in the context of the case study (Chapter 6). Such domestic contexts – 'sites of the social' in Schatzki's terminology – form an accessible and empirically and discursively fruitful source for archaeological analysis at the micro-level.

It was in the home that the materialisation of notions, practices and identities associated with the family, gender, and sexuality, took place. Objects and built space were similarly involved in enactments of practices relating to privacy, hygiene, discipline, and the rise of fashion, and the home was a place where we can detect changing materialities of production and consumption, and the impact of new technologies, conceptions of the body and the experience of personhood, for example.

The historical home and its constituent members (the household) has consequently been a primary social unit of much historical and archaeological research.⁵²⁵ According to Jan de Vries, the family-based household was, and is, an autonomous entity that performs interrelated functions of reproduction, production, consumption and resource distribution among its members. Although its members may be of unequal standing, the household is nonetheless a site of alliances resilient enough to develop adaptive consumption strategies and objectives which allow it to interact actively with the

⁵²³ Shove et al 2012; Trentmann 2017: 14-15.

⁵²⁴ Shove et al 2012: 84; Vickery 2009; Thomasson 1997.

⁵²⁵ E.g. de Vries 2008; Vickery 2009; Yentsch 1994; Yamin 2001, 2006 & 2008; King 2006.

market economy rather than simply passively reacting or yielding to it.⁵²⁶ Spaces and things are intricately entangled in these alliances.

Furthermore, households (families and non-related members such as lodgers and servants) represent sub-groups within society; social fields and existential collectives whose members may share common beliefs, values, attitudes, standards of behaviour and symbols that represent the group. The household is nonetheless entwined in other social fields or networks, associated with other groups to which its members belong, such as a social class or ethnic group, professional groups, or an institution, such as a school or religious community, for example, or, as in my own case study, the army.⁵²⁷

Archaeologies of households can offer a biographical perspective that shifts between a sharp focus on individual lives at particular moments and the wider social contexts in which they existed, as well as the shifting trajectories and transformations of the spaces, commodities and goods used and experienced by individuals or household collectives. Importantly, close examination of the materialities of practice in individual households may reveal complexities of particular situations which may accord with, or deviate from, normative models of everyday life of the time.

4.3.5. The home as a locus of 'ordinary modernity'

In the view of the sociologist Peter Taylor, the home is an essential 'locus of ordinary modernity'. In this term lies a recognition that certain practices, ideas, and things that were previously reserved for the very few and very privileged in society increasingly became commonplace and accessible to ordinary people. A single concept captures the essence of this 'ordinary modernity': namely, the notion of 'comfort'.⁵²⁸

The pursuit of 'personal comfort' and 'social comfort' have been identified as essential consumption targets during our period, which also encompasses practices connected with creating domestic comfort. New forms of domestic comfort probably originated in mid 17th-century Dutch homes, and reached England and France soon afterwards. Brick construction replaced timber, and functional spaces - such as drawing rooms, dining rooms and bedchambers - were better defined and differentiated.⁵²⁹

The experience of domestic comfort involves a range of attributes, including material ones, which are implicated in practices promoting convenience, cleanliness, efficiency, leisure, ease, pleasure, domesticity, intimacy, and privacy, for example. It is Taylor's contention that the pre-eminent 'comfortable' modern place is the home. In our period, its constitutive practices increasingly occur within defined and segregated spaces, in contrast with medieval housing with its multiple-use spaces which were essentially public in nature.⁵³⁰

Central to this change is the notion of privacy and an increasing division between work and domestic life, and between gendered practices. Modern homes can be construed as bounded spaces of practice defined by controlled access both inside and from outside. For Taylor, the creation of a boundary between public and private spaces is the single new idea which enabled houses to become *homes*. Modern domesticity was invented in the process of defining a boundary between public and private worlds.⁵³¹

These boundaries were nonetheless often permeable. The complex experience of 'home' can be illuminated using archaeological evidence for domestic buildings and material culture to discuss the varied material contexts in which the 'domestic' was lived and constituted as a realm of social and personal interaction and domestic comfort. This forms a main aspect of the case study of the provisioning managers' residences in Chapter 6.

The domestic sphere is not isolated, fixed and bounded. It comprises a dynamic social locale firmly embedded in the wider political, economic, and religious discourses that contributed to the shaping of social life. Individual and communal identities entangled with gender, rank, and religious

⁵²⁶ de Vries 2008: 10, 14-15.

⁵²⁷ Henry 1996: 237; Thomasson 1997.

⁵²⁸ Taylor 1999: 52-54.

⁵²⁹ de Vries 2008: 127; Rybczynski, W. 1986: 51.

⁵³⁰ Taylor 1999: 52-53; Rybczynski, W. 1986: 231.

⁵³¹ Taylor 1999: 53 (citing Rybczynski 1986: 66).

practice, for example, were constituted through spatial and material arrangements within the home and the contested relationships between the 'public' and 'private' realms of the city. In the home, men and women actively manipulated their domestic roles and identities to negotiate their position in urban society.

Archaeological case studies like my own can provide snapshots of the varied character and meaning of the 'domestic' in specific times and places that may confirm or challenge views of both the domestic and the communal as stable or natural concepts. They can demonstrate the active construction and negotiation of 'domesticity' as a contested material and cultural category. For example, marriage was a union of difference, and a successful marriage embodied and projected itself in the construction, equipping and decoration of the family home, a process in which both husband and wife invested much socially, personally and economically.⁵³² Gender distinction and other dynamics affecting the household have consequences for our understanding of the role of household spaces and objects in the practices that constituted various forms of authority, identity and belonging in the transition to modernity.

The domestic built environment is essential to defining and stabilising contexts of social practice. However, as argued above (3.5.9), it should not be seen as just a container for action, but an integral part of it – a *place*, not just a space.⁵³³ Social stability and change could be effected through the processes and practices involved in building, maintaining, moving around, and inhabiting structures.⁵³⁴ As my case study will show, changes to the built environment can represent transformations in the nature of dwelling and of identities, especially if they reflect transformations of established and institutionalised sets of practices, for example.

My case study will also show that practices associated with habitation, or *living*, are instrumental to how built space is transformed into 'place' - the multidimensional setting for social practices characterised by the contingencies of unfolding everyday life. Remains of structured spaces and associated material culture can throw light on the ways in which a particular domestic space was organised and used: such as the impact of socially-directed (top-down) or practice-orientated (bottom-up) choices in a building's physical organisation, the establishment of visible and invisible boundaries, and the control of access and movement, for example. Domestic space may be organised for purposes of social performance and display, in which the space, its inhabitants and a diverse array of objects were enrolled in practices of sociability. Alternatively, it may be subdivided into private or public zones, or segregated spaces of gendered domestic practices or status-related household practices, for example.

As stated, central to much of this is the desire for the provision of personal and social comfort and material improvement in the domestic sphere. This is a process dependent ultimately on the constraining and enabling potentialities, attributes and affordances of the materials and objects involved in domestic practices, some of which will be explored in the following chapters (5.6. and 6).

⁵³² Vickery 2009: 302.

⁵³³ Gregory 1989: 204-8.

⁵³⁴ Gieryn 2002.

Chapter 5

Trondheim's post-medieval urban archaeological resource: a characterisation

5.1. Introduction

The material study's central aim is to characterise Trondheim's post-medieval archaeological archive in order to highlight its hitherto neglected potential as a source of historical knowledge. It is a first attempt in national terms at compiling an inventory of a wide range of post-medieval archaeological material - both portable material culture and structural remains - from an urban terrestrial context.⁵³⁵

The study presents a variety of material remains associated with a range of spheres of urban life in the centuries following the Reformation, although the catalogue is far from comprehensive due to current restrictions on the excavation of post-medieval archaeology, and the necessity to be selective in the context of this study. In addition to presenting material already retrieved from the buried archive, it also provides an overview of its future information potential by identifying sites, areas and places of archaeological interest (see Appendices E and F). The characterisation's thematic character will hopefully provide researchers with points of departure for future research.

This is essentially a categorised inventory of *a sample* of Trondheim's buried archive of portable material culture and remains of the historic built environment, detailing its qualitative and functional variety and spatial and temporal distributions during the period from the time of the Reformation to c. 1800. It is divided into two main parts: The first is a survey of archaeological remains associated with the topographic and spatial components making up the urban *historic built environment* i.e. its *spaces and places*, in the form of the remains of streets, plots, infrastructure, building types, fortifications and so on. The second part is a catalogue of a range of objects, or *portable material culture*, associated with practices performed within urban spaces and places.

Before presenting the archaeological material, I will provide resumés of its historical context and the current state of knowledge of Trondheim's post-medieval development based on previous attempts at reconstructing Trondheim's post-medieval topography using historical and archaeological sources (5.2). Source-critical considerations and the methodological approach are set out in 5.3. The thematic characterisation of remains of the built environment is provided in 5.4, followed by the categorised overview of portable material culture in 5.5. Finally, a summary discussion is provided in 5.6, comprising a synthesis of the material evidence and the main analytical themes set out in 4.3.2.⁵³⁶

5.2. The historical context and Trondheim's historical topography

5.2.1. Post-medieval Trondheim: the historical context to c. 1800

The following account presents a digest of Trondheim's social, economic and demographic history, as well as some main features of its historical topography. It provides an historical narrative regarding Trondheim's urban development and socio-economic character in time and space, highlighting aspects that will be examined more closely in subsequent sections.

⁵³⁵ See Falck 2012 and Vangstad et al 2016 for presentations of material from marine deposits in Oslo harbour.

⁵³⁶ Dwelling, sustenance and sociability, personal appearance, and health.

The medieval city

At the time of the Reformation in 1537, Trondheim (also known as Nidaros in medieval times) had already been an important national urban centre for half a millennium. Growing from a small regional trading centre (*kaupang*) established in the 10th century, it rapidly became an important centre for royal and ecclesiastical power and the socio-political processes of Christianisation and state formation. Despite its location on the northern periphery of Europe, both archaeological and historical sources attest that Trondheim was far from isolated from the wider international community, both economically, socially and culturally. It was described as a *civitas* (city) by the chroniclers Adam of Bremen in the 11th century and Ordericus Vitalis in 1135.⁵³⁷ That said, it was a small urban centre in European terms, both spatially and demographically, and its greatest medieval population is estimated at c. 3,000 individuals at about 1300. Nonetheless, its status as a city from the late 11th century on is warranted by its nationally important secular and ecclesiastical institutions and associations (it was the site of a metropolitan see, a cathedral, the administrative centre of the Archbishopric of Nidaros, and a royal estate, as well as being a centre of pilgrimage). The spatio-temporal development of the urban environment built and occupied by medieval generations has been traced by archaeology, as have varieties of material culture associated with all aspects of everyday life, crafts and industry, religious practices, trade and so on.⁵³⁸

Situated on a low-lying alluvial peninsula at the mouth of the River Nid, the built-up area at about 1300 was small in area, characterised by a latticework of passages and streets interspersed with narrow plots densely packed with timber-built buildings, and a large number of predominantly stone-built, parish churches with small graveyards. The medieval urban tenements were arranged in a regulated pattern which persisted largely unmodified until the end of the 17th century. In addition to the densely populated urban core, the medieval urban environment at about 1300 also comprised a segregated metalworking zone to the north, infields to the west, a riverside harbour, and a segregated royal and ecclesiastical area to the south containing the cathedral, archbishop's palace, and royal estate (Figs 5.1 and 5.4).

This functionally complex urban centre emerged during the second half of the 11th century as both the monarchy and Church cultivated and utilised the nascent Cult of St Olav to consolidate their power locally and nationally. Trondheim became a centre of pilgrimage and a cathedral city, and out of this process emerged the economically powerful and geographically extensive Archbishopric of Nidaros, established in the mid-12th century. For the remainder of the medieval period this institution was the prime driver of Trondheim's social, economic and cultural development. The centre of royal power eventually shifted to Bergen and then to Oslo in the course of the 13th century, but the archbishopric retained its power as a major political actor nationally until the Reformation in 1537. Its centre was based in the Archbishop's Palace, one of the few surviving monumental building complexes of the period, and one of the locations featured in this study.⁵³⁹

The Reformation and its aftermath

After the Reformation, this power centre (renamed Kongsgården) was confiscated by the king, and would be used successively as the seat of the Danish aristocratic secular governors (1556-1662), the administrative centre for the county prefects (1662-1686), and a depot for the Danish-Norwegian army (1686+). Major excavations in the palace precinct during the 1990s revealed numerous structural remains and artefacts associated with all these major phases, the latter being the subject of my case study (Chapter 6). The excavations also provided insight into the material nature of the archbishopric's economic and power-related apparatus at the time of the Reformation, uncovering numerous workshops and artefacts linked to the production of money, weapons and other central economic functions.⁵⁴⁰

In 1537, the city was still recovering from a major fire in 1531, which had destroyed much of the urban area as well as all its parish churches. The majority of these churches were abandoned and not

⁵³⁷ Helle 2006: 41-42.

⁵³⁸ Long 1975; Lunde 1977; Christophersen & Nordeide 1994. See Mumford 1975: 41 for an apt definition of a city.

⁵³⁹ Lunde 1977; Blom 1997.

⁵⁴⁰ Nordeide 2000a.

rebuilt, and this is the only material impact of the Reformation on the composition and character of Trondheim's urban topography which has been documented historically and archaeologically. From the late 16th century on, the cathedral and Vår Frue (Our Lady) church functioned as the city's parish churches. Apart from this, the city was rebuilt along long-established lines, although a few streets were widened to act as fire-breaks after a new fire in 1598.⁵⁴¹ On the evidence of the earliest map of Trondheim drawn up in 1658, Trondheim's enduring medieval urban plan underwent no fundamental change until 1681, when, by royal decree, it was radically transformed along baroque lines drawn up by military architects following another catastrophic urban fire (Appendices A and B). Trondheim, a city built predominantly of timber, has been prone throughout its history to frequent fires, even following the radical replanning in 1681, which was in part intended to minimise this danger.⁵⁴²

The 16th century: trade, population, and the urban environment

The medieval city is traditionally thought to have entered on a prolonged period of decline following the demographic catastrophe of the Black Death; a decline which is presumed to have impacted on its population, economic fortunes, urban infrastructure and the like. Although growth occurred at certain times and places, Norway experienced an urban crisis throughout the late-medieval period and well into the 16th century, lasting to c. 1600 in Trondheim.⁵⁴³ The royal confiscation of the Church's property and income from rents at the Reformation, and their subsequent administration by the feudal Danish overlordship (*lensherrer*), undoubtedly impacted on Trondheim's ecclesiastical-centred urban economy. However, there are signs that the city did not experience renewed decline or stagnation as a result of the Reformation, its population adjusting pragmatically to the new political, religious and economic situation. This was aided in part by the granting of a city charter by the king in 1547, which regulated internal and international trade, and gave Trondheim the right to engage in maritime trade with Northern Norway.⁵⁴⁴

Trondheim's population during the mid-16th century possibly stood at between 1,500 and 1,800 individuals, or about half its medieval maximum.⁵⁴⁵ This included a burgher class of merchants, maritime traders and craftsmen which was in the process of establishing and consolidating itself. In Trondheim, craftsmen who had previously worked for the archbishopric formed an influential group. This group had previously included a number of foreigners, and although Norwegians predominated, the emerging burgher class also included numerous immigrants - Swedes, Dutch, English and Germans, for example - many of whom possessed capital, knowledge and international trade networks, and who were well integrated socially, economically, and politically. The influence of wealthy enterprising immigrants, particularly a group of families with origins in Flensburg in Schleswig-Holstein, is a feature of Trondheim's social and economic life from this time on. However, Trondheim's burgeoning economy also attracted poorer immigrants and people from other parts of Norway during the course of the 17th century.⁵⁴⁶

We have little information regarding the material composition of the urban environment and the lives and practices of the community - both burghers and the anonymous ranks of poorer tradesmen, workers, servants, indigent poor and women - during the 16th century. Trondheim's urban area is thought not to have expanded beyond its maximum medieval limits before the mid-17th century.⁵⁴⁷ Existing urban tenements were presumably rebuilt prior to the next great fire in 1598, but the population's housing, living conditions, productive activities and range of material culture during this period of urban crisis and social change are poorly documented.

⁵⁴¹ Kregnes 1981: 97.

⁵⁴² Major historical fires to c.1800: 1219, 1295, 1328, 1344, 1481, 1531, 1598, 1651, 1681, 1708, 1717, 1742, 1773, 1788. (https://snl.no/bybranner_i_Trondheim).

⁵⁴³ In contrast, European cities experienced a period of growth during the 16th century. Eliassen 2006: 145, 150. Note also that archaeological material in Oslo has provided grounds for questioning the extent of crisis there in the 16th century (see 2.8.2).

⁵⁴⁴ Supphellen 1997: 31-34; Eliassen 2006: 159.

⁵⁴⁵ Supphellen 1997: 31; Eliassen 2006: 156.

⁵⁴⁶ Supphellen 1997: 32, 108-117; Nissen 1998; Eliassen 2006: 167.

⁵⁴⁷ Supphellen 1997: 69.

The 17th century: population increase and economic growth

Trondheim experienced a marked upsurge in maritime trade from around 1600, imports initially including grain and small quantities of diverse goods from Denmark, the Netherlands and elsewhere.⁵⁴⁸ As the 17th century progressed, Trondheim competed successfully for trading privileges, and its growing class of burghers engaged more actively in export trade; first fish (local herring and North-Norwegian stockfish) and tar, and eventually, and most importantly, timber from regional sawmills and copper from mines in the hinterland. After 1600, coastal traders from Trondheim also captured a greater proportion of trade with northern Norway and along the coast to the south-west. This diversified basis ensured the city's economic growth throughout the 17th century.⁵⁴⁹ This did not lead to a significant increase in population at first, which is thought by some scholars to have been only about 2,500 by the mid-17th century, due to still restricted levels of growth and the fact that local burghers did not yet control the most lucrative ventures. However, this changed during the second half of the century, when more local wealthy citizens became ship-owners or held interests in mines, for example. The council of burghers also became more specialised, differentiated and professional, and keen to exert their own and the city's independence from state authorities.⁵⁵⁰

During the mid-1600s, and particularly from the establishment of the Absolutist State in 1660, an elite class of merchant traders distinguished itself from the rest of the burgher class, part of a general process of increasing social differentiation from this time on. In addition to being engaged in international trade, owning ships, or loaning money, for example, many in this oligarchy also held important official administrative posts, and consequently exerted both economic and official power. In Trondheim, a small group of families, many of immigrant extraction, secured control over systems of production and distribution (forests, mines, harbours and ships, for example), formed networks and alliances, traded in commodities, accrued capital and formed the core of what would be a long-lasting local dynastic elite.⁵⁵¹ Another important emergent group during the course of the 17th century was the growing number of state-appointed local administrators and bureaucratic officials (*embetsmenn*).⁵⁵² Despite the impact of episodes of epidemics of disease, crop failures and war, Trondheim's population had probably doubled to an estimated total of about 5,000 by the end of the 17th century.⁵⁵³

Prior to the mid-17th century, there are few historical sources detailing the demographic and socio-economic composition and structure of urban society, and practically none concerning the lives of Trondheim's poorer inhabitants, who are largely omitted from contemporary tax lists, probate inventories and mortgage deeds, for example. The anonymous majority – including the poor, seamen and soldiers, for example – may have comprised up to two-thirds of an urban population at the time. While later sources are more comprehensive, they too are far from complete in this regard.⁵⁵⁴

Nonetheless, tax lists from the mid-late 17th century provide us with a degree of insight into the ethnically and socially varied and increasingly differentiated nature of Trondheim's urban society at the time. The small burgher class consisted of elite merchants, smaller merchants and grocers, coastal traders and wealthier master craftsmen,⁵⁵⁵ who held citizen privileges and were able to pay taxes and keep servants. This upper class was eventually supplemented with army officers and civil officials. Most urban dwellers, however, comprised non-privileged 'townspeople', including less wealthy craftsmen, and those who practised a myriad of less skilled trades and occupations, an increasing sub-group of servants (predominantly unmarried women), and the ever-present ranks of the poor.⁵⁵⁶

⁵⁴⁸ Beer, wine, hops, cloth, ceramics, and glasswares, for example.

⁵⁴⁹ Supphellen 1997: 81-100; Eliassen 2006: 156, 159.

⁵⁵⁰ Eliassen 2006: 156, 166, 170.

⁵⁵¹ Eliassen 2006: 169, 225; Supphellen 1997: 113-119; Bull 1998.

⁵⁵² The subjects of my case study – the provisioning managers at the Kongsgård military depot – were members of this important new social group (Chapter 6).

⁵⁵³ *Kvernskattemanntallet* (the mill tax list) of 1687 gives a rough minimum estimate of the population (c. 4700) and the number of dwellings (846). Hals 1981: 123; Supphellen 1997: 102; Vigerust 2000: 18-33.

⁵⁵⁴ Eliassen 2006: 169-170.

⁵⁵⁵ Andersen 2003; Andersen 2004.

⁵⁵⁶ Trades and occupations included carpenters, cobblers, tailors, smiths, clerks, soldiers, seamen, fishermen, and various labourers, for example. Hals 1981; Supphellen 1997: 117-119; Vigerust 2000: 18-33.

Surviving contemporary documents provide our earliest insight into the character of the built environment and the living conditions of parts of Trondheim's urban population during the 17th century. Attempts by the historian Henry Berg and subsequent historians to reconstruct Trondheim's social topography utilising these sources are presented below (see 5.2.2).⁵⁵⁷ An engraved urban prospect of the city depicting it prior to the 1681 fire shows a densely packed built-up area of timber residential buildings stretching westwards from a row of tall riverside warehouses and moored ships, material testimony to the importance and volume of mercantile activity at this time (Maschius's Prospect; Appendix C).

Trondheim after 1681: a fortified baroque garrison city

Following the catastrophic fire of 1681, the king reacted decisively by imposing a radically new urban plan on the council and population of Trondheim, in the form of a modern baroque geometric grid of broad streets transposed on the burnt ruins of the old medieval plan (Appendix B; Fig. 5.6). Trondheim's replanning was one of many royal urban regulation incentives in Norway and other Nordic countries during the 17th century, inspired by European ideals of symmetry, rationality, aesthetics, and practicality, not least in terms of increasing military effectiveness, communication, public hygiene and fire-safety. While the other urban plans comprised Renaissance-inspired grid-plans, the plan chosen for Trondheim constituted Norway's only fully realised baroque city plan, modified for local topographic circumstances, with a large baroque square, broad rectilinear streets, *points de vue*, and large intervening quarters in which new urban properties were established.⁵⁵⁸

However, pragmatic compromises arose due to local dissatisfaction with the loss of old property grounds and stone cellars under the new streets. Certain older elements were retained, notably parts of the medieval alleys, while in some instances the wide streets were encroached upon by neighbouring properties and gardens, and the large square initially failed to function as the city's symbolic, administrative or economic centre. The streets remained largely unpaved well into the 18th century, and the majority of buildings continued to be built of wood, despite efforts to introduce brick and stone, and parts of the city were periodically affected by fire during the 18th century.⁵⁵⁹

This new urban plan was also part of a royal initiative to strengthen Trondheim's urban defences at a time of international conflict. Trondheim's proximity to Sweden, with which Denmark-Norway was periodically at war, meant that it constituted an important garrison for the northern regiments in the newly restructured national army. The 17th-century city defences comprised principally a fortified gate to the west, perimeter palisading and ramparts, and a fortress on Munkholmen island which defended the sea approaches. The city was captured briefly by Swedish forces in 1658, and its defences modified by them and on its recapture (Figs 5.41 and 5.42; Appendix G). However, the new post-1681 fortifications were more robust, consisting of substantial new perimeter ramparts, a new fortress, Kristiansten, strategically placed overlooking the new planned city with its sight-lines and parade streets, and modifications to the fortress on Munkholmen (Fig. 5.43). A new depot for military materiel, ordinance and supplies was housed in the old administrative complex at Kongsgården (Chapter 6). These military works radically altered the urban environment at the turn of the 18th century, a transformation which also saw the growth of two suburbs to east (Bakklandet) and west (Ila), initiating at last the city's significant expansion beyond the boundaries within which it had been contained since medieval and early post-Reformation times (Fig. 5.7).⁵⁶⁰

Into the 18th century: increasing social differentiation and consumer choice

What of the people who lived in this changing urban environment? While demographic growth,⁵⁶¹ mobility, density and variety are features of Norwegian urban centres during the 17th and 18th centuries,

⁵⁵⁷ Berg 1951; Stang 1981.

⁵⁵⁸ Kavli 1966: 36-51; Grankvist et al 1981; Stang 1981; Eliassen 2006: 180-191; Andersen 2015.

⁵⁵⁹ Kavli: 1963, 1966, 1996; Stang 1981; Kregnes 1981; Supphellen 1997: 169-173; Brattli 1997; Eliassen 2006: 180, 188-191, 195-196; Bårdsen 2014.

⁵⁶⁰ Supphellen 1997: 150-166, 169-173; Bull 1985.

⁵⁶¹ The Norwegian urban population as a whole grew significantly between the mid-17th century and c. 1800, from about 30,000 (6.7% of the total population) to over 100,000 (10-12% of the total). Eliasson 2006: 216.

the historian Finn-Einar Eliassen cautions against distinguishing an exclusively 'urban' population structure, development or culture that differentiated it from the rest of society.⁵⁶² Nonetheless, some factors can be identified which characterise the early post-medieval urban population. For example, women formed the majority of the population in 18th-century towns and cities, particularly widows and spinsters, the latter being mostly servants. Despite their inferior formal status in patriarchal society, many women in all classes partook actively in economic activities.⁵⁶³ Urban families were small, the 18th-century average being 3-4 individuals, while households (which might encompass older family members, teachers, apprentices, lodgers, or servants, for example) averaged 4-5, although upper class households with numerous servants could average 8-9 members. These statistical averages hide dynamic realities, however, such as cyclical changes due to familial expansion or contraction, infant and child mortality, mobility, care of aged relatives, changes in economic circumstances etc. Mortality rates in the larger coastal urban centres like Trondheim tended to exceed birth rates, due in part to their susceptibility to epidemics of infectious diseases, for example.

As we have seen in the case of Trondheim, urban centres of the period were also characterised by a high degree of mobility, with large numbers of people of all walks of life, and from near and far, moving to and from them to marry, work, learn or die, for example. People brought with them their own customs, attitudes and material culture, while at the same time encountering new and unfamiliar mentalities, practices and materialities. It was in this meeting of the familiar, traditional and local with the different, new and exotic that urban centres acquired their distinctive social character as dynamic and relatively open communities, with less strict norms, earlier secularisation and less social control than was the case in rural society. Nonetheless, this meeting and mingling of mentalities, practices and materialities was not a uniform process, and was not confined to urban centres. It was also in a process of constant flux, perhaps most markedly so during the second half of the 18th century when emphasis on the individual, privacy, improvement, secularisation, conspicuous consumption and a wider consumer revolution became forces for change in a variety of social and cultural contexts. They certainly marked the character of urban society where these factors often manifested themselves first.⁵⁶⁴

Trondheim's population increased by about 75% during the 18th century, from c. 5,000 at the end of the 17th century to about 9,000 in 1801.⁵⁶⁵ Urban society in Norway was by this time highly stratified, socially and economically. Three main estates, or groups, existed: civilian officials and military officers (c. 5% of an urban population), the burgher class (c. 15-25%), and the rest (70-80%). These groups can be subdivided into socio-economic classes ranked by income and wealth. At the top was a tiny, extremely wealthy elite, or patrician class, comprising a few families of merchants, ship-owners and high-ranking officials engaged in commerce. Beneath these was an upper class of wealthy merchants and higher-ranking officials and military officers (c. 5-10% of an urban population). Helped in part by an increase in commodity turnover, the century saw an expanding 'middling' class of small merchants and retailers with or without citizen rights, ships' captains and steersmen, prosperous craftsmen, lower-ranking officials and officers, doctors and so on (c. 20-30%).

The lower class comprised the vast majority of an urban population (c. 60-75%), including the likes of seamen, labourers, less prosperous craftsmen, innkeepers, fishermen, vergers, clerks, functionaries, soldiers, servants and the poor. The latter included both those in receipt of charity and those who occasionally worked. Social and economic differentiation became more marked during the 18th century, and the proportion of urban poor grew: the impoverished could comprise up to a third of the urban population during bad times.

Prior to the end of the century, only the upper class and elite enjoyed a significant increase in prosperity, the other classes struggling with factors such as underemployment, low wages, rising food prices and fluctuating economic cycles. Trondheim had already distinguished itself with an early provision of social institutions for the poor and destitute during the 17th century, in the form a number of urban penal and charitable institutions (workhouses, poorhouses, orphanages, widows' foundations

⁵⁶² Eliassen 2006: 216, 226.

⁵⁶³ Eliassen 2006: 225-226; Bull 1998.

⁵⁶⁴ Eliassen 2006: 216-220, 226-229.

⁵⁶⁵ Supphellen 1997: 350.

etc.). From the 1730s on, following a period of crisis in their management, a number of new model institutions designed to deal with the city's problems relating to poverty, criminality and care were established on the initiative of local burghers, officials and wealthy patrons.⁵⁶⁶

Rank and socio-economic status was measured, facilitated and expressed materially in manifold ways, both in public and in private. It might take the form of the type of dwelling one occupied, the consumption of particular foodstuffs and beverages (including exotic imported items such as figs, oranges, tea and coffee, for example), the wearing of particular forms of fashionable dress and accessories, or the performance of particular religious and burial practices, for example. While the 17th-century upper classes observed a comparatively sober and restrained lifestyle and consumption in material terms, Trondheim's cultivated and Eurocentric elite enjoyed something of a Golden Age during the mid-18th century. They displayed their material wealth conspicuously in the form of extravagant social gatherings and gastronomic feasts, by competing to build large timber residences and country houses, and they surrounded themselves with varieties of internationally fashionable, exclusive and luxurious things, some of which are curated in local museum collections.⁵⁶⁷ Many of the goods and commodities imported from abroad, both luxuries and more prosaic items, are listed in toll-lists, including those for Trondheim, which indicate that an impressive range of commodities arrived here already during the 17th century. While Norwegian toll-lists are a rich source of information on the range and amounts of goods in circulation during the 17th and 18th centuries, they only provide information on goods transported by sea, are differentially preserved, and their surviving information value is partial.⁵⁶⁸

During the course of the 18th century, new retail forms, developments in transportation infrastructure, the growth of small towns, expanding and diversifying urban populations, and the relaxation of trade laws led to the development of an internal market that facilitated interregional trade and exchange of specialised products, and an increase in the variety and availability of goods in Norway. This made market participation for producer and consumer easier and more profitable, and increased consumer aspirations.⁵⁶⁹ In addition, increased access to improved housing and furnishings was facilitated by improved structural economic conditions.⁵⁷⁰ During the latter half of the 18th century in particular, the middling and lower classes participated to a greater extent in the consumption of new, fashionable and occasionally exotic goods, clothes, comestibles and beverages. Coffee, tea, sugar and coloured cotton fabrics, for example, became customary accoutrements of the lives of a wider spectrum of Trondheim's residents. Likewise, changes in the design of houses and interiors became more widely adopted, with specialised rooms and differentiated, segregated spaces for different domestic functions and practices.⁵⁷¹ However, the full range, distribution, tempo and character of material changes in consumption and living conditions, both at this time and in earlier centuries, are not fully documented historically or archaeologically. These and related factors will be examined further in the case of Trondheim in the following chapters.

5.2.2. Trondheim's historical topography: existing knowledge and sources

Archaeology deals with fragmentary, shifting traces of organised space and the structured urban environment through time. Any attempt to interpret and contextualise the structural residues revealed by archaeology is dependent on existing knowledge of the nature and historical development of the

⁵⁶⁶ Grankvist 1981; Eliassen 2006: 220-224, 229; Supphellen 1997: 241-248; 355-359.

⁵⁶⁷ Kavli 1966; Supphellen 1997: 310-321; Opstad 2003; Andersen 2003, 2004; Eliassen 2006: 226-229.

⁵⁶⁸ Lists from 1605 to 1812 are preserved, although periodic episodes of discard have depleted them. For example, accounts for the period 1631/32 to 1699 are destroyed, although summary extracts are preserved. With some exceptions, toll accounts for the period 1700-1750 have also been destroyed. Most toll accounts for all Norwegian toll places are preserved for the period 1750 to 1812. Hutchison 2017: 280-281.

⁵⁶⁹ Hutchison 2012: 65-97, 169.

⁵⁷⁰ The stabilisation of household expenditures, more secure property rights and tenure, and rising incomes due to a widening gap between purchase and sales prices. Hutchison 2012: 169-170.

⁵⁷¹ Discussed in more detail in Chapter 6. Andersen 2003; Andersen 2004; Eliassen 2006: 229.

urban topography derived from available building-historical, topographical, and historical sources.⁵⁷² A long-term historical perspective and a detailed understanding of particular historical-topographic phenomena in their chronological and spatial settings is required in order to properly contextualise these residues.

In the case of medieval and early post-medieval Trondheim, there is little historical information regarding the areal extent of the city and the physical character, content and organisation of the urban topography prior to the second half of the 17th century. Previous attempts to reconstruct the maximum areal extent and topographic composition of the *medieval* urban area have drawn on fragmentary topographical information derived from a small number of incomplete or ambiguous historical sources, including medieval saga texts and laws, and in particular, the Nightwatchmen's itinerary in the late-medieval Nidaros appendix to King Magnus the Lawmaker's City Law of 1276. In addition, the oldest map of Trondheim drawn by the Swedish military surveyor Oluf Naucler during the Swedish occupation of 1658 (Appendix A) has provided a basis for retrospective reconstruction of the medieval urban topography, while observations made in connection with archaeological investigations prior to 1970 provide occasional comparative material evidence.⁵⁷³

The most recent conjectural reconstructions of the medieval city have been produced by the historians Henry Berg and Grethe Authén Blom, and the archaeologist Øivind Lunde (Fig. 5.1).⁵⁷⁴

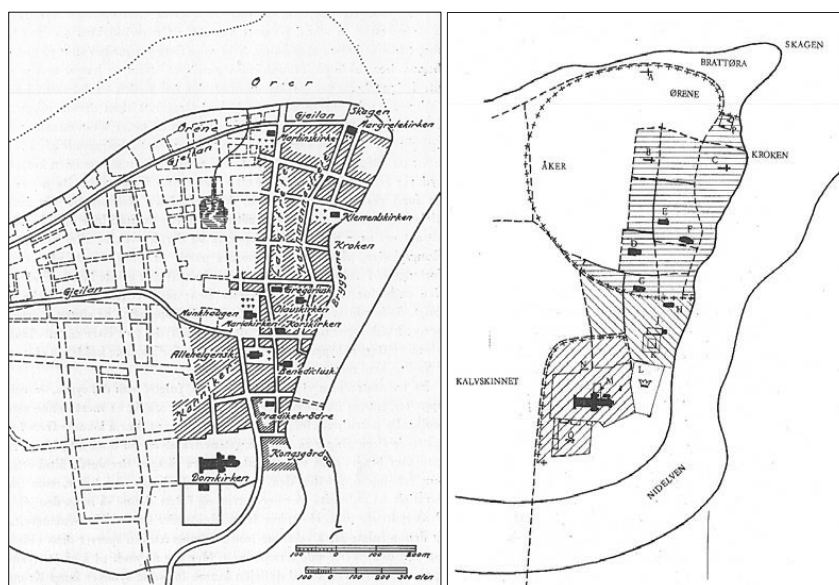


Figure 5.1. Trondheim c. 1300. **Left:** Reconstruction by H. Berg transposed onto the post-1681 street plan (stippled). **Right:** Reconstruction by Ø. Lunde with differentially shaded areas that define royal and ecclesiastical domains to the south and a secular 'townsmen's town' to the north.⁵⁷⁵

According to Blom and Lunde, historical sources indicate that the medieval urban area reached its maximum extent at about 1300,⁵⁷⁶ and this is the point of departure for my own topographic characterisation. Crucially, in contrast to Berg, both Blom's and Lunde's reconstructions of the medieval

⁵⁷² This is consistent with current approaches to urban topography, an interdisciplinary study of the form, fabric, and layout of urban centres, drawing on documentary history, cartography, historical geography, urban planning, architectural history, and archaeology. Geographers refer to it as 'urban morphology', or 'urban form'.

⁵⁷³ Berg 1951: 50-73; Blom 1956: 233-259; Lunde 1977: 188-196, 228-234. See Lunde 1977: 20-45 for overview of the earliest reconstructions by 18th, 19th and 20th century antiquarians, historians and archaeologists.

⁵⁷⁴ Berg 1951: Fig. 9; Blom 1956; Lunde 1977: Figs 25 & 140.

⁵⁷⁵ After Berg 1951: Fig. 9 & Lunde 1977: Fig. 140.

⁵⁷⁶ Blom 1956: 233; Lunde 1977: 229.

urban topography build on both historical *and* archaeological material, although Lunde utilises archaeological sources more systematically, and is currently the standard reference in this regard.

Turning to the early *post-medieval* city: Much of Trondheim was destroyed in the fire of 1531, a fire as catastrophic as the one in 1681. However, the extent of rebuilding during the 16th century is poorly documented, both historically and archaeologically. This fire, and subsequent ones, also decimated local historical archives. Utilising scanty historical sources, Berg attempted to reconstruct the probable extent and character of the built-up area prior to the major urban fire of 1598 (Fig. 5.2).

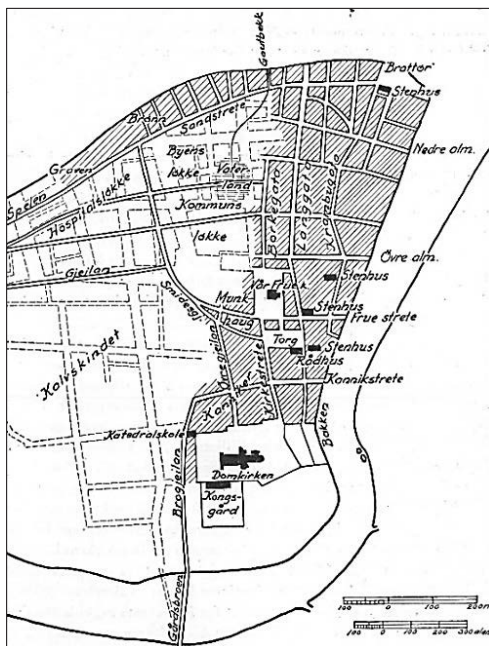


Figure 5.2. Berg's reconstruction of Trondheim c. 1590. After Berg 1951 Fig. 11.

Mortenssøn Maschius dated to 1674 (Appendix C). However, Berg placed great faith in ambiguous documents, and inaccuracies in his localisations of properties and attributions of ownership have been identified by subsequent scholars.⁵⁷⁹ Berg's reconstruction nonetheless provides a valuable synthesis of descriptions of historical properties and their owners during the 17th century, and insight into the character of the built environment and the living conditions of parts of the urban population. Mortgage deeds include concise surveys of urban properties describing their physical character and organisation, and the buildings and functions contained within them. Although there was great variation in property size, complexity and value, a typical well-equipped urban property of the mid-late 17th century comprised a two-storeyed timber dwelling house fronting the street from which a passage led into an enclosed yard lined with ancillary buildings, such as a cookhouse/brewhouse, stables, byres, carriage-shed, woodshed, privy etc. Craftsmens' houses had a workplace, while small retailers had storerooms and a shop fronting the street.⁵⁸⁰

This documentary evidence and Berg's reconstruction provided a basis for Gudmund Stang's suggested social geography of pre-1681 Trondheim (Fig. 5.3).⁵⁸¹ Broadly speaking, by the late 1600s the city was divided into a number of socio-economic zones and sub-zones with floating boundaries, reflecting contemporary processes of social differentiation. The main division was between wealthier properties which lay largely to the east, and poorer properties to the west. The wealthiest merchants

⁵⁷⁷ Berg 1951: 70-95.

⁵⁷⁸ Berg 1951: 10-13ff.

⁵⁷⁹ Lunde 1977: 179; Andersen 2003: 87.

⁵⁸⁰ Andersen 2003: 77-80.

⁵⁸¹ Stang 1981: 62-66; Supphellen 1997: 67-70.

occupied long properties to the north-east stretching westwards from their warehouses along the river, while less wealthy merchants and retailers also congregated in this part of city. Wealthier craftsmen occupied the western periphery of this eastern zone, while civil officials and administrators congregated in its southern part between Vår Frue church and the cathedral. To the north, along the fjord shore, lay

the properties of the seafarers who traded with Northern Norway, while the western urban periphery was occupied by poorer craftsmen, tradesmen, labourers and others.

In common with other scholars, Berg utilised Maschius's Prospect (Appendix C) uncritically as a primary source. Its veracity as a true depiction of Trondheim as it was in the year 1674 has since been called into doubt. A number of details represented on it indicate that it was based in part on earlier drawings and sketches of the city, including features which could only have existed prior to the fire of 1651, and perhaps even as early as the end of the 16th century.⁵⁸² Consequently, it provides a composite representation of Trondheim's urban landscape from the late 16th century on, and not a snapshot of a particular moment in time, and should be treated with care.

In addition to characterising the medieval urban topography, Lunde also provides a detailed account and discussion of the topographic development of the urban area during the post-medieval period up to 1681.⁵⁸³

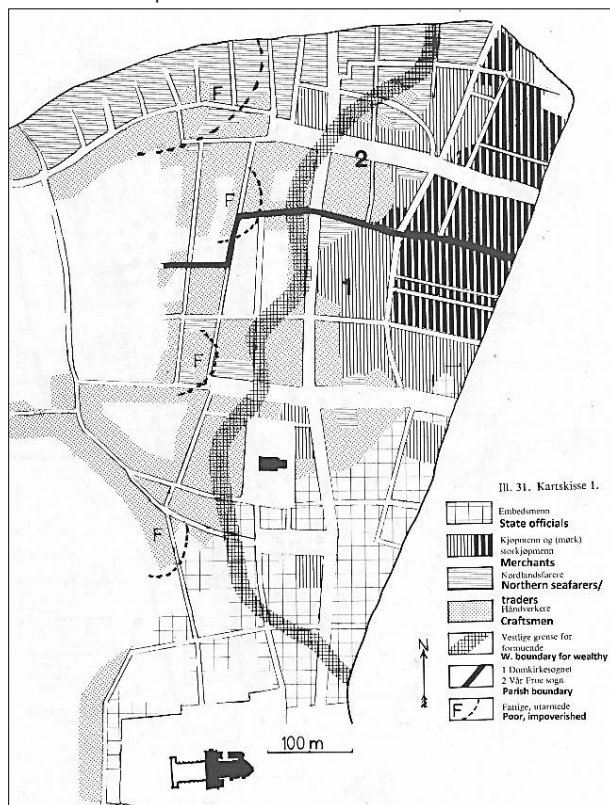


Figure 5.3. A reconstruction of Trondheim's socio-geographic/demographic differentiation pre-1681. After Stang 1981: 63, Ill. 31. Kartskisse 1.

His account draws principally on Berg's topographic reconstruction of Trondheim c. 1675 (Fig. 5.5). Lunde also includes topographic information from scattered pre-1970 archaeological observations.

My own characterisation of the medieval and post-medieval urban topography draws on these sources, but benefits from information garnered from subsequent archaeological observations. Consequently, it will provide some additions, clarifications and modifications to previous accounts.

5.3. The material and its presentation: source-criticism, methodology and prioritisations

As observed already, Trondheim's archaeological documentation and curated material archive for the post-medieval period are fragmentary, limiting this study's analytical potential. As stipulated above, the recovery of context is essential to the recovery of meaning in archaeological analysis, and only a proportion of the curated material can be placed securely in close spatial and temporal contexts. These contexts and their associated material are themselves restricted in character, complexity, and in their spatial, temporal and social associations. The locations, date-ranges and socio-cultural contexts of the main sources for the archaeological material included in this study are listed in Appendix D.

⁵⁸² Examples include Herrehuset and a tower depicted at Kongsgården, both of which had been demolished by 1674 (Lysaker 1989: 37-39; Lunde 1977: 173-176).

⁵⁸³ Lunde 1977: 171-234.

For purposes of clarity, the material relating to *the organisation of space and the historic built environment* is presented thematically (5.4). In line with my theoretical framework, I have approached the urban topography as a variable ‘socio-material assemblage’, a composite spatial aggregate constantly made and unmade by heterogeneous actors at concrete sites of urban practice (homes, workplaces, markets, streets, institutions etc.) (3.5.12). Each theme highlights a particular spatial phenomenon, or set of phenomena, which can be distinguished in terms of functional and structural character, ranging from urban infrastructure (streets, urban plots, waterfront etc) to the sites of institutional buildings (churches, military, royal, civic), industries and crafts within the city, for example.

Where possible, the material associated with these themes is presented at macro- and micro-scales. The former encompasses material that relates to the organisation and use of urban space on a general level, while presentation at a micro-level provides closer detail regarding the specific character of spatial phenomena and their components encountered at particular sites and locations: for example, the organisation and content of urban plots in the form of houses, cellars, back yards, rubbish and latrine pits etc.

In addition, differentiation has been made between material that pre-dates the catastrophic urban fire of 1681 and that which post-dates it. Following the fire of 1681, a radical restructuring of the urban topography took place in which the long-lived medieval urban plan was replaced with a Baroque plan. Given the radical consequences for the spatial organisation and composition of the urban topography, and for the nature and disposition of practices within the new urban environment, this division is reflected in the structure of the material presentation. For the pre-1681 period, reference is made to the city’s spatial organisation during the medieval period, tracing aspects of change and continuity prior to the major reorganisation of 1681. The post-1681 presentation encompasses new elements introduced then and subsequently, as well as being attentive to pre-1681 elements that survived the replanning.

This material survey is accompanied by two urban topographic characterisation maps – one for the period 1537-1681 and the other for 1681-c.1800, showing the principal spaces and places that can be defined by historical and archaeological evidence, and which are mentioned in the text (Appendices E and F). Each is a composite map, including sites and places which may overlap or succeed each other in time and space during the relevant period. They also characterise the differentiated nature and composition of the urban landscapes during these periods using symbols.⁵⁸⁴

The survey of the *portable material culture* (5.5) is essentially a catalogue of haphazardly and fortuitously curated artefacts from various excavations scattered throughout Trondheim. Some have been systematically related to their stratigraphic contexts, others not, and they represent a randomly assembled and incomplete sample.

While attempting to present a range of artefacts associated with a diversity of practices, limitations of time mean that I have had to restrict the range of artefact types to those deemed most relevant to the aims of this study. The majority of curated material, and the majority of material utilised in this study, comprises objects found in domestic contexts; more specifically individual items and assemblages of household refuse deposited in rubbish pits or latrine pits in the back yards of urban plots. These are occasionally associated with other forms of material evidence relating to the domestic context in question, such as building remains, cellars, cisterns etc. These contexts are predominantly restricted to the 17th and 18th centuries (Appendix D).

In addition to limitations in their temporal and functional associations, these contexts and their associated material are further restricted in terms of social profile; with one exception they are associated with households situated within the more socio-economically privileged spheres of society. Furthermore, excavations at most of these contexts have not provided the qualitatively diverse or systematically quantifiable archaeological datasets allied with closely correlatable detailed historical evidence that underpins and characterises the type of high-definition contextual studies conducted by historical archaeologists internationally (3.4).

The unsystematic recovery and haphazard curation of Trondheim’s post-medieval material means that detailed and meaningful quantification analyses cannot be conducted. The integration of

⁵⁸⁴ The finished digital maps were produced by Lars Gustavsen, NIKU.

historical and material evidence has in most cases been hindered by the methodological difficulty of correlating particular buildings or latrines with recorded historical occupants, and even when that is possible, the difficulty in finding associated archived historical documents, in the form of probate inventories, wills and the like. That said, my chosen case study (Chapter 6) offers an opportunity for a degree of comparative analysis of historical and archaeological data from a particular excavated historical site.

In order to extend this material survey beyond the domestic context, and expand the analytical range of artefacts in terms of typological, temporal and contextual variety, material from less systematically documented and closely contextualised sources has also been included here. This material has been for the most part gathered erratically and piecemeal and is far from comprehensive or representative. Nonetheless, with the material from the domestic contexts, this provides an empirical basis for a functionally categorised and broadly representative overview of the available excavated material derived from various localities scattered spatially and temporally within the city.

The functional categories

In order to facilitate the portable material's activation in connection with the study's analytical themes (4.3.2), it has been sorted and presented in accordance with a number of functional categories (5.5.2). The artefacts have been classified according to their functionality and performative associations rather than their constituent material in order to operationalise them as objects involved in material practices and the material constitution of urban society. For example, ceramic tablewares, metal knives, forks and spoons are grouped together within a category denoting food consumption.

However, archaeologists must be critical of the categories used in material-culture analysis, and their relationships to the categories that people assigned to things in the past. Taxonomies of function and practice are situationally specific, varying both cross-culturally and also between different contexts within a culture. Consequently, although the use of functional rather than material categories is preferable for a study of practices, we must be aware that these are not too narrowly defined and perpetuate purely functionalist interpretation. To reiterate, the recovery of context and meaning is central to the analysis, and gains more significance when the concept of 'function' transcends purely manifest or instrumental functions to encompass *latent* aspects which are integral to understanding how built environments or objects are enmeshed in social practices.⁵⁸⁵

Generally speaking, while the *functional* aspects of some objects (cooking pots, locks, spoons) may be taken to be a sufficient account of their meaning, their roles as 'carriers' of practice entail other kinds of significance, although these are nevertheless in some ways dependent on the objects' functionality and affordances. Close attention to the physical and functional attributes of the material while looking beyond these to their integration in the constitution and performance of human sociality underpins current archaeological practice, and forms a theoretical and methodological point of departure for this study (chapters 3 and 4). The functional categories of portable material culture formulated and presented in 5.5 should therefore be seen as tools for defining the range and nature of practices and social change in Trondheim.

My aim is to use these categories of artefacts in developing a socially meaningful typology that can highlight links between objects, practices, places and identities, for example (Chapter 4). They are activated in association with the thematic discussion (5.6) and case study (Chapter 6), where they form analytical tools for discussing a range of social practices. However, as stated, the amounts and ranges of artefacts are biased and depleted by post-depositional factors such as preservation conditions and differential retrieval procedures. Furthermore, contexts of recovery and material are restricted in chronological range and specific social association. Consequently, the potential for observing meaningful and authentic differentiation and long-term change in terms of material practices within Trondheim is restricted. The current value of the present material analysis therefore lies chiefly in its capacity to capture 'moments' in the material life of this urban community, and to hopefully inspire and inform future material studies.

⁵⁸⁵ Gardner 2007: 67; Rapoport 1982: 14-15.

5.4. Urban spaces and places: archaeological traces of the built environment c. 1300 to c. 1800

5.4.1. Introduction

Øivind Lunde's topographical and archaeological survey of medieval Trondheim⁵⁸⁶ has withstood the test of time, despite the fact that archaeological data recorded after 1970 has provided important new information which has modified or supplemented it. His conjectural reconstruction map of the topographic extent and content of medieval Trondheim at about c. 1300 (Fig. 5.1, right) conforms broadly (with some exceptions) with my own reconstruction which draws on more recent archaeological data (Fig. 5.4).

More recent archaeological information has extended our understanding of the nature of the built environment on Nidarnes peninsula at particular points in time and space, and provided a more nuanced insight into chronological and spatial developments. My own reconstructions of the major urban topographical components at about AD 1300, 1537-1681 and 1681-c. 1800 (Fig. 5.4; Appendices E and F) draw on Lunde's survey and reconstruction, but add supplementary interpretation and revisions based on data from archaeological investigations in the urban area since 1970. They provide an updated basis for assessing aspects of continuity and change in urban spatial and infrastructural organisation and use of space between the medieval period and the post-medieval period; in particular, the period between c. 1300 and the radical urban re-planning of 1681 for which we have comparatively few historical or extant architectural sources.

The post-medieval urban characterisation maps (Appendices E and F) provide a more detailed and differentiated graphic representation of the nature and location of many of the spaces and places mentioned in the course of the characterisation, and the reader should refer to these at appropriate points. These are composite representations of the sum of known topographic features during the respective periods prior to, and subsequent to, the major urban replanning in 1681. They plot individual spaces and places, but also show discrete topographic 'zones' within the urban area. They have been compiled utilising the range of historical-topographical literature and archaeological results available to me, and provide an overview of current knowledge regarding the city's topographical 'assemblage'. They also identify important locations which should be taken into regard in any future investigations.

Two suburbs that lay outside the peninsula came into being following the 1681 urban replanning: namely, Bakklundet to the east on the opposite side of the riverbank, and Ila to the west of the narrow defended Nidareid isthmus to the west. Due to their location outside the legally protected medieval urban conservation area, very little archaeological material has been recovered here. Where possible, relevant observations will be made, and the suburbs and potential sites of interest are included on my characterisation maps.

The following sections present short thematic accounts of the major topographic developments on Nidarnes peninsula between c. 1300 and 1800. They highlight the principal features and the contribution of archaeological material to verifying, supplementing and expanding our understanding of the development of the urban topography during this long period. The aim is to characterise the main topographical and infrastructural elements within the urban assemblage, and identify any patterns of change and continuity in their character and organisation a) between the late medieval period and the urban restructuring following the urban fire of 1681 and b) in the century following the 1681 urban replanning.

The elements within the historic urban assemblage include: urban infrastructure (streets, market place, and waterfront/harbour); urban plots and their contents; religious institutions (churches, monastic foundations, graveyards); secular institutions (royal enclosure, hospitals, city halls, guild hall, charitable institutions); sites of crafts and industries; military buildings and urban fortifications; urban fields, gardens, and fishponds.

This characterisation combines historical, architectural and archaeological information to provide a descriptive account of spatial phenomena at both macro- and micro-scales. Excavations provide data which contribute to our general view of urban spatial organisation and development at particular times and through time, as well as finer-grained insight into specific material aspects of spatial

⁵⁸⁶ Lunde 1977.

organisation and the nature of practices in time and space at particular sites within the urban assemblage. Where possible, this information will be utilised to provide information on the material nature of the particular phenomena listed above, such as, for example, the types of buildings and other structures which filled the urban plots at particular times and places. However, the characterisation begins with a macro-overview of the development of the urban plan structure, both prior to the comprehensive replanning in 1681 and following it.

5.4.2. The development of the urban plan from the medieval period to c. 1800

5.4.2.1. The medieval urban area: maximum extent and topographic zones

While confirming much of Lunde's reconstruction, excavations in the decades post-dating 1970 have provided us with a more complete and more empirically grounded insight into the character of the medieval urban topography at c. AD 1300.⁵⁸⁷ At this juncture, prior to the local demographic depredations of the Black Death in 1351, the medieval city is thought to have reached its maximum population density of c. 3000 inhabitants, and its fullest areal extent, occupying the entire length of the eastern edge of the Nidarnes peninsula in a broad swathe some 250 metres in width.

For the purposes of easing the process of characterisation, and drawing on a combined reading of available topographical, archaeological and historical information, I have subdivided the medieval urban built environment into four functionally and spatially distinctive topographic areas, or 'zones' (Fig. 5.4).⁵⁸⁸ These existed long before 1300 and persisted well into the post-medieval period. As such, they comprise a spatial 'template' of an urban form which displays long-term continuity, although, as will be seen, it underwent minor changes during the transition to the post-medieval period, and was radically transformed in the urban replanning after 1681. These differentiated zones or areas are:

the urban core (red-bounded area): the densely built-up central zone of streets, regulated plots and a riverside harbour, which developed from the original Viking trading settlement (*kaupang*), and formed the area of densest population and urban practices, filled with timber houses and workshops, timber and stone-built parish churches and friaries, and small graveyards;

the southern periphery (yellow-bounded area): the site of a physically and functionally segregated area of social, political and economic power outside the urban settlement proper, located on the highest part of the Nidarnes peninsula: namely, the royal and ecclesiastical enclosures. The subdivision of the area into separate royal and ecclesiastical areas or enclosures has long been postulated on the basis of historical evidence and occasional archaeological observations.⁵⁸⁹ During the course of the 11th and 12th centuries the area was divided into a royal enclosure (*kongsgården*) to the east beside the river, and an ecclesiastical complex comprising the cathedral (*domkirken*), the bishop's palace (*bispegården*), and subsequently the archbishop's palace (*erkebispegården*) to the west (Fig. 5.1, right). Only fragmentary buried traces of the royal enclosure and the first bishop's palace survive. The cathedral and archbishop's palace are represented by monumental standing stone buildings, surrounded by a large graveyard;

the northern periphery (orange-bounded area): originally an empty area of sandbanks which first became habitable during the 12th century, when it was taken into use as a functionally segregated zone devoted exclusively to fire-hazardous metalworking. This has only comparatively recently been

⁵⁸⁷ The following account is based on the previously mentioned historical works, published archaeological surveys and analyses, chiefly Lunde 1977 and Christophersen & Nordeide 1994, as well as numerous unpublished excavation reports.

⁵⁸⁸ In his reconstruction of the medieval urban plan, Lunde divides the urban area between a royal and ecclesiastical domain in the south and 'the townsmen's town' to the north, a differentiation based primarily in administrative/ownership criteria (Lunde 1977: 233 and Fig. 140, see Fig. 5.1. above). My zoning prioritises differentiation in topographic/spatial organisation, notably between a densely built up area of urban plots, some of which may have been owned by the Church, and the segregated royal and ecclesiastical enclosures characterised by a different kind of spatial content and development expressive of power and monumentality.

⁵⁸⁹ Blom 1956: 234-237; Lunde 1977: 206-207.

revealed by excavation. The area was filled with regulated smithies and the detritus of their practices which were deliberately located outside the main residential area to the south;

the **western periphery**: this encompasses the entire western half of the Nidarnes peninsula between the urban settlement proper and the narrow isthmus. The main approach road from the west traversed the area, entering through a fortified gate and proceeding through an extensive area of urban in-fields, passing an isolated hospital for lepers and the poor and accompanying church on the way to the built-up area.

Spatial arrangements established in the medieval period persisted long after the Reformation, and any review of post-medieval urban topographic development requires a retrospective approach. In addition to firmly establishing the character, extent and limits of the medieval city, archaeology is also providing insight into continuities and changes within the long-established central zone and on the urban peripheries as the built-up area expanded northwards and westwards during the post-medieval period.



Figure 5.4. The suggested extent of the medieval city c. 1300 and its differentiated topographic zones superimposed on Naucler's map of 1658: the urban core (red), northern periphery (orange), and southern periphery (yellow). The western periphery comprises the area extending west from these zones to the narrow defended isthmus. The long north-south streets with confirmed medieval origins are shown (A-E), as is the market place which may also have medieval origins (F).

5.4.2.2. Continuity of urban form: the persistence of the medieval plan prior to 1681

The earliest surviving map of Trondheim, drawn in 1658 by Oluf Naucler (Appendix A), and a similar map drawn up by Anthony Coucheron c. 1681 (Fig. 5.42, left) comprise the principal cartographic sources for our understanding of developments in the urban plan prior to and immediately following the great fire of 1681. The extent to which they accurately depict reality is a central question, and in particular, the extent to which Naucler's map can be regarded as representing the medieval situation, both with regard to the areal extent of the urban area and the nature of its infrastructure. Archaeology has played an important role in clarifying aspects of continuity and change in this regard.

In common with earlier historians, Øivind Lunde suggests that Naucler's map provides a reasonably accurate depiction of an urban plan which retained slightly irregular medieval street alignments in the central area (where cellars and stone buildings may have cemented existing arrangements), while peripheral areas contained more regularly laid out, newly constructed streets or modified sections of older streets.⁵⁹⁰ Archaeology has provided evidence for the dating, location and structural character of portions of many of the streets shown on Naucler's map, largely confirming their medieval origins. Archaeology has furthermore filled in the anonymous blank spaces depicted on Naucler's map by providing evidence for the physical character and content of the properties arranged between the streets, the use and ownership of which at about 1675 Henry Berg attempted to reconstruct and characterise through the analysis of documents of property ownership (Fig. 5.5, left).⁵⁹¹

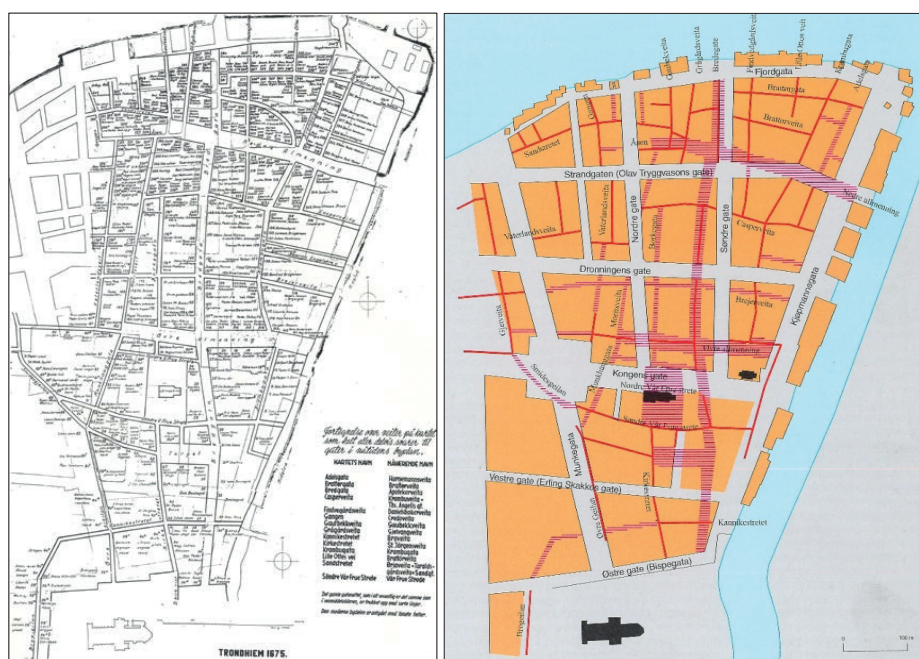


Figure 5.5. **Left:** Berg's reconstruction of streets and associated properties c. 1675. Naucler's 1658 street pattern (with additional streets) is superimposed on the post-1681 street plan. **Right:** Simplified version showing named pre- and post-1681 streets (vanished streets hatched, post-1681 alleys and streets solid red).⁵⁹²

Despite the devastating impact of the major late- and post-medieval fires of 1481, 1531, 1598, and 1651, the mid-late 17th-century urban plan retained a remarkable amount of its ancient form, displaying an entrenched conservatism and only limited reorganisation to reduce the impact of fire. Efforts by the state in 1599 to introduce wider firebreak streets was restricted to the insertion of two east-west streets, *Øvre almenning* and *Nedre almenning* and the widening of pre-existing *Langstrete* to become *Bredegata* (Broad Street) (Fig. 5.5).

My urban topographic characterisation map for the period 1537-1681 (Appendix E) can be consulted when reading the thematic presentation. It shows that the main built-up area (light blue) is still partly confined to its medieval limits, with the exception of the south-western and northern perimeters and ribbon developments to the west, encroaching into the area of western fields (green). The site of the market square is shown in solid purple. The harbour area, with the first timber-built mercantile warehouses (dark cross-hatched blue) lies along the western riverbank, while the rest of

⁵⁹⁰ Lunde 1977: 179.

⁵⁹¹ Berg 1951.

⁵⁹² After Lunde 1977: Fig. 129 & Bratberg 2008: 21.

Nidarnes peninsula's perimeter is lined with the earliest post-medieval fortifications (cross-hatched lilac). Munkholmen fortress is represented (yellow), as are temporary fortifications set up to the west and east of the city during the 1658 (cross-hatched purple). The first thinly spread buildings on the Bakklandet riverside bank to the east are shown in dark brown, as are the sites of the brick factory (light brown), a windmill (cross-hatched yellow-orange), and fishponds (cross-hatched purple). The site of a watermill (cross-hatched yellow-orange) is shown on the Ila side to the west. Extra-urban farms and buildings are shown in hatched green. Churches (black) are shown with their graveyards (hatched red/white), and early institutions in red and cross-hatched red/white. On the western urban periphery lie a plague cemetery (light brown), a ropewalk (cross-hatched brown), and a large mansion (purple) with a large Renaissance formal garden (dark green). Historic sites and buildings of particular archaeological interest and potential are identified.

5.4.2.3. The transformation of the urban plan after 1681

The comprehensive urban replanning undertaken immediately after the catastrophic fire in 1681 was a radical, centralised project that completely transformed the urban landscape. It resulted in the replacement of the medieval street plan with an ambitious modern baroque radial gridplan, which constitutes the city centre to this day (Fig. 5.6; Appendix B).

The new baroque plan was a state initiative aimed pragmatically at reducing fire risk, its large segmented quarters being divided by unusually broad firebreak streets. However, the 1681 fire also offered the Absolutist state of Denmark-Norway centred in Copenhagen a blank sheet upon which to literally inscribe an ideal urban plan, the *raison d'être* of which was to project and manifest autocratic power materially and symbolically. Rooted in the geometric ideals of renaissance and baroque urban planning, including ideals of perspective and symmetry, such plans were designed to facilitate central contemporary state functions: political, religious, military, social and economic. This particular plan - drawn up by two senior military officials, Johan Casper von Cicignon and Anthony Coucheron and ratified by Christian V - was integrated with new state-of-the-art perimeter fortifications, including a new fortress at Kristiansten and an upgraded Munkholmen fortress, transforming Trondheim into a modern Scandinavian fortified garrison city and regional military centre.

That said, historians have noted that the new urban plan has an unusual and unique character in terms of its design, deviating as it does from certain principles of symmetry and perspective, which suggests that it was adjusted pragmatically to take pre-existing topographic and property arrangements into account. This is most apparent in the trapezoidal form of the area to the east of the main north-south diagonal axis formed by Munkegata, a form which clearly reproduces that of the pre-existing urban core. This indicates that the plan may have been drawn up to limit disruption to pre-existing properties as much as possible and reduce the need for expropriation. That the plan's improvisational nature may have resulted in the failure of certain plan elements to fulfil normal prescribed functions is evident; for example, the new, over-dimensioned square was placed peripherally to the main socio-economic centre of the city, and failed to act as the social, economic and administrative hub.⁵⁹³

Despite the attempt to limit its impact on existing properties, the plan had drastic and unpopular consequences for the population. Some plots disappeared completely beneath, or were truncated by, the new, extremely broad streets. The intricate latticework of pre-existing streets vanished beneath the new large segmented quarters into which plots were amalgamated (Fig. 5.6). That this structure was over-dimensioned and impractical, and caused problems of communication, is evident from the fact that portions of some of the medieval alleys and streets were subsequently resurrected, a survival indicative

⁵⁹³ Stang 1981; Grankvist *et al* 1981; Brattli 1997; Bårdsen 2014. A recent reassessment of Cicignon's plan by the historian Eystein Andersen criticises previous positivistic object-centred interpretations of its design which emphasise aesthetics, style and secularism, and seeks instead to emphasise aspects of contemporary mentalities and ideology which may have influenced the new plan: most notably the application in its design of Catholic ideas and symbolism by the Counter-Reformationist Cicignon. Consequently, rather than being an incomplete and idiosyncratic plan, as previous historians suggest, Andersen sees it as a well thought-out, integrated and international in its form and character. It was designed to reflect the Divine in keeping with contemporary European trends and values, subtly combining modern urban planning ideas with Catholic references in such a way as even a Protestant king approved it (Andersen 2015). See further under 5.6.1.

of the local population's desire to retain accustomed and practical routes of communication within the new formalised grid structure (Figs 5.5 and 5.6). Indeed, entirely new alleys that criss-crossed the vast urban quarters were also inserted. In addition, planned quarters in the Kalvskinnet area on the south-western periphery were not taken into use, remaining as fields long into the 18th century. These were intended to contain new plots which would have compensated for the loss or reduction of properties elsewhere, but many property owners refused to move from popular areas in the centre to these less prestigious plots. Furthermore, the ribbon development of poorer housing along the fjord shore to the north was retained, as was that along the main access road from the west.

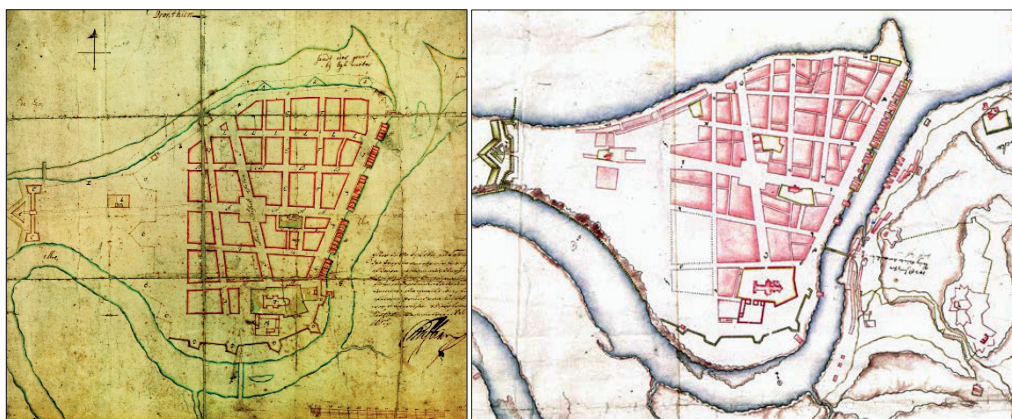


Figure 5.6. **Left:** Cicignon's proposed urban plan of Trondheim 1681 (smaller version). **Right:** unsigned map of Trondheim c. 1695 showing surviving and inserted alleys/streets and other adaptations and additions to Cicignon's plan.⁵⁹⁴



Figure 5.7. Detail of map of Trondheim and its fortifications 1761. Note the extramural suburbs of Ila (Ihlen) and Baklandet (Bakkeland) to west and east respectively. See Appendix N for larger reproduction.⁵⁹⁵

As the 18th century progressed, the only significant expansion of the built-up area occurred across the former fields and allotments to the north of Kongens gate. The Kalvskinnet area to the south of it remained largely tilled fields, with the exception of the establishment of scattered institutions associated with poor-relief, a sugar refinery and some wealthier residences with walled formal gardens.

⁵⁹⁴ Maps: Left: Statsarkivet i Trondheim (Teikningsarkiv 28_1_32). Right: Riksarkivet.

⁵⁹⁵ Situations Cart over Tronhiems bye og Fæstninger. Riksarkivet.

However, the most significant urban-plan development of the 18th-century is the growth of the extramural suburbs: Ila to the west, and Bakklandet to the east (Fig. 5.7 & Appendix N).

Historical sources suggest that Bakklandet was already the site of small-scale settlement and craft industry during the mid-17th century, including careening of hulls, tanning, and tar, brick and possibly pottery production. However, the construction of a new bridge across the river between 1683 and 1685 and increasing maritime trade led to this harbour-side suburb's rapid and intensive development. This was further encouraged by the fact that boats and ships that tied up on this side of the river did not have to pay certain duties. New warehouses were built to contain fire-hazardous goods (gunpowder, tar, cod liver oil) that were prohibited from being stored in the warehouses along the western bank. In addition to rows of riverfront warehouses, the narrow strip of land between the river and the steep slope up to Kristiansten fortress saw the establishment of streets lined with dwelling houses, taverns, small workshops, and small industrial enterprises, such as shipyards, boat-slips for careening, a crane and a ropewalk.⁵⁹⁶

It was not until the early 18th century that Ila emerged as an urban suburb, previously being the site of the local water-driven mill, place of execution, temporary military fortifications, an inn and a few farms. During the 18th century, the fjord waterfront here was developed as a site for storing large pallets of timber, one of Trondheim's chief export commodities. Rows of small timber buildings grew up alongside this wharf, largely comprising housing for workers associated with the timber trade, the mill, tar and rope production, as well as one of Trondheim's oldest schools. A few potteries and craftworkshops were also located here.⁵⁹⁷ By 1765 there were 104 houses here, most occupied by working class families, although there were some wealthier houses with ornamental gardens located here, including *Ilsvigen gård*, one of the first of a number of country houses (*lystgårdene*) that became fashionable among Trondheim's wealthy families during the mid-18th century.⁵⁹⁸

Important places and spaces in these suburbs and the main urban area are shown on my composite urban topographic characterisation map for 1681-c.1800 (Appendix F). The suburbs and main built-up area are represented in light blue, the latter now further expanded into the former western fields, although the Kalvskinnet district is still characterised by cultivated fields (light green). Small formal gardens (dark green) lie here and in the main urban area and suburbs. Within the built-up area important institutional buildings are shown in red, and timber mansions of the elite in purple, only a few of which stand to this day. Rows of mercantile timber warehouses (cross-hatched dark blue) line the western riverbank and the northern fjord shore. New urban fortifications (lilac), Munkholmen and Kristiansten fortresses, and Kongsgård military depot (yellow) - the subject of my case study - are also represented. The city's small number of churches (black) and their graveyards (hatched red/white) are shown, as well as a plague cemetery (grey). Industrial sites and structures are represented in light brown, and extra-urban farms and houses are shown in cross-hatched green. Historically documented sites of particular archaeological importance and potential are identified.

The following thematic survey will provide more detail regarding the character and development of Trondheim's post-medieval topography.

5.4.3. Urban infrastructure: streets, market square, bridge and harbour

5.4.3.1. Introductory overview

The central, densely built-up zone comprised two interdependent areas by c. 1300: the waterfront ranged along part of the western riverbank, and the long-established central urban area subdivided into tenement plots that extended behind it towards the west.⁵⁹⁹ The harbour comprised timber wharves built partly out into the river and supported on posts, which are all that survive archaeologically.

⁵⁹⁶ Bull 1985; Bull 1997; Bratberg 2008: 68-69.

⁵⁹⁷ Reed 2009: 60-63.

⁵⁹⁸ Håpnes 2004: 140-147; Bratberg 2008: 20.

⁵⁹⁹ See Christophersen & Nordeide 1994 for the most comprehensive account of the archaeology of the medieval core based on excavations at the Library Site.

This zone was characterised by a regulated spatial organisation into east-west aligned tenement plots, or properties, containing timber buildings, interspersed by a high density of stone or timber-built parish churches and small surrounding churchyards.⁶⁰⁰ This intensively developed area is essentially the urban core which grew exponentially from the original 10th-century trading settlement (*kaupang*) beside the riverbank. It was ultimately subdivided by at least two, or possibly three, elongated north-south orientated streets (*streter/gater*), and an unconfirmed number of east-west streets and alleys (*veiter*) (see below). Although the situation for the east-west streets and alleys is not verified, archaeology confirms that all three north-south medieval streets were wood-paved, often renewed in multiple overlying phases. While the lines of some medieval streets, alleys and property boundaries are perpetuated partly in modern street alignments, these and the rest of the medieval urban topographical components (buildings, yards etc.) can today only be observed archaeologically. The only surviving standing medieval building in this area is the stone church of *Vår Frue* (Our Lady).

Archaeologically, this zone is characterised by deep, well-preserved stratified sequences of remains of medieval buildings, passages, wells, diverse structures, deposits and artefacts associated with a variety of activities, predominantly domestic-, commercial and craft-related, which took place within the plots. The site of the medieval marketplace has not been identified archaeologically, but it may have lain a short distance to the south of *Vår Frue* church on the same site as the marketplace shown on Naucner's map of 1658 (Fig. 5.9). Post-medieval deposits and structural remains exist over and dug down into the medieval deposits, but have only been excavated and documented in a haphazard manner.

The spatial and chronological development and topographic and functional nature of the urban area's northern and western peripheries in medieval and post-medieval times have only recently been documented archaeologically. At its maximum medieval extent the central built-up area stretched westwards for some 250 metres from the riverbank, and had a maximum north-south extension of some 600 metres, the equivalent of an area of approximately 15 hectares.

5.4.3.2. Streets and alleys

Archaeology provides insight into the location and alignment of streets, their age, their surfacing, and aspects of continuity and change regarding these aspects. It may supplement, confirm or contradict interpretations based on available cartographic and written evidence.

The situation prior to 1681

Both Berg and Lunde provide comprehensive presentations and overviews of the pre-1681 streets and alleys (Fig. 5.8), although Lunde asserts that archaeological material has provided us with a better basis for reconstructing the medieval street pattern than the available historical sources.⁶⁰¹ The following account supplements and expands on these and other topographical accounts with information derived from recent archaeological investigations within the urban core and on the northern and western peripheries.

Naucner's map (Appendix A) provides a good point of departure for reconstructing the character and development of the urban street pattern prior to the 1681 re-planning. A number of the streets recorded on the 1658 map have archaeologically verified medieval precursors, although their courses have not yet been fully documented.

The 17th-century street pattern perpetuates many of the main elements in the medieval layout, though with localised modifications. The medieval arrangement was characterised by at least two long, roughly parallel north-south orientated streets which bisected the urban core (A and B on Fig. 5.9). They conform to the natural topography at the time, following the lines of higher contours running roughly parallel with the west bank of the river. They were accompanied to the west by two shorter, similarly aligned north-south streets, which may have originally formed a single, elongated street (C and D on Fig. 5.9). All are partly documented archaeologically, confirming their medieval origins. If Naucner reflects

⁶⁰⁰ Historical and archaeological sources suggest the existence of some 20 churches here during the medieval period, eight of which were parish churches. Lunde 1977: 208-220.

⁶⁰¹ Berg 1951: 14-49; Lunde 1977: 171, 180-187.

the medieval situation, there were at least four or five shorter, narrow east-west aligned streets crossing these long north-south streets at irregular intervals. Only two have been observed archaeologically.

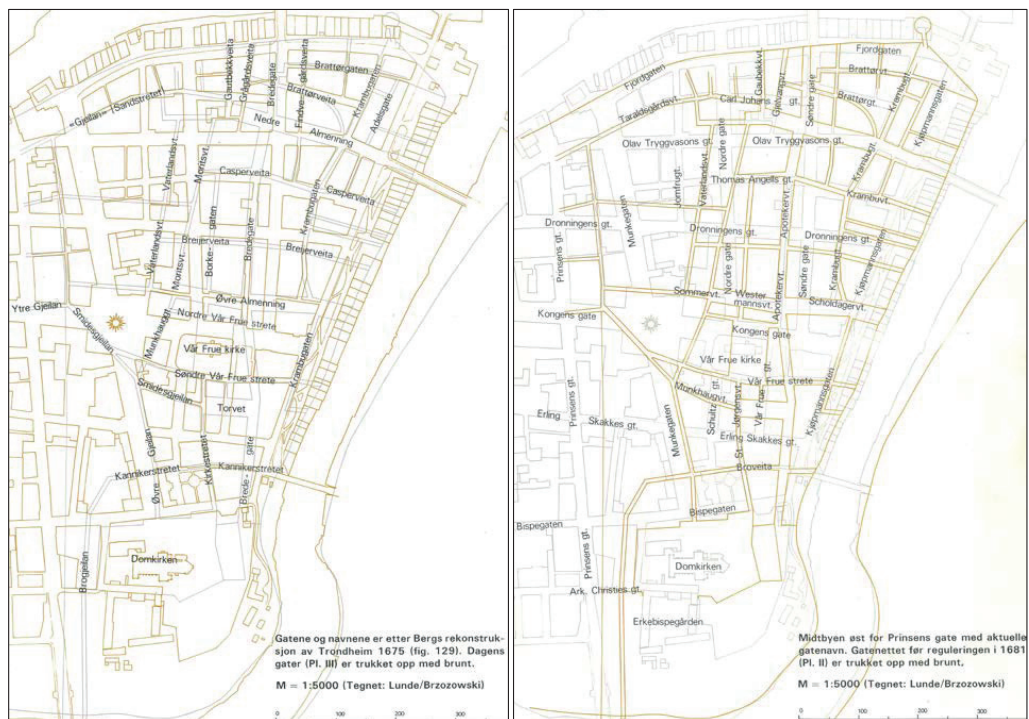


Figure 5.8. **Left:** pre-1681 streets and street names superimposed on Trondheim’s current street plan (brown). Based on Berg’s reconstruction of Trondheim c. 1675. **Right:** Trondheim’s current street plan and street names with the pre-1681 street plan superimposed (brown).⁶⁰²

This latticework of angular medieval streets was retained on existing alignments up to 1681 despite the ravages of a number of large-scale urban fires. The first major alterations occurred following the 1598 fire, principally in the form of the insertion of two broad east-west aligned firebreak streets (I and J, Fig. 5.9). These represented limited changes that largely conformed to the constraints of the pre-existing pattern. The following account summarises our current state of knowledge regarding the character and development of the pre-1681 street pattern.

North-south streets with medieval origins

The two north-south running streets *Kaupmannastretet* (post-medieval *Krambugata*) and *Langgate* (post-1599 *Bredegata*/today’s *Apotekerveita*)(A and B, Fig. 5.9.) have been partly documented and dated archaeologically, as have two separate medieval streets which follow an identical north-south alignment to the north and south of *Vår Frue* church and its graveyard (C and D, Fig. 5.9). It is uncertain whether these originally formed a single continuous street which was at some point in time interrupted by the insertion or extension of *Vår Frue*’s graveyard. No medieval name or names for them survive. The northern street (C) is known by its post-medieval name *Borkegata*, while the southern street (D) was known as *Kirkestretet* in the post-medieval period (today’s *St. Jørgensveita*).

Kaupmannastretet/*Krambugata*⁶⁰³ was partly excavated on the Library Site. Originating as a rough gravel-and-stone track running along a slight gravel ridge in the 10th century, it maintained a stable

⁶⁰² Lunde 1977, plansjer II and III.

⁶⁰³ ‘Merchant Street’.

alignment and width (c. 3-4 metres) over multiple phases of intermittent re-paving in wood throughout most of the medieval period. It was widened to 5 metres in the late-medieval/post-medieval transition, and to 6.4 metres prior to 1708. By this time the traditional wooden paving had been replaced by sands and gravels which may, or may not, have acted as bedding for a cobbled stone surface. The street was widened again after the urban fire of 1708. The first historically and archaeologically documented interruption in Krabugata's long-maintained line coincided with the insertion of the east-west aligned firebreak street *Øvre Almenning* in 1599 (I, Fig. 5.9), and its southern end disappeared completely in the post-1681 reorganisation.⁶⁰⁴

The street's northernmost observed limit has been confirmed archaeologically as lying at the



Figure 5.9. Detail of Naucner's map of 1658. Streets with medieval precursors (A-E), marketplace (F), and post-1598 firebreak streets (I, J)

junction with present-day Olav Tryggvasons gate.⁶⁰⁵ Excavations in modern Krabugata north of Olav Tryggvasons gate revealed no trace of its continuation there.⁶⁰⁶ However, Naucner's plan shows the presence of a street (E, Fig. 5.9) curving northwards and westwards from this point, a highly unusual configuration in comparison to the angularity of the rest of the street layout. Lunde suggests that this may preserve the line of a medieval street,⁶⁰⁷ and it may represent Kaupmannastretet's continuation northwards and westwards. By curving in this way, it would have provided a link with the entire metalworking zone on the northern periphery, as well as a church and guildhall (*gilde*) located at the north-west extremity of the medieval urban area.

To the south, Naucner's map indicates that Kaupmannastretet terminated at a point near the riverbank, and did not extend as far south as the royal and ecclesiastical enclosures. This reflects the medieval situation, since two medieval church sites are archaeologically documented south of its termination, blocking its continuation to the royal enclosure.

Turning to the parallel, north-south aligned street medieval *Langgata*/post-medieval *Bredegata* (pre-1681).⁶⁰⁸ Naucner depicts it as the broadest of the north-south streets. Its line is partly preserved in today's Apotekerveita, confirmed archaeologically by indirect evidence in the form of the excavated cellars of 17th-century buildings that fronted on to it: two stone cellars located under the Telegraph building, and two wooden cellars excavated on V-site.⁶⁰⁹

Further south, a large portion of *Langgata*/*Bredegata* was uncovered by excavations conducted in 1928 beneath post-1681 Kongens gate.⁶¹⁰ A sequence of superimposed wood-paved surfaces displayed a remarkable degree of continuity in alignment and width (c. 3.5 metres) throughout the medieval period. The uppermost wooden paving, however, was more substantially founded and widened to c. 6 metres. The excavator, Sigurd O. Tiller, associated this alteration with a major post-fire regulation following King Christian IV's decree in 1599

that *Bredegata* should be widened following the 1598 urban fire. However, as Lunde points out, this stipulated a width of 13.5 metres, while Tiller's upper paving was only 6 metres wide. Lunde suggests that while the street was indeed widened to 13.5 metres in 1599, its surfacing comprised gravel

⁶⁰⁴ Lunde 1977: 181; Christophersen 1988: 145, 151; Christophersen & Nordeide 1994: 73-83.

⁶⁰⁵ TA2016/3.

⁶⁰⁶ TA1987/1.

⁶⁰⁷ Known as Brattørstretet in 1704, part of its line is preserved in today's Brattørgate. Lunde 1977: 185, 189.

⁶⁰⁸ Respectively Long Street and Broad Street.

⁶⁰⁹ TA1977/3.

⁶¹⁰ TA 47.

established on a bed of dumped leather waste recorded by the excavators overlying the 6 metre-wide paved alteration.⁶¹¹ This gravel may have formed the new surface itself or bedding for cobblestone paving that was subsequently robbed-out. Cobble paving for 17th-century levels in Bredegata were recently observed in this area.⁶¹² That Bredegata lived up to its post-1599 name with a width of exactly 13.5 metres has been confirmed by a corresponding distance recorded between two 17th-century cellars excavated further north in Dronningens gate, one to either side of the presumed street alignment.⁶¹³

Langgate/Bredegata's extension north of the medieval equivalent of east-west post-medieval Casperveita is conjectural, although, like Kaupmannastretet, we might assume that it continued north to connect with the metalworking zone, church and guildhall located at the northern periphery. Its extension south of Vår Frue church is not confirmed archaeologically, although it is likely that it extended at least to the eastern end of the site of the pre-1681 market place shown on Naucler (F, Fig. 5.9). To the south of this, Naucler shows it extending all the way to the 'King's Garden' beside the cathedral churchyard. However, the Dominican Friary and its graveyard would have blocked this route between the early 13th century and the Reformation.⁶¹⁴ Consequently, the southernmost portion of Bredegata depicted on Naucler is a post-Reformation extension, although a similar situation may have existed prior to the building of the friary.

These two long streets were accompanied to the west by two shorter streets which shared the same alignment to north and south of Vår Frue church's graveyard (as shown on Naucler), and known only by their respective post-medieval names, *Borkegata* to the north and *Kirkestretet* (modern St. Jørgensveita) to the south (Fig. 5.8; Fig. 5.9, C and D). As yet, there is no evidence to suggest that these originally joined to form a single elongated street which was subsequently cut in two by the insertion of the church and its churchyard.

Their medieval origins have only recently been confirmed archaeologically. Kirkestretet was documented at the junction of Erling Skakkes gate and St Jørgensveita, as well as in St. Jørgensveita itself, where 7 superimposed levels of medieval wooden paving were observed, the earliest yielding radiocarbon dates of 11th and 12th century age range.⁶¹⁵ Borkegata's existence is first recorded in a royal decree of 1599, and it vanished after 1681.⁶¹⁶ However, a recent excavation on its presumed line identified its lowest timber paving, radiocarbon dated to the 15th century.⁶¹⁷ This suggests that Borkegata was established at a later date than Kirkestretet, although it may have existed in unpaved form at an earlier date. In both cases, however, neither their widths nor the date at which wooden paving was replaced by gravel or stone has been determined. On Naucler, Borkegata does not extend north of east-west aligned Casperveita, and we have no data yet to confirm that this reflects the medieval situation. Likewise, we currently have no archaeological evidence to confirm that medieval Kirkestretet extended as far as the southern periphery and the royal and ecclesiastical enclosures, although this seems likely.

Borkegata and the western limits of the medieval urban area

Borkegata's recent discovery provides important evidence for determining the location of the westernmost limit of the *medieval* built-up area to the north of Vår Frue church. Based on historical evidence, Berg placed the medieval urban boundary north of Vår Frue church in the vicinity of post-medieval Bredegata (medieval Langgata), extending westwards to Borkegata only by the late 16th century. However, based on his reading of historical sources and the distribution of haphazardly recovered medieval artefacts, Lunde suggests that the medieval city's western limit at about AD 1300 coincided with Borkegata.⁶¹⁸

The discovery and dating of a medieval precursor to Borkegata to some extent supports Lunde's proposal that this, and not Langgata, formed the western limit of the medieval urban area, although the

⁶¹¹ Lunde 1977:112-120.

⁶¹² TA2016/12.

⁶¹³ TA1983/6.

⁶¹⁴ 1977:79.

⁶¹⁵ TA2006/11; TA1997/3 trench 2; TA2003/3.

⁶¹⁶ Berg 1951: 75.

⁶¹⁷ CalAD 1410-1440: TA2003/3.

⁶¹⁸ Berg 1951: 29; Lunde 1977: 190.

15th-century dating for its earliest level of paving places it in the later medieval period. This may have replaced an earlier unpaved track, however. The excavated section lies near what is probably the northernmost limit of Borkegata. The late dating of its paving coincides with evidence from excavated regulated urban plots established between Borkegata and medieval Langgata to the east which are dated to the late 13th and 14th centuries.⁶¹⁹ This contrasts with the situation at the street's southern extension, where the area between Langgata and Borkegata seems to have been filled with regulated plots that can be traced back to the 10th and 11th centuries (see below).⁶²⁰ As yet unverified, this suggests that the medieval built-up area did not extend westwards to Borkegata in the area north of today's Dronningens gate until the *late-medieval* period.

Naucler's map indicates that by 1658 the regulated built-up area at this part of the north-western periphery had extended significantly west of Borkegata, lying to either side of a new north-south street parallel with it, namely Moritsveita (Fig. 5.8; Fig. 5.9, H). Properties lying to the west of Moritsveita were subsequently separated from the urban fields by another parallel street, Vaterlandsveita, which Berg claims formed the western urban limit immediately prior to 1681 (Fig. 5.5).⁶²¹ Vaterlandsveita was not present as such in 1658, although a line of dots on Naucler's map that coincides with its later line suggests that it may have existed in the form of a field-boundary track.

Borkegata's southernmost extension is only indicated indirectly by archaeology. Excavations immediately west of its presumed line revealed a cultivation soil of Viking Age and medieval date, above which the earliest occupation deposits dated to the late 16th/early 17th century.⁶²² In contrast, to the east of Borkegata's presumed line just north of Vår Frue church, deeply-stratified medieval deposits containing traces of successive regulated medieval properties dating back to the 11th century were excavated at V-site. This clearly constitutes the westernmost extension of the regulated built-up area here throughout the medieval period and well into early post-medieval period.⁶²³

On Naucler's map, Borkegata does not extend as far as Vår Frue church, its course being interrupted by two east-west streets, the broad Øvre Almenning and narrower Nordre Vår Frue Strete (Figs 5.8 and 5.9). The former was inserted in 1599, while the latter may mark the line of a medieval street aligned along the northern perimeter of the church's graveyard. As stated, there is currently no archaeological evidence to support Borkegata's continuation southwards on the same line to pass close against the original western gable end of the church to join with Kirkestretet. This is likely to have been the case, however, if the westward extension of the graveyard shown on Naucler is a post-medieval phenomenon.

East-west streets and alleys with medieval and post-medieval origins

The east-west streets shown on Naucler are only known by their post-medieval names (north to south): Casperveita, Breijerveita, Nordre Vår Frue strete, Søndre Vår Frue strete and Kannikestrete (Figs 5.5 and 5.8). Of these, only Breijerveita and Søndre Vår Frue strete have produced archaeologically documented medieval remains in the form of superimposed levels of wooden paving.⁶²⁴ Other than this, their respective widths and transition to gravel/stone paving have not been documented. There is as yet no evidence that the curving east-west street named *Smidesgeilan* to the west of Kirkestretet and the site of the pre-1681 market had medieval origins, and it may have been established in connection with post-medieval developments on the western periphery (see below).

The widening of Langgate to become Breddegata after the fire of 1598 by King Christian IV's royal decree of 1599 was accompanied by another centralised intervention to mitigate the effects of future fires. This took the form of the insertion of two new, even wider streets, driven east-west through pre-existing properties to act as firebreaks: *Øvre almenning* to the south and *Nedre almenning* to the north

⁶¹⁹ TA1986/3; Bjerck & Jonsson 1988.

⁶²⁰ TA1977/3; E. Jondell, unpublished report.

⁶²¹ Berg 1951: 195, 266.

⁶²² In Nordre gate: TA2003/6; TA2006/5.

⁶²³ TA1977/3; E. Jondell, unpublished report.

⁶²⁴ TA1971/2; TA1984/4.

(Fig. 5.8 and Fig. 5.9, I and J).⁶²⁵ The former cut a broad swath through Kaupmannestrete/ Krabugata and many of the pre-existing urban plots in the middle of the Library Site (Figs 5.13 and 5.15). However, excavation revealed that this broad new street was inserted in a way that conformed to the pre-existing spatial pattern, its northern edge being aligned to respect the limits of pre-existing plot boundaries.⁶²⁶ No clear traces of surfacing were observed, though it may have been cobbled. Both the line of Øvre almenning and post-1598 Krabugata are indicated indirectly by the locations of cellars which mark the sites of buildings which fronted directly onto it (Fig. 5.15, left).⁶²⁷ In some instances, people took the liberty to build out into the widened streets, although we have no archaeological evidence for this.⁶²⁸

The almenning disappeared together with Krabugata's southern end in the post-1681 reorganisation. Its line is partly preserved in the narrower modern Schøldagerveita and Westermannsveita. The line of Øvre almenning has also been traced archaeologically in excavations in Søndre gate where it crossed the ruin of a medieval church.⁶²⁹ The line of the other east-west aligned firebreak street to the north, Nedre almenning, has also been documented indirectly archaeologically by the plotting of the location of cellars of buildings which fronted it on its northern and southern sides.⁶³⁰

The streets in the new urban plan after 1681

Archaeological traces of the 1681 fire and its aftermath are largely confined to backfilled burnt-out cellars of houses which disappeared as existing plots were partly destroyed by the new widened streets⁶³¹ and intervening blocks containing new plots. However, some vaulted stone cellars in similar locations were, due to their value, not abandoned immediately, and many were used for private storage despite being situated in the new streets. Attempts at consolidating the surfacing of the new streets only began in earnest after 1700, although this was sporadic and often inadequate, due to its expense and negligence by the individuals whose responsibility it was to pave sections of street fronting their properties; a source of complaint by the first master of public works in 1711. The more important streets were levelled, and drainage ditches were dug alongside them, but they soon filled with rubbish.⁶³²

Although cobbling is often encountered during excavations in main streets and side streets, their dating and extent are difficult to determine closely. However, recent excavations in the post-1681 market square confirm contemporary accounts of the poor conditions encountered by citizens as they negotiated streets and public spaces during the 18th century.⁶³³ The accumulations of domestic rubbish and haphazard attempts at surfacing and drainage recorded there may be representative of a rather primitive state of affairs that existed generally with regard to the surfacing, cleanliness and maintenance of streets and public areas during the 18th century (see 5.4.3.3). During the late 18th century the streets incorporated a new infrastructural component, namely a buried piped water system with public water stands placed at strategic locations (Appendix H and 5.4.4.5).

5.4.3.3. The market square

A market square is mentioned in medieval sources, but its precise location is currently unverified archaeologically. Berg asserts that the market square shown on Naucler's map between Bredegata and Kirkegata to the south of Vår Frue church (F on Fig. 5.9) is *not* the site of medieval market, suggesting instead that it was laid out following the fire of 1531 when a fire-damaged medieval stone church was demolished to make way for this large rectangular market square. This church was partly excavated in the late 19th century, ostensibly occupying a site coinciding with the northern half of the market square

⁶²⁵ Øvre almenning was 42 alen/c. 26 metres broad. Berg 1951: 74-75.

⁶²⁶ It was also revealed in Søndre gate (TA1971/1), as were traces of a narrow unpaved alley or street which predated it but which also post-dated the medieval church ruin here. Moen 1971: 108-109.

⁶²⁷ Christophersen 1988: 150-153.

⁶²⁸ TA1971/1. Kregnes 1981: 97.

⁶²⁹ TA1971/1.

⁶³⁰ TA1980/2.

⁶³¹ 60, 36 and 25 alen wide.

⁶³² Supphellen 1997: 184.

⁶³³ Berg 1981: 175; Kregnes 1981: 103; TA2016/13 & TA2017/11.

shown on Naucler (the ruin -'G'- is shown on Fig. 5.32).⁶³⁴ If correct, the square as shown on Naucler is unlikely to correspond exactly with the medieval market in terms of size and precise location, but may rather represent the first post-medieval marketplace used between c. 1531 and 1681. However, Lunde suggests that the medieval marketplace may nonetheless have lain here or somewhere in the vicinity, the church's abandoned graveyard possibly being taken into use for this purpose, for example.⁶³⁵ If verified by excavation, this would comprise yet another medieval urban topographic component that survives into the post-medieval period.

This marketplace vanished after 1681, to be replaced by the large quadrilateral market square which forms a central component in the baroque urban plan (Fig. 5.6; Appendix B). Recent excavations here have revealed the remains of pre-1681 buildings and activities on the urban periphery, including late-medieval metalworking (5.4.7).⁶³⁶ Most remains of backyards and buildings belonging to the properties that burned in 1681 were removed during the subsequent levelling-off and laying out of the new square.

Archaeology has provided eloquent testimony regarding how the new square was constructed and used from the 1680s through to the present day. One major insight is that the square was first provided with a comprehensive and well-constructed stone-paved surface in the 1870s. Prior to that, it was largely unpaved, other than in the form of loosely consolidated metalling utilising a variety of media, including roughly strewn cobbles or brick fragments (Fig. 5.10). Furthermore, significant deposits of trampled pottery and other domestic rubbish had accumulated here, indicating that the square was used as a public refuse dump. This confirms the complaints of the man in charge of public works in the early 18th century, Christian Gartner, who stated that poor drainage and the volume of refuse made it impossible to negotiate the square by foot, horse or coach, and that this practice of dumping should be forbidden.⁶³⁷ Attempts at improving drainage here were made during the 18th century, as demonstrated by archaeological evidence for stone-lined gullies (Fig. 5.10).



Figure 5.10. Trondheim market square excavations 2015-16. **Left:** One of the 18th-century square's rough stone and crushed brick metalled surfaces. **Right:** A late 17th-/early 18th-century diagonal stone-lined drain.⁶³⁸

Large pits were dug into the square's surface to dump rubbish, and in some instances possibly to extract sand from the underlying alluvial deposits.

⁶³⁴ Berg 1951: 72-73. Lunde 1977: 70-71, plansje I.

⁶³⁵ Lunde 1977: 180, 231-232.

⁶³⁶ TA2016/13 & TA2017/11.

⁶³⁷ Berg 1981: 175; Kregnes 1981: 103.

⁶³⁸ Photo: NIKU.



Figure 5.11. The market square c. 1800 with its central water stand. In the background the brick-built Cathedral School (right), the semi-ruinous cathedral, and Kongsgården behind. Prospect by Joh. F.L. Dreier 1800. Photo: Nordenfjeldske Kunstindustrimuseum.

Although the square was the centrepiece of Cicignon's new baroque plan, this evidence confirms that it was in fact an urban backwater, at least during the early part of the 18th century. It was located peripherally to the main centre of urban population to the east, where the city hall and harbour were also situated, and was over-dimensioned in relation to Trondheim's requirements for a marketplace. The square did not acquire a more central role in urban life until the second half of the 18th century when large timber mansions owned by the elite were built beside it and a public water pump was placed at its centre (Fig. 5.11).

5.4.3.4. Bridges over the River Nid

The southern approach to the peninsula and the medieval and early post-medieval city was over a long bridge over the Nid at Elgeseter. *Elgeseterbro*, or *Nidarosæ* bridge, is mentioned in historical sources in the period from the 1170s until it was demolished soon after the 1681 fire. In medieval times, the bridgehead on the urban side was defended by a castell, and the bridge formed part of the urban defences, burning down and being rebuilt numerous times.⁶³⁹ It existed during the 16th and 17th centuries, and is depicted on both Naucler's map and Maschius's Prospect (Appendices A and C). It was in poor repair in 1670.⁶⁴⁰ It lost its military-strategic importance after the building of Kristiansten fortress between 1682 and 1685. A new bridge was established by the king in 1685 further downstream beneath the new fortress (Figs 5.6 and 5.7), the precursor of the 19th-century bridge that stands there today.⁶⁴¹ Its construction was instrumental in stimulating the growth of the new suburb at Bakklundet. Bakklundet and the city were previously connected by a ferryman.

5.4.3.5. The waterfront and harbour

Evidence from the Library Site suggests that the medieval waterfront was established along part of the western bank of the River Nid during the 11th century, and was extended progressively eastwards out into the river's tidal zone in step with localised post-glacial land-rise and the need to accommodate cargo boats with deeper draughts.⁶⁴² The medieval waterfront comprised a succession of post- and horizontal timber-built wharves (*flatbrygger*) which stood at the eastern ends of the elongated urban plots stretching westwards from the riverbank (Fig. 5.13). These open wharves were replaced by warehouses of the type seen on Maschius's Urban Prospect (Appendix C) supported on wooden caisson foundations (*bolverk*) backfilled with soil and rubbish (Fig. 5.12).

⁶³⁹ Lunde 1977: 190. Submerged timbers belonging to earlier bridge foundations have been observed previously near the modern bridge here. Archaeological investigations identified three timber pier foundations, a timber from one dated dendrochronologically to c. AD 1263 (Sylvester *et al* 2016: 278-282).

⁶⁴⁰ Kregnes 1981: 98.

⁶⁴¹ Kregnes 1981: 104.

⁶⁴² Christophersen & Nordeide 1994: 84-97; Christophersen 2015: 315-319.

It is uncertain precisely how and when this transition took place, although excavations suggest this may have occurred during the late 16th or early 17th centuries,⁶⁴³ from which time the waterfront extended to the north and south of its medieval limits.

Naucner's 1658 map does not distinguish the waterfront. However, the situation prior to 1681 is shown on Maschius's Prospect (Appendix C), and forms the basis for the situation depicted on my urban topographic characterisation map (Appendix E). The prospect, dated 1674, but possibly incorporating earlier topographic elements, shows the densely packed row of caisson- and post-borne multi-storeyed timber warehouses along the western riverbank beside which ships loaded and unloaded cargo. As in medieval times, these stand at the eastern ends of elongated properties which extend westwards to buildings fronting Krabugata. These burned in 1681 and 1708, and the oldest surviving warehouses here are of 18th-century date.



Figure 5.12. **Left:** Two phases of 17th-century caisson foundations (pre-1651 & post-1681) for riverside warehouses excavated at the Royal Garden site (TA1980/5). **Right:** *left* corner in a late 16th-century caisson (TA 2014/25).⁶⁴⁴

The prospect also shows activity on the eastern bank, principally the careening of ships' hulls. Scattered warehouses, sheds and houses are also shown. Unfortunately, this area (Bakklandet) lies outside the medieval urban protected area, and there are few archaeological observations of activities here (though see 5.4.7.). The prospect shows Bakklandet on the cusp of becoming an urban suburb, the decades after 1681 seeing its transformation into an area of densely packed riverside warehouses, dwellings, craft- and industrial workshops and factories.⁶⁴⁵

The first warehouses on the fjord shoreline along the northern periphery were built from c. 1750, though the oldest surviving warehouses there date from after the fire of 1841. Harbour facilities were established in connection with the new suburb at Ila during the early 18th century where timber was piled on pallets prior to export (Fig. 5.33).

5.4.4. Urban plots: layout, internal organisation, buildings and structures

Attention will now turn to the content and spatial organisation of Trondheim's urban plots, or properties (*byggårder*). This section looks at the forms and layout of the urban plots, their locations in time and space, the types of buildings, cellars and ancillary structures (rubbish pits, privies etc) constructed within them, and the ways they were organised spatially. The review takes a long-term perspective, but will necessarily focus principally on plots, buildings and associated structures prior to 1681 since there is comparatively little 18th-century archaeological evidence available. It draws on material derived from a number of excavations; however, the archaeological evidence is fragmentary and confined to a few locations. Material from the Library Site in particular has provided interesting evidence for changes in spatial organisation and building types in the urban core between the medieval and post-medieval periods. Excavations in the precinct of Kongsgården provide supplementary evidence of building types

⁶⁴³ TA1980/5; TA1993/2; TA 2014/25 Kjøpmannsgata 33.

⁶⁴⁴ Photos: Riksantikvaren & NIKU.

⁶⁴⁵ Bull 1997: 72-81.

and ancillary structures probably in use within the city from medieval times and well into the 18th century (see also Chapter 6).

5.4.4.1. The layout and locations of plots in space and time

This section presents archaeological evidence for the plot structure within the urban core and evidence for the expansion of the built-up area beyond its medieval urban limits in the northern and western peripheries prior to the urban fire of 1681. The internal organisation of the plots will be presented in more detail in subsequent sections.

The urban core

The Library Site provides the best empirical evidence for continuity and change in the layout and organisation of urban plots in Trondheim during the medieval and post-medieval periods.⁶⁴⁶ Street and plot alignments are closely associated throughout (Fig. 5.13). Narrow elongated properties which originated during the 10th century stretched out at right-angles to the approximately north-south orientated Kaupmannstretet/Krambugata. These underwent differentiated and localised modification and realignment during the medieval period, but the basic organisational pattern displays a remarkable degree of stability. With some modifications, this continuity in layout persisted up to 1599 when the first major reorganisation occurred, although this only had a limited impact.⁶⁴⁷ A number of plots disappeared under the new broadened streets during the urban reorganisation of 1681, and others were reduced in

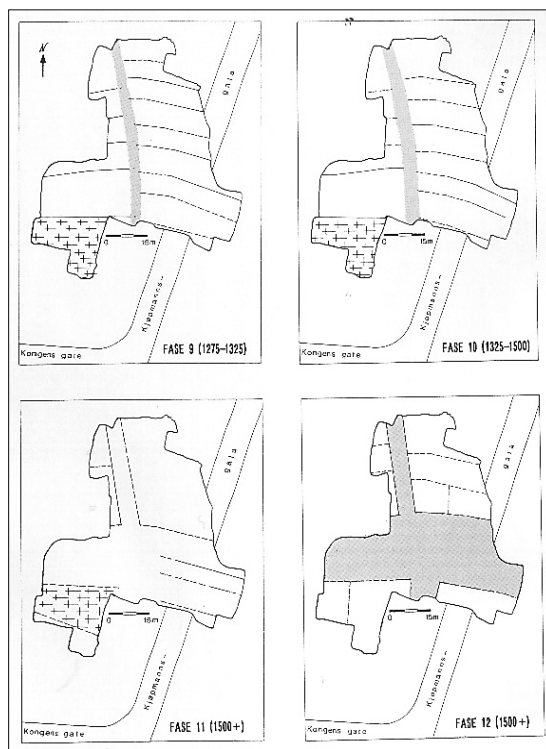


Figure 5.13. The Library Site: property boundaries, Kaupmannstretet/Krambugata and Øvre almenning (dark) through four phases (AD1275-1500+). After Christophersen & Nordeide 1994 Fig. 93b.

size. However, the large blocks created in the new urban plan were large enough to accommodate elements of the old plot and street structure, and many property boundaries were retained and have persisted up to the present day.⁶⁴⁸

Archaeological evidence for the medieval/post-medieval transition was extremely fragmentary, and with one exception, no physical evidence in the form of boundary ditches or fences were recorded. The boundaries are reconstructed using indirect evidence, inferred from the locations of other forms of surviving structural evidence, notably cellars, as well as comparing fragmentary structural remains with pre-existing alignments.⁶⁴⁹ Analysis indicates that most of the late-medieval plot boundaries in this part of the city were retained largely unaltered prior to the insertion of the east-west fire-break street *Øvre Almenning* in 1599, which constituted the first major planned post-medieval alteration in the local property layout (Fig. 5.13, faze 12). Some localised changes pre-dating 1599 were observable; notably alterations to the size and extension of the medieval graveyard which lay in the south-west corner of the site. This was probably

⁶⁴⁶ Christophersen 1988; Christophersen & Nordeide 1994: 113-212; Bjørdal 2006.

⁶⁴⁷ Christophersen 1988: 153.

⁶⁴⁸ Kregnes 1981: 102, 104.

⁶⁴⁹ Christophersen 1988: 143-149.

connected with the sale of the former Franciscan friary church and churchyard into private hands by the Crown in 1559. Likewise, the widening of Krabugata encroached slightly into the properties fronting it on the west, and, as mentioned, after 1599 Øvre Almenning cut a broad east-west swath through the middle properties here while respecting pre-existing property boundaries on its northern edge.⁶⁵⁰

Of the other major excavations in the urban core, only V-site has provided comparable archaeological evidence for long-term patterns in the location and alignments of properties and streets. These comprise properties aligned at right-angles to the western side of medieval Langstretet and its post-medieval successor Bredegata. A number of 17th-century wooden cellars aligned alongside the western side of Bredegata clearly respected pre-existing property alignments. This is also the case for modern property boundaries, indicating that property divisions have remained remarkably stable here throughout the medieval and post-medieval periods.⁶⁵¹

Although there are fewer observations elsewhere in the urban core, this repeated arrangement of elongated east-west aligned properties interspersed with alleys and smaller paved passages also seems to be the case for its south-eastern part, between Kirkestretet to the west and the river to the east. Thick stratified deposits containing the remains of multiple phases of medieval urban plots and houses (dating from the 10th century on), churches, graveyards and the detritus of domestic and craft-related activities have been recorded extending east to the river and south towards the royal enclosure.⁶⁵²

The south-western periphery

Kirkestretet did not form the western limit of medieval urban development in the southern part of the urban core. Sporadic excavations to the west of it have revealed that regulated urban plots were established by at least the 12th century.⁶⁵³ Interestingly, some early deposits here produced evidence of localised iron smithing, suggestive of the establishment of another peripherally located metalworking zone. However, in contrast to the metalworking zone on the northern periphery, this seems to have been replaced by other activities, both domestic and craft-related, conducted in superimposed urban plots throughout the high-medieval period. Evidence for several phases of medieval urban buildings has been found in and alongside the eastern part of the east-west aligned street Smidesgjeilan ('the road leading to the smithies', first mentioned in 1617 and shown on Naucler's map).⁶⁵⁴ There is no clear evidence for a medieval street on the same alignment, so Smidesgjeilan may have been established in the post-medieval period, when this part of urban area seems again to have become a location for metalworkers. This was confirmed recently by excavations in the south-eastern part of the large market square established in 1681 which revealed evidence for pre-1681 specialised metalworking that included blacksmith and coppersmith workshops and traces of a bell and cauldron foundry, all of 15th or 16th-century date (5.4.7.1).⁶⁵⁵

The medieval situation further south along the western side of Kirkestretet is poorly documented archaeologically. Sporadic observations indicate that urban plots probably extended in a narrow band along the western side of the street, at least as far south as present-day Erling Skakkes gate, and possibly as far as Kannikestretet.⁶⁵⁶ Continuing south, the area immediately north of the cathedral between Kirkestretet and Øvre Gjeilan (a parallel street to the west marked on Naucler's map) has traditionally been regarded as an urban quarter occupied by the residences of the cathedral canons (Fig. 5.1.).⁶⁵⁷ There is presently no archaeological evidence to confirm this, and what has been found suggests that urban development and occupation here was piecemeal and of *late* medieval date.⁶⁵⁸ This may provide some tentative support for Lunde's suggestion that at least some of the canons' residences lay closer to

⁶⁵⁰ Christophersen 1988: 144, 150-153.

⁶⁵¹ TA1977/3. Unpublished report.

⁶⁵² Lunde 1977: 64-82. Erling Skakkes gate 1 TA1972/2 E.

⁶⁵³ TA1985/12; TA2006/1.

⁶⁵⁴ TA1977/5; TA1997/3.

⁶⁵⁵ TA2016/13; TA2017/11.

⁶⁵⁶ TA1987/11; TA1997/3; TA2006/11.

⁶⁵⁷ Marked as 'Kannikere' on Berg's reconstruction map (Fig. 5.1.). Berg 1951: 61-70; Lunde 1977: 219-220.

⁶⁵⁸ TA1988/8 Munkegata 3.

the cathedral, and disappeared following a post-medieval northward extension of the cathedral churchyard.⁶⁵⁹

The north-western periphery

The built-up area's expansion into the former cultivated fields and allotments beyond the medieval urban boundary formed by Borkegata during the 17th century has been noted above. This saw the creation of a patchwork of residential plots and cultivated allotments. Berg's property survey suggests that by 1681 the area between Borkegata and post-medieval Vaterlandsveita was subdivided into parcels. These chiefly comprised field allotments (*løkker*) and herb and fruit gardens (*hager*) owned by Trondheim's wealthier citizens and clergy, though with occasional residential properties scattered among them.⁶⁶⁰ Lunde cites a 1638 source which refers to building work within and outside these allotments and gardens, and suggests that they were developed piecemeal during the course of the 17th century, increasingly entering into private hands. The area's traditional use, rooted in long medieval custom, was as cultivated plots reserved primarily for the secular and ecclesiastical elite, an arrangement which Lunde claims persisted until about 1650.⁶⁶¹

Excavations at a location bounding the western side of Borkegata at its northern end lend support to Lunde's scenario, and provide a nuanced insight into the character and development of occupation at this part of the urban periphery during the medieval and post-medieval periods.⁶⁶² Traces of 15th century fence-lines, rubbish pits, post-holes and building foundations were recorded on the surface of the medieval fields, representing a phase of urban encroachment west of Borkegata. This was temporary, however, and the area reverted to cultivation between the late 15th century and the first half of the 17th century.

This is consistent with the documented character of land use already noted for the area during much of the 17th century, characterised by parcelled-out gardens and field allotments. However, the ambiguous documentary sources for the properties on which the excavations took place do not provide a clear indication as to exactly when they changed from gardens to residential plots.⁶⁶³ Firm archaeological evidence was provided by the discovery of a vaulted stone cellar close against Borkegata's western side.⁶⁶⁴ Since Borkegata vanished after the fire of 1681, this attests the existence of a house fronting Borkegata on its western side prior to that date.

The contrast between the ambiguity of the documentary evidence and the emphatic testimony provided by archaeological evidence for a pre-1681 urban property expansion west of Borkegata was further demonstrated by archaeological evidence confirming the presence of a contemporary property neighbouring it to the south.⁶⁶⁵ Importantly, this also supports Lunde's suggestion that the allotments and gardens immediately bounding the western limits of the medieval city marked by Borkegata were in the process of being developed as residential plots *prior to 1681*.

However, the north-western urban periphery was not entirely reserved for gardens, allotments and occasional residences prior to 1681. There is documentary evidence and an increasing amount of archaeological data indicating that the northernmost part of this boundary area was occupied by various craft industries in the form of metalworking during the 15th century, and tanning and leatherworking during the 17th century (see 5.4.7).⁶⁶⁶

Further west, excavations confirm the testimony of documentary evidence and Naucler's map that during the 17th century the area was occupied by narrow fields interspersed by east-west and north-south orientated streets or tracks, some of which appear to have been fronted by narrow developed strips of residential properties. The fields to the west of Gjetveita were known as the Hospital's Inner Fields (*Hospitalets Indre løkker*) well into the 17th century. These were owned and

⁶⁵⁹ Lunde 1977: 219-220.

⁶⁶⁰ Berg 1951: 197.

⁶⁶¹ Lunde 1977: 178

⁶⁶² Nordre gate 11 and Dronningens gate 14; TA 2004/15 and TA2004/13

⁶⁶³ Berg 1951: 197, 249-250.

⁶⁶⁴ TA2004/15 Nordre gate 11.

⁶⁶⁵ TA2004/13 Dronningens gate 14.

⁶⁶⁶ At the intersection of today's Nordre gate and Thomas Angells gate.

cultivated by the Hospital from the medieval period until 1630 when parcels were sold off to citizens.⁶⁶⁷ According to Berg, most of the easternmost parcels (bounding Gjetveita on its western side) continued as fields after 1681.⁶⁶⁸ Excavations to the west of Gjetveita confirm that this cultivated land was first taken into use for residential properties at the end of the 17th century or the start of the 18th century.⁶⁶⁹ The change to residential activity is represented by sheet deposits and rubbish pits filled with domestic refuse and building detritus, traces of activity in the back yards of properties whose dwelling houses fronted onto the streets recorded by Naucner.

The northern periphery

Archaeology is providing new evidence for the character and date of changes in urban spatial organisation here during the late-medieval/post-medieval transition. The area at the northern end of Kaupmannestretet (modern Brattøra) was devoted exclusively to metalworking during most of the medieval period, a regulated area of small workshops and smithies standing amid accumulations of smithing waste (5.4.7.1).⁶⁷⁰ The question arises as to when and how the area transformed from a



Figure 5.14. Detail from Naucner's map of 1658 showing the northern urban periphery. Brattøra lies to the north of broad Nedre almenning, while Sanden stretches in a narrow strip along Sandstrete to the north-west.

under today's Olav Tryggvasons gate may suggest that residential properties of some sort were established above the metalworking deposits here during the 15th and 16th centuries.⁶⁷¹ However, it is uncertain whether this formed part of a major phase of urban redevelopment that encompassed the entire area. There is some evidence to suggest that parts of the area lay empty, and were first occupied by urban properties during the 17th century, for which there is more emphatic material evidence.⁶⁷² What is worthy of note, however, is that the alignments of the short streets and intervening built-up areas shown to the east of the northern periphery on Naucner's map conform to the same alignments as the rows of medieval workshops excavated here, suggesting some form of regulated spatial continuity here.

Following its abandonment here, excavations indicate that metalworking moved westwards along the fjord shore, where smaller-scale metalworking continued up to the early 16th century at the latest. In contrast to the eastern part of Brattøra, evidence for some degree of *discontinuity* in spatial organisation was demonstrated at Søndre gate 24, where a 15th-century workshop was overlain by a small east-west street (today's Storchveita, shown on Naucner as the westernmost extension of the curving street that may be the northern extension of Kaupmannestretet/Krambugata).⁶⁷³ Furthermore, at this and other sites in the vicinity, a short hiatus was observed between the abandonment of metalworking here during the late 15th century/early 16th century and subsequent traces of residential occupation dated broadly from the late 16th century to the early 17th century.⁶⁷⁴ The clearest example of a regulated domestic plot that post-dated the post-metalworking hiatus took the form of a burnt wooden cellar and a backyard containing deposits and domestic rubbish pits containing pottery and

⁶⁶⁷ Grankvist 1982: 37-39, 73; Berg 1951: 89.

⁶⁶⁸ Berg 1951: 186-191.

⁶⁶⁹ TA2000/14 Prinsens gate 49; TA2004/18 Ravelsveita 6.

⁶⁷⁰ Espelund *et al* 1989; Bergquist & McLees 2015.

⁶⁷¹ TA1990/7.

⁶⁷² TA1987/1; TA2016/3.

⁶⁷³ TA2007/11.

⁶⁷⁴ Brattørveita 7-9 TA1988/7; Brattørveita 7-9 TA1988/7; Søndre gate 24 TA2007/11.

drinking glass of late 16th and early 17th-century date excavated at Søndre gate 24. The property fronted Storchveita's precursor, and it is suggested that both represent a significant spatial and functional reorganisation of the area which may have taken place just prior to, or just after, the fire of 1598.⁶⁷⁵

Naucner's map (Fig. 5.14; Appendix A) also shows a narrow strip development running further west from here along the fjord shore and the line of a street or track (Sandstrete) that led ultimately to the narrow isthmus and fortified city gate. Henry Berg suggests that this area, known as 'Sanden' from the 17th century on, was, with Brattøra, part of a comprehensive regulated development of the entire northern urban fringe completed by the 1590s (Fig. 5.2).⁶⁷⁶ Contrary to the evidence from Brattøra, however, archaeological observations from the Sanden area tend to contradict this. Furthermore, there is as yet no archaeological evidence to support Berg's claim that Sandstrete, the street along which this strip of properties is aligned, preserves the line of a medieval precursor, 'Gjeilan'. Indeed, excavations at sites which coincide with this Sanden strip development indicate that the area adjacent to the fjord comprised fields cultivated from the Viking Age through to the 17th century.⁶⁷⁷

Archaeological evidence from the Brattøra area may provide some support for Berg's contention that a fully developed property and street pattern extending to the fjord shore was already established there by the 1590s. However, it suggests that there is no *unbroken* continuity in spatial organisation and character of occupation back to the medieval period. While regulated properties may have been in place here prior to the 1598 fire, the systematic regulation and intensive development of the northern periphery as a whole is perhaps best associated with an expansion of the urban area *after* 1598. A push northwards into the less intensively developed periphery may have been required to compensate for the loss of properties caused by the insertion of the two broad east-west firebreak streets (*almenninger*) into the existing built-up area to the south. Furthermore, the urban population also began to expand from this time (5.2.1). One new social group in particular, merchants who specialised in new trading enterprises with communities in Northern Norway (*nordlandsfarere*), established themselves in this part of the city during the 17th century.

5.4.4.2. The plots' internal organisation: front-houses and backyards

The site that has produced the best archaeological evidence for pre-1681 plot development is the Library Site, but even here this consists predominantly of structures dug down into earlier deposits, such as cellars, rubbish pits, wells and their fills (Fig. 5.15.). In contrast to the well-preserved medieval buildings on the site, post-medieval floors and building foundations are almost completely absent due to either poor preservation conditions or wholesale removal by machine prior to excavation. Only fragmentary traces of small buildings were found to the south-west of the site, erected on the site of the former medieval graveyard after 1598. With one or two exceptions, all the excavated cellars on the Library Site post-date the 1598 fire and the insertion of Øvre almenning, as do most of the rubbish pits, wells, cobbled surfaces and other backyard structures. Only a few pits and postholes represent remains of activity during the 15th and 16th centuries.⁶⁷⁸ Consequently, we have no meaningful archaeological evidence for how these plots were organised internally until the early 17th century. This is the same for the rest of the urban area, and constitutes a major gap in our knowledge of Trondheim's urban development.

Despite the fragmentary nature of the Library Site evidence, an analysis by Even Bjørdal, which combines available archaeological material with historical sources in an exemplary fashion, provides insight into the organisation of plots here during the 17th century. He demonstrates that, while the formal building-filled character of the medieval tenement plot (*bygård*) was retained, the arrangements of buildings within it underwent changes during the course of this century. The main dwelling house was now customarily equipped with a cellar, and was increasingly placed at the street frontage (a so-called *fronthus*), behind which the plots were filled with ancillary buildings and structures connected with the

⁶⁷⁵ TA2007/11.

⁶⁷⁶ Berg 1951: 11, 83.

⁶⁷⁷ TA2002/13 & TA2004/9 Nordre gate 26&28/30; TA2008/20 Prinsens gate 65/Olav Tryggvasons gate 51; TA2009/11 Olav Tryggvasons gate 47-49.

⁶⁷⁸ Christophersen 1988: 143, 150-160.

household's economy and functions.⁶⁷⁹ This contrasts with the situation during the medieval period, where the dwelling house was normally placed deeper within the plot, usually behind another non-residential building which fronted the street.⁶⁸⁰

The key archaeological evidence for the street-frontage location of the otherwise now completely absent 17th-century dwelling houses is their surviving cellars (Fig. 5.15), the majority of which were built of wood, though stone examples were also excavated. The predominance of wooden cellars over stone seems to be a general pattern in terms of Trondheim as a whole (5.4.4.4). With a couple of possible exceptions elsewhere, no post-medieval cellars have been dated to the 16th century, and the combination of dwelling house and cellar seems to occur first during the course of the 17th century.⁶⁸¹

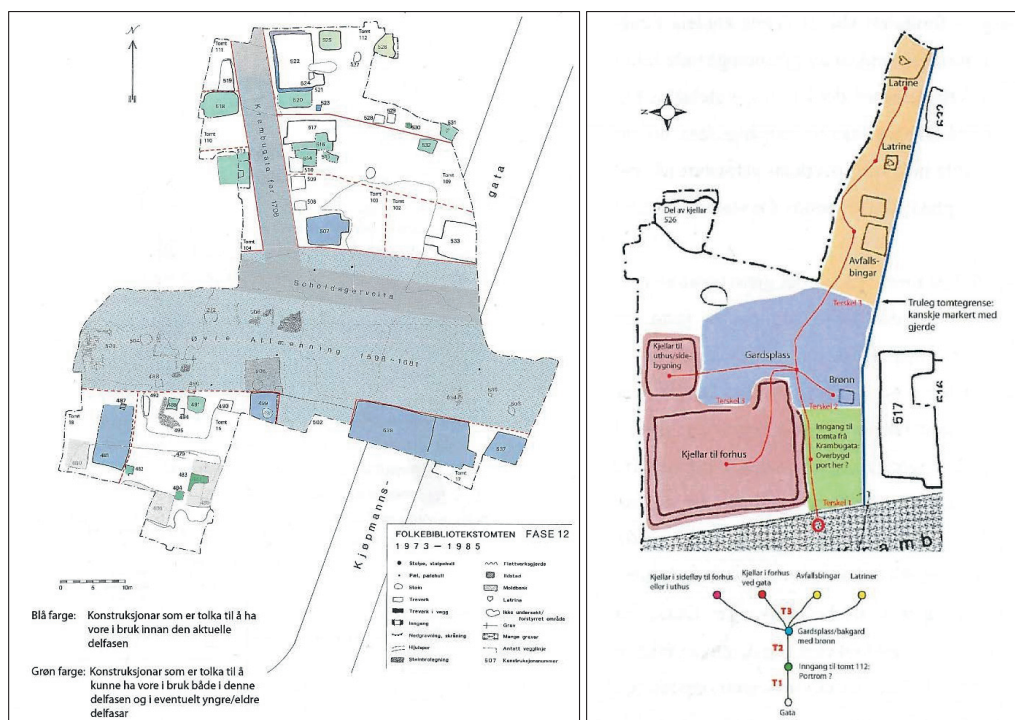


Figure 5.15. **Left:** Overview of the Library Site excavation showing 17th-century properties with cellars (blue and green) for front houses placed against N-S street Krabbugata and the broad E-W fire-break street Øvre almenning. **Right:** Detail of property 112 (northernmost on plan to left), showing site of front and rear buildings with cellars (red), entrance to the back yard (green), front area of back yard with well (blue), rear of back yard with rubbish pits and privies (orange).⁶⁸²

Bjørddal correlates a number of buildings depicted on part of the Maschius prospect with particular excavated cellars on the Library Site (Figs 5.15 and 5.16). By combining the sites of excavated cellars with locations of buildings shown on the prospect and property surveys cited by Berg which mention the presence or absence of a *fronthus*, he demonstrates that, prior to the 1670s, many of the wealthier property owners here placed their dwelling houses against Krabbugata, usually with their long sides parallel to it. The architectural historian Guthorm Kavli also previously noted Maschius's depiction of houses located beside streets, connecting this with the arrival of newly fashionable ideas regarding the placement of houses along street frontages. However, based on his interpretation of historical

⁶⁷⁹ Bjørddal 2006: 65-109.

⁶⁸⁰ Christophersen & Nordeide 1994: 200-212; Bjørddal 2006: 61-62.

⁶⁸¹ Bjørddal 2006: 70, 76, 79.

⁶⁸² After Bjørddal 2006 Figs. 12 and 8.

property surveys, he maintained that this was more the exception than the rule, and that it was still more customary for the gable-end of an outhouse to be placed at the street frontage while the dwelling house lay deeper within the properties.⁶⁸³

Bjørddal's analysis of the Library Site material suggests that Kavli's assessment should be qualified, at least with regard to developments in spatial organisation in this part of Trondheim, which was occupied mainly by the wealthier citizenry. Based on his interpretation of the archaeological evidence and historical building surveys cited in Berg, Bjørddal demonstrates that by 1681 front houses were more the rule rather than the exception in this part of Trondheim. While occasional examples existed during the early 17th century, Bjørddal shows that the fashion really took hold here after about 1650, with most plots containing a front house with cellar by 1681.⁶⁸⁴

Many of the dwelling houses depicted by Maschius in the area immediately behind the riverside warehouses were two-storeyed timber buildings with external passages - examples of the so-called *svalgangshus* (galleried house) (5.4.4.3). Bjørddal correlates a particularly large L-shaped *svalgangshus* on Maschius's prospect with a plot containing a large stone cellar located at the intersection of Krabugata and Øvre almenning (cellar 538 on Fig. 5.15. and the 'Vinkelbygning' on Fig. 5.16.). This property was possibly owned by Casper Wilthagen, a wine merchant and Trondheim's postmaster, one of many wealthy citizens who lived in this part of Trondheim. He concludes that the placement of houses against street frontages, and particularly at street corners, is expressive of greater individual initiative by an increasingly self-conscious and assertively display-minded urban elite.⁶⁸⁵

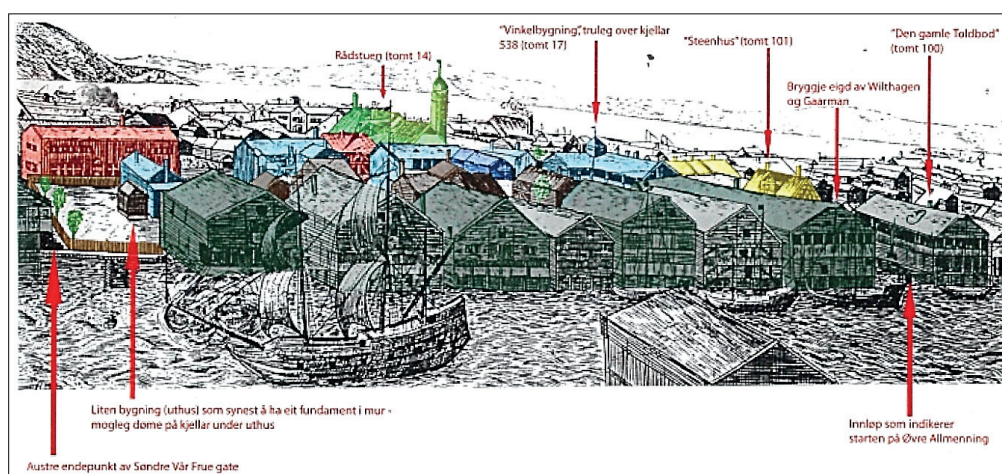


Figure 5.16. Detail of Maschius's Prospect, with suggested interpretation of types and locations of buildings.⁶⁸⁶

Only fragmentary archaeological evidence for the organisation of the back yards behind these dwelling houses was recovered on the Library Site. This is the case generally throughout the city, with only rare instances where extensive parts of backyards and their contents have been excavated. Nonetheless, by combining available archaeological evidence and the 17th-century property surveys cited by Berg, Bjørddal suggests that a typical plot behind the front buildings on the Library Site would have comprised an elongated back yard containing a number of smaller timber-built outhouses.

⁶⁸³ Kavli 1963: 214.

⁶⁸⁴ Bjørddal 2006: 77-100.

⁶⁸⁵ Bjørddal 2006: 82-83, 98-100.

⁶⁸⁶ After Bjørddal 2006, Fig. 3. **Red:** *svalgangshus* (galleried houses) fronting the west side of Krabugata. **Blue:** *svalgangshus* fronting the east side of Krabugata, including the large L-shaped building 'Vinkelbygning', which also fronted the southern side of Øvre almenning. **Brown:** smaller buildings within plots. **Yellow:** buildings on the north side of Øvre almenning, including a stone- or brick-built house. **Light green:** the stone-built city hall. **Dark green:** the riverside warehouses at the eastern ends of the long east-west aligned plots.

These had diverse functions relating to the household's functions and economy, such as a 'smokehouse' (for food preparation), storehouses, stable, byre, woodshed and other ancillary buildings and structures, as well as small dwelling houses that could be rented out. Further in, placed strategically at a distance from the dwelling, were the household's waste management facilities, namely rubbish pits, privies and manure pits. At the very rear of the long properties situated between Krabugata and the riverfront stood the large warehouses which functioned as combined stores, workplaces and accommodation connected with maritime trading activities. Part of such a property (without its riverfront portion) was excavated on the Library Site (property 112) (Fig. 5.15).

No excavations have so far matched the Library Site regarding evidence for the nature and organisation of 17th-century urban plots in an urban quarter. The extent to which the situation recorded here is representative of developments across the city as a whole remains to be established. Given the ambiguity of historical evidence, Kavli's assertion that front houses were *not* the norm can only be confirmed or refuted by archaeology.

There is some archaeological evidence that this trend of a cellared dwelling house fronting a street may have been adopted on 17th-century plots in the northern and western urban periphery, although with local variation. This includes the previously mentioned discovery of a pre-1681 vaulted stone cellar that marked the location of a front-house placed against the western side of Borkegata on the westernmost urban periphery.⁶⁸⁷ In contrast to the properties on the Library Site, however, the main body of this property's back yard - comprising accumulated surface deposits, cobbled surfacing, and a water cistern - seems to have stretched along the street frontage to the side rather than behind the dwelling house. At a site on the northern periphery, a burnt wooden 17th-century cellar marked the location of a dwelling house which fronted onto the precursor of today's Storchveita, as well as rubbish pits, sheet deposits and patchy cobbled surfaces in a back yard behind it.⁶⁸⁸ A similar situation was revealed to the north-east in the Brattøra area, where a 17th-century wooden cellar marked the location of a building which fronted onto a small alley, Lille Ottes veit.⁶⁸⁹

5.4.4.3. Buildings: types of dwelling houses and ancillary buildings

It is not this study's purpose to provide an account of Trondheim's post-medieval architectural history. It can be mentioned that only a very few 17th- and 18th-century urban buildings have survived to the present, due to the ravages of fires and developers. Consequently, although contemporary and more recent documentation of buildings of the period exist,⁶⁹⁰ archaeology offers building historians a means to supplement and extend their knowledge of local architectural history.

Evidence for the early post-medieval building stock's architectural and structural character, building materials, and internal structural features has rarely been recorded archaeologically in the urban area. With the exception of 17th-century cellars, we have little *in situ* material evidence for the types of residential and ancillary buildings that were built on the 16th- and 17th-century urban plots prior to 1681. The character of the pre-1681 urban residential building stock can currently only be conjectured from scanty archaeological and documentary evidence, including contemporary property surveys and the testimony of the Maschius Prospect. The presentation includes evidence from excavations within the precinct of the late-medieval Archbishop's palace/post-medieval Kongsgård. This systematically excavated site provided evidence for building types and associated structures current during the centuries following the Reformation, although we cannot yet demonstrate the extent to which equivalent forms encountered in this elite environment were utilised elsewhere.

Based on historical and architectural evidence, Guthorm Kavli asserted that timber houses constructed of interlocking logs (*laft*) with ground plans based on the medieval three-room *stue*, and a side entrance and *svalganger* (external passages/galleries) was the norm for urban dwelling houses in 17th-century Trondheim.⁶⁹¹ The following review of available archaeological evidence provides some supplementary insight into types of dwelling houses that may have occupied urban plots. It indicates the

⁶⁸⁷ TA2004/15 and TA2004/13.

⁶⁸⁸ Søndre gate 24 (TA2007/11).

⁶⁸⁹ Brattørveita 7-9 (TA1988/7).

⁶⁹⁰ Kavli 1966.

⁶⁹¹ Kavli 1963: 214.

persistence of the medieval *stue* building types into the post-Reformation period, and the introduction of new forms - most notably cellular-plan buildings and the two-storeyed *svalgangshus* (galleried house) - during the 16th and 17th centuries.⁶⁹²

Stue-type buildings in late medieval and early post-medieval contexts

Excavations in the Archbishop's Palace precinct indicate that small, single-storeyed two- or three-roomed *stue*-type buildings of *laft* construction were still utilised immediately prior to the Reformation. A varied stock of excavated buildings dating to the early 1500s (pre-1532) was crammed into the precinct's southern and eastern wings, exemplified here by the situation in Period 6 Phase 2 (Figs 5.17. and 5.18.).

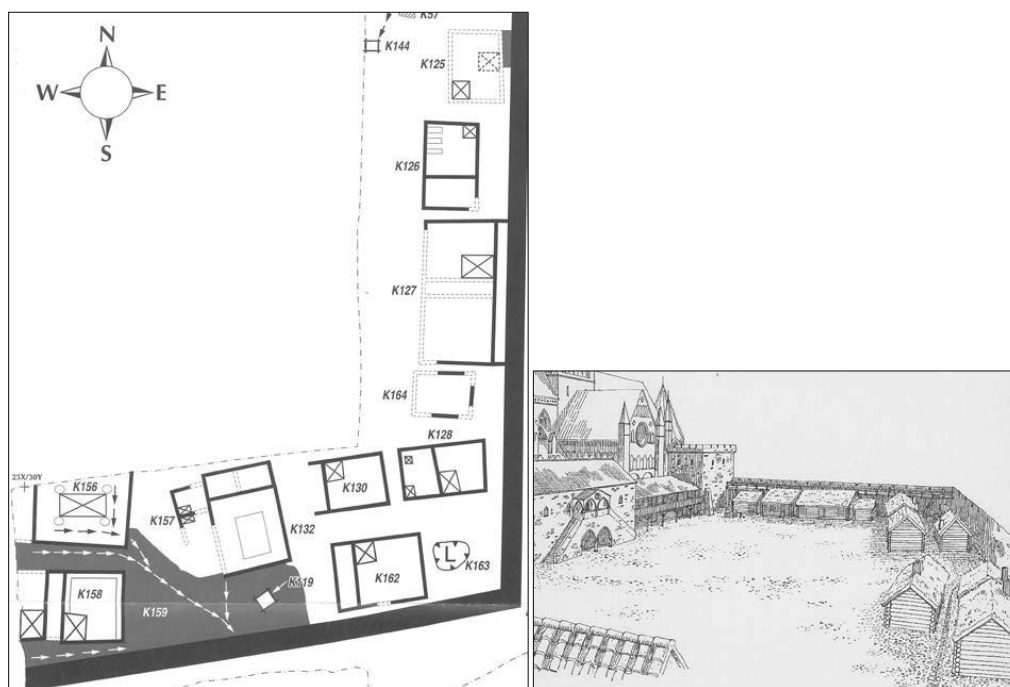


Figure 5.17. Plan and reconstruction drawing showing buildings excavated in the precinct of the Archbishop's Palace (Period 6 Phase 2: early 1500s). The reconstruction picture looks east.⁶⁹³

Variants of this building type here housed chiefly varieties of craft production (see 5.4.7.). They displayed a diversity of sizes, internal room divisions and hearth forms and sizes, a variety suggestive of the building type's versatility. All were of timber *laft* construction. The numerically most represented is the medieval *stue* building with one-, two- and three-roomed variants (eg. K130, K162, K126) (Figs 5.17. and 5.18.). In addition at least two buildings (K127 and K158) had groundplans comprising two rooms

⁶⁹² *Stue* buildings comprise a genus of small, log-built, single-storeyed dwelling houses originating in the medieval period, but in use up to the 19th century. Variants with single, two- or three-roomed ground plans are known. The largest room (the '*stue*') was equipped with a corner hearth and functioned as the main living and sleeping room. In 16th-century Oslo, another variant comprised narrower, elongated buildings with two or three evenly-sized rooms placed end-to-end in a cellular plan. The *svalgangshus* type of timber-built dwelling house, modelled on European Renaissance urban houses, became increasingly widespread in Norway from the early 17th century, both in the countryside and in urban centres, in tandem with the introduction of the chimneystack, which made it possible to build two-storeyed houses with heated upper rooms. Rooms on both floors were accessed from covered galleries, or passages, placed along the building's exterior (Christensen 1995: 84-91; 128-132; Ekroll 1991: 81; Roede 2001: 52-53).

⁶⁹³ After Nordeide 2000a plan 13 & Keller & Ekroll 2008: 70.



Figure 5.18. Archbishop's Palace, south wing looking west (Period 6 Phase 3). Building K162 and privy pit K163 bottom left. Photo: L. Renolen/NIKU.

divided by a narrower central room or passage. They also had particularly solid stone foundation walls, which might indicate they had two storeys, although there are no indications of external passages by which such an upper floor might have been accessed. Two buildings, K189 and K205, had three rooms and a ground-level external passage (*svalgang*) along one side (Period 6 phase 4, Fig. 5.19), while one had a single room and a *svalgang* along three sides (K136; Period 6 phase 1, not illustrated).

Internal arrangements also revealed a degree of variety. Floors generally consisted of wooden planks, though individual rooms in some buildings were paved with glazed or unglazed tiles (K126, K128, K200) (Figs 5.18 and 5.19). A large building interpreted as a kitchen (K156) had a cobbled stone floor (Fig. 5.19). Built into its centre and flush with its surface was a large rectangular brick-built hearth, accompanied by the bases of brick-built pillars which supported a smoke canopy through which smoke was channelled upwards. It was also provided with a subterranean flue which transported hot air from a hearth in a side room into its centre in order to increase heat intensity there. This 'super-heating' demonstrates an acquaintanceship with hearth technology of a sophisticated character.

This large hearth, unique in Trondheim, was only one of a great variety of types of

hearth evident in these late-medieval buildings. This reflects the varieties of specialist activities taking place within the buildings. The hearths ranged from small low-level brick-built hearths used for specialist heating functions to large stone-built fireplace (*peis*) foundations, almost exclusively placed in the corners of rooms. Most of the larger stone-built corner hearth foundations were solidly built and their dimensions were such that they would have been capable of supporting chimneys, although no fireplace or chimney superstructures were recorded *in situ*. The medieval flueless stove (*røykovn*) appears to have been supplanted by the chimney fireplace (*peis*) in this context by this time. Finds of birch-bark cladding in associated contexts confirms that these buildings were turf-roofed in the traditional manner. Window glass was found in association, possibly the earliest recorded in a secular context in Trondheim.

Most buildings were workshops, but building K162, a two-roomed *stue* building situated beside a privy (K163) in the south-east corner of the precinct, may have been where craftsmen gathered, ate and slept (Figs 5.17 and 5.18).⁶⁹⁴ A contemporary building, K158, exemplifies another type of building which may have had a similar function (Figs 5.17 and 5.19). This was a triple-celled structure, with a central narrow room between two large living rooms (*stuer*), each with large corner chimney hearth foundations (possibly for open hearths/*peis*) and, in the eastern room, peripheral wall-benches. A larger triple-celled equivalent (K127) lay in the eastern wing, a building which may have accommodated similar functions, or acted as an administrative building for the mint workshop (K126) neighbouring it to the north (Fig. 5.17).

⁶⁹⁴ Period 6 Phase 2 & 3, early 16th century (pre 1532).

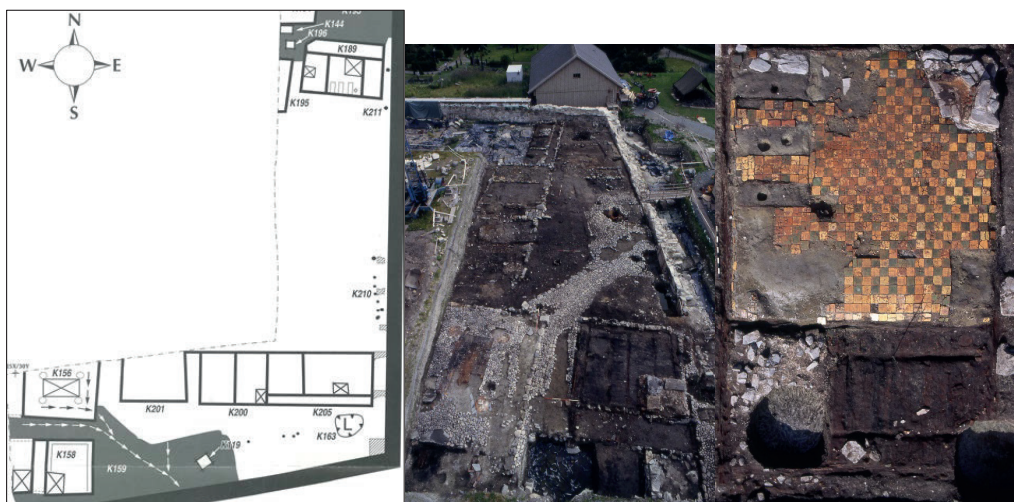


Figure 5.19. Archbishop's Palace excavations, Period 6 Phase 4. **Left:** plan of buildings in southern and eastern wings. **Middle:** photo of southern wing, looking east. Foreground: kitchen building K156 and building with hearths and wallbenches K158. Background: row of buildings K201, K200, K205. **Right:** mint workshop K126.⁶⁹⁵

We have only scattered and fragmentary evidence for pre-1681 *stue* buildings in the urban area proper. A possible *stue* building equipped with a corner fireplace - possibly a flueless stove (*røykovn*) - was revealed beneath Kongens gate, aligned against a passage running eastwards from Bredegata.⁶⁹⁶ In addition, there is some evidence for outhouses and ancillary buildings of late medieval or 16th-century date from the area. These include three so-far unique *laft* (log-built) buildings with slightly sunken plank floors found on the Library Site (Phase 11) situated well back on a property, away from the front zone against Krabugata. On analogy with Oslo, where 16th-century cellars are located well within the properties, Even Bjørdal raises the possibility that these may be proto-cellars, although they have been partly sunk in order to provide better stability. These small, single-roomed buildings without fireplaces are likely to be storage buildings.⁶⁹⁷

Fragmentary traces of another possible *stue* building and outhouses of possible 16th-century date were documented at S-site where the foundations for three small pre-1598 buildings were buried below the line of Øvre almenning and above a demolished medieval church and its graveyard (Fig. 5.20). Two were small single-roomed *laft*-built buildings with no evidence of hearths and may therefore have had a storage function. The third may have been a two- or three-roomed *stue* building. Finds of slag suggest it may have been a smithy.⁶⁹⁸

⁶⁹⁵ TA1991/1. Photos: L. Renolen & E. Baker/Riksantikvaren.

⁶⁹⁶ TA1996/14, delfelt 14/R.

⁶⁹⁷ Christophersen 1988: 145ff; Bjørdal 2006: 79.

⁶⁹⁸ TA1971/1. Moen 1971: 69, 108.

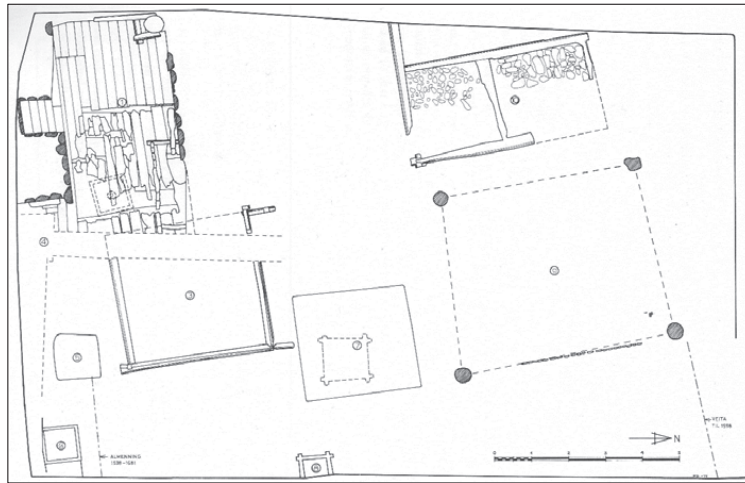


Figure 5.20. Ground plans of 16th-century buildings excavated in the urban centre: two single-roomed buildings (3, 9) and a three-roomed *stue* building (10). Also shown: 16th and 17th-century wells (5, 6, 7, 8), and a 17th-century cellar (1).⁶⁹⁹

Cellular-plan buildings and the advent of the two-storeyed 'svalgangshus'

Following the Reformation, no new timber buildings were built in the former Archbishop's Palace precinct (now Kongsgården) until the late 16th century. During the course of the 17th century, the precinct contained a variety of timber buildings. The earliest accommodated the domestic, administrative and agricultural activities of the Danish overlords, or district governors (*lensherrer*), and after 1660, those of the County Prefect (*stiftamtman*). After 1686, the Danish-Norwegian army used Kongsgården as their regional depot, which also contained dwellings and farm buildings used by the provisioning managers (Chapter 6).

All the new buildings comprise forms not represented here at the time of the Reformation. Interestingly, some of the earliest buildings included elongated cellular-plan buildings which contained chimney-hearth foundations that were no longer located in the corner of a single main living room, but which were located centrally so that they could serve two neighbouring rooms. These may represent modifications of the earlier *stue* building type, and the introduction of a building type with a more elongated cellular ground plan⁷⁰⁰ and an entrance placed mid-way along one long wall.

Three timber buildings which may be dwelling houses or utility buildings succeeded each other on exactly the same site in the south wing (Period 8 c. 1590-1640) (Fig. 5.21). The earliest (K249) was a simple rectangular timber building - single- or two-roomed - resting on corner pad-stones and equipped with a plank floor and brick-built corner fireplace. Its entrance may have been mid-way along its western long wall, marked by stone slabs outside it. This was replaced on the same site by a larger rectangular timber building (K265) which displayed a number of modifications. The stone foundations for a square projection on its western side possibly marked the site a small entrance porch (*bislag*).⁷⁰¹ This building's chimney fireplace foundation was larger than its predecessor's, perhaps supporting a chimney stack, and rather than being in a corner it was now placed midway along the building's eastern long wall. This foundation accommodated *two* conjoined open hearths, and indicated that the ground floor was divided into at least two separate rooms, each served by a fireplace. This was in turn replaced by another rectangular building (K279) which, although smaller, more or less reproduced K265's ground plan, reusing the pre-existing foundations and large fireplace foundation.

⁶⁹⁹ After Moen 1971: 69.

⁷⁰⁰ Two- or three-roomed cellular-plan buildings are known from 16th-century Oslo. Ekroll 1991: 81; Roede 2001: 52-53.

⁷⁰¹ A feature of the Akershus-type of stue building.

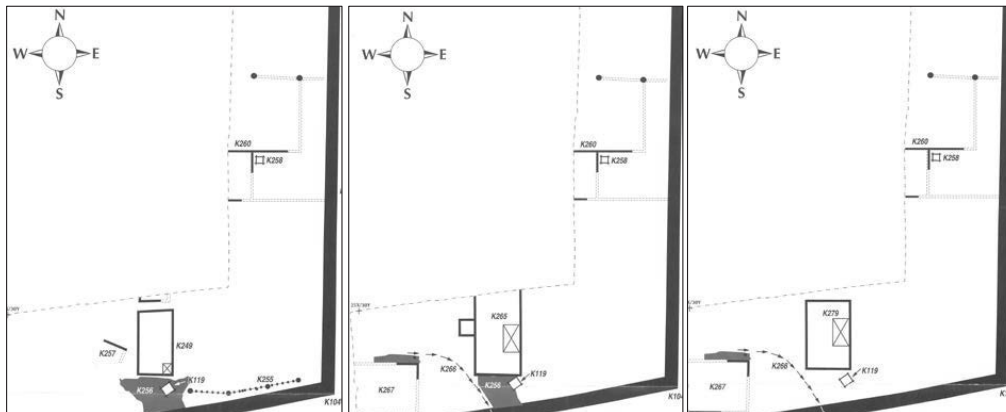


Figure 5.21. Plans showing successive rectangular buildings (l-r: K249, K265, K279) excavated in Kongsgården's southern wing and a building in its eastern wing (K260). Period 8 phases 1 to 3: c. 1590 - 1640.⁷⁰²

A larger and different form of building stood in the east wing, the foundations of which were very badly preserved (K260) (Fig. 5.21). Enough survived to suggest that it was the old and dilapidated building mentioned in a survey of 1629 as 'a large house with many rooms in which the governors resided [with] a gallery facing the courtyard.'⁷⁰³ This may have been a *svalgangshus* (galleried house), a two-storeyed house with external communicating passage or gallery which became increasingly popular among wealthy members of urban and rural society in Norway during the course of the 17th century.⁷⁰⁴

This was replaced on the same site by a possibly even larger *svalgangshus* in 1640 (Period 9), the



Figure 5.22. *Herrehuset* (1640-1672). Detail from Maschius's Prospect.

foundations of which were better preserved (Fig. 5.23). This large, elongated timber building (K284) has been identified as *Herrehuset*, for which historical sources exist, including its representation on Naucner's map and Maschius's Prospect (Fig. 5.22; Appendices A and C). It accommodated a range of administrative, ceremonial, domestic and residential functions and activities connected with the *lensherrer* (district governors). The building is described in detail elsewhere,

combining contemporary written sources and the archaeological evidence.⁷⁰⁵ It was a large rectangular *laft* (log-built) structure, two-storeyed, with an upper-floor external gallery (*svalgang*) along three sides. A projecting rectangular structure (visible on Naucner's map) was placed midway along its western long wall, a form of porch or bay window (*bislag/karnapp*) which accommodated a stairway to the upper floor's external gallery. This gallery provided access to a cellular arrangement of rooms on the upper floor. On the ground floor, a row of rooms also formed a cellular arrangement, each room accessed via doors along the west side. Spaced equidistantly along the central axis of the building were three chimney foundations, two of them accommodating back-to-back double fireplaces, arranged to provide heating for most of the rooms.

⁷⁰² TA1991/1. After Nordeide 2000a, plans 18, 19 & 20.

⁷⁰³ Nordeide 2000a: 143; Nordeide 2003: 241.

⁷⁰⁴ Christensen 1995: 122-132; Roede 2001: 52-53. This building may have been constructed as early as the 1550's (Sørensen 2002: 297).

⁷⁰⁵ Nordeide 2003: 246-248; Nordeide 2000a: 145; Sørensen 2002: 297-298.

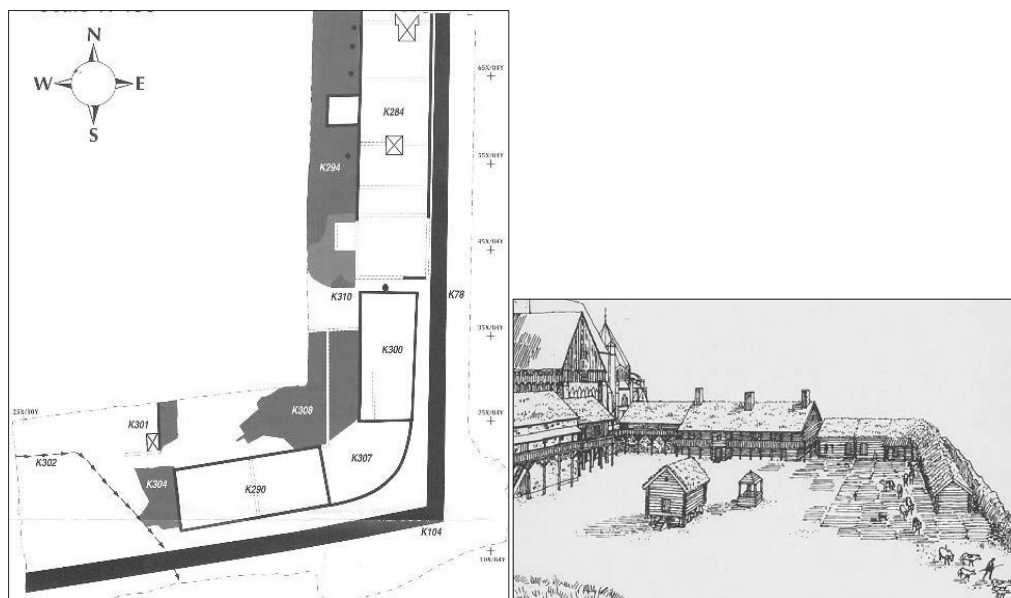


Figure 5.23. Schematic excavation plan (left) and reconstruction drawing showing *Herrehuset* (K284) and its farm buildings (K290, 307, 300) in the eastern and southern wings of Kongsgården (the former Archbishop's Palace).⁷⁰⁶

Herrehuset was built as part of a Crown-funded national initiative aimed at upgrading and standardising the residential buildings (*lensresidenser*) of district governors, most of which comprised large two-storeyed timber buildings.⁷⁰⁷ It was accompanied by a succession of timber buildings to the south which comprised a range of byres, barns and stables related to the farm that formed an important part of the *lensherres'* private economy (Fig. 5.23) (not described here).

These examples of *svalgangshus* in Kongsgården were elite dwellings, and probably among the earliest to be built in Trondheim, perhaps acting as models for an architectural fashion adopted by the local urban elite during the first half of the 17th century.⁷⁰⁸ As the Maschius Prospect indicates, two-storeyed *svalgangshus* are a characteristic feature of the cityscape by the mid-to-late 17th century (Fig. 5.16; Appendix C). A number of large examples can be discerned, particularly occupying properties behind the warehouses, most of which were in possession of wealthier members of the urban citizenry at this time.⁷⁰⁹ These and other houses and outhouses were predominantly built of timber utilising the traditional *laft* technique. Only occasional examples of buildings utilising different building materials and techniques appear to have existed at this time. Documents and the Prospect indicate that some half-timbered dwelling houses incorporating brick existed by the third quarter of the 17th century, while stone dwelling houses are restricted to occasional reused churches.⁷¹⁰

The dates at which new building materials (other than timber and turf) are first utilised in Trondheim's urban housing are currently only approximate. Historical sources suggest bricks were

⁷⁰⁶ TA1991/1 Period 9 Phase 3. After Nordeide 2000a plan 23 & Keller & Ekroll 2008: 70.

⁷⁰⁷ Sørensen 2002: 302.

⁷⁰⁸ Two-storeyed houses with external galleries were regarded as the best form of urban housing ('god kjøbstedbygning') in 16th-century Oslo. Their adoption among the urban elite nationally presumably received a boost following Christian IV's decree that the best houses in his new city of Christiania (founded 1624) should be two storeys high (Roede 2001: 53).

⁷⁰⁹ Berg 1951; Bjørdal 2006.

⁷¹⁰ This seems to mirror the situation in early post-medieval Oslo and post-1624 Christiania, although after 1708 half-timbered buildings increasingly became a characteristic building type there. This was an imported building technique which Christiania's builders adapted utilising their own traditional techniques into a 'creolised' or hybrid form (Roede 2001: 216-235, 357-359).

manufactured at a site at Bakklandet during the medieval and post-medieval periods (5.4.7.4). While medieval bricks are found in small amounts on excavations, no archaeological traces of medieval or early post-medieval brick-built or half-timbered buildings survive. As mentioned, brick is incorporated in late-medieval and post-medieval hearths and fireplaces, although this may be an elite phenomenon. The pre- and post-Reformation buildings in the palace precinct also provide evidence for the use of chimneys and open hearths that replaced the corner flueless stove (*røykovn*) commonly used in the medieval-type *stue* buildings. Likewise, the use of glazed tiles in flooring has been recorded here, though confined to the late-medieval mint workshops in the Archbishop's Palace (Fig. 5.19). Smaller yellow bricks imported from the Netherlands are found on excavations from the early 17th century on, their increasing presence presumably linked to the expansion of trade with Holland during that century.

The earliest clear evidence for use of leaded window glass in timber *stue*-type buildings derives from the buildings occupying the early 16th century Archbishop's Palace precinct (Period 6 Phase 1). Imports of ceramic roof tiles to Trondheim are recorded in the late 17th century,⁷¹¹ and archaeological finds of roof tiles occur first in 17th century contexts, although as Maschius's Prospect shows, turf or timber roofs were still commonplace well into that century.

The architectural history of secular buildings in Trondheim during the course of the 18th century is better documented in the form of extant historical sources and buildings, although most are buildings constructed by the army or the wealthier citizenry.⁷¹² Impulses from abroad that emphasised symmetry included a new type of building that would eventually become a popular form of urban and rural housing during the course of this century. This was the *midtgangshus* (central passage house), of which the military commandant of Munkholmen fortress's stone-built dwelling is the earliest extant example here (built in 1695). After the fire of 1708, General Wibe attempted to initiate plans for a systematic and regulated rebuilding of Trondheim, producing plans for model houses which comprised variants of the central passage plan, preferably built of brick to reduce fire-risk. Some were indeed built, but for the most part in timber, as were most buildings.

The prototype for the residential urban house during the first half of the century was a one-storey timber building with a high roof and attic. During the second half of the 18th century, Trondheim's elite indulged a local passion for, and competitiveness in, the construction of increasingly large panelled timber mansions (*paléer*).⁷¹³

Archaeologically recorded traces of buildings of the types mentioned above, as well as other types and variants which presumably occupied less wealthy properties, are practically non-existent. Exceptions are the well-preserved excavated remains of the provisioning manager's dwelling houses in Kongsgården, which are the subject of my case study (Chapter 6). These comprise successive examples of two of the main types mentioned here: namely a *svalgangshus* and a variant of a *midtgangshus*.

5.4.4.4. Cellars

Trondheim's few known stone cellars of medieval date are, with one exception, associated with the Archbishop's Palace.⁷¹⁴ Stone and wooden cellars associated with ordinary residential dwellings appear to be introduced during the 17th-century. Only one wooden cellar securely pre-dating the 1598 fire has been recorded archaeologically in the built-up area.⁷¹⁵

A number of complete or partly surviving 17th-century *wooden cellars* have been excavated in the urban area.⁷¹⁶ Six cellars excavated on V-site (Televerkstomta) provide a representative closely dated sample. Datable archaeological finds in their construction trenches indicate that the two earliest were

⁷¹¹ Kregnes 1981: 106.

⁷¹² See for example Kavli 1963, 1966, 1996; Håpnes 2004.

⁷¹³ Kavli 1966.

⁷¹⁴ A stone cellar to the north, which may have been the basement in a medieval fortified tower (castell) or a high-status secular dwelling, has been excavated (TA2007/3).

⁷¹⁵ Trondheim's only verified medieval wooden cellar was found on V-site (cellar B38), going out of use during the late 14th or early 15th century. Bjørdal 2006: 69-70 and TA1977/3, unpublished excavation report: 53-55.

⁷¹⁶ See Bjørdal 2006 Appendix B/7 for descriptions of wooden and stone cellars excavated on the Library Site.

built between 1630 and 1651 when they were destroyed by fire, after which four new cellars were built, all of which burned in 1681.⁷¹⁷

No comprehensive survey of the distribution of excavated wooden and stone cellars has been undertaken, but the majority of pre-1681 cellars encountered on excavations in the urban core are all closely aligned against street frontages (e.g. the Library Site - see 5.4.4.2. Fig. 5.15). As pointed out above, this provides archaeological evidence for the movement of the dwelling house from its previous position deeper within the medieval urban plots to the street frontage during the 17th century. Wooden cellars were cheaper to build than stone cellars, and more widely adopted (Figs 5.20 and 5.24). Descriptions in 17th-century property surveys are often ambivalent, although a recent assessment suggests that the majority mentioned there are likely to have been wooden.⁷¹⁸ While stone cellars are occasionally encountered by excavation, most recorded so far are wooden.

The majority of 17th-century wooden cellars range in form from square to rectangular, and from single to composite (ie. two conjoined cellars). Some were accessed via narrow wooden stairs placed on one side (Fig. 5.24), others from trapdoors in the floors above. Most of the wooden cellars excavated on the Library Site and V-site, for example, had walls composed of vertically-aligned split logs or planks.⁷¹⁹ This is the most common form of walling generally. Rarer forms are occasionally encountered, including a cellar on V-site built using the *sleppvegg* technique (ie. horizontal planks slotted into vertical posts), and a cellar with *laft* (log-built) walls on the Library site.⁷²⁰ Wooden cellars contain floors composed of planking, stamped earth or cobblestones. In some instances internal arrangements include wells, an important source of assured domestic water supply, or centrally placed sumps for drainage.⁷²¹ Storage was a main function; some contained sunken-barrel cisterns used for cold storage (site FX), or traces of storage bins.⁷²² Wooden cellars continued in use throughout the 18th century, and even up to the mid-19th century.⁷²³



Figure 5.24. **Left:** typical wooden cellar with wooden stairs (Site FH). **Right:** Vaulted stone cellar.⁷²⁴

The earliest securely dated post-medieval *stone cellars* in Trondheim are of 17th-century date. Some are stone-vaulted, while others only possessed stone walls and floors, and could be accessed from the room above rather than only from an external side entrance (Figs 5.24 and 5.25).

⁷¹⁷ TA1977/3, unpublished excavation report: 61.

⁷¹⁸ Bjørdal 2006: 76.

⁷¹⁹ V-site TA 1977/3, unpublished excavation report: 57-61.

⁷²⁰ Site FX. Cellar 533 in Bjørdal 2006.

⁷²¹ Site FH; S-site TA1971/1 (see 5.4.4.3. Fig. 5.20.).

⁷²² Site FX; TA 1984/4.

⁷²³ Kregnes 1999: 51.

⁷²⁴ Photos: Riksantikvaren and Kommunedelplan 2013-2025.

The only systematic survey of post-medieval stone cellars undertaken in Trondheim to date is a study by architect Jonny Kregnes.⁷²⁵ Using fire-insurance surveys published in 1807, he traced



Figure 5.25. Stone cellar with cobbled floor, sump, external entrance with wooden stairs (left), trapdoor entrance (mid upper) and light well (right). The first provisioning managers' residence, Kongsgården (TA1991/1). After Nordeide 2000a: plan 25.

information regarding about 250 vaulted stone cellars, of which only around 40 are known to have survived. Most were built after the 1681 replanning, although earlier ones are known. They vary greatly in size and form. Approximately half comprise a single room, one third have two, and the rest three or more rooms. Sizes vary from a few square metres to around 100 m², with a variety of plan types. Common characteristics include a rectangular or trapezoidal ground plan, barrel vaulting, and vertical end walls. Walls were plastered, or occasionally tiled. Building materials include stone, brick, or combinations of both, while floors comprise flagstones, cobblestones, brick, wood or stamped earth. Windows were

placed in the wall against the street, secured with iron bars and shutters. Access was usually gained from the property's backyard via a secured iron door and stone steps.

Barrel-vaulted cellars were the most expensive, and Kregnes' analysis of their distribution showed a close correlation with Trondheim's wealthier properties, with the greatest incidence concentrated in the north-east part of the built-up area, north of Kongens gate and east of Munkegata. These cellars were used generally for secure storage, particularly large quantities of wine and spirits for sale.

Previously unrecorded stone cellars are occasionally found during excavation: for example, a fine vaulted cellar at Nordre gate 11⁷²⁶ and stone cellars (without vaults) beneath the two successive dwelling houses provided for the provisioning managers in the army depot in 18th-century Kongsgården (Fig. 5.25 and Chapter 6).

Most abandoned cellars that survive are backfilled with building debris and rubbish, but some occasionally contain artefacts that may have been stored in them at the time of their destruction, usually by fire. One example is a large stone vaulted cellar found on the Library Site (FO) which contained an assemblage of Dutch tin-glazed plates, drinking glass and other items belonging to its possible owner, a wealthy wine merchant and local postmaster, Caspar Wilthagen (cellar 538, Fig. 5.15).⁷²⁷

5.4.4.5. Wells, cisterns, water pipes, rubbish pits and privy (latrine) pits

With cellars, these are the post-medieval structural remains most frequently encountered by excavation, due to the fact they have been dug down into medieval deposits. They are connected with local waste-management and water-supply practices. Privy pits, rubbish pits and abandoned backfilled wells are an important source of material evidence of domestic practices, providing much of that presented in the portable material culture survey.⁷²⁸

Wells and cisterns

Excavations in medieval contexts in the city have produced comparatively few wells and cisterns. For example, on the Library site, only two late-medieval wells were found, in contrast to eight definite and six possible wells of post-medieval date. This might be explained by a medieval preference for using

⁷²⁵ Kregnes 1976, 1981 & 1999.

⁷²⁶ TA2004/13 &15.

⁷²⁷ Bjørdal 2006: 82-83, and his Appendix B/7.

⁷²⁸ See Bjørdal 2006 Appendix B/7 for descriptions of 17th- and 18th-century wells, privies and rubbish pits and their contents excavated on the Library Site.

cisterns to collect surface water, of which three wood-lined examples were found, though this is uncertain.⁷²⁹

Judging from the frequency of well poles, or counterpoise lifts (*brønnvipper*), depicted on Maschius's Prospect (Appendix C), numerous 17th-century urban properties must have had their own wells. Excavation has occasionally revealed wood-lined wells dug into 17th-century backyards, most of which are approximately 1 metre square and wood-lined, the majority utilising the traditional interlocking log *laft* technique customarily used for building houses. *Laft*-built wells are known from late-medieval contexts, but the character and typology of earlier medieval urban wells is poorly documented due to their rarity.



Figure 5.26. Wells, conduit and cistern excavated in the Archbishop's Palace/Kongsgården. L-r: Wood-lined conduit K118 leading to well K119 (at top); plank-lined cistern K196; *laft*-built well K258.⁷³⁰

Eight *laft*-built wells of 16th- and 17th-century date were excavated on the Søndre gate site (Fig. 5.20).⁷³¹ Some of the best documented late-medieval and post-medieval wells and cisterns were excavated in the precinct of the Archbishop's Palace/Kongsgården (Fig. 5.26). A particularly fine example was K119, a deep *laft*-built well dated by dendrochronology to c. 1498, which provided water to a range of workshops here. In a sophisticated arrangement designed to supplement the well's supply with water transported in from another source, it was fed by a buried wooden conduit composed of interlocking hewn logs covered with planks and insulated with birch bark (K118). A shallower, plank-lined cistern (K196) dug into clay subsoil lay beside a mint workshop to the north, used as a privy immediately prior to abandonment. A later well, K258, built at about 1600, is a typical example of a *laft*-built well.

Piped-water system

Water drawn from urban wells would have been of variable quality. For those willing to pay, the freshest and cleanest water was carted in from a nearby stream, *Ilabekken*, to the west of the city. The first plans

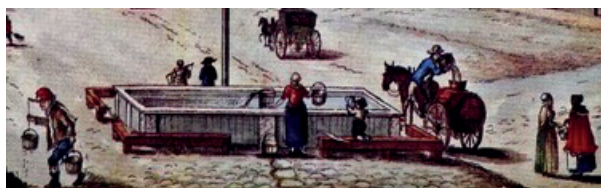


Figure 5.27. The central water stand in the market square c. 1800. Detail of view by Joh. F.L. Dreier (Nordenfjeldske Kunstindustrimuseum).

for supplying the city with water from *Ilabekken* by means of an integrated system of pipes were drawn up in 1724, but were not realised. It was not until 1775 that a new plan was initiated, this time with the dual aim of supplying cleaner drinking water and improving access to water for fire-fighting. Following a three-month construction period, the system was opened in 1777,

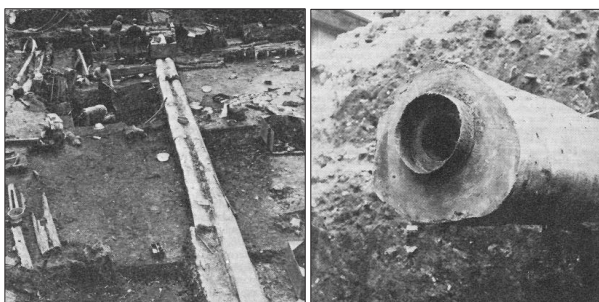
⁷²⁹ Christophersen & Nordeide 1994: 151-154.

⁷³⁰ TA1991/1. Photos: NIKU/Riksantikvaren.

⁷³¹ TA1971/1 S; Moen 1971: 111. Including pre-fabricated examples with numbered elements.

financed by money from Thomas Angell's charitable endowment (Appendix H). Two parallel pipes composed of hollowed-out logs laid end-to-end led water from a specially constructed dam high on Steinberget, down through the Ila suburb and Skansen ramparts and into the city itself, where water was dispersed via a number of tributary service pipes laid under streets.

Public water stands with cisterns were established at main junctions and in the centre of the main square (Fig. 5.27) while additional wells were placed at regular intervals along the pipes. A few service pipes led into wealthier private properties, at a cost of an annual rent of 4 riksdaler. By 1806 there were 36 such private service pipes. Each pipe comprised a spruce tree-trunk, 10 alen (c. 6 metres) long, 10 inches wide at the top, bored out from both ends and joined with others using iron sleeves. The pipes were placed in trenches, and sealed with clay to keep them moist to prevent splitting. The public stands and cisterns were constructed of planks, square or rectangular in form, and 2-3 metres deep. The



system was prone to leaks and rotting, and required frequent maintenance and replacement, with a major overhaul in the 1840s.⁷³² Wooden pipes belonging to this system are encountered archaeologically (Fig. 5.28).

Figure 5.28. Wooden water pipes exposed during excavations in Søndre gate in 1971, and detail of the end of a bored-out pipe with metal sleeve.⁷³³

Rubbish pits and privies

There is uncertainty regarding the nature and use of pits, occasionally wood-lined, found sporadically in medieval contexts in the city. On the Library Site, for example, some are interpreted exclusively as privy/latrine pits, others as purpose-made rubbish pits, while some may have had a dual function. Some comprised simple dug pits filled with moss which is often associated with human cess deposits. Others were wood-lined structures, occasionally situated at the tidal rivers' edge to facilitate periodic flushing.

Although these may represent individual attempts to manage human and domestic waste more efficiently, much domestic rubbish and human and animal waste accumulated in open areas, or was dumped in levelling deposits beneath new buildings or road surfaces and the interiors of caisson foundations at the waterfront, or even in the river itself, despite its prohibition. A communal dump is mentioned in later medieval sources, although it has not been located archaeologically.⁷³⁴ As in the case of wells, medieval pits are notably fewer in number than the purpose-built rubbish pits and privy pits associated with post-medieval contexts.

The random nature of excavation of post-medieval deposits means that we do not have a comprehensive typology or dating of rubbish pits and privies across the urban area. A rough assessment of reported results suggests that simple *unlined* rubbish pits do not appear in great numbers until the 17th century, dug into backyards across the built-up area, particularly those to the north and west. There are also instances where rubbish pits were dug into the surfaces of post-1681 streets and even the city square!⁷³⁵

Furthermore, comparatively few *wood-lined* rubbish pits pre-date the 18th century, earlier examples possibly being located exclusively in elite contexts.⁷³⁶ An example is a large early 17th-century wood-lined pit excavated recently in the backyard of a wealthier property fronting Krambugata (Fig. 5.29). In addition to a small amount of domestic rubbish, it contained manure from domesticated animals kept on the property. It was lined with cross-braced standing wooden planks, as is the case with many others. Other 17th-century wood-lined pits include examples built of *lafted* timbers or vertical split

⁷³² Lund & Støren 1973: 7-25.

⁷³³ Photos: Riksantikvaren.

⁷³⁴ Christophersen & Nordeide 1994: 154-156.

⁷³⁵ E.g. Kongens gate: TA2013/2; Torvet TA2016/13 & TA2017/11.

⁷³⁶ See examples from the Library Site listed in Bjørdal 2006: Appendix B/7.

logs.⁷³⁷ It remains to be seen whether the rarity of 16th- and 17th-century wood-lined rubbish pits reflects the true situation, perhaps linked to status, or is an arbitrary result of excavation priorities.



Figure 5.29. An early 17th-century plank-lined rubbish pit, with discarded pottery and passglass *in situ* (right) (Søndre gate 7-11).⁷³⁸

A number of large purpose-built wood-lined 18th-century rubbish pits have been excavated, many filled with large volumes of domestic rubbish. Some were filled with so-called ‘clearance dumps’, comprising large amounts of ceramic and glass objects in particular, clearly dumped *en masse*, possibly in connection with a move or a death. Examples include an early 18th-century pit filled with a great variety of local and imported ceramic table- and kitchenwares, and a mid 18th-century pit filled with a huge quantity of glass tablewares (Fig. 5.30).⁷³⁹



Figure 5.30. **Left:** Large plank-lined rubbish pit emptied of a large assemblage of discarded ceramics and glass objects at Erling Skakkes gate 1 (TA1972/2 E-site). **Right:** A plank-lined rubbish pit filled with a large ceramic assemblage at Dronningens gate 14 (TA2004/13).⁷⁴⁰

Such pits provided a convenient secure place to dump material deemed hazardous. Domestic objects and rubbish also often ended up in privy pits, most of which were wood-lined, usually plank-built (Fig. 5.31, left). A typical example is the mid 18th-century privy belonging to the household of the provisioning manager in Kongsgården (see Chapter 6) (Fig. 5.31, right). A wooden shed in the yard behind the house accommodated two neighbouring privy pits. In addition to much human excrement, they contained a possible clearance dump of domestic refuse. Analysis of the excrement provided dietary evidence and traces of human parasites. Similar analyses were conducted on deposits in an early 16th-

⁷³⁷ Lunde 1977: 94; Bjørdal 2006: Appendix B/7.

⁷³⁸ TA2017/3. Photos: NIKU.

⁷³⁹ Dronningens gate 14 (TA2004/13) & Erling Skakkes gate 1 (TA1972/2 E). Objects from these are presented below.

⁷⁴⁰ Photos: Left: Riksantikvaren. Right: NIKU/Riksantikvaren.

century latrine pit for a privy which pre-dated this on the same site. This had been tucked away behind buildings in the south-east corner of the Archbishop's palace precinct (K163, Figs 5.17 and 5.18).⁷⁴¹



Figure 5.31. Plank-lined privy pits. **Left:** Mid 18th-century privy pit at Søndre gate 7-11 (TA2017/3) with objects in fill. **Right:** One of the twin pits for the mid 18th-century privy in the second provisioning managers' residence in Kongsgården (TA1991/1).⁷⁴²

Although differing in their socio-cultural contexts, construction and contents, the siting of both these privies in respect to buildings represent conscious attempts to segregate places of defecation from public gaze. Many privies in post-medieval urban properties are placed towards the rear of the back yards, in contrast to the situation on medieval plots. From the late 17th century on, the task of emptying these was given to a paid workman, the *nattmannen*,⁷⁴³ although no public refuse collection or cleaning authority was established until the early 20th century.

5.4.5. Religious institutions: churches, monastic foundations, graveyards

The most striking discontinuity in Trondheim's topographic assemblage pre- and post-Reformation is the drastic reduction in the numbers of churches and graveyards which were in active use. However, while Trondheim was divided into two parishes served by only two churches by the end of the 16th century, we do not have a precise insight into the nature, rate and chronology of church decommissioning prior to this. Some churches may have been abandoned long before the Reformation, while almost all those standing in 1531 were damaged and abandoned following the catastrophic urban fire of that year. Archaeology is equipped to provide evidence regarding chronologies of use, abandonment and possible refurbishment. Archaeology is also able to provide evidence regarding burial practices and diverse aspects of human health through the excavation of graveyards. While medieval burials are automatically protected, it is only recently that special dispensation has occasionally been granted for the excavation of post-medieval burials.

⁷⁴¹ Nordeide 2000a; Nordeide 2003: 292-294.

⁷⁴² Photos: Left: NIKU. Right: Riksantikvaren.

⁷⁴³ Supphellen 1997: 131, 184, 334.

5.4.5.1. Churches and monastic buildings

Due to ambiguities in the historical and archaeological evidence, there are still a number of uncertainties regarding the exact number, periods of use, architectural character and locations of Trondheim's

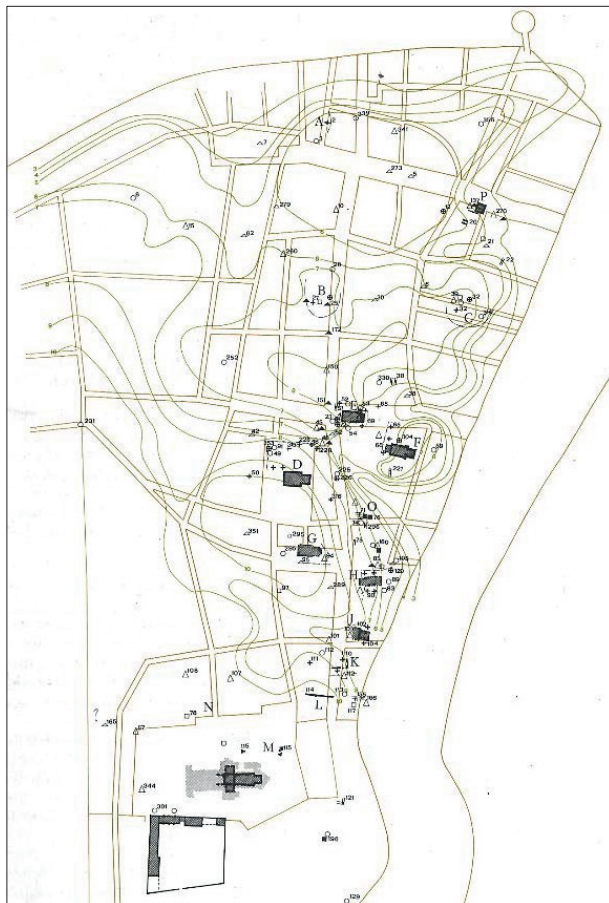


Figure 5.32. Map of Trondheim based on Naucle's map of 1658 showing archaeological observations of church buildings, burials and unidentified stone-built structures. After Lunde 1977 fig. 132.

medieval churches (Fig. 5.32). In addition to Nidaros Cathedral and Christchurch (its predecessor on the same site), sixteen churches are mentioned in medieval sources. At least eight of these were parish churches, while others were private churches and chapels. In addition, five monastic foundations lay in or near to the built-up area. While some churches may have been abandoned during the medieval period, particularly after the population decline following the Black Death, all those that existed in 1531 burned during the great fire of that year (with the exception of the Dominican priory).⁷⁴⁴ Most fell into disuse and ruin, and many were plundered for their valuable stone. Church masonry is found occasionally reused in post-medieval cellar walls or ground walls, or as loose finds on excavations. However, Lunde is of the opinion that, despite royal decrees of 1552 and 1568 authorising the reuse of building stone to repair the Cathedral, for example, many churches may have stood throughout the rest of the century as visible ruins.⁷⁴⁵ According to Berg's reading of historical sources, including Maschius's Prospect, a few may have been refurbished as private houses for wealthier citizens during the mid-16th century before being demolished in the 17th century. These included the

Franciscan friary church beside Krabbugata, a 'stenhus' (stone house) in the Brattøra area on the northern periphery (possibly the former Church of St. Margaret), and two others which may coincide with ruins and foundations for two medieval churches (The Church of the Cross and St. Benedict's) which stood to the east of Bredegata's southern portion. Lunde highlights the uncertainty of the evidence, and casts doubt on Berg's correlations with churches, although he admits the possibility that two stone buildings may have been refurbished churches, or portions thereof.⁷⁴⁶

Of the medieval church buildings, only Nidaros Cathedral and St. Mary's (renamed Vår Frue - Our Lady - in 1681), survive today. Their architectural history will not be dealt with here. Following the post-Reformation diocesan reorganisation in 1589, both Vår Frue and the partly ruinous Nidaros Cathedral served as Trondheim's two parish churches. In addition, historical sources, including Naucle's map,

⁷⁴⁴ Berg 1951: 70-73; Lunde 1977: 208-220.

⁷⁴⁵ Lunde 1977: 180. That the ruin of a church in Søndre gate (St. Gregory's?) was drastically plundered down to its ground walls by 1599 has been documented by excavation (Long 1975: 16-17).

⁷⁴⁶ Berg 1951: 70-73; Lunde 1977: 179.

indicate that the timber church (Hospitalskirke) that was built to serve the city's hospital for lepers and the poor (founded in 1277) sited on the approach road to the west continued to exist until 1705.⁷⁴⁷

The ruins of six churches have been documented archaeologically,⁷⁴⁸ most in the 19th and 20th centuries, though not all have been identified securely by name (Fig. 5.32). Few have been excavated in a way which can provide a more refined insight into the nature and chronology of demolition or reuse of the city's decommissioned churches following the Reformation over and beyond the incomplete testimony of historical sources. Archaeology has provided a secure *terminus ante quem* for demolition of a ruin identified as St. Gregory's (Gregorius kirke), which was plundered in the late 1500s, and then built over, first by small timber buildings and subsequently the new fire-break street Øvre almenning, established in 1599.⁷⁴⁹

A lack of detailed excavated evidence also applies to the Franciscan friary and Dominican priory in the built-up area and the three monastic houses which lay outside the urban area proper: Nidarholm abbey on the island of Munkholmen to the north, Bakke convent to the east of the river, and Elgeseter priory to the south of it. Excavation has revealed that the chancel of Nidarholm abbey church was reused as some form of shelter during the 17th century, perhaps in connection with the island's use as a temporary fortification during hostilities with an invading force of Swedes in 1658. However, its stone was plundered for reuse in the major late 17th century fortification works here. Following the Reformation, Elgeseter priory was confiscated by the Crown in 1546 for use as a residence for the first



Figure 5.33. Prospect dated 1800 showing the western end of Kongens gate. Foreground: Trondheim hospital with its church and graveyard. Background: the city gate, ramparts, and Ila suburb with piled pallets of timber for export at the waterfront. Detail of prospect by Joh. F.L. Dreier.

Lutheran bishop in Trondheim, then became a farm for the district governor in 1559, and was burned by the Swedes in 1564. In 1606, stone from its ruin was reused in Kongsgården (the former Archbishop's Palace) and Vår Frue Church. The ruin, now below ground, was visible in 1773 when its ground plan was drawn by local antiquarian Gerhard Schøning.⁷⁵⁰

Two new churches were built outside the main urban area following the Reformation, both timber-built octagonal structures. These comprised a new church beside Trondheim hospital to the west in 1705, built on the site of the medieval church that it replaced (Fig. 5.33), while Bakke church was built near the former Bakke convent to the

east of the river in 1715.⁷⁵¹ Both still stand, in modified form.

5.4.5.2. Graveyards

Medieval parish churches and monastic houses had burial rights, and in addition to the graveyards accompanying the standing and ruined churches, the locations of a number of lost medieval churches within the city are indicated by archaeological finds of burials (Fig. 5.32). Post-medieval burial sites (pre-1800) are restricted to the two surviving parish churches, Nidaros Cathedral and Vår Frue, the hospital's churchyard to the west, and a 17th-century plague cemetery situated at the then-urban periphery to the

⁷⁴⁷ Grankvist 1982: 157.

⁷⁴⁸ Excluding the foundations of Christchurch under the cathedral, but including the recently discovered site of a timber church, possibly St Clement's, rebuilt in a number of phases (TA2017/3).

⁷⁴⁹ Moen 1971: 108-109; Long 1975: 16-17.

⁷⁵⁰ McLees 1992; Lunde 1977: 215-219.

⁷⁵¹ Grankvist 1982: 157-184.

north-west (see Naucley's map, Appendix A). With the exception of the latter, their periods of use span the 1681 urban topographic divide, although most excavated material derives from the post-1681 era.

Human osteological remains are an important source of scientific information regarding many aspects of the lives and deaths of past individuals and populations. Nidaros Cathedral's cemetery has been the subject of two major excavations which have provided insight into its differentiated use during the post-medieval period, and the health of different sections of the local population.

During renovation of the open area beside the west front, Riksantikvaren granted special dispensation to excavate the post-medieval burials here due to the site's perceived 'national importance'. An attempt to regulate the cemetery into differentially priced demographic zones was made in 1663, and the area fronting the west front was designated for the free burial of soldiers serving in the cavalry and infantry who died within the parish, and their families. This low social status designation was retained in subsequent churchyard plans drawn up following a ban on burials within churches in 1805. The date-range of the excavated burials was 18th - early 19th century (including reburials of 18th-century coffins removed from the cathedral crypt during its renovation in the 1860s). Some 60 well-preserved articulated skeletons of adults and infants were documented, males and females being equally represented. Osteological analysis provided insight into the health of this low-status population. It indicated a comparatively low age at death of males, generally low adult stature, and a variety of pathological traits and disease, including *tibial periostitis* (lesions caused by chronic infection) and *enamel hypoplasia*, and diseases caused by poor nutrition (*osteomalacia* and scurvy) and bacterial infection (leprosy, tuberculosis, venereal syphilis).⁷⁵²



Figure 5.34. The Cathedral Visitor Centre excavation (TA2004/21). **Left:** Overhead view showing densely packed burials in the part of the cathedral cemetery reserved for the poor (left) and more regularly spaced reburials of coffins of wealthier citizens brought from the cathedral crypt (right). **Right:** a portion of a sawn cranium from the graveyard for the poor; early evidence for medical dissection.⁷⁵³

An excavation further north conducted prior to the construction of the new Visitor's Centre in 2004 uncovered a further 300 burials, again all post-medieval and excavated by special dispensation (Fig. 5.34). This caught the part of the churchyard set aside for the poor during the 18th and early 19th centuries, in which inhumations were densely packed and intercutting.⁷⁵⁴ In contrast, neatly arranged rows of reinterred 18th-century coffins containing the remains of wealthier citizens lay in an empty area to the east of this segregated burial ground for the poor, transferred here from the cathedral crypt during renovation work in the 1860s. The osteological material was only summarily analysed, but revealed that the vast majority derived from adults, with a rough parity between male and female, most of whom died in middle age. The most common documented disorders and traumas were related to poor dental hygiene, *periostitis*, *cribra orbitalia* (the result of chronic anaemia), *osteoarthritis*, tuberculosis, bone tumours, septic arthritis and broken bones. Of particular interest was the discovery for the first time in

⁷⁵² Reed et al 1998.

⁷⁵³ Photos: Bruce Sampson/NIKU.

⁷⁵⁴ 'Fattighaugen' / 'Poor Garden'

Trondheim of evidence for early human dissection (Fig. 5.34). Three adults had sawn crania, while a fourth was reburied with dissected limbs laid back in correct anatomical position. These lay in the graveyard for the poor and are probably of early 19th-century date.⁷⁵⁵ This site produced a particularly abundant and varied range of evidence which has the potential to offer much information on social differentiation and the health status of two different social groupings during the 18th and early 19th centuries.

The only other cemetery used for normal parish burials following the Reformation was Vår Frue church's graveyard, the size and form of which is shown on Naucler's map (Appendix A; see also appendices E and F). Following the 1681 regulation, its northern part disappeared under Kongens gate. There are indications from earlier observations, watching briefs and minor excavations that the churchyard was subsequently extended to the east, over pre-existing buildings and properties. Occasional burials of medieval and post-medieval date have been excavated at various locations around the church.⁷⁵⁶ The churchyard went out of use in the 1830s. Burials in private vaults took place inside the church from at least the early 17th century. Most were built after 1681, and over 100 coffins were installed here until such burials were banned in 1805. These were predominantly burials of members of Trondheim's wealthier families during the 17th and 18th centuries. A number of coffins and their contents were examined and documented archaeologically in connection with a recent refurbishment. Due to excellent preservation of the coffins and mummified individuals, this survey provided detailed information on, among other things, burial practices, coffin types and furniture, gravegoods, and the clothing and preparation of the dead.⁷⁵⁷

The two other early post-Reformation graveyards lay on the western urban periphery. The medieval hospital church's graveyard continued to be used (Fig. 5.33), while the cemetery shown on Naucler (The New Churchyard/*Ny kirkegård*) in a peripheral location behind the fjord foreshore accommodated victims of the plague of 1629 and subsequent 17th-century epidemics (Appendix A; Appendices E and F). It also functioned as an adjunct to Vår Frue church and for the burial of the poor, and was decommissioned in 1791.⁷⁵⁸ No systematic investigations have been undertaken here due to its unprotected status.

5.4.6. Secular institutions: the royal enclosure, hospital, guildhall, city hall, schools, and institutions for poor-relief and correction

The following provides an overview of various secular institutions, drawing primarily on historical evidence for their localisation (see Appendices E and F for their locations). With the exception of the medieval royal enclosure and post-medieval Kongsgården (the confiscated medieval Archbishop's Palace), none has yet been archaeologically investigated. This overview draws attention to them as important socio-cultural and material entities, and potential sources of archaeological information regarding their spatialities and practices.

5.4.6.1. The medieval royal enclosure (medieval *kongsgården*)

This segregated medieval royal manor or enclosure was established by King Harald Hardråde in the mid-11th century, but the absence of above-ground traces makes its precise location conjectural. Its traditional localisation to the area between the cathedral cemetery and the river is based on historical evidence. The date at which it was abandoned and the area became a garden and fields (as shown on Naucler's map, Fig. 5.35) is uncertain.

A few material remains may be connected with the enclosure. Old sightings of buried wall foundations at the eastern end of today's Bispegata place its northern boundary at the southern termination of Bredegata (Figs 5.9 and 5.35). They include the remains of a stone structure interpreted as a possible northern gate, still visible above ground in the late 18th century.⁷⁵⁹ This evidence was recently supplemented by the discovery of a substantial east-west aligned medieval stone wall beside

⁷⁵⁵ Rapport Arkeologiske utgravninger Trondheim TA2004/21, nr. 07/2007.

⁷⁵⁶ Lunde 1977: 54-56; e.g. TA2008/9.

⁷⁵⁷ Jantsch & Ødegården 2007.

⁷⁵⁸ Lunde 1977: 219; Berg 1951: 261; Bratberg 2008: 404.

⁷⁵⁹ Lunde 1977: 80, 207.

the river, possibly the easternmost extension of the walling observed further west.⁷⁶⁰ There are consequently grounds for suggesting that the northern boundary of the royal enclosure was marked by

a substantial monumental stone wall where it met Bredegata and the southern edge of the urban area.

The royal enclosure is last mentioned in 15th-century documents.⁷⁶¹ It was abandoned and completely demolished between then and 1658, when Naucler's map (Fig. 5.35) indicates the presence to the east of the cathedral of a garden (*Kungsträgård/The King's garden*), as well as a featureless, though physically delimited open area leading off the southern end of Bredegata, and a large field or meadow (*åker*) to the south. The name of the garden may hark back to the former occupant of the area, but is perhaps just as likely to denote the garden's association with the post-medieval *Kongsgården*, the former Archbishop's Palace, which was now Crown property. However, it is suggested that the boundary between the garden and the cathedral graveyard may preserve, in part, the former



Figure 5.35. The Cathedral, Kongsgården, the King's Garden, and fields. Detail from Naucler's map of 1658.

boundary between the medieval royal and ecclesiastical enclosures.

There are no historical references to the spatial organisation and structural content of the medieval royal enclosure. Stratified medieval deposits, building remains and artefacts have been registered recently in the area of the garden, open area and field shown on Naucler's map which indicates the presence of long-term occupation including *in situ* domestic and craft-related activities.⁷⁶² These investigations indicate that the enclosure probably extended as far east as the riverbank, and south to the site of earlier documented finds of medieval skeletons which possibly mark the location of a church (or royal chapel?) at the southern end of the enclosure.⁷⁶³ Excavation evidence is too fragmentary to allow insight into how the interior of the enclosure was organised or what kind of buildings it contained. Scattered observations of stone walls in today's graveyard may indicate that it contained some stone buildings, although many ancillary buildings here may have been timber-built.

5.4.6.2. Post-medieval *Kongsgården*

The medieval Archbishop's Palace became Crown property after the Reformation, and was renamed *Kongsgården* (Fig. 5.35). It became the centre of local and regional governance from 1556 when it was taken into use as the residence and administrative headquarters of the regional governors (the Danish *lensherrer*). They were replaced by the County Prefect (*Stiftsamtman*) after 1660, and the army subsequently took over the complex in 1686 as a military depot and arsenal.

Major excavations were conducted in its eastern and southern wings during the 1990s, which included systematic investigation of these, and subsequent, phases of occupation. The results are described in detail elsewhere.⁷⁶⁴ Relevant aspects of the archaeological material from late-medieval and post-medieval phases are presented in the course of this characterisation and in Chapter 6.

5.4.6.3. The guildhall (*Gildeskålen*)

This was a building used for gatherings and festivities by the association of St Michael (*Miklagildet*), whose members were prominent burghers. It was formed in the medieval period, but was probably

⁷⁶⁰ TA2007/17.

⁷⁶¹ Bratberg 2008: 300.

⁷⁶² TA2001/8, TA2001/15, TA2002/15; TA2003/39.

⁷⁶³ TA192.

⁷⁶⁴ Nordeide 2000a; Nordeide 2003.

disbanded following the Reformation. Its precise location is unknown, though it stood somewhere in Brattøra on the northern periphery. It may also have functioned as the medieval city hall.⁷⁶⁵

5.4.6.4. Trondheim's Hospital (*Trondhjems hospitalet*)

Founded in 1277 by Archbishop Jon Raude, it is one of Norway's oldest social institutions, and is still in existence today. King Magnus Lagabøte donated the land to the foundation, which was possibly originally intended for lepers, though it also functioned as a hospital for the poor. During the post-medieval period it functioned as a leper hospital, poor house, mental asylum and infirmary.⁷⁶⁶ It had an accompanying church and graveyard (see 5.4.5.).

5.4.6.5. Early institutions for poor relief and correction

From the mid-17th century on, a number of institutions for the care of the destitute and the correction of petty criminals, vagrants, beggars and 'promiscuous' women were established in the city. These were founded on the initiative of the city's newly established poor-relief system, the first in Norway to be organised on an incarceration model, whereby people with deviant behaviour were confined, and those unable to take care of themselves were looked after. The poor, orphaned and indigent were dispersed among a number of institutions, financed by donations and, particularly in the 18th century, by charitable endowments.⁷⁶⁷

Institutions that existed prior to 1681 (Appendix E) include: the first poorhouse (*Spinnehuset/Fattighuset*) (1630-1699), located on the main road leading into the city to the west; the first workhouse (*Verkshus/tukthus*) (1639-1651), the first of its kind in Norway, and the second workhouse (1669-1681), built on two separate sites to the north-east of the cathedral; the first *St. Jørgens hus*, a home for elderly poor, situated on a site north of the cathedral between 1607 and 1681; and the first orphanage, *Barnehuset* (1637-1681), situated in the same area.

With the exception of the first poorhouse, situated on the western urban periphery, the majority of these institutions were concentrated in the southern part of the urban core between the market place and the cathedral. These are all likely to have been timber buildings, and almost all disappeared before or during the 1681 fire or the post-fire re-planning. The former King's Garden was taken over as the second workhouse's garden between 1669 and 1681. The second workhouse is depicted on Maschius's Prospect (Fig. 5.36), which shows a large enclosed

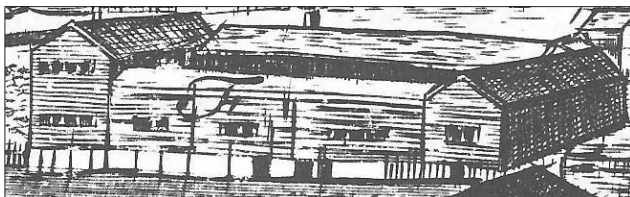


Figure 5.36. The second workhouse (*tukthus*). Detail from Maschius's Prospect 1674.

complex comprising 4 two-storeyed timber buildings, possibly *svalgangshus*, ranged around a central

yard.

Following the 1681 fire, many former institutions moved out of the built-up area to the western periphery, where they were joined by new ones (Appendix F). In 1699 the poorhouse, *Fattighuset*, moved to a new site beside the hospital, and then in 1721 to a site not far from the city gate. In 1770, a home for poor elderly women, *Thomas Angells stuer*, was added to the northern end of *Fattighuset*. The workhouse was not rebuilt until a new house of correction, *Tukthuset*, was built just to the east of the poorhouse in 1732. In 1734, *Barnehuset* was amalgamated into a new charitable foundation, *Waisenhuset*, together with *Blåskolen*, a home for poor boys and girls. *St. Jørgens hus*, a home for elderly women, was the exception in staying within the built-up area, moving to its present site in 1691. *Thomas Angells hus*, a home for wealthier elderly women and one of the city's rare Baroque-inspired brick buildings, was established nearby in 1772.

⁷⁶⁵ Bratberg 2008: 203, 360.

⁷⁶⁶ Grankvist 1982.

⁷⁶⁷ Grankvist 1981; Bratberg 2008: 170-171.

5.4.6.6. Schools

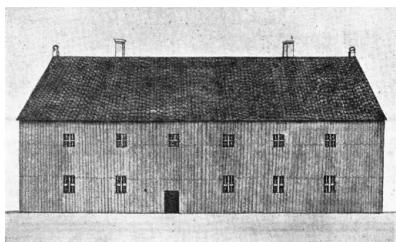


Figure 5.37. The Latin School, as drawn by Gerhard Schøning in 1774.

The Latin School (*Latinskolen*) was Trondheim's first school, with medieval origins. Between 1573 and 1783 it occupied a site just beside the north-west corner of the cathedral cemetery. It was drawn in 1774 by local antiquarian Gerhard Schøning, at which date it comprised a large two-storeyed weatherboarded timber building with a tiled roof (Fig. 5.37). A monumental brick-built school building replaced this on a site further north, where it stands today (Fig. 5.11).

5.4.6.7. City hall (*rådhus*)

The existence of a medieval city hall is undocumented. Prior to 1669, the post-medieval city hall occupied a site on the southern edge of the pre-1681 market place. Its architectural character is unknown. In 1669, the city hall was moved a short distance to the north to occupy the site of the ruin of a medieval church and friary. This fine baroque-style stone- and brick-built building, which also formerly housed the city gaol, stands on the site today.

5.4.6.8. Tollbooth (*tollbod*)

The upturn in national and international maritime trade during the 17th century required facilities for the receipt of tolls levied on increasing amounts of goods which entered the harbour. The first tollbooth stood midway within the row of timber warehouses lining the western bank of the river Nid. It was moved to the northern end of this row in 1651.

5.4.7. Sites of crafts and industries

Sites at which varieties of crafts were practiced have been identified archaeologically in *medieval* contexts both within the urban core and on its periphery. They comprise buildings and/or waste products associated with metalworking (e.g. ironsmithing, copper-alloy working, precious metalworking), leatherworking (e.g. shoe manufacture), boneworking (e.g. comb manufacture), and woodworking (e.g. carpentry, vessel manufacture).

During the immediate pre-Reformation period, Trondheim's chief political and economic institution, the Archbishopric, gathered a variety of craft industries central to its operation within the confines of the Palace precinct (Period 6, c. 1500 – 1532).⁷⁶⁸ Not all the functions of the small timber buildings and other structures occupying the eastern and southern wings of the precinct have been established, but individual buildings have been associated with minting, weapon manufacture and/or repair, shoe manufacture and repair, and possibly blacksmithing (see 5.4.4.3, Figs 5.17-5.19). One building has been identified as a communal kitchen with an almost industrial-sized hearth. Although this is an elite context with particular specialised power-related production (ie. minting, weapon manufacture), many of the buildings, structures and waste products excavated here are representative of types of processes and specialised crafts that would have been present in urban contexts of the late-medieval/early post-medieval periods.

This site has provided us with the best archaeological information about the materiality, practices and organisation of craft industries at the time. We have otherwise only scattered material traces of post-medieval crafts and craft industries, although their variety is indicated by historical information. For example, a tax census (*skattemanntall*) of 1687 listed 240 independent craftsmen who represented 40 different trades, including the following: bakers, coopers, brewers, leatherworkers, furriers, glassmakers, goldsmiths, glovemakers, hatmakers, wheelmakers, vessel casters, miller, saddlemaker, carpenters, cobblers and shoemakers, tailors, butchers, blacksmiths, masons, a clockmaker, and weavers.⁷⁶⁹ The following sections present a number of crafts whose sites within the post-medieval city are known from historical and/or archaeological sources.

⁷⁶⁸ Nordeide 2000a: 76-125.

⁷⁶⁹ Supphellen 1997: 117-118, 191ff; Vigerust 2000: 18-33.

5.4.7.1. Metalworking: smithing, casting, founding, minting

The concentration of fire-hazardous specialised metalworking in peripheral locations during the medieval period has been mentioned above. As discussed, the area devoted exclusively to metalworking along the northern periphery for much of the medieval period was transformed into an area of urban properties from around 1600. The area had previously contained several generations of regulated workshops, and large accumulations of waste debris, particularly slags and charcoal. Both ironsmithing and copperworking were carried out here from the mid-late 12th century until the late-medieval period.⁷⁷⁰

Traces of late-medieval metalworking have also been revealed on the western periphery in the form of diversified metalworking practices in specialised workshops which may have been in simultaneous use during the 15th century. This includes evidence for bronze bell- and cauldron-founding in the form of waste mould fragments and an *in situ* base of a bell-mould (Fig. 5.38).⁷⁷¹ In addition, the floor of an iron smithy and smithing waste in the form of slags, hammerscale and charcoal were found on the northern side of the pre-1681 diagonal street *Smidesgjeilan* here. Traces of at least one other workshop in which copper and copper alloys were being worked were also recorded. This activity ceased and was replaced during the 16th and 17th centuries by regulated residential properties, a development



Figure 5.38. Trondheim market square excavation 2016. *In situ* base of bell-founding mould. Torvet TA2016/13. Photo: NIKU.

which mirrors the change from industrial activity to residential settlement along the northern periphery.

We have not yet encountered evidence for metalworking practiced on a comparable scale during the post-medieval period elsewhere in the urban area. Occasional traces of post-medieval metalworking occur across the urban area, but there are as yet no indications that this was conducted in a collectively organised and spatially segregated manner as

before. The apparent abandonment of the specialised metalworking sites on the northern and western urban peripheries during the transition to post-Reformation times may suggest that urban metalworking and metalworkers underwent some form of organisational change at this time.

Specialised metalworking practices took place in connection with the Archbishop's mint located in the precinct of the Palace in the decades preceding the Reformation. These are dealt with in detail elsewhere.⁷⁷²

5.4.7.2. Tanning and leatherworking

Historical evidence and recent discoveries in the northern part of the pre-1681 western urban periphery, notably in the vicinity of the junction of today's Nordre gate and Thomas Angells gate, indicate that this was an area where small-scale crafts and industries were located. Traces of late-medieval metalworking here are replaced by evidence for 17th-century tanning in the form of thick accumulations of bark, lime and animal hair and leather offcuts recovered from two neighbouring localities.⁷⁷³ There are also historical references to tanning using bark at Bakklundet.⁷⁷⁴

⁷⁷⁰ Espelund et al 1989; Bergquist & McLees 2015.

⁷⁷¹ Excavations at Trondheim's city square (Torvet): TA2015/18, TA2016/13 & TA2017/11.

⁷⁷² E.g. Nordeide 2000a; Saunders 2001; Nordeide 2003; Lohne *et al* 2010.

⁷⁷³ TA 2016/12; TA2014/10.

⁷⁷⁴ Bull 1997: 73.

5.4.7.3. Pottery production

There is only slight documentary evidence for the presence of local potters prior to 1681, including references to a potter in 1606-7 and a Flensburgian immigrant potter living in Bakklundet prior to 1681, although an increasing (though still small) number are mentioned during the course of the 18th century. These were the earliest producers of the local *Trønderkeramikk* redwares utilising local sources of clay, and most of their workshops were situated in the new suburbs of Bakklundet and Ila.⁷⁷⁵ No workshops or kilns have been located archaeologically, though wasters and kiln furniture have been found at sites in Bakklundet and at Bispegata.⁷⁷⁶ Our knowledge of the character and range of early Trønderware production is currently confined chiefly to remains of products, in the form of the large amounts of sherds found in archaeological contexts within the city (see 5.5.).

5.4.7.4. Brick- and tile-making

A medieval brickworks was probably established by King Håkon Håkonsson in the early 13th century on the eastern riverbank in the southern part of the Bakklundet area near a local source of clay. It was donated to the archbishopric in 1277, and after the Reformation it entered private hands. Brick and tile production continued, probably sporadically, at the same site until the 1960s, and in 1988 the industrial complex was demolished, with the exception of the modern furnace building. There is no archaeological information from the site. The early scale and range of production is not known, and few standing or excavated historical buildings in Trondheim contain brick. In a city in which timber was the dominant building material throughout the medieval and post-medieval periods, brick's use was probably restricted to elite contexts, as evidenced by ornamental details and cisterns found at Steinvikholmen castle, and walls in Sverresborg castle and the Archbishop's Palace. In other post-medieval archaeological contexts, brick is occasionally found incorporated in walls, foundations for hearths, or redeposited in secondary contexts, for example.

Much of the brick found in post-medieval contexts, may have been brought to Trondheim as ballast in foreign merchant ships,⁷⁷⁷ principally Dutch, including the characteristic smaller, narrower yellow bricks ('klinkers'), fragments of which are found on many excavations (Fig. 5.170). Medieval and post-medieval floor and roof tiles may also have been produced here, although again, many post-medieval roof tiles were imported. Floor tiles, including unglazed and glazed examples (usually green, yellow or brown), are found occasionally *in situ* within standing or excavated medieval buildings, though these are so far restricted to elite contexts, such as Nidaros Cathedral, the Archbishop's Palace, and the mint and weapon workshop within the Archbishop Palace precinct (5.4.4.3., Fig. 5.19).⁷⁷⁸ No analyses to establish the provenance of the clay used in bricks and tiles used locally have yet been undertaken.

5.4.7.5. Shipbuilding, maintenance and repair

Documentary evidence and Maschius's Prospect of 1674 (Fig. 5.39; Appendix C) indicate that ships and boats were beached on the foreshore on the eastern bank of the River Nid for repair and maintenance. This could include the repair of damage to hulls caused by dry rot or cannon shot, or the removal of organisms such as barnacles to increase speed. Hull exteriors were tarred to reduce leakage.⁷⁷⁹ No archaeological evidence for these activities has been retrieved. As the prospect indicates, the repair and careening of ships' hulls was carried out on the eastern riverbank during the 17th century. This maintenance activity was modernised and improved with the building of a slipway for careening, tarring and repairing ships and boats here in the 1680s. This was replaced in 1717, and supplemented with a mast crane (Krana) in 1724. This area became known as the Krana shipyard. In 1779 a new shipyard was created on the Bakklundet foreshore (*Trondhjems Skibsværft*) in response to a state initiative to encourage shipbuilding in Norway. Another shipyard (Sundt, later Nordre verft) was established further north in the early 19th century, eventually taken over by Trondheim Skibsværft's owners. It was one of

⁷⁷⁵ Reed 2009: 11-16, 59-63.

⁷⁷⁶ TA1988/3; TA1998/16.

⁷⁷⁷ Hundreds of thousands are registered in local toll lists from 1685 on as entering from 'foreign places' or Holland: <https://databaser.lokalhistoriewiki.no/customs/GoodAndPlace.jsp?a=3459&b=Trondheim> (13.06.18)

⁷⁷⁸ Flønes 1950: 10-21; Ekroll 2006: 149; Bratberg 2008: 531-532.

⁷⁷⁹ Bull 1985: 15.

Trondheim's largest employers, and many ships were built and repaired here up to its closure in 1895.⁷⁸⁰



Figure 5.39. Vessels drawn up onto the Baklandet riverbank for careening and maintenance. Detail from Machius's Prospect 1674.

Archaeological watching briefs and rescue excavations have been undertaken during recent major redevelopment of parts of the former shipyard area. Major modern disturbances and destruction during redevelopment have destroyed and depleted the remains significantly. Recorded finds include

fragmentary remains of timber waterfront structures, *in situ* sunken wooden ships' hulls, boat parts, dumped ballast sands, and diverse marine- and shipyard-related objects and equipment.⁷⁸¹

5.4.7.6. Ropemaking

A number of ropewalks were established as privileged enterprises during the 17th and 18th centuries, their locations attested by contemporary documents, maps and paintings. All are located peripherally to the urban area. None have been observed archaeologically. The earliest recorded ropewalk was established at Kalvskinnet in 1637 on the western urban periphery beside the main access road, continuing in production until 1863. Another was established in 1701/2 beside the main road leaving Baklandet to the north beside Bakke manor, supplying rope to the nearby shipyard and maritime vessels. It continued in production until 1892. Another ropewalk was established during the 18th century at Marienberg beside the main highway leading to Trondheim from the west.⁷⁸²

5.4.7.7. Sugar refining

In 1752 a consortium of local merchants acquired the right to refine raw sugar imported from the Danish West Indies, and built a large refinery building on a site on the western urban periphery, which stood ready in 1754. The large brick- and timber-built building stands today, one of only a few surviving 18th-century factory buildings in Norway. It previously also had ancillary buildings used for storage and packing. The factory was originally equipped with refining equipment based on German models. The raw muscavado sugar was refined by a series of boiling and filtering processes. When ready for granulation, it was poured into inverted conical moulds made of brown earthenware with an internal slip, each standing in its own collecting pot into which the dark syrup and non-crystalline matter drained through a small hole in the base of the mould (Fig. 5.185). The final product took the form of large 'sugarloaves', tapped out of the moulds, dried, and then trimmed and wrapped for sale. Fragments of discarded earthenware moulds from the factory have been found on excavations.⁷⁸³

5.4.8. Fields, gardens and fishponds

The urban fields

Naucner's map of 1658 (Appendix A) shows that almost all the western half of the Nidarnes peninsula between the built-up area and the narrow fortified isthmus was occupied by cultivated fields (*åker*) at that time. This area was divided by the main access road, to the north of which lay land owned by the Hospital, including a patchwork of smaller fields sold off piecemeal into private hands during the 17th century. To the south of the road lay a large, triangular expanse of land to the south-west known as

⁷⁸⁰ Bull 1985: 15-17; Bull 1997: 74-76; Bratberg 2008: 584.

⁷⁸¹ Gundersen & Sylvester 2002; Grue et al 2014.

⁷⁸² Bull 1985: 17; Berg 1981:164-165; Bratberg 2008: 442-443.

⁷⁸³ Bratberg 2008: 519; <https://en.wikipedia.org/wiki/Sugarloaf> (accessed 15.05.2018).

Kalvskinnet, described on Naucler as cultivated fields and pastureland (*åker och äng*). This was owned by the Crown, used as farmland by the Danish *lensherrer* during the 16th century, and sold off piecemeal as building land after 1681. In addition, a small area of fields to the south-east, also owned by the Crown, was used by the army's provisioning manager during the 18th century (Chapter 6).

Pollen and macrofossil evidence retrieved from a number of excavations indicates that cultivation of the peninsula's sandy subsoil, as well as the clay plateau to the south, took place throughout the Iron Age, as evidenced by registrations of ard-marks and cultivated soils containing pollen, grains and seeds from cereal crops, plants and weeds associated with cultivation. Traces of plants and weeds indicative of pastureland have also been registered. This pattern of use continued throughout the medieval period and well into the 18th century, though the cultivable area decreased as the urban area expanded westwards. Hardy cereals, notably barley, were the chief cereal crops grown throughout this long period.⁷⁸⁴ In addition to the private farms of the *lensherrer* and the army's provisioning managers excavated in Kongsgården (Chapter 6), there is written and archaeological evidence for the keeping of cattle and other farm animals within the urban built-up area during both medieval and post-medieval times.⁷⁸⁵

Allotments and gardens

As mentioned (5.4.4.1), a number of the small fields on the north-western urban periphery comprised parcels or allotments (*løkker*), many of which were owned by the wealthier urban citizenry. Historical sources mention fruit gardens and hop gardens here and within the built-up area, and this is a marked feature of the post-medieval urban environment.⁷⁸⁶ During the period 1640-1687, some 100 properties are recorded as having small gardens, occasionally specified as herb gardens, hop gardens or fruit gardens. A document of 1694 mentions 38 gardens within the city, including the bishop's garden and two apothecaries' gardens.⁷⁸⁷ Also previously mentioned is the King's Garden on the site of the medieval royal enclosure to the south (Fig. 5.35). Its age and character are unknown. Its name suggests that it may have been connected with post-medieval Kongsgården, perhaps functioning as its fruit or vegetable garden. It was taken over by the second workhouse in 1669, presumably supplying it with supplies of fruit and vegetables.

The first of a number of ornamental formal gardens was established by the Flensburgian gardener, Christian Gartner, during the 1670s behind *Kommissariegården*, the mansion of County Prefect and Royal Commissioner Peder Tønder, located on the urban periphery to the west (30, Appendix F). This was originally a large *parterre* garden divided into 12 beds, but by the mid-1700s it was reduced to 4 beds laid out in quadratic form (Fig. 6.26). It is clear from map evidence that by the mid-to-late 18th century, a fashion for small ornamental urban gardens was established among Trondheim's citizenry (see 6.4.4.3). There is little archaeological evidence which can be directly associated with these gardens, though possible traces of an ornamental garden were excavated in the Kalvskinnet area.⁷⁸⁸

Fishponds

Naucler's 1658 map (Appendix A) shows the existence of fishponds (*rudhdammar*) at locations to the east and south of the city. These were in all likelihood artificial ponds, and their locations in the proximity of medieval Bakke convent and Elgeseter priory respectively indicates their likely origin as monastic fishponds, used for raising and storing freshwater fish (*vivaria*). The name *rudh* designates the specific type of fish kept here, namely Crucian carp (*Carassius carassius*) (Nor. *Karuss*). The ponds' depiction on this map, which shows the main features and assets of the city, may suggest that they were still in use.

That facilities for keeping live freshwater fish also existed after the Reformation was demonstrated by the discovery of a 16th-century *servatorium* - a timber-built sunken fish tank for keeping fish alive immediately prior to eating - in the east wing of post-medieval Kongsgården (Fig. 5.40). This

⁷⁸⁴ Christophersen & Nordeide 1994: 59-65; McLees 2003 & 2014; e.g. pollen and macrofossil series at Torvet (TA2015/18, TA2016/13 & TA2017/11), Prinsenkryset (TA2013/2), and Statens Hus (TA1998/16).

⁷⁸⁵ Nordeide 2000a: 145-160, 166-177. A manure-filled pit was excavated at Søndre gate 7-11 (TA2017/3).

⁷⁸⁶ Dybdahl & Bull 2005: 302; Bruun 2007: 46-47.

⁷⁸⁷ Balvoll & Weisæth 1994: 14; Bruun 2005: 159.

⁷⁸⁸ Number 32 on Appendix F; Ramstad 2004.

was used between c. 1560 and 1585 to supply the *lensherrers'* table with fresh fish, including crucian carp, the remains of one being found *in situ* in the basal deposits (Fig. 5.108).⁷⁸⁹

A map of 1716 depicts a row of three north-south aligned fishponds in an open area just to the west of Kongsgården (Fig. 5.40). One of these was encountered during a watching brief excavation, while other excavations here have revealed a number of stone-lined drains which may comprise feeder and/or drainage channels associated with these ponds.⁷⁹⁰



Figure 5.40. **Left:** Timber-built, clay-bottomed *servatorium*/fish tank (cut mid-way by later stone cellar) excavated in the east wing of Kongsgården (TA1991/1). **Right:** Detail of map of 1716 showing a row of three fishponds to the west of Kongsgården.⁷⁹¹

5.4.9. Urban fortifications and military buildings

There are currently no archaeological observations of the pre-1681 perimeter fortifications, and there



Figure 5.41. Detail from map of Trondheim showing urban defences and troop dispositions during the 1658 siege. Published by S. Pufendorf in 1696, based on earlier maps. ©Trustees of the British Museum. See also Appendix G.

are few historical references to them. It is the post-1681 defences that are best represented in terms of visible, surviving structures in today's urban landscape, although archaeological observations of vanished or buried parts of these urban defences are rare.⁷⁹²

Prior to 1681, the narrow isthmus to the west was defended by some form of fortification during the medieval period, possibly a palisaded earthen rampart and ditch flanking a fortified gate.⁷⁹³ Later sources mention the existence of a simple *skanse* (sconce) here during the first half of the 17th century, enclosing a gate at which tolls were taken, as well as another sconce at the north-eastern tip of the peninsula situated near a

⁷⁸⁹ Nordeide 2000a: 128, 132-134; Nordeide 2003: 237-239.

⁷⁹⁰ TA1984/2; TA1992/7.

⁷⁹¹ *Carta som presenterer den ubebyggede og mestendehl oppløyede pland Kalvskindet kaldet*. A. Lillie, 1716 (Riksarkivet). Photo: E. Baker/Riksantikvaren.

⁷⁹² See Rognhaug 1981 and Kavli 1987 for history and architectural details of Trondheim's post-medieval fortresses and urban defences. Fragmentary traces of ditches and stone revetments have been observed archaeologically (TA2009/23).

⁷⁹³ Sverre's saga mentions that Archbishop Eystein built a wooden castle (*treborg*) at Nidareid in 1178, which was subsequently expanded by King Sverre, who also built an extensive palisade around the medieval urban area. Lunde 1977: 190-192; Håpnes 2004: 106.

military blockhouse.⁷⁹⁴ Naucler's map of 1658 (Appendix A) shows a simple linear rampart or sconce, presumably an earthwork, spanning the narrow isthmus, as well as a blockhouse projecting slightly into the fjord at the rivermouth. Subsequent 17th-century maps clearly based on Naucler's map showing Trondheim prior to 1681 (Figs 5.41, 5.42, Appendix G) suggest that the sconce at Skansen was modified into an up-to-date fortification, comprising a hornwork, walled bastions, curtine, ravelin, tenaille and ditches. Also shown on these maps are additional urban fortifications built by Swedish and Danish-Norwegian forces in turn during the battle for the city in 1658, including a number of bastions, blockhouses and palisades around most of the peninsula's perimeter.⁷⁹⁵

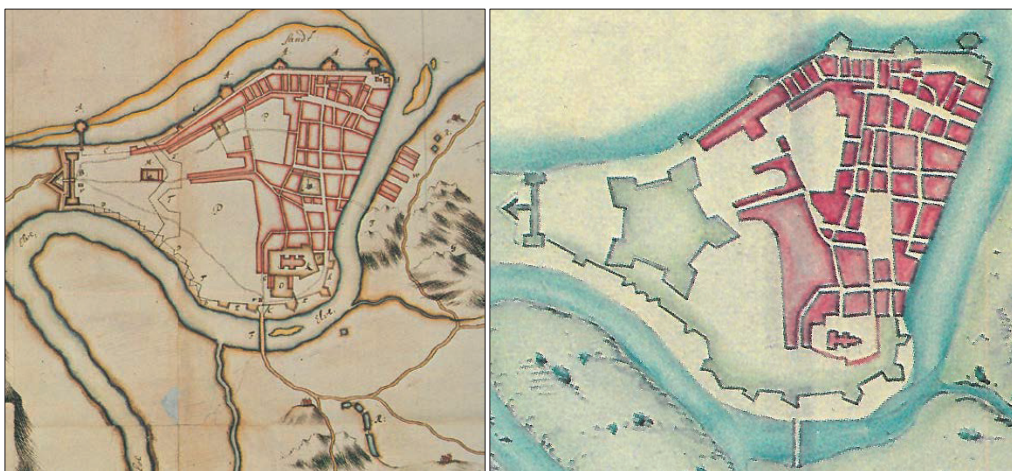


Figure 5.42. Pre-1681 urban fortifications. **Left:** Detail of Coucheron's map of Trondheim prior to the fire of 1681, based on an earlier map of 1661 and Naucler's map of 1658. **Right:** Map of 1675 based on Naucler's map, though with omissions and additions, including a star-shaped sconce-like fortification which was never built.⁷⁹⁶

The Norwegian army established a number of temporary fortification works around the city during their siege in 1658, notably at Ilevollen to the west, Øya to the south and Bakklundet to the east (Appendices E and G). Remains of the latter were observed during the 20th century, but no detailed records survive. The Swedes in their turn built ramparts for a battery of cannon along the top of the riverbank between the gate and ramparts at Skansen and Kongsgården and beyond to face Bakklundet.

A small battery of cannon was also established on the island of Munkholmen, fortified subsequently with stone and timber perimeter walling by the Norwegians on Trondheim's recapture in 1658. Excavations here revealed evidence that may suggest that the monastery church ruin was used as part of these early fortifications. Munkholmen was transformed into a fortress proper in a number of phases of building and rebuilding between 1672 and 1707, with the construction of a stone tower, stone garrison buildings, and a star-shaped system of stone and earth ramparts and bastions (Fig. 5.43). These defences served until 1825, when construction began on a massive polygonal outer wall, making Munkholmen one of Scandinavia's strongest coastal fortresses. The German Army used the island as an anti-aircraft battery during World War 2, material traces of which survive.⁷⁹⁷

⁷⁹⁴ A free-standing timber building, usually comprising one or more rooms with loopholes, allowing its defenders to fire in various direction.

⁷⁹⁵ Rognhaug 1981: 39; Håpnes 2004: 106; Bratberg 2008: 479.

⁷⁹⁶ After Grankvist *et al* 1981 III. 39 & 40. Royal Library Copenhagen & NTNU biblioteket.

⁷⁹⁷ Grüner 1902: 161-162; Rognhaug 1981: 39; McLees 1992: 16-20, 74-76; Håpnes 2004: 106, 140; Bratberg 2008: 552.

During the medieval period, the Archbishop's Palace (Erkebispegården) comprised a monumental fortified residence, surrounded by high stone perimeter walling. It was reduced in size



Figure 5.43. Trondheim and its post-1681 fortifications in 1733. After Grankvist *et al* 1981 ill. 43. Royal Library, Copenhagen.

around 1500, possibly in an attempt to reduce its vulnerability to cannon.⁷⁹⁸ No significant steps were taken to strengthen its defences during the centuries following the Reformation when it was known as Kongsgården. From the 1680s on it functioned as a military depot and lay within the protection provided by a new system of urban defences which were established on Continental models as part of the major urban replanning after 1681.

These comprised modifications to Munkholmen fortress, a strengthened bastion and gate at Skansen, modifications to the earth ramparts along the southern and south-eastern perimeter of the peninsula, and the building of Kristiansten fortress (Figs 5.43 and 5.44). Construction of this major new fortress began in 1682, and it was subsequently modified with, among other things, stone-clad ramparts and new redoubts in the 1720s and 30s. It overlooked the city from its dominating protective position on a hill high above it on the eastern side of the river. Much is intact, although its outlying bastions, tenailles and redoubts are partly demolished or in disrepair, and an extensive system of timber palisading has vanished.⁷⁹⁹ One sconce, or redoubt, Møllenberg skanse, has completely vanished under modern buildings, but part of its massive stone revetment wall was recently revealed (Fig. 5.44).⁸⁰⁰



Figure 5.44. **Left:** Part of the revetment wall for the Møllenberg sconce/redoubt revealed in 2015. **Right:** The sconce/redoubt's location in relation to Kristiansten fortress in 1733.⁸⁰¹

⁷⁹⁸ Nordeide 2000a.

⁷⁹⁹ Rognhaug 1981: 37-41; Bratberg 2008: 304-305; Stomsvik & Håpnæs 2015.

⁸⁰⁰ Stomsvik & Håpnæs 2015.

⁸⁰¹ Photo: Trøndelag Fylkeskommune. Map: Royal Library, Copenhagen.

5.5. Portable material culture: range and functional categorisation

5.5.1. Introduction

This overview presents a range of artefacts defined collectively as *portable material culture* retrieved from some of the post-Reformation urban contexts prioritised in this study (Appendix D). Due to the conservation constraints outlined in Chapter 1, the archaeological contexts of recovery range from systematically to haphazardly excavated and sampled sites and features. As pointed out (5.3), inconsistent recovery and curation procedures, and differentiation in material preservation, discard and recycling mean that it is difficult to establish any meaningful intra- or inter-site patterning in the post-medieval material collected in Trondheim to date. Consequently, any attempt at comprehensive typological quantification or distribution analysis (spatial or chronological) of artefacts on a pan-urban scale cannot be undertaken. Attempts at specific quantification analysis and contextual interpretation are reserved for the more systematically retrieved and curated material associated with my case study (Chapter 6). The present section categorises a range of items by function, and places them within a wider context of known historical developments with regard to typologies of material culture in Norway and Europe. Since the material has not been systematically quantified, it is consequently an introductory, 'qualitative' overview of the locally derived range of material culture *currently* available. This forms an empirical basis for discussion (5.6), and a point of departure for future research work.

As the table of functional categories (Fig. 5.45) reveals, a wide range of artefacts has been found in Trondheim's post-medieval urban contexts, and I have attempted to categorise and present examples of as many as time and capacity allowed. This is material which has been catalogued and stored in the local university museum,⁸⁰² and a selection was examined manually to compile a basis for this study's categorisation. In addition, a digital database for material found and catalogued in connection with excavations in the Archbishop's Palace (post-medieval Kongsgården) was consulted, particularly with regard to the material used for the case study (Chapter 6). Time constraints and other restrictions⁸⁰³ meant that the museum survey could not cover all the stored material, and had to be limited to a number of selected sites (see below). Artefact overviews and published accounts and illustrations of material from other sites and sources have been utilised where possible. My categories are consequently not complete inventories of the curated material, and certainly not a complete overview of what would have existed in the past. This is essentially a small, random sample of what was originally a far more complex and varied body of material culture.

The aim of this survey has been primarily to present a cross-section of the range and variety of material remains of social practices that can be provided through archaeological retrieval. However, limitations on time and expertise mean that it has not been possible to treat all categories with the same level of analytical detail. It is important to stress that I have prioritised material that will provide a basis for discussion in relation to my analytical themes⁸⁰⁴ (5.6) and my case study (Chapter 6), and particularly objects, tools and equipment used in domestic practices, and these receive most attention in the text. Many of the illustrated examples derive from contexts discussed in connection with the case study, for example.

I have placed particular emphasis on items related to the preparation, storage and consumption of food and drink, as these are items with particular relevance for my thematic discussion and case study. Many of the items utilised in these practices are also among the most common and well-represented forms of artefacts found in archaeological contexts, due to their durability and fragmentation, as well as their widespread use in a variety of urban practices and contexts. I also have a personal interest in glasswares, which form a central material category in my case study, and this is reflected in the level of detail awarded them. Other categories are less well represented in terms of types or numbers, though I have attempted to assemble as many types as possible. Bulk materials, such as waste from craft activities

⁸⁰² NTNU Vitenskapsmuseet i Trondheim.

⁸⁰³ The museum embarked on a prolonged period of renovation of their storerooms during my period of study, during which time it was not possible for me to access relevant parts of the archive.

⁸⁰⁴ See 4.3.2.: i.e., dwelling, sustenance and sociability, personal appearance, and health.

(e.g. slags), building materials (e.g. bricks, tiles, window glass), and food refuse (animal bone etc.) are not treated in any significant detail here (although the latter is discussed in some detail in Chapter 6).

The published assemblage of material from Revierstredet in Oslo provides an exemplary model for the presentation, quantification and typological analysis of a varied body of material from a Norwegian urban site of the period.⁸⁰⁵ However, such a fine-grained, quantified typological analysis of a wide range of artefact groups drew on a range and depth of specialist knowledge and expertise which my own cannot replicate. Nonetheless, in order to comply with my aim of providing an informed overview of the range of post-medieval material in Trondheim, it draws on available expertise and comparative work in order to present the material in as typologically accurate a way as possible.

To this effect, the sections incorporating ceramic material have been compiled in consultation with ceramic specialist Ian Reed (NIKU Trondheim) and with reference to both his published overview of ceramics from the Library Site, and an up-dated version currently in preparation.⁸⁰⁶ In his published overview, Reed produced qualified quantifications of post-medieval ceramics from the Library Site.⁸⁰⁷ In the absence of any comparable surveys of material from the rest of the city, his observations provide a provisional basis for the broad, subjective statements regarding frequency and relative proportions of ware types made in the following sections.⁸⁰⁸ Reed has also produced a study of locally produced Trønderwares.⁸⁰⁹ The published surveys of ceramics from Revierstredet in Oslo have provided a comparative body of 17th- and early 18th-century material which utilises a categorisation which also attempts to characterise function.⁸¹⁰ Glass vessels and bottles have been identified with reference to published comparative material, both national and international, in particular, Ada Polak's seminal works on Norwegian glass.⁸¹¹ The overview of clay pipes draws on the few available clay-pipe studies in a Norwegian context: namely, Anneka Pettersen's study of pipes from a Norwegian factory site, a survey of clay pipes from Revierstredet by Dagfinn Skre, and a study of Trondheim clay pipes by Lise Loktu, as well as reports and articles by Jørgen Johannessen dealing with pipes recovered from the harbour at Oslo.⁸¹²

Relevant aspects and typological interpretations in other instances are made with reference to other authoritative studies, both Norwegian and international.

5.5.2. The functional categories: presentation

With the aim of providing a basis for discussion along the contextual, interpretative lines outlined in chapters 3 and 4, the material has been sorted into a number of functional categories (Fig. 5.45). These are also intended to relate objects to differentiated contexts of use, or practice; for each main category, therefore, specific types of associated artefacts are attributed according to their presumed primary *function(s)* or *association(s)*. These include objects conventionally associated with specific activities, processes or operations (eg. textile equipment, tablewares, toys etc.) or material that was produced in the course of such activities (food refuse, pottery wasters, metalworking waste etc). However, it is recognised that specific items may, in the course of their use life (or biography), have been used, reused or modified in alternative, unforeseen and diverse ways, or utilised in contexts not originally envisaged. Where this is clear, this will be referred to, but in most cases they are correlated with the *presumed* primary function conceived by their producers or original owners.

In order to capture the diversity and range of contexts of use, most main categories are subdivided into a number of sub-categories which define specific functional associations within the main context of use. Most main categories and sub-categories are self-explanatory and have a clearly defined

⁸⁰⁵ Schia 1981a.

⁸⁰⁶ Reed 1990 and in prep.

⁸⁰⁷ Reed 1990: 28-45; 78

⁸⁰⁸ Some relevant data from an uncompleted survey of redwares from the Archbishop's Palace excavations is included: Blackmore in prep.

⁸⁰⁹ Reed 2009.

⁸¹⁰ Schia 1981b; Molaug 1981a, 1981b; Fjellheim 1981.

⁸¹¹ Chiefly: Hume 1969; Polak 1974, 1983; Charleston 1984; Henkes 1994; Museum Boymans-van Beuningen 1991; Johansson 2008; Johansen 2011.

⁸¹² Pettersen 1944; Skre 1981; Loktu 2009; Johannessen 2012, 2016.

functional 'profile'. However, some main categories are less specifically definable (eg. Diverse equipment & tools and Food remains/refuse).⁸¹³ The following table provides an overview of the functional categories and their associated sub-categories:

Functional category	Functional sub-categories
1. Food preparation, processing & storage	Ceramic kitchenwares Other food-preparation/processing vessels Utensils & equipment
2. Food consumption (eating/serving)	Ceramic table- & servingwares Other eating & serving vessels (metal, wood, glass) Eating utensils/equipment
3. Beverage consumption	Drinking vessels (ceramic, glass, wood) Serving/pouring vessels (ceramic, glass)
4. Beverage storage/dispensing	Storage/dispensing vessels (ceramic, glass) Storage-/dispensing-related equipment
5. Food remains/refuse	Zoological remains Botanical remains
6. Diverse equipment & tools	Cutting tools Other tools Containers
7. Tobacco consumption	Smoking equipment
8. Clothing & footwear	Items of clothing Clothing-related equipment (fasteners etc) Footwear
9. Jewellery, personal ornaments & accessories	Jewellery & ornaments Accessories
10. Health, hygiene & toiletry	Pharmaceutical items Hygiene/toiletry/grooming equipment Ophthalmic equipment Human biological-related
11. Literacy & numeracy	Book-related items Writing equipment Accounting equipment
12. Textile working	Weaving equipment Spinning equipment Sewing equipment Laceworking equipment
13. Metalworking	Metalworking equipment Metalworking waste
14. Children's toys & curios	Dolls Figurines Other
15. Leisure & pastimes	Gaming equipment
16. Weapons	Crossbows & related items Firearms & related items Cannon & related items
17. Heating & lighting	Heating-related equipment Lighting-related equipment
18. Furniture, fixtures and fittings	Moveable furniture Fixtures & fittings
19. Security	Security equipment
20. Building materials & equipment	Wall, chimney, flooring & roofing materials Tools & equipment

⁸¹³ In formulating my range of categories, I have drawn on a number of recent North American studies which have developed comprehensive categorisations of artefacts, and particularly artefacts associated with domestic contexts and practices, most notably Hodge 2006, Hodge 2009, and Mrozowski 2006.

Functional category	Functional sub-categories
21. Fishing & hunting	Fishing equipment Hunting equipment
22. Horse furniture & equipment	Equipment & harness fittings
23. Bone-, leather-, & woodworking	Tools & equipment Waste
24. Trade- or commerce-related items	Money Cloth seals
25. Religious/devotional items	Devotional figurines Other
26. Pottery manufacture	Production waste Kiln furniture
27. Miscellaneous items	Household-related Sugar manufacture

Figure 5.45. The functional categories

The material associated with each category is described and discussed in turn. Where possible, the artefacts' physical and typological characteristics are presented, as well as observations regarding their origins (sources of production), chronological ranges, typological parallels etc. where these are known or surmised. Their spatial and chronological provenance within the urban area will also be identified and commented upon where possible. Likewise, their customary functional associations will be noted. As stated, this finer-grained process is not attempted in all cases, most notably where specialist knowledge not available to the author is required, or where it would be too time-consuming.

A selection of associated artefacts from local contexts is presented and illustrated for each category. I have attempted to select representative or particularly informative examples, and identify their particular contexts of provenance within the city. These derive from the principal excavated sites identified above where material has been collected from 16th- to 19th-century deposits, latrines, cellars etc (Appendix D). However, most of the highlighted examples derive from a few main sites with important assemblages or single items, namely: the precinct of the Archbishop's Palace/ Kongsgården (TA1991/1); B-site (TA1971/2); E-site (TA1972/2); Dronningens gate 14 TA2004/13, Søndre gate 7-11 TA2016/21 & TA 2017/3; and Torvet (TA2016/13 & TA2017/11). Material retrieved elsewhere is included where relevant. Particular attention is devoted to material that will be presented and discussed in connection with my case study which deals with the 18th-century period of military occupation of Kongsgården (Chapter 6).

Regarding illustrations of examples: all photographs are taken by the present author unless otherwise stated; accession numbers are shown where available to the author.

5.5.2.1. Category 1: Food preparation, processing & storage

Functional sub-categories	Artefact types	Source
Ceramic kitchenwares	Tripod pipkins, cooking pots, skillets, storage jars, costrels, colanders, bowls	Local & imported
Other food-preparation/ processing vessels	Stone cooking vessels, metal cauldrons, metal skillets, ceramic milk pans, glass canning jars	Local & imported
Utensils & equipment	Hand-quernstones, wooden whisks, ladles, butter-moulds, milk-churns, troughs	

Figure 5.46.

In instances where sherd identification and counts have been undertaken,⁸¹⁴ this category consists overwhelmingly of ceramic *kitchenwares*, vessels used specifically for cooking or heating food and the storage of foodstuffs. The vast majority are cooking vessels in coarse earthenwares, which are particularly well represented in the urban ceramic assemblage prior to about 1750. These are predominantly tripod pipkins in imported (Dutch and German) and locally-produced (Trønderware) coarse earthenwares, as well as Scandinavian/ North German refined earthenware. Other principal

⁸¹⁴ Molaug 1981a; Molaug 1981b; Reed 1990; Reed in prep.; Blackmore in prep.

forms of ceramic cooking vessels include smaller numbers of cauldron-type cooking vessels in Dutch coarse earthenwares, cooking pots in Jutish black-burnished ware, and ceramic skillets in Dutch and German coarse earthenwares and German refined earthenware.

The kitchenware category also includes a smaller number and range of ceramic vessels used in food preparation and storage. Colanders are found in imported Dutch coarse earthenwares and local Trønder refined coarse earthenwares, and occasional large bowls in imported coarse earthenware occur. Storage vessels chiefly take the form of jars in a range of wares: Dutch, German and Trønder coarse earthenwares, Dutch and German refined earthenwares and German coarse stonewares. Merida (Portuguese) costrels are also found.

Other vessels used for preparing or processing food (e.g. dairying) include a few complete or fragmentary cooking vessels in metal (cauldrons and skillets) and stone (soapstone cauldrons/cooking pots), and ceramic milk pans.

Curated excavated and ethnographic specimens in museum collections indicate that varieties of wooden vessels were also used in connection with food preparation and processing, as were diverse wooden utensils and equipment, such as for example whisks, ladles, butter moulds, milk-churns, troughs, and the like. Corn was also ground in the domestic environment using hand-quernstones. Examples of such utensils and equipment, usually in fragmentary condition, are occasionally found in archaeological contexts, though recycling and taphonomic conditions have impacted greatly on their depositional and post-depositional circumstances. These are not discussed further below. Furthermore, coopered tubs, buckets and barrels may have been used in this connection, but these are categorised as multifunctional equipment (Category 6).

Ceramic kitchenwares

Ware types	Vessel types	Trondheim date ranges
Coarse earthenwares		
<i>Redwares</i>		
Dutch redwares	Tripod pipkins, cauldron-type cooking pots	15th - 18th centuries
	Skillets	15th - 18th centuries
	Colanders	15th - 18th centuries
German redwares	Tripod pipkins	16th - 18th centuries
	Skillets	16th - 18th centuries
	Storage jars	16th - 18th centuries
Trønder redware	Tripod pipkins	mid 17th - 18th centuries
	Storage jars	mid 17th - 18th centuries
Iberian coarse redwares	Storage jars	17th - 19th centuries
English Post-medieval black-glazed ware	Storage jars, large bowls	18th century
North Devon gravel-tempered ware	Storage jars	18th century
<i>Whitewares</i>		
Dutch lead-glazed	Tripod pipkins, cauldron-type cooking pots	17th - 18th centuries
	Colanders	17th - 18th centuries
English yellow ware	Bowls, jars	19th century
<i>Jutish black-burnished ware</i>	Cooking pots	17th - 19th centuries
Refined earthenwares		
<i>Slipwares</i>		
Weser slipwares	Skillets	16th - 18th centuries
	Jars	16th - 17th centuries
Scandinavian/North German slipwares	Tripod pipkins	Late 16th - early 18th centuries
Dutch slipwares	Jars	Late 16th - 17th centuries
Trønder slipwares	Colanders	18th - 19th centuries
<i>Tin-glazed earthenware</i>		

Ware types	Vessel types	Trondheim date ranges
Thuringian tin-glazed	Storage jars (albarelli)	17th century
Coarse stonewares		
Westerwald stoneware	Storage jars	17th - 19th centuries

Figure 5.47.

Kitchenwares are ubiquitous in Trondheim's post-medieval stratigraphy, and derive from a number of contexts identified in the present study, most notably in latrines, pits and backyard sheet deposits, both in connection with urban dwellings⁸¹⁵ and in the Archbishop's Palace/ Kongsgården (TA1991/1). There is no space here for a comprehensive presentation of this material, although the items illustrated below exemplify its range and character.

Earthenware cooking pots

Ceramic kitchenwares are dominated by redware cooking pots of the tripod pipkin type, with smaller amounts of redware cauldron-type cooking pots (with lids). The earliest pipkins are of Dutch and German redwares, the former being the earliest to appear during the 15th century. Pipkins and cauldron-type cooking pots also occur in the form of Dutch lead-glazed whitewares from the 16th century on. From this time on, small quantities of pipkins are also found in refined earthenwares, more specifically Scandinavian/North German slipwares. Imported earthenware pipkins in general dominate the sherd counts from late-medieval and early post-Reformation contexts, and, with the less well represented cauldron-type redware cooking pots, continue to be used in Trondheim until the 18th century. Locally-produced pipkins in Trønder redware first appear from the mid-17th century. Pipkins in general seem to disappear from urban assemblages by about 1750. These characteristic cooking pots could be placed directly on or beside a hearth, and many are sooted externally, and could be used for cooking and heating wet courses, such as porridge, soups, pottages, stews and the like.

Another type of coarse earthenware cooking vessel occurs in much smaller numbers, namely handmade, cauldron-type cooking pots in Jutish black-burnished ware. Produced in Denmark, they appear in Trondheim during the 16th century, but their peak occurrence extends from the late 18th century into the mid-19th century.⁸¹⁶



Figure 5.48. Earthenware cooking pots and skillet. L-r: Dutch cauldron-type cooking pot; German tripod pipkin; S. Scandinavian/N. German tripod pipkin; Dutch redware skillet (Dronningens gate 14 TA2004/13).⁸¹⁷

Earthenware skillets

Concurrent with the redware cooking pots are ceramic skillets, or frying pans, which provided an alternative method of food preparation. They occur in both Dutch and German redwares, the former being the earliest to appear in the 15th century. Occasional examples are also found in refined earthenwares, more specifically late 16th - to early 17th-century Weser slipwares.

Earthenware colanders and bowls

The earliest ceramic colanders are found in imported coarse earthenwares (Dutch redwares and Dutch lead-glazed whitewares) and from the early 19th century also in locally produced refined earthenware

⁸¹⁵ E.g. B-site (TA1971/2), E-site (TA1972/2), Dronningens gate 24 (TA2004/13), from which examples are illustrated here.

⁸¹⁶ Reed 1990: 42-43; Schia 1981b: 116.

⁸¹⁷ Photos: NIKU.

(Trønder slipware). Colanders could be used in connection with a number of food preparation and processing practices, including washing vegetables, draining/straining cooked food, or making cheese. In addition, some large coarse earthenware bowls probably intended for kitchen use are found in 18th-century post-medieval black-glazed ware and 19th-century English yellow wares.

Earthenware and stoneware storage jars

Ceramic jars are generally interpreted as storage vessels for wet and dry foodstuffs used in food processing and preparation, although they are potentially multifunctional items. Jars occur in both imported coarse stoneware and a variety of imported and locally produced earthenwares. During the course of the 16th to 19th centuries, coarse earthenware jars occur in German redwares, Trønder redwares (Fig. 5.49), Iberian coarse redwares, Post-medieval black-glazed ware, and North Devon gravel-tempered ware. Refined earthenwares are represented by Dutch and Weser slipware jars (though these may also have been used for cooking), and costrels in Thuringian tin-glazed ware. German stoneware costrels of 17th century date are also known (Fig. 5.49). Storage jars in coarse stoneware from Westerwald date broadly to the 17th - 19th centuries. These were suitable for pickling (Nor. *syltekrukker*).



Figure 5.49. L-r: Dutch redware colander N147403; Trønder redware storage jar N147869; German stoneware costrel.⁸¹⁸

Other food-preparation/ processing vessels

Material	Vessel type	Trondheim date ranges
Metal	Cauldrons & skillets	15th - 19th centuries
Stone	Steatite cauldrons	17th - 19th centuries
Ceramics	Earthenware milk pans	18th century
Glass	Canning jars	18th century

Figure 5.50.

Metal cauldrons and skillets, stone vessels

Cooking vessels manufactured in other materials are poorly represented in post-medieval contexts. Metal cauldrons (cast-iron and copper/copper-alloy) and skillets/frying pans (wrought iron) are represented by occasional fragments or fortuitously preserved complete examples, their rarity presumably reflecting their price and recycling of metal. That said, a rare hoard of fine bronze cauldrons was found in a well near the Franciscan friary in the middle of Trondheim, presumably hidden for safe keeping, perhaps at the time of the Reformation (Fig. 5.51). Stone cooking vessels, including cauldrons in Norwegian soapstone (steatite) are represented by occasional fragments.

⁸¹⁸ Private collection.

Earthenware milk pans

Vessels associated with dairying processes take the form of ceramic milk pans used for separating cream from milk; these are found in locally-produced Trønder redware in 18th-century contexts (Fig. 5.52).⁸¹⁹

Glass canning jars

Fragments of glass canning jars in green and clear glass are commonly found in 18th-century rubbish pits and privies. These were used for pickling, preserving and storage. From the mid 18th century on, these were produced in the Norwegian glass factories at Nøstetangen and Aas. The examples illustrated below derived from the privy of the second provisioning managers' residence in Kongsgården, pictured together with contemporary examples illustrated in the factory catalogue.



Figure 5.51. Bronze cauldrons from Trondheim.



Figure 5.52. **Left:** Trønderware milk pan (E-site, TA1972/2 pit E77),⁸²⁰ **Middle:** Fragments of glass canning jars N143407, 143408, 143409 (TA1991/1). **Right:** Complete curated glass canning jar.⁸²¹

Utensils & equipment

The majority of equipment used in kitchen-related practices comprises fortuitously and fragmentarily preserved items in wood: notably whisks, ladles, spatulas, butter-moulds, milk-churns, and troughs. Occasional quernstones for hand-milling flour or malt are found, such as the example found in association with the second provisioning managers' residence in Kongsgården illustrated here.



Figure 5.53. L-r: quernstone N143921; wooden spatula N145908 (TA1991/1).

⁸¹⁹ Reed 2009: 191-192.

⁸²⁰ Photo: I. Reed.

⁸²¹ Photo: A.L. Reinsfelt. Norsk Folkemuseum.

5.5.2.2. Category 2: Food consumption (eating/serving)

Functional sub-categories	Artefact types	Source
Ceramic table- & servingwares	Plates, bowls, tureens, serving dishes	Local & imported
Other eating & serving vessels	Wooden trenchers, plates, bowls	
	Pewter plates	
	Glass bowl, glass salver, jelly glasses	Local & Imported
Eating utensils/equipment	Table knives, forks, spoons (metal, wood, bone)	Local & imported

Figure 5.54.

Ceramic vessel sherds dominate this functional category due to their ubiquity and durability. These vessels are classified functionally as *tablewares* (plates, bowls and other vessels from which food was consumed at table) and *servingwares* (bowls, dishes and other vessels used for presenting and serving food at table).

In contrast to the previous category, coarse earthenwares are poorly represented, and are limited to bowls in German and Trønder redwares and Dutch whitewares. The majority of vessels associated with food consumption are predominantly refined earthenwares, chiefly bowls, plates and dishes in Dutch, German, English and Trønder slipwares, Dutch, Danish and Italian tin-glazed wares, and English lead-glazed earthenwares (Pearlwares, Creamwares, Fine white earthenware). Stonewares are confined to English refined stoneware plates and bowls in English Staffordshire white salt-glaze. Porcelain tablewares, both Chinese and European, also occur, though in comparatively small amounts.

Table- and serving wares in other materials are poorly represented, chiefly comprising occasional complete or fragmentary bowls, trenchers and plates in wood, while pewter plates and glass table- and servingwares are rarities. The small number of eating utensils recovered principally comprises varieties of table knives. These are rarely complete, and most survive in the form of metal blades, or as handles made of organic material, predominantly bone, often decoratively carved. In addition, a few fragmentary metal forks (with two or more prongs) have been found, as have a number of different varieties of spoons in metal (copper-alloy, pewter, silver, silver-plated), bone or wood.

Ceramic table- and servingwares

Ware types	Vessel types	Trondheim date ranges
Coarse earthenwares		
<i>Redwares</i>		
German redwares	Bowls	16th - 18th centuries
Trønder redware	Bowls	17th century
<i>Whitewares</i>		
German lead-glazed	Bowls	16th - 17th centuries
Dutch lead-glazed	Bowls	17th - 18th centuries
Refined earthenwares		
<i>Slipwares</i>		
Weser slipwares	Plates, dishes, bowls	16th - 18th centuries
Werra slipwares	Plates, dishes	16th - 17th centuries
Scandinavian/North German slipwares	Plates, dishes	Late 16th - early 18th centuries
Lower Rhine slipwares	Plates, dishes	18th century
Dutch slipwares	Plates, dishes, bowls	Late 15th - 18th centuries
Trønder slipwares	Plates, dishes, bowls	mid 17th - 19th centuries
Staffordshire slipware	Plates, bowls	Late 17th - 18th centuries
<i>Tin-glazed earthenware</i>		
Dutch polychrome decorated tin-glazed	Plates, dishes, bowls	Late 16th - 18th centuries
Dutch white tin-glazed	Plates, dishes, bowls	Late 17th - 18th centuries

Ware types	Vessel types	Trondheim date ranges
Dutch blue decorated tin-glazed	Plates, dishes, bowls	17th - 18th centuries
Danish tin-glazed	Plates, bowls	18th century
Montelupo maiolica	Dishes, bowls	Late 16th - early 17th centuries
Ligurian maiolica	Plates, bowls	17th - 18th centuries
Lead-glazed earthenware		
Creamware	Plates, dishes, bowls, tureens	Mid 18th - early 19th
Pearlware	Plates, dishes, bowls, tureens	Late 18th - mid 19th century
Fine White earthenware	Plates, dishes, bowls, tureens	Mid 19th century +
Refined stonewares		
Staffordshire white salt-glazed	Plates, bowls	18th century
Porcelain		
Chinese porcelain	Plates, bowls	18th century
European porcelain	Plates	18th - 19th centuries

Figure 5.55.

Earthenware plates, dishes and bowls

Coarse earthenwares occur only in the form of bowls in German and Trønder redwares and Dutch and German lead-glazed whiteware found in 17th and 18th century contexts. Greater numbers and varieties of bowls, plates and dishes are found in a range of refined earthenwares, notably Dutch, German (Weser, Werra, Lower Rhine), Scandinavian/North German, and English (Staffordshire) *slipwares*. Dutch slipwares are the first to appear during the 15th century, but, with the exception of Staffordshire slipware, most imported slipwares are represented already in 16th century contexts. All extend into the 18th century.



Figure 5.56. **Left:** Trønder slipwares and redwares (Dronningens gate 14 TA2004/13).⁸²² **Middle & right:** Rhenish slipwares N147346, 147402 & Staffordshire slipware bowl N147880 from the second provisioning managers' residence privy, Kongsgården (TA1991/1).

Locally-produced Trønder slipwares appear in Trondheim from the late 17th century on. Both local and imported slipwares include undecorated and slip-decorated vessels, predominantly in the form of plates, carinated bowls with pairs of looped handles, shallow bowls with flat bases, and various dishes. Staffordshire slipware is represented by plates and occasional bowls with comb-slip decoration.

Tin-glazed earthenware tablewares are concurrent with the slipwares. Similarly, there is a great variety of ware types and sources, though those from Dutch production centres are best represented in quantified assemblages. The Dutch tin-glazed earthenwares appear first during the late 16th century in the form of polychrome decorated tin-glaze plates, dishes and bowls, including fine display dishes in maiolica and faience. Larger numbers of plates, dishes and bowls in Dutch white tin-glaze and the characteristic blue decorated tin-glazed 'Delftware' appear during the 17th century, and these form the bulk of the Dutch material. All extend into the 18th century.

Plates that clearly belonged to dining sets have been found in both white and blue and white tin-glazed earthenwares, as have serving dishes and bowls (see below). Other forms of tin-glaze are less well

⁸²² With possible N. German/S. Scandinavian tripod pipkin and dish to right. Photo: B. Sampson/NIKU.

represented here, though fine vessels in both Montelupo and Ligurian maiolica are found, the former comprising fine display dishes from late 16th- early 17th century contexts. The only Scandinavian material comprises plates and bowls of 18th-century Danish tin-glazed earthenware.



Figure 5.57. **Left:** Dutch tin-glazed earthenwares (Delft) plates (B-Site, TA1971/2).⁸²³ **Right:** A cache of Dutch tin-glazed plates, bowls and jug (Dronningens gate 14 TA2004/13).⁸²⁴ Possibly late 17th/early 18th century.



Figure 5.58. Dutch tin-glazed plates from the second provisioning managers' privy, Kongsgården (TA1991/1). **Left:** from a set bearing Dutch phrases N147381-2.⁸²⁵ **Middle:** With Imari decoration N147402. **Right:** With Chinese-influenced design N146958.

Lead-glazed earthenware vessels appear first in later contexts; namely, from the mid- 18th century on. The earliest lead-glazed earthenware to appear in Trondheim are plates, bowls, dishes and tureens in Creamware, which was manufactured in various English production centres from the 1740s to c. 1820. This was supplemented from the late 18th century on by plates, bowls, dishes and tureens in Pearlware, and from the 1830s on by similar vessel types in Fine White earthenware, also produced by English potters.

All three lead-glazed types could be decorated using transfer-printing. This began in England during the 1780s, escalating rapidly in use and popularity during the 19th century. Popular early motifs were Oriental-inspired, most notably the ubiquitous willow patterns, and, from the first decades of the 19th century, European scenes, increasingly Romantic and Gothic-inspired in style. Another popular form of decoration from the 1820s on was *sponge decoration*, in this case applied to Pearlwares and Fine White earthenwares (illustrated below).

⁸²³ Photo: Riksantikvaren.

⁸²⁴ With the exception of back row no. 4 Frechen stoneware bottle and nos 5 & 6 Westerwald stoneware tankard and jug. Photo: B. Sampson/NIKU.

⁸²⁵ Photo: P.E. Fredriksen/ Nidaros Domkirkes Restaureringsarbeider.



Figure 5.59. 19th-century wares from Ravelsveita 6 (TA2004/18). **Top:** Assemblage of Fine whitewares; Sponged ware bowl and cup. **Bottom:** Sponged ware saucer and Industrial slipware cup.⁸²⁶

Refined stoneware and porcelain tablewares

The only refined stoneware tablewares registered here are plates and bowls in Staffordshire white salt-glazed ware which first appear in 18th century contexts. This is also the case for Chinese and European porcelain tablewares. The former are represented by plates and bowls, the latter by plates only.

Documentary evidence is ambiguous regarding the date of the earliest imports of Chinese porcelain to Norway, and there is no secure evidence for its importation prior to 1700.⁸²⁷ The earliest mention in a Norwegian customs list of 'porcelain' is in a Bergen list of 1696, valued at 200 *riksdaler* and imported from unidentified 'foreign places'. However, there is a chance that this may not be Chinese porcelain, but rather a misleading reference to faience (such as Dutch blue-decorated tin-glazed 'Delftware') which resembled Chinese porcelain.⁸²⁸ Further mention of porcelain in Bergen customs lists during the first two decades of the 18th century is on the low side and unreliable, and accurate figures are first available here from 1732 on. Porcelain is not mentioned at all in Christiania customs lists until 1733, and figures here remain low and unreliable until 1751. However, probate inventories from Christiania indicate that Chinese porcelain may have entered wealthy households from the late 1690s, although some ambiguity remains regarding whether the earliest references are to faience or Chinese porcelain proper.⁸²⁹ Small amounts of porcelain were found at Revierstredet, Oslo, the earliest dating to the start of the 18th century.⁸³⁰

The year 1732 saw the formation of the Danish Asiatic Company, which traded directly with China, and porcelain reached Norway chiefly from Copenhagen from then on, although Bergen also maintained contacts with Amsterdam up to about 1770. A major increase in imports is registered in Bergen toll lists from 1740, attributable to the Danish company's growing trade with China, and Chinese porcelain became less of a costly rarity. This also coincided with burgeoning imports and consumption of tea, coffee and, to a lesser degree, chocolate, and a major proportion of this porcelain comprised teawares (Category 3). Imports of porcelain appear to remain regular up to 1796 and 1800, when there were sharp drops, trade ceasing entirely following the dissolution of Denmark-Norway in 1814.⁸³¹

In Trondheim, Chinese porcelain is regularly recorded in 18th-century archaeological contexts, including tablewares of early Qing dynasty date, represented chiefly by blue-and-white teawares (cups, saucers, bowls). However, a few sherds of early Chinese porcelain have been found in 17th-century stratified contexts in Kongsgården (TA1991/1), suggesting that it was in use here prior to c. 1670. With sherds from excavations in Trondheim market square, these comprise the earliest recorded porcelain

⁸²⁶ Photos: I. Reed.

⁸²⁷ Johannessen 1985: 142.

⁸²⁸ Johannessen 1985: 131-132.

⁸²⁹ Johannessen 1985: 131-132, 142.

⁸³⁰ Fjellheim 1981: 127.

⁸³¹ Johannessen 1985: 136, 142.

from Norwegian archaeological contexts.⁸³² The sparsity of porcelain finds in 17th-century contexts presumably reflects limited availability, although there is a marked increase in the incidence of porcelain finds from contexts on the same site and elsewhere in Trondheim already from the early 1700s.⁸³³

European porcelain production began at Meissen in Germany in 1708, replicating Chinese hard-paste porcelain. By the second half of the 18th century, a number of other porcelain factories were in production in Germany, France, Denmark, Sweden and England. The most dominant English porcelain is bone china, so called due to the addition of bone powder to the clay. European porcelain plates from Trondheim contexts are of 18th and 19th century date; their origin is uncertain, but they are probably European rather than English.⁸³⁴



Figure 5.60. Chinese porcelain plates and saucers. L-r: plates and saucers (Kongsgården TA1991/1); a 'spoon tray' for tea ceremony and two Chinese Imari saucers (E-site, TA1972/2 pit E77).⁸³⁵

Other eating and serving vessels

Wooden, metal and glass vessels

There is a numerically and typologically more restricted range of non-ceramic vessels associated with food consumption. This includes occasional complete or fragmentary wooden plates, bowls and platters. A large assemblage of deliberately dumped wooden platters incised with owners' marks was found in an early 16th century context in the Archbishop's Palace. Occasional wooden bowls and pewter plates from the time of the Reformation were also found here (illustrated below).



Figure 5.61. **Left:** Wooden platter and spoon (both bear the same owner's mark). **Middle & right:** shallow wooden bowl and large broad-rimmed pewter plate or dish. All from the Archbishop's Palace (TA1991/1).

Pewter plates survive in the form of occasional single finds elsewhere, although a dumped cache (N200575-78, 200542) was found during excavations in Bryggegata (TA1993/2).

⁸³² TA 1991/1; I.Reed pers.comm.; TA2016/13 & TA2017/11.

⁸³³ I. Reed pers. comm.

⁸³⁴ Reed in prep.

⁸³⁵ Photos to right: I.Reed.

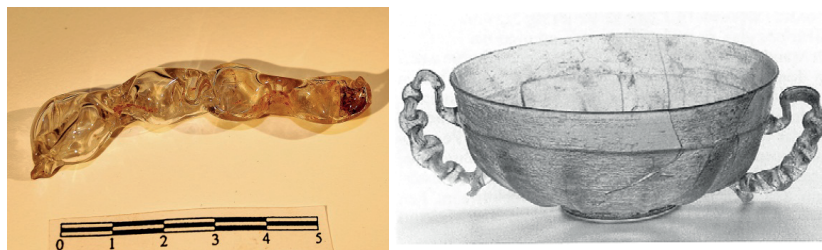


Figure 5.62. Glass handle N131863 from first provisioning managers' residence privy, Kongsgården (TA1991/1). Possibly from a 17th-century *façon de Venise* bowl of type illustrated to right.⁸³⁶

Only occasional examples of glass tablewares and serving vessels have been retrieved to date. A rare glass serving bowl is represented by a fragment of a handle, possibly from an imported 17th century *façon de Venise* bowl (illustrated above) found in Kongsgården (Chapter 6). A mid-18th-century rubbish pit at E-site (TA1972/2) produced fragments of a glass salver or stand which functioned as a tray or 'waiter' for serving cakes or a dessert such as jelly. It could be combined with others to form a pyramid of three tiers, a fashion current during the first half of the 18th century (below).



Figure 5.63. **Left:** Fragments of a glass salver N7036 (E-site, TA1972/2). **Middle:** A comparable example ('Presenter Tallerken') made at Nøstetangen with a contemporary illustration from the Weyse factory catalogue. **Right:** A pyramid of salvers ('jelly tree') in the Victoria & Albert Museum Collections, made c. 1750.⁸³⁷

Also found here were glass plates or saucers, a bowl, jelly glasses and punch cups (below).



Figure 5.64. A glass plate/saucer, bowl, and possible glass punch cups and jelly glasses (E-site, TA1972/2).

Eating utensils/equipment

Varieties of knives, forks and spoons have been found in Trondheim. The typologies for these are complex, and this survey must confine itself to a brief presentation of particular types represented in the Trondheim material.

⁸³⁶ After Henkes 1994: 236, 50.16.

⁸³⁷ Johansen 2011: 266; <http://collections.vam.ac.uk/item/O77974/jelly-tree-unknown/> (accessed 19.05.2018)

Knives

Medieval knives intended for use at table were pointed, used for cutting and spearing food. With the increasing adoption of the fork among the wealthy during the course of the 17th century, knife blades gradually became less pointed, the fork only now being used to spear food. From the 16th century on, the handles of luxury knives could be ornately decorated, although people in all walks of life used plain knives with simply decorated copper-alloy, wooden or bone handles. Until the 18th century, it was customary for people to carry their own table knives in a leather scabbard at the belt.⁸³⁸ During the course of the 17th and 18th centuries, the table knife underwent a series of changes.⁸³⁹ Table knives of the first half of the 17th century typically had a narrow, straight blade and long, solid shoulders on the handle, often faceted and decorated. By the third quarter of the 17th century, however, the tips of fashionable knives were rounded off, the forerunner of today's table-knife. From about 1670 the round end became slightly bulbous, while the cutting edge became convex and the upper edge slightly concave. By 1700 the now distinctly curved blade had acquired a dorsal ridge about a third of the way along, giving it the appearance of a scimitar (see below). This type of blade continued throughout the 18th century, and was almost always associated with a 'pistol-grip' handle with a down-curved butt. Table knives are occasionally found in late-medieval and later contexts in Trondheim, though their state of preservation is variable. Iron blades and handles in bone and wood, often finely decorated, have been found. Some examples are illustrated below.



Figure 5.65. Table knives. **Top:** Two early 17th-century knives from a rubbish pit at Søndre gate 7-11 (TA2017/3).⁸⁴⁰ **Bottom (l-r):** Two 18th-century knives from the provisioning managers' residences at Kongsgården N144859, N148805 (TA1991/1); knife with 'pistol-grip' handle from Søndre gate 7-11 (TA2017/3).

Forks

During the 16th century, the fashion of eating with a fork was introduced to the rest of Europe from Renaissance Italy, and the two-pronged fork was used by the wealthy to serve delicacies at the table, and ultimately for spearing food. This heralded a new style of eating associated with gentility and refinement. Forks were manufactured in silver, iron or copper alloy. During the course of the 17th century, the fork acquired three prongs, and four by the mid-18th century.⁸⁴¹

While table knives and spoons are known from medieval contexts in Norway, forks are unknown prior to the 17th century, at which time they were regarded as something of a curiosity, not becoming a customary, widely-adopted item of table cutlery before the 19th century.⁸⁴²

Only a few fragmentary two-pronged forks of 17th-century date have currently been identified in Trondheim, including fragments of two late 17th-century 2-pronged forks from deposits associated with the provisioning managers' residences in Kongsgården (below).

⁸³⁸ Museum Boymans-van Beuningen 1991: 141, 196, 245.

⁸³⁹ Hume 1969: 177-179.

⁸⁴⁰ Photos: NIKU.

⁸⁴¹ Museum Boymans-van Beuningen 1991: 141, 145, 196-198; Hume 1969: 180.

⁸⁴² Fossberg 1974: 26.

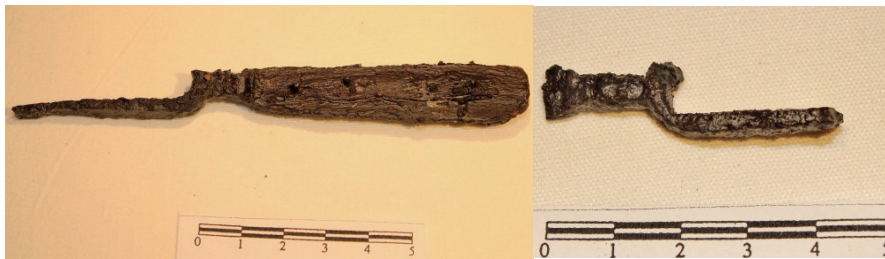


Figure 5.66. Two-pronged iron forks N146053, N119161 from Kongsgården (TA1991/1).

Spoons

The evolution of the spoon saw similar forms being reproduced concurrently in silver, brass, latten, pewter and wood, for which silver spoons formed the prototype. Silver spoons made in Norway are known from the late-medieval period on. These (and their humbler copies) conform generally to the North European repertoire of forms. Trondheim silversmiths were particularly noted for their skills in the production of ornate silver spoons during the 17th and 18th centuries.⁸⁴³

From the 15th to the mid-17th century, all spoons had fig-shaped bowls, rounded at the end, and gently curved towards the stem, or handle, which tapered to a decorative finial, by which different types can be identified and dated (e.g. 'Apostle' spoons, 'seal-top' spoons etc.). In Europe, silver spoons with decorated finials date to before c. 1670, although in Norway decorated fig-shaped varieties (referred to as 'Renaissance' types) continue in use in 18th-century rural communities.⁸⁴⁴ During the early 1600s, the silver spoon bowl became more oval, and the shaft lengthened, a popular form known in Norway as the 'kuleskje'. From the mid-1600s spoon stems became wider and flatter, a form known in Europe as the 'Puritan'.⁸⁴⁵ This marks a technical and decorative transition between the ornate, moulded Renaissance-inspired forms to simplified, engraved baroque forms, such as the popular Norwegian 'baroque spoon'. They could be made in sets, and are associated with changes in elite dining practices, where guests were no longer expected to provide their own spoons at table.⁸⁴⁶ The bowl deepened, and the junction of stem and bowl was reinforced with a spinal rib known as a 'rat-tail'. The rat-tail was current in Europe during the second half of the 17th century, and was in use until the second quarter of the 18th century on silver spoons (though much later on pewter spoons), being replaced by about 1740 by single or overlapping double, scale-like junction ornament. Latten spoons were most common in the rat-tail period, though they lost out to pewter in the early 1700s due to its comparative ease of production. The rat-tail spoon handle originally had a notched trifid terminal ('piede-de-biche'). By around 1700, the rat-tail spoon had acquired an evolved egg-shaped bowl and a handle with a terminal in the form of a rounded, up-turned spatula (the 'dognose'), a stem style that stayed popular until the end of the 18th century. Rat-tail spoons with trifid and dognose stems were the dominant form of silver spoon in Norway prior to c. 1760, although spoons with more slender, elongated handles based on English models were also popular in the earlier part of the century. After 1760, rococo-inspired 'violin' handled spoons became popular, Trondheim silversmiths also excelling in their production. Further changes in form and technological production methods occurred during the 18th and 19th centuries, but these are not dealt with here.⁸⁴⁷

As well as pewter examples, examples of 'Renaissance-type' spoons with fig-shaped bowls are replicated in bone and wood, to varying degrees of quality. Carved wooden examples from a late 17th-century context are known from Revierstredet in Oslo, for example, demonstrating the longevity of this form in organic materials.⁸⁴⁸

⁸⁴³ Hume 1969: 180; Fossberg 1974: 11-12; cf. Museum Boymans-van Beuningen 1991:141-146, 196-203.

⁸⁴⁴ Hume 1969: 181; Fossberg 1974: 16.

⁸⁴⁵ Fossberg 1974: 16-19, 26-27; Hume 1969: 183.

⁸⁴⁶ Fossberg 1974: 26-27.

⁸⁴⁷ Fossberg 1974: 32-38; Hume 1969: 180-184.

⁸⁴⁸ Weber 1981: 182.

Varieties of spoons manufactured in all materials and of diverse quality are found in post-medieval contexts in Trondheim. These range from spoons with fig-shaped bowls in silver, bone, wood and pewter from early post-medieval contexts, to rat-tail spoons in silver or pewter from 18th-century contexts. Examples of fig-shaped spoons in wood and bone from 16th and 17th-century contexts in the Archbishop's Palace/Kongsgården are illustrated below, as well as a fine example of a silver rat-tail spoon from contexts associated with the second provisioning managers' residence in Kongsgården.



Figure 5.67. Spoons from the Archbishop's Palace/Kongsgården (TA1991/1). **Left:** bone and wooden spoons with fig-shaped bowls. **Right:** a silver rat-tail spoon with dog-nose terminal N145124.

5.5.2.3. Category 3: Beverage consumption

Functional sub-categories	Artefact types	Source
Drinking vessels	Ceramic tankards, drinking jugs, cups, saucers, mugs, beakers	Local & imported
	Glass beakers and stemwares, glass punch cups	Norwegian & imported
	Wooden drinking vessels	
Serving/pouring vessels	Ceramic jugs, teapots	Imported
	Glass decanters	Imported

Figure 5.68.

This category encompasses a great variety of drinking vessels used to consume beverages, and a more limited range of vessels used to pour liquids in the process of their consumption.⁸⁴⁹ They are associated with the consumption of a variety of alcoholic and non-alcoholic beverages, notably beer, wine, spirits, mineral water, tea, coffee and chocolate.

Ceramic and glass drinking vessels dominate the urban assemblage in terms of surviving fragments, with a comparatively smaller amount and variety of fragments of vessels used for serving or pouring beverages/liquids. Ethnographic collections indicate that drinking vessels in wood (cups, beer-bowls, tankards etc) were commonly used, but, due to their constituent material, wooden drinking vessels are comparatively rare survivals in the archaeological material, as are metal vessels.

Ceramic drinking vessels from Trondheim conform to recognised types: namely, tankards, cups, mugs and beakers. They are found in a range of wares, all imported: mugs in English coarse earthenwares, tankards and cups in German and English refined earthenwares; tankards, drinking jugs, mugs and beakers in German coarse stonewares; tankards and mugs in English refined stonewares; and cups and saucers in Chinese and European porcelain. However, occasional 18th-century tankards and 19th-century cups in local Trønderware are known. While some jugs may have been used for drinking, I have opted to classify them as serving vessels (with the exception of Siegburg drinking jugs).

Glass drinking vessels in Trondheim can be subdivided into two main formal categories: namely, *beakers* (glasses without stems or handles, most of whose height is used to hold liquid), and *stemwares*

⁸⁴⁹ Glass or stoneware bottles may also have been used to serve at table, but they were also used to transport and/or store liquids. Consequently they have been categorised separately (see Category 4. Beverage storage/dispensing).

(stemmed vessels that support a bowl, less of whose height is used for holding liquid).⁸⁵⁰ Beakers are generally associated with beer-drinking, and stemwares with wines and spirits.

The Trondheim glass assemblage includes examples of many of the principal known types of beakers and stemwares imported to Norway from glass-houses in Northern Europe and England from the late 15th century to the mid-18th century. In addition, stemwares and beakers produced in the Norwegian glassworks at Nøstetangen and Hurdal, which monopolised the Norwegian market during the second half of the 18th century, are well represented.

The range of vessels in ceramics and glass used for *servicing or pouring* beverages and other liquids is comparatively limited in numbers and variety. They comprise mainly ceramic jugs and teapots, and a small number of glass bottle wine decanters/carafes. Again, all were imported during our period. Ceramic serving/pouring vessels include jugs in English, French and Dutch coarse and refined earthenwares, jugs in German coarse stonewares, and teapots in English refined stonewares and European porcelain.

Drinking vessels

Ceramic drinking vessels

Ware types	Vessel types	Trondheim date ranges
Coarse earthenwares		
Whitewares		
English mottled ware	Mugs	18th century
Refined earthenwares		
Slipwares		
Staffordshire slipware	Cups	Late 17th - 18th centuries
Tin-glazed earthenware		
Dutch blue decorated tin-glazed	Tankards, cups	17th - 18th centuries
Lead-glazed earthenware		
Creamware	Cups	Mid 18th - early 19th
Pearlware	Cups	Late 18th - mid 19th century
Fine White earthenware	Cups	Mid 19th century +
Refined redwares	Tankard	18th century
Coarse stonewares		
Siegburg stoneware	Tankards, drinking jugs, beakers	Mid 16th - early 17th centuries
Raeren stoneware	Mugs	16th - 17th centuries
Cologne stonewares	Mugs, tankards	16th - early 17th centuries
Frechen stoneware	Mugs, tankards	Late 16th - 17th centuries
Westerwald stoneware	Tankards	17th - 18th centuries
Refined stonewares		
English brown salt glazed	Tankards, mugs	18th century
Staffordshire white salt-glazed	Mugs	18th century
Porcelain		
Chinese porcelain	Cups, saucers	18th century
European porcelain	Cups, saucers	18th - 19th centuries

Figure 5.69.

⁸⁵⁰ Willmott 2002: 35-36, 57. Following Willmott (ibid: 57-58), the term goblet will be used for the stemmed drinking vessels included in this category. The common alternative modern term – wineglass – negates other possible uses, although the consumption of wine was probably their primary function.

Earthenware drinking vessels

These are almost exclusively refined earthenware vessels, the only exception being coarse earthenware mugs in English mottled whiteware. Refined earthenware vessels from 17th and 18th century contexts include cups ('posset' cups) in Staffordshire slipware, tankards and cups in Dutch blue decorated tin-glaze, and a tankard in refined redware. From 18th and 19th century contexts we find cups in the lead-glazed earthenwares, namely Creamware, Pearlware and Fine White earthenware.

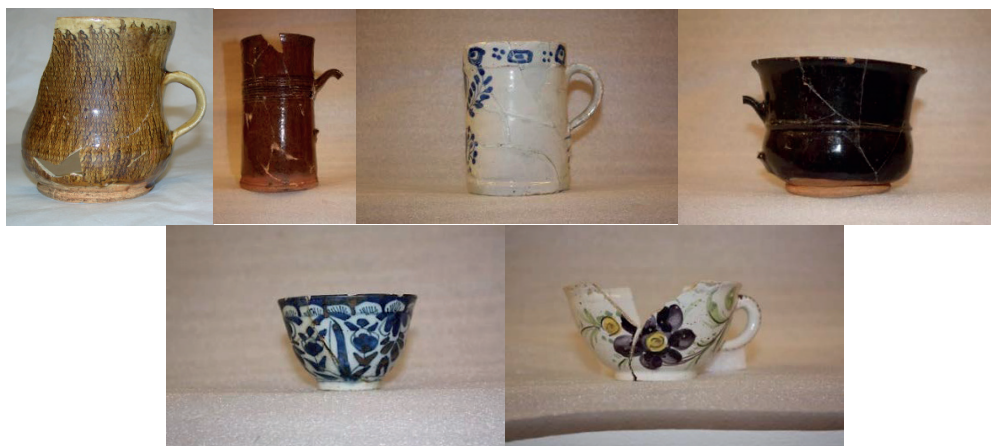


Figure 5.70. Ceramic mugs, tankards and cups. **Top** (l-r): Staffordshire slipware mug (Dronningens gate 24 TA2004/13); English mottled whiteware mug (E-site, TA1972/2); Dutch tin-glazed tankard (B-site, TA1971/2); Staffordshire black glazed cup (E-site). **Bottom**: two Dutch tin-glazed earthenware cups (B-site).⁸⁵¹

Stoneware drinking vessels

German coarse stonewares represent the earliest ceramic drinking vessels noted within the parameters of the present study. From 16th and 17th contexts are registered tankards, drinking jugs and beakers in Siegburg stoneware, mugs from Raeren, mugs and tankards from Frechen and Cologne, and from 17th and 18th century contexts, mugs in Westerwald stoneware. Refined stonewares appear in 18th century contexts in the form of tankards and mugs in English brown salt-glazed and mugs in Staffordshire white salt-glazed stonewares.



Figure 5.71. L-r: Siegburg stoneware drinking jug (Torvet TA2016/13);⁸⁵² Staffordshire stoneware mug 147881 (Kongsgården TA1991/1); Westerwald stoneware tankard (Dronningens gate 24 TA2004/13); Westerwald stoneware (B-site, TA1971/2).

⁸⁵¹ Photos: I.Reed.

⁸⁵² Photo: J. Cadamarteri/NIKU.

Porcelain drinking vessels

Chinese porcelain teawares in the form of cups and saucers are registered in 18th-century contexts, while European porcelain cups and saucers are found in 18th and 19th-century contexts. The earliest Chinese porcelain vessels registered archaeologically are from 17th-century deposits in Kongsgården (TA1991/1 Period 10).



Figure 5.72. Chinese porcelain cups and saucers. **Left:** cups and saucers from the second provisioning managers' residence, Kongsgården (TA1991/1).⁸⁵³ **Middle & right:** Cups from a mid 18th-century privy at Søndre gate 7-11 (TA2017/3).⁸⁵⁴

Glass drinking vessels

Glass drinking vessel types	Trondheim date ranges
Beakers	
Maigelejn cups/beakers	Early 16th century
Stangengläser (tall cylindrical beakers)	Late 16th - late 17th century
Keulenbecher/club beakers	Late 16th century
Passgläser/passglasses (tall polygonal beakers)	16th-17th centuries
Berkemeier (prunted beakers)	17th century
Roemer (prunted beakers)	17th-18th century
Venetian-style (<i>façon de Venise</i>) beakers (filigree; applied-thread)	Late 17th century
Bandwurm beakers (tapeworm beaker)	Mid-late 17th century
Wafel beakers (waffle-/latticed-pattern beaker)	Mid-late 17th century
Mesh-work beakers ('nipt-diamond-waies')	Mid-late 17th century
Bossed beakers	Late 16th - mid 17th century
Comet beakers	First half of 17th century
Bohemian crystal beakers	Late 17th century
Other (Nøstetangen beakers, punch cups)	18 th century
Stemwares	
Venetian-style (<i>façon de Venise</i>) goblets	17th century
Heavy balusters	Late 17th - 18th century
Balusters/balustroid	18th century
Moulded pedestal ('Silesian') stems	18th century
Drawn stems	18th century
Twist stems (air-twist, opaque-white/enamel)	18th century
Covered goblets	18th century

Figure 5.73.

Although no major comparative surveys exist, vessel glass is comparatively rare in medieval Norwegian archaeological contexts prior to the 15th century. In Trondheim, for example, only one archaeological

⁸⁵³ N146968, 147375, 1437370, 147372, 145507.

⁸⁵⁴ Photo: A. Wändahl /NIKU.

find of a possible early medieval drinking glass is currently recorded.⁸⁵⁵ A recent study of glass vessels from archaeological contexts at Bryggen, Bergen registered 147 fragments dated prior to c. 1413, of which 116 (79%) were found in 14th-century contexts. The same study showed a marked increase in the amount and range of vessel glass during the 15th, 16th and 17th centuries (1046 fragments).⁸⁵⁶

During the course of the 17th century, an increasing variety of drinking glasses was used in Norwegian towns and cities, presumably reflecting increased demand and availability. This is indicated by archaeological material from urban centres and contemporary documents, notably probate inventories and customs lists. For example, customs lists from Christiania (Oslo), which from 1669 onwards detail the import of significant amounts of Roemers, passglasses and simple stemwares, items which also feature, with diverse other beer glasses and wine glasses, in the 1696 probate inventory of a Christiania shopkeeper who sold glass. According to Ada Polak, by 1700 the consumption of glasswares in Norwegian urban centres had increased significantly, although their use in rural contexts was not common until later in the 18th century. Glasswares were originally primarily the preserve of social elites, but from the early 18th century their use extended to less privileged groups, although differentiation still existed in the types and quality of glass used across the social scale.⁸⁵⁷

Prior to the introduction of an embargo on imports in 1760, most of the glass used in Norway during the first half of the 18th century was imported from Germany via an agency in Copenhagen or itinerant German peddlers. This glassware encompassed cheaper beakers and stemwares, as well as more expensive engraved covered ceremonial goblets, for example. However, the quality of most of even the more elaborate German glass imports to Norway seems to have been generally mediocre, especially with regard to the execution of their engraved decoration, which also repetitively employed conventional and old-fashioned baroque ornamentation. Norwegian glass production began at Nøstegangen in southern Norway in 1741, its products monopolising the domestic market between 1760 and 1803.⁸⁵⁸

A broad range of beakers and stemwares, both imported and Norwegian-made, are represented in Trondheim and other urban contexts during the period under discussion here. The main types documented archaeologically are presented here.

Façon de Venise stemwares and beakers

The rarity of vessel glass in Norwegian medieval archaeological contexts is matched by rare references to glass in medieval documents. Of relevance for the present study, however, are an inventory reference and an archaeological find of a stemware glass fragment of either Venetian *crystallo* or *façon de Venise* type at Stenvikholmen castle which Polak cites as evidence for the use of imported luxury glass typical of the period by the last archbishops of Nidaros (Trondheim) immediately prior to the Reformation.⁸⁵⁹

Façon de Venise glassware (cheaper copies of original Venetian *crystallo*) was being produced in North German and Low Countries colourless mixed-alkali or soda-lime glass by the mid-16th century, and took the form of varieties of high-quality stemwares and beakers. In addition to elite Norwegian contexts such as Steinvikholmen, Polak notes archaeological finds of *façon de Venise* vessel glass in 16th-century urban contexts, notably goblet fragments from Bryggen in Bergen that may have been produced in Dutch glasshouses.⁸⁶⁰ Goblets with hollow knopped stems are the most common *façon de Venise* stemware found in post-medieval contexts on the Continent, appearing first in the late 15th century, becoming increasingly frequent in the 16th century, and by the end of the 17th century they were almost the only form used. Goblets with distinctive 'compound' or flattened openwork stems, including winged-

⁸⁵⁵ I. Reed pers. comm.

⁸⁵⁶ Høie 2006: 47-54.

⁸⁵⁷ Polak 1983: 19. An interesting recent find of fine glass drinking vessels and porcelain normally associated with urban households at a mid 18th century rural cotter's household may suggest that some such goods traversed social boundaries (Sethre 2017).

⁸⁵⁸ Polak 1983: 20-21, 222; Johansen 2011.

⁸⁵⁹ Polak 1983: 18.

⁸⁶⁰ Polak 1983: 18, 243; Høie 2006: 58; <http://glass.app.uib.no/> (accessed 19.05.2018).

serpentine, coiled-serpentine, and twisted cable stems, were also popular prior to the late 17th century.⁸⁶¹

Occasional *façon de Venise* stemware fragments have been found in Oslo⁸⁶² and Trondheim. The earliest stemwares from Trondheim excavations are shards of *façon de Venise* goblets of 17th-century date. Stems are the most readily interpretable surviving fragments. These include knopped stems and ‘compound’, or flattened openwork stem variants. The examples illustrated below comprise hollow-knopped varieties from late 17th-century contexts in Kongsgården (TA1991/1 Period 11 Phase 1), and an early 18th-century context in the city (B-site, TA1971/2).⁸⁶³ During the late 17th century *façon de Venise* goblets acquired a heavier, less elaborate look in imitation of English lead-glass models, a development possibly exemplified by an example with a hollow baluster-like stem (below, furthest right).⁸⁶⁴



Figure 5.74. *Façon de Venise* goblets with hollow-knopped stems. L-r: Three examples N115304, N125318, N184542 from Kongsgården (TA1991/1) and two examples N9601, N9598 from B-site, TA1971/2.

Occasional fragments from delicate *façon de Venise* goblets with compound/ flattened openwork stems are found in 17th-century contexts here. The examples illustrated below include fragments of at least two fluted goblets with winged-serpentine or winged twisted cable stems from an early 17th-century urban site (Site FX), and fragments of winged-serpentine stems, coiled and winged-serpentine stems, and winged twisted-cable stems from late 17th-century contexts in Kongsgården.⁸⁶⁵

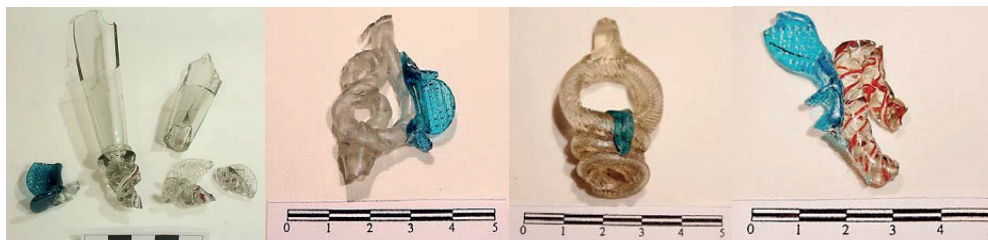


Figure 5.75. *Façon de Venise* goblets with compound stems. **Left:** fragments of two fluted winged goblets N60824 (Site FX). **Middle & right:** a winged-serpentine stem N148057, a coiled and winged-serpentine stem N115976 and a winged twisted-cable stem N146236, from Kongsgården (TA1991/1).

Readily identifiable soda-glass *façon de Venise* bowls are those with *mezzaforma* moulding. An example from an early 18th-century context in the city (B-site, TA1971/2) is pictured below (N50451), as is an example from a late 17th context in Kongsgården (TA1991/1) which closely resembles a Dutch example dated to the first half of the 17th century illustrated in Henkes.⁸⁶⁶

⁸⁶¹ Willmott 2002: 58-62, 65-67; Henkes 1994: 200-222; Museum Boymans-van Beuningen 1991: 190-191.

⁸⁶² Wiberg 1981: 175.

⁸⁶³ Henkes 1994: 211-217, 263, Afb. 132, 174 & 175, cat. nrs. 47.3, 47.9.; Willmott 2002: 60-61.

⁸⁶⁴ Henkes 1994: 266, 263-264, Afb. 175 & 176 nos. DL-88 & B-121.

⁸⁶⁵ TA1991/1 Period 11 Phase 1, first provisioning managers’ residence; Henkes 1994: cat. nos. 48.1, 48.5, 48.6; Willmott 2002: 66-7.

⁸⁶⁶ Henkes 1994: 209, cat. no. 46.18.

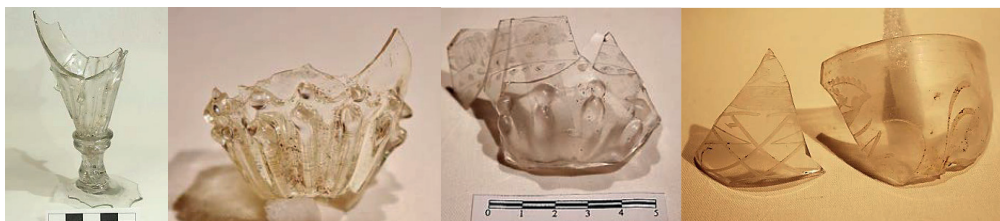


Figure 5.76. *Façon de Venise* goblets from B-site TA1971/2 (furthest left) and Kongsgården (TA1991/1). **Left:** soda goblets with *mezzaforma* moulding N50451, N130040. **Right:** two engraved potash-lime(?) goblets: one with moulding N146585 and one with monogram of King Fredrik IV (1700-1730) N146307.

A similarly moulded bowl from the same context is engraved, possibly from a goblet made of potash-lime glass (Bohemian/Silesian?), as is another monogram-engraved bowl from the mid-late 18th-century latrine pit associated with the second provisioning managers' residence in Kongsgården (TA1991/1).

Beakers were also produced *à la façon de Venise* from the mid-16th century on. These included the characteristic filigree (*vetro a filigrana*) low conical or cylindrical types produced in a number of variants, such as the late 16th and 17th-century *vetro a fili* beakers, decorated with spiralling threads of white or coloured glass.⁸⁶⁷ These delicate, thin-walled beakers are represented by occasional fragments found on urban excavations.⁸⁶⁸ Examples from Trondheim illustrated below derive from late 17th-century redeposited contexts in Kongsgården.⁸⁶⁹ The coloured examples are from filigree beakers,⁸⁷⁰ while a fragment of thin soda glass bearing thin opaque white horizontal applied thread decoration is of less certain interpretation, possibly from a French conical beaker or goblet with an applied *lattimo*, or milk glass, trailing thread, or alternatively, a form of Dutch beaker of a type illustrated in Henkes.⁸⁷¹

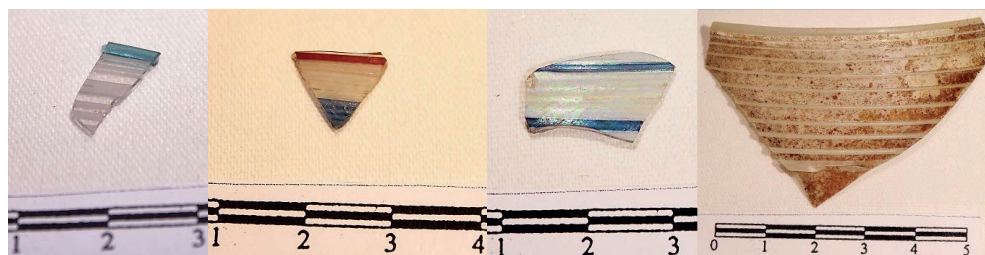


Figure 5.77. *Façon de Venise* beakers. L-r: three fragments of filigree glass N148247, N132202, N148024 and a fragment of a beaker (or goblet?) with applied *lattimo* thread N125308. From Kongsgården (TA1991/1).

During the course of the late 17th century, *façon de Venise* soda-lime glass succumbed to the commercial success of Bohemian potash-lime crystal and English potash-lead crystal (see below) and vanished from the European market soon after 1700.⁸⁷²

Maigelein cups and pruned beakers (krautstrünke, berkemeier, roemer)

The earliest high-quality *façon de Venise* stemwares and beakers in colourless soda-lime glass were contemporary with cheaper beakers in green-tinted German potash glass.

⁸⁶⁷ Henkes 1994: 175-176.

⁸⁶⁸ Høie 2006: 55.

⁸⁶⁹ TA1991/1 Period 11 Phase 1 c. 1672+.

⁸⁷⁰ Henkes 1994: 175-176, cat. nrs. 41.6, 41.9.

⁸⁷¹ Henkes 1994: 155 cat. nr. 35.11.

⁸⁷² Charleston 1984: 142-143; Henkes 1994: 245; Museum Boymans-van Beuningen 1991: 184, 237.

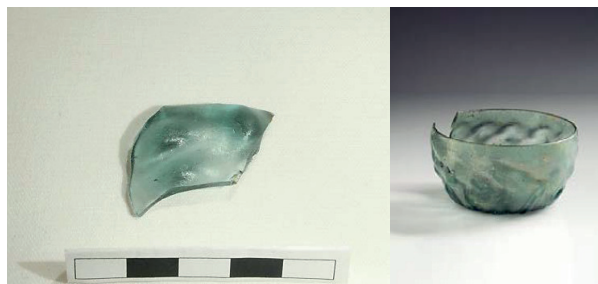


Figure 5.78. *Maigelein* cups. **Left:** Fragment N166811 from the Archbishop's Palace (TA1991/1). **Right:** *Maigelein* cup from Bergen.⁸⁷³

Among the earliest examples of the latter are *Maigelein* glass 'cups', which were in general use on the Continent during the 15th century and first half of the 16th century, and are registered in contemporaneous Norwegian urban contexts, notably Trondheim and Bergen (illustrated above).⁸⁷⁴

The earliest glass vessels from Trondheim comprise a few fragments of low, bowl-shaped mould-blown potash *Maigelein* cups/beakers found in pre-Reformation contexts in the Archbishop's Palace.⁸⁷⁵

Polak notes Norwegian urban archaeological finds of quantities of German potash glass, suggesting its considerable use here from at least the mid-16th century on, particularly in the form of *roemer* beakers which probably originated in the Hessen region of Germany, and were imported via north-German and Dutch ports.⁸⁷⁶ *Roemers* are developed variants of a 'prunted' beaker known as the *berkemeier*, which was characterised by a conical bowl and cylindrical body with applied decorative glass blobs ('prunts'). *Berkemeiers* were produced in Germany prior to 1500, and discontinued shortly after 1650.⁸⁷⁷ Occasional fragmentary examples have been found in Norwegian urban contexts, including Bergen and Trondheim.⁸⁷⁸ During the second half of the 16th century, the *berkemeier* evolved into the *roemer*, a luxurious form produced specifically for the consumption of Rhenish white wine, adorned with prunts and threads and distinguished from the *berkemeier* by a spherical or convex bowl.⁸⁷⁹ However, due to similarities in their stems and the use of pointed prunts prior to c. 1650, it is often difficult to identify fragments securely as either *berkemeiers* or early *roemers*.



Figure 5.79. *Roemers/berkemeiers*. **Left:** Stem of early *roemer* beaker from Søndre gate 7-11 (TA2017/3). **Middle:** Two *berkemeier* or early *roemer* beakers from KN-site N13573, N14168. **Right:** A pincer-notched foot-ring, possibly from a *berkemeier* beaker N148140; first provisioning managers' residence, Kongsgården (TA1991/1).

Prunted beakers of *berkemeier* and *roemer* types were produced in large quantities, variable qualities and numerous varieties in the Netherlands and Lower Rhineland during the 17th century.

⁸⁷³ Bryggen Museum's collection: <http://glass.app.uib.no/maigelein/1/> (accessed 29.06.2018).

⁸⁷⁴ Willmott 2002: 5-6, 20, 58; Tait 1991: 154-155, 172-176; Henkes 1994: 16, 51, 55, 200, 213, 173; Museum Boymans-van Beuningen 1991: 86, 90, 130, 184; Grieg 1933: 120, Fig. 73; Høie 2006: 56; <http://glass.app.uib.no/> (accessed 29.06.2018).

⁸⁷⁵ TA1991/1: Period 6 Phase 3 c. AD1480-1532.

⁸⁷⁶ Polak 1983: 18.

⁸⁷⁷ Henkes 1994: 72, 192, 256.

⁸⁷⁸ Grieg 1933: 115-117, Figs 69-71; <http://glass.app.uib.no/>; Høie 2006: 57.

⁸⁷⁹ Polak 1974: 59-61; Henkes 1994: 192; Willmott 2002: 53.

Roemers reached peak popularity during the mid-17th century, but continued in use, in modified forms, into the 18th and 19th centuries and are one of the most common drinking vessels found on north European sites. In Norway, finds from Trondheim, Bergen and Oslo encompass forms datable to a long period extending from the early 16th century to the 18th century.⁸⁸⁰ Prunted beakers that might be either conical-bowled *berkemeiers* or early spherical-bowled *roemers* from 17th-century contexts in Trondheim are illustrated above.

More numerous examples of the developed form of prunted beaker - the spherical-bowled *roemers* – have been identified in 17th- and early 18th-century contexts in the city and the Archbishop's Palace/Kongsgård.⁸⁸¹ The illustrated examples (below) show a miniature *roemer* from an urban site (FX), and two differently sized *roemers* from another urban site (B-site, TA1971/2).⁸⁸² A rarer form found in the same context comprises a colourless-glass *roemer* with a smooth high foot, manufactured in northern Germany after 1700.⁸⁸³



Figure 5.80. *Roemers*. **Left:** A miniature *roemer* with smooth prunts N61442 (FX-site). **Middle:** Two *roemers* with raspberry prunts N22713 (B-site, TA1971/2). **Right:** A clear-glass *roemer* with smooth high foot and raspberry prunts N50446 (B-site).

Tall cylindrical beakers: stangengläser, club beakers (keulenbecher), passglass beakers (passgläser)
Another popular German potash-glass product common in Germany, the Low Countries and Scandinavia during the later medieval/early post-medieval period was the tall cylindrical beaker used for drinking beer known as the *stangengläs*. These were produced in North German glasshouses from the mid-15th century on, production ceasing at the end of the 16th century or early 17th century. From about 1500 up to the late 17th century these fashionable tall beakers were also produced in octagonal form, often richly decorated. During the 16th century, a related form known as the *keulenbecher*, or club beaker, was differentiated from the *stangengläser* by its club-shaped upper half. The largest could be up to 50cm tall, with a capacity of half a litre. They ceased to be produced during the late 16th century.⁸⁸⁴

Only a few possible fragments of the earliest cylindrical and octagonal *stangengläs* beakers have been identified in Trondheim in late 16th- and 17th-century contexts in the Archbishop's Palace/Erkebispegården,⁸⁸⁵ and one fragmentary *keulenbecher* (club beaker) from a late 16th- /early 17th-century context in the city (illustrated below).

⁸⁸⁰ Henkes 1994: 189-192; Museum Boymans-van Beuningen 1991: 130, 184, 237; Tait 1991: 155; Willmott 2002: 53; Polak 1974: 61; Grieg 1933: 117-119; Wiberg 1981: 173-174; Polak 1983: 18; Høie 2006: 57; <http://glass.app.uib.no/> (accessed 29.06.2018).

⁸⁸¹ TA1991/1 periods 8 and 9 c 1590 - c 1670; Johansson 2008: 53-55.

⁸⁸² The FX example is identical to a mid-17th century example in Henkes 1994 (cat.no. 45.8). The smaller of the B-site beakers resembles an example dated to 1648 in Henkes 1994 (cat. no. 45.20), while the larger example's broader, shallower, and less spherical bowl is a later 17th-century form (Henkes 1994: 256).

⁸⁸³ Henkes 1994: 256, 261-2

⁸⁸⁴ Henkes 1994: 76; Willmott 2002: 51; Tait 1991: 155; Henkes 1994: 76, 80; Henkes 1994: 86-87.

⁸⁸⁵ TA1991/1 periods 8 & 9 c 1590 - c 1670; Johansson 2008: 53-55.

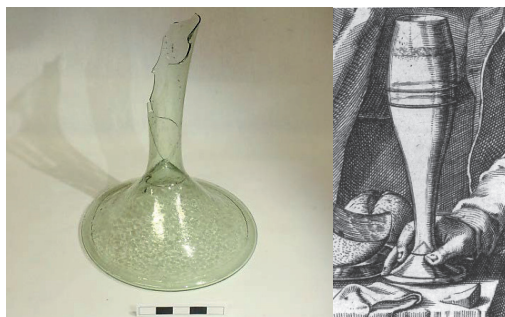


Figure 5.81. *Keulenbecher*. **Left:** Base and lower fluted stem of a club beaker N62133 (site FX). **Right:** 16th-century illustration of a *keulenbecher*.⁸⁸⁶

Another *stangengläs* variant, the tall polygonal beakers (6-, 7- and 8-sided) known as *passgläser* (*passglass* beakers) are distinguished from octagonal *stangengläser* by their regularly-spaced applied horizontal glass rings (rigaree trails). These were produced in great quantities in Germany from the mid-16th century on, becoming popular in the Netherlands around 1600. The *passglass* was specifically designed for sociable beer drinking and drinking games, single beakers being passed around among drinking companions.⁸⁸⁷ They were popular in Scandinavia, with evidence of their production in Sweden and Denmark, though Danish glass manufacture in general was not characterised by large-scale production for export.⁸⁸⁸

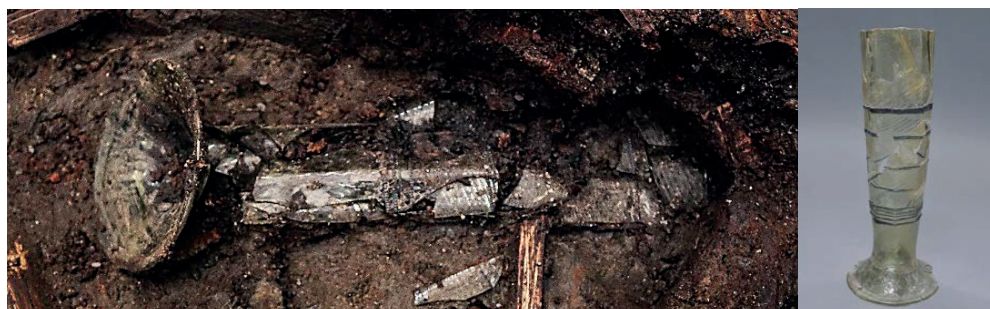


Figure 5.82. **Left:** A *passglass* beaker discarded in an early 17th-century rubbish pit at Søndre gate 7-11 (TA2017/3).⁸⁸⁹ **Right:** a comparable *passglass* beaker from the Boijmans Collection.⁸⁹⁰

Numerous *passglass* beaker fragments are found in 17th-century Norwegian urban archaeological contexts. For example, they comprise the biggest single group of drinking glass in deposits from between c. 1670 and c. 1700 at the Revierstredet site in Oslo, and from 17th-century deposits prior to c. 1672 in the Archbishop's Palace/Kongsgård in Trondheim (TA1991/1 periods 8 & 9) and 17th-century urban deposits. According to Polak, imports of *passglass* beakers into Norway ceased by about 1700.⁸⁹¹

Conical beakers

Varieties of smaller conical beakers were produced in green-tinted potash or colourless soda/mixed alkali glass in the Low Countries or Germany during the mid-late 16th and 17th centuries. Occasional

⁸⁸⁶ After Henkes 1994: 86, Fig. 58.

⁸⁸⁷ Tait 1991: 177; Willmott 2001: 50-51.

⁸⁸⁸ Jexslev *et al* 1970.

⁸⁸⁹ Photo: NIKU.

⁸⁹⁰ <http://collectie.boijmans.nl/en/object/143722/pasglas/Anonymous> (accessed 29.06.2018).

⁸⁹¹ Henkes 1994: 160; Willmott 2002: 51; Wiberg 1981: 172-173; Johansson 2008: 53-55; Høie 2006: 56; <http://glass.app.uib.no/>; Polak 1983: 17, 20.

examples have been identified in 17th-century contexts in Trondheim, Bergen and Oslo.⁸⁹² These are differentiated by their characteristic patterns and decorative elements, and types known from Trondheim include fragments of *bandwurm*, *wafel*, *mesh-work*, *bossed* and *comet* beakers from mid-late 17th-century contexts (illustrated below).⁸⁹³



Figure 5.83. Conical beakers. **Top** (l-r): Fragments of *bandwurm* N186283, *wafel* N186320 and *mesh-work* (relief-blown 'nipt-diamond-waies') N186319 beakers (Søndre gate 24 TA2007/11). **Bottom** (l-r): Fragments of at least two comet beakers N11152 and bossed beaker base and body fragment N11150 (S-site TA1971/1).

Bohemian crystal stemwares and beakers

While *passglass* beakers vanished from the Norwegian market at around 1700, *roemers* continued to be imported up to at least 1750. However, the first half of the 18th century is chiefly marked by the flooding of the Norwegian market (in common with the rest of Europe) by cheap German export glassware.⁸⁹⁴ During the final decades of the 17th century, *façon de Venise* soda-lime glass had declined in popularity due to the emergence of two new 'crystal' glass types: namely, the newly-perfected Bohemian/Silesian potash-lime glass, notable for its clarity and durability, and its suitability for increasingly popular decoration by engraving, cutting and stippling; and, from c. 1675, by the newly invented (or reinvented) English potash-lead glass, a viscous and heavy glass with a high refractive index and contrasting dark shadows.

Cheap beer beakers in Bohemian potash-lime glass bearing poorly-executed wheel-engraving were particularly popular.⁸⁹⁵ Representatives of the varied range of stemwares and beakers associated with these glass types are found in Norwegian archaeological contexts, including Trondheim (illustrated below). These include occasional complete Bohemian potash-lime beakers, a fine example being a large beaker with crudely engraved chinoiserie scenes from an early 18th-century context in the city (B-site,

⁸⁹² Høie 2006; Wiberg 1981: 175, Fig. 9.

⁸⁹³ Henkes 1994: 132-135; 162-164; Museum Boymans-van Beuningen 1991: 139, 192; Willmott 2002: 40-41. Cf. Henkes 1994 cat. nos. 30.1.-30.3 (bandwurm) 30.4-30.7 (wafel), 31.1. (bossed), 32.1-31.3 & 53.1 (mesh-work), 38.1.& 38.2 (comet).

⁸⁹⁴ Polak 1983: 19-20, 244; Polak 1974: 19.

⁸⁹⁵ Henkes 1994: 16-17, 245; Charleston 1984: 142-143; Museum Boymans-van Beuningen 1991: 184, 237; Tait 1991: 181-184; Willmott 2002: 6-7; Polak 1983: 49; Høie 2006.

TA1971/2).⁸⁹⁶ Fragmentary beakers were recovered from late 17th-century deposits in Kongsgården, including one with a crudely executed floral design and an enamel-painted example.⁸⁹⁷



Figure 5.84. Bohemian crystal beakers. L-r: Two views of a large beaker engraved with chinoiserie panels N9616 (B-Site, TA1971/2); fragment with engraved floral design N125309, and enamel-painted fragment N128493 (Kongsgården TA1991/1).

English lead-crystal stemwares

Emerging commercially just before 1700, quantities of English potash-lead drinking glasses were also imported into Norway from the start of the 18th century, although this was unlikely to have been on the same scale as the German glass import trade. A chief production and export centre at the time was Newcastle, and exports of varieties of beer glasses and stemwares from there to Bergen are documented in the 1740s.⁸⁹⁸

The properties of English lead crystal facilitated a new order of form where the goblet, or drinking-glass, was the main vehicle of changing fashion, and in which the decorative focus became the stem.⁸⁹⁹ This 'baroque' style in stemware was characterised by a thick base to the bowl and stout, solid stems, sometimes beaded with one or more air bubbles. There were multiple permutations, but goblets in the new style produced in England and copied abroad - including at the glass factories at Nøstetangen and Hurdal in Norway during the second half of the 18th century (see below) - conform generally to distinctive types that evolved from the late 17th century on. However, chronologies for these types' production periods are difficult to determine precisely, and particular types clearly overlapped in use. Distinctive developments in the forms of bowl and base also occur, but the standard typology is built chiefly on the decorative characteristics of the stem. These are also the parts of the goblets that survive best archaeologically, although many bowl fragments survive, including numerous with engraved decoration, including floral designs, inscriptions, monograms and coats-of-arms.⁹⁰⁰

The earliest stems comprise solid, heavy *balusters*, usually combined with simple straight-sided funnel and round-funnel bowls. Their production probably began in England during the 1690s, continuing through the first quarter of the 18th century. After about 1710, these transformed into a number of variants with numerous permutations, so-called *developed balusters*.⁹⁰¹ Prior to 1750, this heavy baroque style ultimately gave way to the lighter and more purely decorative spirit of the Rococco, characterised by a lengthening and slimming of the monumental baluster stem, more graceful bowl forms (e.g. bell-bowl, ogee and thistle bowls), and the use of greater varieties of decorative techniques.⁹⁰² Stems were compiled mainly of slender balusters and inverted balusters, small globular and flattened knobs often enclosing air bubbles, as well as sections of straight stem, all in varied combinations. A firm line of stylistic transition cannot be drawn between developed balusters and these so-called '*balustroids*' or *light balusters*, but the trend seems to start at about 1715, with their main

⁸⁹⁶ Henkes 1994: cat. no. 52.3. Pseudo-Chinese scenes - in imitation of Chinese porcelain - went out of fashion by c. 1760 (Henkes 1994: 247).

⁸⁹⁷ TA1991/1 Period 11 Phase 1, first provisioning managers' residence (see Case study, Chapter 6).

⁸⁹⁸ Polak 1983: 22, 222.

⁸⁹⁹ Charleston 1984: 133.

⁹⁰⁰ Henkes 1994: 17, 245; Polak 1983: 19-20; Tait 1991:181-184; Charleston 1984: 109-196; Willmott 2002: 6-7

⁹⁰¹ Charleston 1984: 133-137.

⁹⁰² Charleston 1984: 142-143.

period of currency between c. 1725 and c. 1760.⁹⁰³ However, outside London and England, balusters overlapped in use with the lighter *balustroid* forms, and had a long currency. Illustrative of this in the present context is that in 1755, when the Newcastle glass-blowers James Keith and William Brown travelled to Norway to help establish English glass-making methods at Nøstetangen, they took with them styles which would have been considered old-fashioned in London.⁹⁰⁴

Many types of stemware characteristic of English and German models from the late 17th and 18th centuries are represented in Trondheim, including lead-crystal items imported prior to 1760, and Norwegian crystal variants in cheap potash-lime 'German glass' and a local variety of English lead-glass produced at Nøstetangen during the second half of the 18th century. Examples illustrated below include imported baluster-stemmed goblets and a moulded pedestal (or Silesian) goblet from an early 18th - century context on an urban plot (B-site, TA1971/2), and balusters from the latrine pit of the first provisioning managers' residence in Kongsgården (abandoned c. 1730).



Figure 5.85. Imported English-style goblets. **Left** (standing): heavy *balusters* and, at rear, a *pedestal/Silesian* goblet (B-site, TA1971/2). **Right**: heavy *balusters* N131868, N132101 to either side of a *light baluster/balustroid* goblet N131859 from the privy of the first provisioning managers' residence, Kongsgården (TA1991/1).

Parallel with the evolution of balusters was a stem tradition that remained largely unchanged, namely the *drawn-stem*, where the usually plain stem, sometimes with an enclosed bubble, or 'tear', was drawn out in one piece from the bowl (usually a trumpet bowl) (see illustrated examples below). Varieties abounded throughout 18th-century Europe, and were produced in quantity at Norwegian glassworks during the second half of the century ('Nøgne jomfruer'/ Naked Maidens, see further below).⁹⁰⁵



Figure 5.86. **Left**: A *balustroid/light baluster*(?) goblet or possible spirits glass with a bell bowl and tear N7086. **Right**: A drawn-stemmed goblet with narrow bowl, engraved with grain stalks and ears N7041 (E-site, TA1972/2).

⁹⁰³ Charleston 1984: 142-143; Hume 1969: 192.

⁹⁰⁴ Charleston 1984: 143-144; Polak 1983: 45-46, 58-62.

⁹⁰⁵ Charleston 1984: 144; Hume 1969: 192; Polak 1983: 33-34.

The *pedestal* (or 'shouldered') stem (sometimes referred to as the 'Silesian' stem) joined the *balusters* and baluster derivatives and the *drawn-stems* at about 1710 (Fig. 5.85).⁹⁰⁶ This is a form of moulded stem, initially four-sided, overlapping later with octagonal or hexagonal variants. In England the *pedestal* stem seems to have gone out of fashion in connection with drinking-glasses by 1730, although it was retained there for dessert-glasses, salvers and candlesticks. In Norway, however, goblets with pedestal stems continued to be produced during the second half of the 18th century, including cheaper varieties (Figs 5.87 and 5.89).⁹⁰⁷

All these 'wrought' stems were overtaken in importance by the *twist* stems which dominated the second and third quarters of the 18th century in England. The earliest was the *air-twist*, a technique probably well established by the 1730s.⁹⁰⁸ After 1750, the *plain spiral air-twist* became more elaborated; for example a gauze-like corkscrew of fine lines, or a double-series air-twist with one spiral enclosing another. The heyday of the *air-twist* in England was around 1750, although they continued to be made until about 1760. *Air-twist* stems were also produced in Norway after 1755 (Fig. 5.88).⁹⁰⁹

The air-twist was soon overtaken in popularity by the *opaque-white twist* (or *enamel-twist*), made by twisting canes of opaque white glass and, like air-twist stems, numerous varieties developed, even extending to the mingling of variously coloured canes. They appeared in the early 1750s, and achieved their greatest popularity during the period 1760-75.⁹¹⁰ Keith and Brown took the then new art of making *opaque-twist* stems with them to Norway when they moved from Newcastle to Nøstetangen in 1755, and *air-twist* and *opaque-white twist* glasses continued to be produced here and at Hurdal throughout the rest of the century (Fig. 5.88).⁹¹¹

Norwegian glass production

As alluded to above, a new commercial actor entered the Norwegian glass market during the mid-1700s, and the German and English glass producers faced competition from glasswares manufactured, for the first time, in Norway. In 1741 a small glass factory was established at Nøstegangen, near Drammen, under the auspices of a newly-created mercantile enterprise, the Norwegian Company (*Det Norske Kompani*). Production facilities improved from 1748, and the factory concentrated on the production of finer table-glass and ornamental glass, particularly large engraved lidded ceremonial goblets for the Danish-Norwegian Court and elite customers in Norway. The 'crystal' glass used in this process, so-called 'German glass', was a local recipe based on the Bohemian crystal prototype, combining a lime and potash flux. A small selection of drinking-glasses, mostly German models known all over Europe, was also produced during this early phase.⁹¹² Some broad sheet window glass was also produced here for the first time in Norway.⁹¹³

In 1753 the Norwegian Company was reorganised with the aim of making glass production its main activity, and the Norwegian glass industry the sole supplier of glass for Denmark and Norway. To this end, new glassworks for the production of crown window-glass were established at Hurdal in 1755, and for bottle manufacture at Hadeland, which from 1765 took over bottle manufacture in green and brown glass from Aas factory (in production since 1747).⁹¹⁴ The Nøstetangen factory was enlarged and modernised in order to produce two qualities of 'crystal' glass: the comparatively cheap potash-lime 'German glass' mentioned above, and a local variant of English lead-glass. Nøstetangen's original German glassblowers were retained, but a desire to use new artistic and technical developments associated with lead-glass production in England resulted in the recruitment in 1755 of two English glassblowers from Newcastle. Skilled German engravers were also employed, utilizing rococo stylistic elements. This reorganisation process was successful, and accomplished Norwegian glass products

⁹⁰⁶ Charleston 1984: 145.

⁹⁰⁷ Charleston 1984: 146; Hume 1969: 190-191; Polak 1983: 93.

⁹⁰⁸ Charleston 1984: 146; Hume 1969: 193.

⁹⁰⁹ Polak 1974: 35.

⁹¹⁰ Hume 1969: 193.

⁹¹¹ Charleston 1984: 147-150; Polak 1974: 35; Polak 1983: 127.

⁹¹² Polak 1983: 21-22, 23-34, 36, 49-50, 222-227, 234.

⁹¹³ Amdam et al 1989: 14, 17.

⁹¹⁴ Cheaper broad sheet glass was produced at another glassworks at Biri from 1766 (Amdam et al: 14).

competed in the national market. In fact, in 1760 glass imports were forbidden in Denmark-Norway, and the Norwegian Company obtained a State monopoly on the production and sale of glass which remained in place until 1803, with only insignificant amounts of foreign glass entering Norway during this period under license or through smuggling. Due to problems in acquiring enough firewood for production, Nøstetangen closed in 1777. Production along the same lines resumed at Hurdal between 1779 and 1808, from where glass production moved to Gjøvik.⁹¹⁵

Norwegian stemwares, beakers and dram/firing glasses

A great range of glassware was produced at Nøstetangen. The majority comprised utilitarian products in the comparatively cheap potash-lime 'German glass', while a local variety of English lead-glass was reserved for luxury articles.⁹¹⁶ Accomplished engraved decoration was employed, and the clear glass could be coloured red (manganese) or blue (cobalt). Drinking-glass production, in the form of stemwares and beakers, formed the factory's economic mainstay. Most of the cheaper drinking vessels produced for everyday use were based on established English and German models. The more ordinary and utilitarian stemwares were mostly English-inspired, although most - notably those with baluster stems and air-twist stems - would have been regarded as old-fashioned in contemporary London.⁹¹⁷ This may reflect the association of the factory's immigrant English glassblowers with a provincial glass factory (at Newcastle) where older working methods had not been replaced. This conservatism is also exemplified in the long-term production of German models here, for example the well-known 'Nøgne Jomfruer' (Naked Maidens), 'Dantziger Kelchen', 'Perlekelchen' and plain drinking-glasses with simple baluster stems (Figs 5.87 and 5.89).⁹¹⁸

Two near-contemporary archaeological contexts in Trondheim have yielded large quantities and varieties of glass drinking vessels, including goblets produced at Nøstetangen. These comprise items dumped in the privy of the second provisioning managers' residence in Kongsgården during the 1750s or 1760s, and a rubbish pit on a property with a high-status owner (possibly General von Krogh), filled with a large clearance dump of glasswares sometime after 1752 (on date-inscribed pottery evidence).⁹¹⁹



Figure 5.87. Nøstetangen goblets with their Weyse catalogue equivalents. L-r: 'Perlekelchen' (no N-no.); 'Dantziger Kelchen' N7015; 'Nøgne Jomfruer' N7029; 'Viin Glas Formed Knap' N7087 (E-site, TA1972/2).

⁹¹⁵ Polak 1983: 25-26, 34, 224; Polak 1992.

⁹¹⁶ Over 100 different models. Illustrated catalogues (*Ip Olufsen Weyses modellbøker*) from 1763 and 1774 in Riksarkivet document the impressive range and the prices of products of the Nøstetangen, Aas and Hadeland glassworks. Glass servingwares and drinking vessels include varieties of engraved ceremonial lidded goblets, wine and dessert glasses, liquor glasses, beer glasses and mugs, beakers, bottle decanters, carafes, pitchers, flagons, hip flasks, lidded punch bowls and punch ladles, salvers, cruets for oil and vinegar, capers and oil bottles, sugar jars, butter, sugar and salt bowls. Glass for other household uses encompasses a range of preserving jars, candlesticks, lanterns, lampshades, tobacco jars, lavender water bottles, water dispensers for birdcages, a herb pot, hyacinth vases, a flycatcher jar and a glass bell. Varieties of pharmaceutical bottles (green and clear), urine flasks, siphons, barometer pipes and measuring jugs are also represented, as are varieties of bottles in green glass produced at Aas. Weyse's 1763 catalogue is published at <https://media.digitalarkivet.no/view/32611/3> (accessed 19.05.2018).

⁹¹⁷ Polak 1983: 51-56, 95, 92-102, 225; Charleston 1984: 143.

⁹¹⁸ Polak 1983: 34, 55, 93, 230; Polak 1974: 24-28, 31-32.

⁹¹⁹ TA1991/1 Period 11 Phase 3 group 376 (see case study, Chapter 6); E-site, TA1972/2, context E77.



Figure 5.88. Nøstetangen goblets with twist stems. **Left:** goblet with an opaque-white/enamel twist stem (N6992) and a similar, though not directly equivalent Weyse catalogue model. **Right:** stem fragment (N7057), probably a variant of the 'Crystal Desert' glass 'med Perler og Slanger' (with bubbles and air-twists) (E-site, TA1972/2).

Stemwares from the latter include balustroids, drawn-, pedestal-, straight-, faceted- and twist-stemmed varieties drawing on English and German prototypes (Figs 5.87 and 5.88). Some are equivalent to, or are variants of, named models illustrated in the Nøstetangen catalogue,⁹²⁰ while the origins of others are as yet unidentified, perhaps including possible earlier imports. A number of examples of 'Nøgne Jomfruer', 'Dansiger Kelchen', 'Viin Glas Formed Knap', and 'Krop Kelchen' types (the latter not illustrated here) were found in the rubbish pit, indicating their purchase in sets. Goblets with *air-twist* stems were comparatively rare in the assemblage, but examples with both air-twist and opaque white enamel twist occur (illustrated above).

The assemblage from the second provisioning managers' privy in Kongsgården was more restricted in numbers and variety. However, it contained a variety of Nøstetangen products, including remains of sets of wine goblets, beakers (beer glasses) and dram/firing glasses (Fig. 5.89; Appendix K).



Figure 5.89. Selection of drinking glasses from the second provisioning managers' residence privy in Kongsgården (TA1991/1). **Left** (l-r): two balustered goblets, a possible 'Kongelig Mund Glas' and a possible 'Knopf Kelchen Glas' N146646, 146647; a goblet with drawn stem and tear/'Nøgne Jomfru' N146635; a dram or firing glass/'Frimurer Brendevins Glas' N146648; two moulded pedestal/Silurian stemmed goblets/'Viin Glas Formed Knap'(N146639); and a beaker, possibly a beer glass/'Øll Glas Knap'? N146684.⁹²¹ **Right:** a Silurian stemmed goblet engraved 'Vivat' N146645.⁹²²

⁹²⁰ Polak 1983 ff.; Johansen 2011: 164-7; <https://media.digitalarkivet.no/view/32611/3> (accessed 28.06.2018).

⁹²¹ Photo: D. Makridis/ Nidaros Domkirkes Restaureringsarbeider.

⁹²² Photo: I. Halvorsen.

Ceremonial goblets with lids (*pokaler*) were a particular Nøstetangen speciality, and many fine engraved examples are known. Both luxurious and less expensive varieties were produced, reflecting their wide currency among the various levels in the upper social ranks.⁹²³



Figure 5.90. Ceremonial goblets. **Left:** a 'sachsisk modell' ceremonial goblet with faceted ground stem⁹²⁴ N7087 (E-site, TA1972/2). **Right:** engraved lid, possibly for a ceremonial covered goblet N146837, Kongsgården (TA 1991/1).

Occasional excavated fragments are known from Trondheim, including a small faceted ceremonial goblet from the E-site (TA1972/2) assemblage, and an engraved lid with a simple elongated knob-like finial from the second provisioning managers' residence latrine in Kongsgården which may be a cover for a comparatively inexpensive goblet of this kind (Fig. 5.90).⁹²⁵

Nøstetangen glassware was sold in Trondheim through a trading establishment owned by Thomas and Christian Jelstrup, their stock including drinking-glass types which were clearly popular here, such as the '*Rømer Trondhjemske*' and a dram glass called '*Trunhjems Brendevins Spitz Glas*'.⁹²⁶

Glassware production ended at Nøstetangen in 1777 and moved to Hurdal. Drinking-glasses were made in even greater variety here, although several earlier models were retained, including the German models mentioned above. For more fashionable models, opaque-white twist (or enamel-twist) stems replaced air-twist models. Following Hurdal's closure in 1808, crystal production moved to Gjøvik where production was characterised by glass in Blue Style (cobalt), and drinking glasses in the low sturdy Empire style, although again, old models persisted (e.g. Naked Maidens, air-twist, and opaque-white twist stems). The factory closed in 1843.⁹²⁷

Crystal *beakers* that were probably produced at Nøstetangen have also been recovered from mid 18th-century contexts, both in the urban area (E-site) and in Kongsgården (the second provisioning managers' residence privy).



Figure 5.91. Crystal beakers from Nøstetangen: **Left:** possible base of a '*Spaniol God*' or '*Øll Glas Knap*', and base of a '*Dommernixglas*' N7045, N7052 (E-site, TA1972/2). **Right:** pair of mould-blown, engraved beer glasses ('*Formede Øll Glas*') N146303, N146304 from the second provisioning managers' residence in Kongsgården (TA1991/1).

⁹²³ Polak 1983: 81-92; Johansen 2011: 158, 162-163.

⁹²⁴ Johansen 2011: 158.

⁹²⁵ Or a lid for another type of glass vessel: e.g. a punch bowl, sugar bowl, glass beer tankard or tobacco jar, covered types of which were also produced at Nøstetangen. Polak 1983: 96, 102-107; Johansen 2011: 237-242.

⁹²⁶ Polak 1983: 64-65.

⁹²⁷ Polak 1983: 232-233.

Examples with their contemporary Weyse catalogue nomenclatures and illustrations are shown above.⁹²⁸ A dram or firing glass was also recovered from the same Kongsgården context (Fig. 5.89). These were often used in drinking rituals originating in Freemasonry.⁹²⁹

The E-site (TA1972/2) rubbish pit also produced a range of small glass vessels, including possible punch cups and jelly glasses (Fig. 5.64).

Serving/pouring vessels

Ceramic serving/pouring vessels

Ware types	Vessel types	Trondheim date ranges
Coarse earthenwares		
<i>Whitewares</i>		
Beauvais lead-glazed	Jugs	16th - 17th centuries
English yellow ware	Jugs	19th century
Refined earthenwares		
<i>Slipwares</i>		
Tin-glazed earthenware		
Dutch blue decorated tin-glazed	Jugs	17th - 18th centuries
Lead-glazed earthenware		
Creamware	Jugs, teapots	Mid 18th - early 19th
Pearlware	Jugs, teapots	Late 18th - mid 19th century
Fine White earthenware	Jugs, teapots	Mid 19th century +
Refined redwares	Teapot	18th century
Coarse stonewares		
Raeren stoneware	Jugs	16th - 17th centuries
Cologne stonewares	Jugs	16th - early 17th centuries
Westerwald stoneware	Jugs	17th - 18th centuries
Refined stonewares		
English brown salt glazed	Jugs	18th century
Staffordshire white salt-glazed	Jugs, teapots	18th century
Red stoneware	Teapots	18th century
Porcelain		
European porcelain	Teapots	18th - 19th centuries

Figure 5.92.

Earthenware jugs and teapots

The only jugs in coarse earthenwares comprise examples in Beauvais lead-glazed whiteware (16th -17th century contexts) and the later (ie. 19th century) English yellow ware. The earliest jugs in refined earthenwares comprise Dutch blue decorated tin-glaze (17th - 18th centuries) (Fig. 5.94). The later lead-glazed earthenwares (Creamware, Pearlware and Fine White earthenware) include both jugs and teapots. A single example of a refined redware teapot has also been identified. Fragments of a Staffordshire creamware teapot with tortoiseshell glaze are illustrated opposite.



Figure 5.93. Fragmented Staffordshire creamware teapot (E-site, TA1972/2 pit 77). Photo: I. Reed.

⁹²⁸ See Weyses modellbok 1763 <https://media.digitalarkivet.no/view/32611/3>; Johansen 2011: 234-6.

⁹²⁹ Johansen 2011: 222.

Stoneware jugs and teapots

The earliest jugs in Trondheim are predominantly German coarse stonewares, namely Raeren and Cologne (16th - 17th centuries), as well as Westerwald stoneware (17th - 18th centuries) (see below). The 16th- early 18th -century Bellarmine bottles from Frechen may also be classed as serving/pouring vessels, but they could also function as storage/dispensing vessels, and are categorised as such (Category 4, below). Jugs also appear in 18th-century refined stonewares, namely English brown salt glaze and Staffordshire white salt-glaze (illustrated below). Teapots also occur in the latter.



Figure 5.94. Jugs. **Left:** Staffordshire stoneware N146328 (Kongsgården TA1991/1). **Middle & right:** Westerwald stoneware and Dutch blue-decorated tin glaze (Delft) (Dronningens gate 14 TA2004/13).⁹³⁰

European porcelain teapots

No Chinese porcelain teapots have been recovered archaeologically, though examples in European porcelain have been found.

Wooden and metal drinking vessels

Type	Vessel types	Trondheim date ranges
Wooden vessels	Stave-built vessels; turned beakers	17th-18th centuries

Figure 5.95.

These rarely survive outside museum collections, since metals and organic materials are more subject to processes of environmental decay, and metal was recycled and wood burned. Ethnographic collections in museums contain varieties of wooden drinking vessels in the form of *ølborler* (beer-drinking bowls), wooden tankards, and small stave-built vessels. Excavations occasionally produce examples of small stave-built drinking vessels, as well as turned wooden beakers such as the example illustrated opposite.⁹³¹



Figure 5.96. Wooden beaker N145770 from second provisioning managers' privy, Kongsgården (TA1991/1).

Glass serving/pouring vessels

Ware type	Vessel types	Trondheim date ranges
Glasswares	Decanters/carafes	17th-18th centuries

Figure 5.97.

⁹³⁰ Photos: NIKU.

⁹³¹ N145770 from second provisioning managers' privy, Kongsgården (TA1991/1).

These are limited to a few fragments of carafes, or bottle decanters, used to serve wine. These were first used in affluent Norwegian households during the 18th century, the fashion being firmly established by the middle of the century, and decanters were produced at Nøstetangen from the 1740s on.⁹³²

In Trondheim, fragments from at least two imported *façon de Venise* decanters/ carafes have been identified in material from a pre-1740 latrine associated with the first provisioning managers' residence in Kongsgård (illustrated below).⁹³³



Figure 5.98. Fragments of at least two *façon de Venise* decanters/carafes from Kongsgården (TA1991/1). **Left:** example with ridged applied trails N132113. **Middle:** fragments of decanter with mould-blown *nipt diamond waies* decoration N131865/131866. **Right:** a comparable late 17th-century Dutch decanter.⁹³⁴

One (N132113) resembles a published 17th-century Dutch *façon de Venise* soda-glass decanter/carafe.⁹³⁵ The other (N131865/131866) comprises fragments with a moulded pinched ribbing design (*nipt diamond waies*) employed by glassblowers from the second half of the 17th century on.⁹³⁶

5.5.2.4. Category 4: Beverage storage/dispensing

Functional sub-categories	Artefact types	Sources
Storage/dispensing vessels	Glass wine bottles, case-bottles, Seltzer mineral-water bottles	Imported & Norwegian
	Bellarmino ceramic bottles, ceramic mineral water bottles, costrels, Martincamp flasks	Imported
Storage-/dispensing-related equipment	Metal barrel-taps, coffee mill	Imported?

Figure 5.99.

This category consists chiefly of vessels used to transport or distribute alcoholic beverages and other commodified liquids, such as mineral water, or to store them in retail or domestic contexts, for example. They comprise glass bottles and ceramic bottles, costrels and flasks.

During the course of the 17th century, North European and English production centres exported variants of globular bottles for transporting and storing wine, and tall square bottles, so-called 'squares', 'case-bottles' or 'cellar-bottles', used for spirits as well. By the end of the century, the characteristic compact, short-necked globular, or onion-shaped, bottle was commonplace,⁹³⁷ and they are found in Trondheim from that time on. These and other forms of wine and spirits bottles were produced in Norway from the mid-18th century on at the Nøstetangen, Aas and Hadeland factories. The range was extended to include globular, four-sided, eight-sided, light-green and dark-green bottles. Bottles containing other liquids were imported to Norway, notably bottles for mineral water and others which may possibly have contained eau de cologne.

⁹³² Polak 1983: 108.

⁹³³ TA1991/1 Period 11 Phase 2 group 344 (see case study, Chapter 6).

⁹³⁴ After Henkes 1994: 272, cat. nr. 56.1.

⁹³⁵ Museum Boymans-van Beuningen 1991: 189 (inv. nr. F5043).

⁹³⁶ Compare a late 17th century Dutch decanter illustrated in Henkes 1994: 272, cat. nr. 56.1.

⁹³⁷ Henkes 1994: 241, 284.

The ceramic bottles, flasks and costrels are exclusively imported coarse stonewares. Bottles are best represented in the form of Bellarmine (or Bartmann) bottles in coarse Rhenish stoneware, and cylindrical mineral-water bottles of Westerwald stoneware. Less numerous are finds of Merida redware standing costrels, German stoneware standing costrels, and fragments of Martincamp flasks imported from France are a particularly rare find from contexts associated with late-medieval Archbishop's Palace and post-medieval Kongsgården (see below).

The only other equipment associated with the storage or dispensing of beverages noted in the course of this study includes brass barrel-taps, presumably associated with tapping of beer and wine barrels, and a handle for a coffee mill.

Storage/dispensing vessels

Glass bottles

From the early 18th-century, glass bottles were an increasingly common utilitarian object associated with Norwegian commercial and domestic contexts, reflecting increasing consumer demand for their various contents. Bottles are mentioned in documents from the late 16th century on, and by the late 17th century toll-lists in Christiania record the importation of large numbers of bottles from Europe.⁹³⁸ Bottles were produced at Nøstetangen in Norway soon after the Norwegian Company's establishment in 1739, although large-scale production did not begin until the 1750s at the main bottle factories at Aas (1748-1765) and, from 1765, at Hadeland, near Nøstetangen. During the second half of the 18th century, bottles were mass-produced in Norway, facilitated by the ban on glass imports between 1760 and 1803 (although some German and English bottles were imported under licence when the factories could not meet domestic demand). Bottle production and window-glass production formed the Norwegian glassworks' economic mainstay. Annual production in the 1760s reached 120,000, rising to 2 million in 1808, and Norwegian bottles were also exported in great numbers.⁹³⁹

Norwegian wine merchants were the greatest consumers of bottles, using them to dispense and sell the wine they imported in barrels. Bottles were also used in the wine cellars of the wealthy and in taverns. In general stores, not only wine, beer and spirits were tapped into bottles and sold, but also other liquids, such as lemon juice, rosewater, lavender-water, mineral waters, oil and lamp-oil, and in households they could be put to multiple uses. Globular wine bottles in particular were increasingly robust items, and could be used and refilled numerous times.⁹⁴⁰ Apothecaries also utilised a range of glass bottles.⁹⁴¹ Small, elongated blue-or green-glass bottles often found in 18th century contexts are classified as 'oil bottles' in the Weyse catalogue of the Aas glass factory. These may have been multi-purpose storage bottles for the kinds of liquids mentioned above, but they are also likely to have been used by apothecaries.⁹⁴² They are described under Category 10.

The characteristic variants of globular bottles were principally used for wine, while square case bottles were also used for distilled liquors/spirits (e.g. brandy, 'Hollands gin') or other commodified liquids, such as spa water, as well as being used for a variety of functions in the home, for example.⁹⁴³ The latter's square form had many advantages over the globular onion bottles, since they took up less space, could be transported more safely in sectioned wooden cases, and could be stored horizontally. This was particularly advantageous for the storing and maturing of wine (binning), which had become more customary in Europe shortly prior to 1700 due to the improving quality of wine.⁹⁴⁴ In response to this, the globular bottles gradually evolved more straight-sided variants prior to 1750, notably the so-called 'mallet bottle, which eventually evolved into the cylindrical wine bottle we know today, although globular bottles continued in use well into the 18th century in Europe.⁹⁴⁵

⁹³⁸ Polak 1983: 18; Borgersen 2011.

⁹³⁹ Polak 1983: 18-19, 209, 212, 271.

⁹⁴⁰ Polak 1983: 212; Willmott 2002: 87.

⁹⁴¹ Johansen 2011: 259-261.

⁹⁴² Johansen 2011: 261.

⁹⁴³ Polak 1983: 210-211; Hume 1969: 62; Henkes 1994: 241, 284; Willmott 2002: 86-87.

⁹⁴⁴ Polak 1983: 210-211; Museum Boymans- van Beuningen 1991: 237, 245.

⁹⁴⁵ McNulty 1971: 116-119; Hume 1969: 62-71; Henkes 1994: 245-246, 284.

Bottles produced in Norway comprised green potash glass in a range of qualities, chiefly light and dark green, the former cheaper than the latter.⁹⁴⁶ In addition to globular and mallet bottles, forms produced in Norway which were based on European prototypes included the tall four-sided short-necked *Cantineflasker* (a form of case-bottle), the distinctive pinched-in *Klukkflasker* (the European *Kuttrolf*), and eight-sided long-necked bottles (illustrated below). A contemporary factory catalogue illustrates a range of the bottles produced at Aas,⁹⁴⁷ varieties of which have been excavated in Trondheim (see below).

In common with European practice since the mid-17th century, bottles (chiefly those which would be used at table) could be custom-produced with an applied seal bearing the customer's monogram or initials, a date or decorative motif (see below).⁹⁴⁸

Contexts in the city and Kongsgården have produced closely-dated assemblages of bottles. An early to mid-18th-century latrine at B-site produced a variety of case bottles and wine bottles typical of the time, including imported types and types possibly produced at Nøstetangen or Aas (illustrated below with contemporary Norwegian nomenclatures).⁹⁴⁹



Figure 5.100. Bottles from the B-site rubbish pit (TA1971/2). L-r: Case bottle with seal (crowned 'London' over Star of David) N22712; case bottle with pewter mount for screw top ('*Cantineflaske*') N5071; globular bottle (with cork) ('*Ronde Boutellier*') N50447; flat-sided globular bottle ('*Mørke ronde boutellier*') N50469; mallet bottle ('*Mørke firkantet boutellier*') N50467.

By the mid-1700s mallet bottles were replacing globular bottles, although the latter persisted in use. The mid 18th-century rubbish pit at E-site contained examples of both types, as well as light-green, eight-sided moulded bottles produced in Norway at Nøstetangen or Aas during the mid-18th century (pictured below).



Figure 5.101. Bottles from E-site TA1972/2 (left) with their Weyse catalogue equivalents. **Back row:** Light-green and dark-green mallet bottles ('*Lyse Ronde Boutellier*' & '*Mørke Ronde Boutellier*') N6960, N7085, and a light-green moulded 8-sided bottle ('*Lyse 8-kantet boutellier*') N6957. **Front row:** a globular green bottle ('*Ronde Boutellier*') N7084, and a flat-sided globular bottle.⁹⁵⁰

⁹⁴⁶ Polak 1983: 209-210.

⁹⁴⁷ Ip Olufsen Weyses modellbok 1763: <https://media.digitalarkivet.no/view/32611/3> (accessed 28.06.2018).

⁹⁴⁸ Polak 1983: 210-212; Willmott 2002: 86.

⁹⁴⁹ Compare examples illustrated in Borgersen 2011: 271-275.

⁹⁵⁰ Compare examples in Borgersen 2011: 273.

Distinctive *Kuttrolf* bottles with pinched-in bodies became popular in the Low Countries during the 17th century, and many, in common with straight-sided case-bottles, were equipped with pewter mounts for screw caps.⁹⁵¹ The illustrated fragments (below) comprise the neck, screw-mount and a decorative glass tube from an imported *Kuttrolf* bottle of this type found in an early 18th century context in Kongsgården (the first provisioning managers' residence).⁹⁵² Varieties of this model were widely produced on the Continent over a long period of time, and were also produced in Norway in green and clear glass ('*Kluk Flasker*') during the mid-late 18th century.⁹⁵³



Figure 5.102. *Kuttrolf* bottles. **Left & middle:** Two fragments of a 17th-century *Kuttrolf* bottle with pewter screw mount N19239, N149238 (Kongsgården TA1991/1). **Right:** A contemporary Dutch example⁹⁵⁴ and a contemporary Norwegian equivalent (*Kluk Flaske/Cantineflask*) from Aas illustrated in the Weyse catalogue.

Mineral or spa water was a popular commodity in wealthier circles and was imported in glass and stone bottles. Two glass bottle fragments bearing seals from the German spa at Pyrmont (*Piermont*) in the Waldeck were found in the mid-18th century glass assemblage at E-site (below). One is stamped 'Pyrmont water' around a crowned shield bearing the coat-of-arms of Waldeck-Pyrmont, the other 'Pyrmont water' encircling an 8-pointed star.⁹⁵⁵

During the 17th and 18th-centuries, bottles were made in playful figurative forms, including small bottles shaped as animals served for pouring liqueurs (Fig. 5.103, right).⁹⁵⁶



Figure 5.103. **Left:** Two seals from Pyrmont/Piermont mineral water bottles N7082, N7049 (E-site TA1972/2). **Right:** Views of a fragmentary potash-glass bottle shaped to resemble an animal N51383 (FP-site, 17th century).

Ceramic storage/dispensing vessels

Ware types	Vessel types	Trondheim date ranges
Coarse earthenware		
Merida redware	Costrels	14 th – 18 th centuries
Coarse stonewares		
Frechen stoneware	Bellarmine/Bartmann bottles	16 th - 18 th centuries

⁹⁵¹ Henkes 1994: 240-241, 244; Museum Boymans van Beuningen 1991: 188.

⁹⁵² TA 1991/1 Period 11 Phase 1.

⁹⁵³ Polak 1983: 211, 270-271; Johansen 2011: 253.

⁹⁵⁴ Henkes 1994: 244, cat. nr. 51.11.

⁹⁵⁵ Hume places their use in the period 1720-1770, the star being more common in the earlier part of the period (1970: 61-62). Henkes places the coat-of-arms after 1712, and the star in the 17th century (1994: 293).

⁹⁵⁶ Henkes 1994: 279-80

Westerwald stoneware	Mineral water bottles	Late 18th - 19th centuries
Other German stonewares	Costrels/bottles	17th - 18th centuries
Martincamp stonewares	Flasks	15th - 17th centuries

Figure 5.104.

Stoneware bottles

The best represented in terms of frequency of sherd numbers are the distinctive Bellarmine (or Bartmann) bottles in coarse Rhenish stoneware, produced and exported in huge quantities from Frechen from the later 16th century to the early 18th century. These are known from numerous archaeological contexts in Scandinavia, Europe and America. In addition to being used for the transportation and storage of liquids, they are also known to have been used as ‘witch bottles’.⁹⁵⁷ Trondheim contexts have produced examples with the earlier naturalistic ‘benign’ face-masks (pre- mid-17th century), stylised ‘grotesque’ masks (later 17th century) (illustrated below), and forms without masks (early 18th century).⁹⁵⁸

Fragmentary and complete cylindrical mineral-water bottles of Westerwald stoneware are also found in Trondheim, and other Norwegian contexts. These date from the late 17th century to the 19th century, and were used to transport mineral waters from German spa wells, the most common in Norway being marked with the Seltzer seal.⁹⁵⁹

Earthenware and stoneware costrels

Standing costrels are probably multipurpose storage vessels, whose primary and possible secondary functions are uncertain. However, given their narrow necks, their use for storing or dispensing liquids, including beverages, seems probable.



Figure 5.105. Stoneware bottles and costrels. L-r: Bellarmine stoneware bottle (Dronningens gate 14 TA2004/13); German stoneware costrel (Raeren) (Søndre gate 7-11 TA2017/3); a German stoneware costrel.⁹⁶⁰

Standing costrels are found in Merida redware (Portugal) in contexts extending from the 14th to 18th centuries, and varieties of costrels in German stoneware from 15th to 17th-century Norwegian urban contexts, including Trondheim and Oslo. The smaller types are known to have been used as reliquary jars, but may also have been used for holding spinning oil (Fig. 5.105, middle).⁹⁶¹

Martincamp stoneware flasks

Stoneware flasks from Martincamp in France are a rarer find in Norway, the only recorded examples being from the Archbishop’s Palace in Trondheim. They mimic the shape of Italian glass flasks, and were exported empty to serve as canteens for field workers and soldiers.⁹⁶² To date, the only recorded

⁹⁵⁷ Merrifield 1987.

⁹⁵⁸ Hume 1969: 55-57, 279; Hurst *et al* 1986: 214-221; Reed pers. comm. and Reed in prep.

⁹⁵⁹ Reed in prep.

⁹⁶⁰ Photos, left and middle: I. Reed. Costrel to right: private collection.

⁹⁶¹ Reed pers. comm.; Reed in prep.; Molaug 1981a: 101-102.

⁹⁶² Reed in prep.; Hurst *et al* 1986: 102-103; Jamestown Rediscovery website.

examples of Martincamp flasks in Trondheim comprise a few fragments in Period 6 contexts (c. 1480-1532) in the Archbishop's Palace and one fragment from the first managers' residence in Kongsgården (TA1991/1).

Storage-/dispensing-related equipment

Barrel-taps are known from 18th-century urban plots such as V-site (TA1977/3) for example, and deposits associated with the first provisioning manager's residence in Kongsgården. From the same contexts came an iron handle, possibly for a coffee mill of the type illustrated below.



Figure 5.106. L-r: Copper-alloy barrel tap (uncertain context); fragment of a cast copper alloy handle for a barrel tap with salamander maker's mark N130012 (TA1991/1); iron handle for a coffee mill N119034 (TA1991/1); example of a curated coffee mill (unknown date).⁹⁶³

5.5.2.5. Category 5: Food remains/refuse

Functional sub-categories	Artefact types	Sources
Zoological remains	Animal bone, fish, shellfish, hens' eggs	Local & regional
Botanical remains	Wild & cultivated cereals, seeds, nuts	Local & imported

Figure 5.107.

Food refuse found in post-medieval sheet deposits, privies and rubbish pits principally takes the form of discarded animal bone. Post-medieval bone material has occasionally been collected and analysed, most notably from excavations at the Archbishop's Palace/Kongsgården. These attest to a wide range of available foodstuffs consumed here, and will serve to exemplify the varied and informative character of this type of evidence.⁹⁶⁴ Skeletal material from a range of mammal and bird species was represented, including domesticated cattle, sheep/goat, and pigs, domesticated fowl (predominantly chicken and geese, with occasional pheasant, peacock, rock dove and turkey), and occasional hunted wild animals and birds (hare, red deer, grouse, capercaillie, swan and songthrush). Varieties of saltwater species of fish were recorded, notably cod, coalfish, haddock, flounder and salmon. Freshwater fish were comparatively rare, with only eel and carp registered. The latter comprised an unusual find of a preserved crucian carpfish in a 16th-century



Figure 5.108. Preserved crucian carpfish from Kongsgården, N141489 (TA1991/1).

servatorium fishtank in the precinct of Kongsgården (Figs 5.108 and 5.40).⁹⁶⁵

Shellfish in the form of marine crustaceans and molluscs were consumed, as evidenced by finds of oyster and mussel shells in particular, and occasional crabshells. Indeed, quantities of oyster shells are a distinctive feature of post-medieval contexts. Hens' eggs are occasionally found in latrines.

⁹⁶³ Photo right: Stiftinga Sunnmøre Museum.

⁹⁶⁴ Hufthammer 1999; Nordeide 2003. See 6.4.4.4 for an overview and discussion of this evidence.

⁹⁶⁵ Nordeide 2003: 27-238.

Pollen and microfossils were also analysed from post-medieval contexts in Kongsgården.⁹⁶⁶ Pollen, grains, seeds and pips from a variety of cereals (barley, oats, wheat and rye), fruits and herbs were registered. Fruits included both local seasonal fruits and imported exotic fruits in the form of raspberry, strawberry, cloudberry, crowberry, blueberry, fig and grape (raisins). Traces of locally grown coriander were also found.

5.5.2.6. Category 6: Diverse equipment & tools

Functional sub-categories	Artefact types
Cutting tools	Utility knives, clasp knives, scissors, shears, sickle etc
Other tools	Picks, axes, adzes, chisels/punches, tweezers, large iron needles, whetstones, screwdriver
Containers	Coopered tubs, buckets and barrels

Figure 5.109.

This category encompasses tools and equipment which can be used in connection with a number of practices, both craft- or domestic-related, skilled and unskilled. It also includes items which cannot be classified elsewhere. The examples illustrated below are from contexts associated with the provisioning managers' residences in Kongsgården (TA1991/1) unless otherwise stated. Knives which could have been used in connections other than at table occur in a variety of sizes. Iron scissors and shears were made in a variety of sizes, type and quality, presumably for specific and general tasks (Fig. 5.110).



Figure 5.110. Cutting tools from Kongsgården (TA1991/1). L-r: two utilitarian knives 153408, 128554, and pairs of narrow and broad-bladed scissors N114823, N125953.



Figure 5.111. Miscellaneous tools from Kongsgården (TA1991/1). **Top** (l-r): iron sickle blade N148700; iron pickhead N148704; iron chisel/punch N145248. **Bottom** (l-r): large copper alloy tweezers N144332; large iron needle N145414; copper alloy screwdriver N149162/145210.

Other tools from the 18th-century residences comprise a sickle, a pick-head, a possible chisel/punch, tweezers, a very large iron needle and a screwdriver (fashioned out of a handle for a metal

⁹⁶⁶ Sandvik 2000.

spoon) (Fig. 5.111). One possible area of use for the latter given its context might have been for loosening and tightening the screws integral to flintlock mechanisms on muskets.

Staves from wooden tubs, buckets and barrels are occasionally found, as are occasional complete buckets. These containers could be used for a variety of purposes in domestic- or craft-related contexts.

5.5.2.7. Category 7: Tobacco consumption

Functional sub-category	Artefact types	Sources
Smoking equipment	Clay pipes	Imported & Norwegian

Figure 5.112.

Only a fraction of the clay-pipe material recovered archaeologically in Trondheim has been analysed, and the scope of the present study could not accommodate further research. This section consequently provides a general view of main national and local trends in the historical and archaeological material presented in the available literature, as well as my observations on examining 18th-century material associated with my case study (Chapter 6).

The few historical sources we have suggest that tobacco and clay pipes reached Norway during the first decades of the 17th century. Their use is unlikely to have spread beyond sailors and a tiny section of the population until cheap tobacco from Virginia became available to Europeans in 1612. King Christian IV instituted a ban on the use of tobacco in Norway in 1632 (repealed in 1643), which suggests it was a more widely used commodity by that time. Studies of archaeological finds from Oslo provide strong evidence to suggest that clay-pipe smoking was a customary practice among at least part of the population there by at least 1620, and possibly slightly earlier. That pipes were being traded in bulk from London in 1624 has been confirmed archaeologically by the discovery of a cache of over 1100 clay pipes manufactured in London during recent excavations at Oslo harbour. These unused pipes had been unloaded onto a wharf which burned in the historic urban fire of that year.⁹⁶⁷ The earliest pipes analysed in a survey of a small sample found on excavations in Trondheim were broadly datable to 1600-1640. Although further studies are needed to narrow this down, this indicates that pipe-smoking was established within the local population during the first half of the 1600s.⁹⁶⁸ Archaeological finds of clay pipes dating to the first half of the 17th century at the small provincial seaport of Son in Vestfold suggest that smoking was not confined to the larger towns and cities at this time.⁹⁶⁹

The earliest records of imports of tobacco and pipes are absent since there are no systematically compiled toll lists prior to the mid-1600s. The earliest for Christiania (Oslo) show an average import of 50,505 pounds (c. 25,000 kilos) of tobacco a year between 1665 and 1670.⁹⁷⁰ Trondheim's earliest surviving toll list for 1665 records the import of 30,049 pounds (c. 15,000 kilos) and 44 rolls of tobacco. By 1706 this had grown to 116,584 pounds (c. 58,000 kilos), and by 1805 it stood at 225,000 pounds (610,000 kilos). The tobacco was imported from Amsterdam in leaf- and spun form, with only a tiny amount as snuff. Some tobacco imports from England are recorded in the mid 1700s. Mentions of a tobacco spinnery and a certain Nils 'pipemaker' may suggest that small-scale tobacco-processing and pipe-making enterprises may have existed in Trondheim at the end of the 17th century.⁹⁷¹ The import of a modest amount of tobacco pipes to Trondheim is recorded in the toll list for 1665 (12 gross, or 1728 pipes),⁹⁷² while only 40 dozen (480 pipes) were imported from 'Denmark' and 'foreign places' in 1686. Similarly low amounts are registered for Christiania during the second half of the 17th century, giving rise to speculation that smuggling may have undermined the trade, which was subject to high taxation. Imports of pipes to Trondheim grew to 36 gross (5,184 pipes) in 1724, and by 1756 the volume had grown

⁹⁶⁷ Johannessen 2016: 12, 22-24; Skre 1981: 156.

⁹⁶⁸ Loktu 2009: 52-54, 79-80.

⁹⁶⁹ Johannessen 2016: 22.

⁹⁷⁰ 1 skålpund = 0,498 kg.

⁹⁷¹ Berg 1981: 157-158. There is no other evidence yet for local pipe manufacture.

⁹⁷² 1 gross = 12 dozen or 144 items.

considerably to 700 gross (100,800 pipes) from 'foreign places' and 686 gross (98,784 pipes) from 'Norway' (internal trade). In 1770 the same figures stood at 1173 gross (168,912 pipes) and 601 gross (86,544 pipes) respectively.⁹⁷³

The origins of imported pipes are specified on some toll lists, and judging from these and available archaeological evidence, both Dutch and English pipes formed the majority of imports nationally from the start, with Dutch pipes ultimately in the ascendancy. Smaller amounts of locally produced pipes occurred first after the establishment of the first Norwegian pipe factory in 1752 at Bragernes in Drammen, near Oslo (Christiania) (see below). Although a national embargo was imposed on imports of foreign clay pipes in 1757, this does not seem to have been in effect for long. As Trondheim's toll register of 1770 indicates, the embargo was no longer in operation by that year at least, presumably reflecting the collapse during the late 1760s of production at this first Norwegian pipe factory run by Jacob Boy which had been granted a monopoly on the Norwegian market.

The earliest analytical study of clay pipe material derived from an archaeological excavation was undertaken on material recovered from Boy's factory during a pre-War excavation at the site, historians Pettersen and Alsvik providing a detailed and historically contextualized study of production here.⁹⁷⁴

The first major in-depth qualitative and quantitative study of clay pipes from a Norwegian urban archaeological context was undertaken on the Revierstredet material in Oslo by Dagfinn Skre.⁹⁷⁵ Rubbish from local households had been dumped as fill in caisson foundations shown by dendrodating to have been constructed during the 1670s. This included a range of clay pipes dated by Skre to the period 1625-1680, while deposits above the caissons contained pipes from the early 18th century. It was concluded that material was redeposited here from a rubbish dump which had been in use from the time of Christiania's establishment in 1624, and that the large amount of pipes in the assemblage dated by Skre to 1625-1645 suggested that pipe smoking was common from that date. He also noted that the early pipes were Dutch, but that these decreased drastically in numbers after 1650, when English pipes were introduced and increased in numbers towards 1680. However, as Skre noted, this pattern was puzzlingly inconsistent with the historical evidence for an increase in Dutch contacts at this time.⁹⁷⁶ Jørgen Johannessen has since demonstrated that Skre's typological analysis and chronology was based on a statistical methodology that has since been criticised, and should be revised in the light of more recent Dutch typologies. On revisiting the Revierstredet material, he concludes that, with some exceptions, most can be redated to 1660-1680. Furthermore, his revised chronology is more consistent with the historical trade trends of the time, with a small amount of early English imports followed by a subsequent increase in Dutch imports. It also tallies better with the dating of the find context, and that the bulk of the pipes deposited in the caissons were used and deposited here during the 1670s prior to 1680.⁹⁷⁷

Johannessen has also examined material from recent excavations in the harbour area. He concludes that trends observable in this material are consistent with trends for tobacco consumption and trade in pipes generally, including international trends in tobacco production and consumption (ie. a steady increase prior to c. 1710, followed by a fall to a low point c. 1730, a resurgence to a new high in the following decade, and a renewed slump between 1740 and 1800). The material contains pipes of most types available between the mid 17th century and 1900, both English, Dutch and local, demonstrating the availability of a good range of smoking equipment to consumers. The earliest pipes are from the 1620s and their frequency increases steadily from that time, indicating an early trend towards mass consumption of pipes and tobacco in a wide segment of the population during the first half of the 17th century, although this is still low compared to the situation in the 18th century.⁹⁷⁸

No comparable systematic survey or study of the range of clay pipes in the Trondheim material exists, although a limited study of 17th-century pipes from selected urban locations has been undertaken

⁹⁷³ Trondheim toll lists published on <http://toll.lokalhistorie.no> (accessed 19.05.2018); Skre 1981: 156-157; Loktu 2009: 40.

⁹⁷⁴ Pettersen 1944; Alsvik 1944.

⁹⁷⁵ Skre 1981: 155-169.

⁹⁷⁶ Skre 1981: 166.

⁹⁷⁷ Johannessen 2016: 19-20.

⁹⁷⁸ Johannessen 2012: 140-147; Johannessen 2016: 23-24.

by Lise Loktu, who analysed them in terms of socio-historical context, social practice and habitus.⁹⁷⁹ Her study examined the practice of smoking in different social contexts, offering tentative insights into its early introduction and integration within local society. The earliest pipes are found primarily in contexts associated with the wealthier classes, notably the local merchant class, but also high-ranking seafarers. English pipes were used exclusively at this early stage, perhaps indicating a prioritised and even personalised trade connection involving these select social groups who had close connections with national and international trade.⁹⁸⁰

Ian Reed has conducted an informal cataloguing of some of the Trondheim pipe material, and among his records are drawings of the earliest pipes so far recorded here (Fig. 5.113). These resemble London pipes of Oswald's types 2 and 4,⁹⁸¹ and derived from a context which post-dates 1598, and are themselves datable to c. 1580-1610 and c. 1600-1640. Another early London pipe of Oswald's type 4 was found in a stone cellar on site FX.

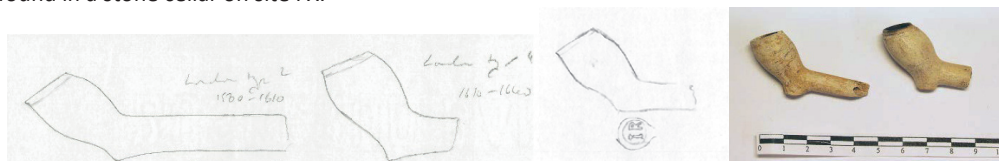


Figure 5.113. Early pipes found in Trondheim. L-r: London type 2 (1580-1610) and London type 4 (1600-1640) from A-site N7786; London type 4 with heel mark 'IR' 1600-1640 from FX N60664; London type 2 (1580-1610) and London type 4 (1600-1640) with possible 'IR' heel mark from FX.⁹⁸²

Based on this, it can be suggested that by the mid-late 17th century a change occurred in the dominant source of imports. The vast majority of pipes of this date can now be identified as being of Dutch manufacture, and although English pipes occur then and in the 18th century, they are comparative rarities.⁹⁸³ This would be consistent with the trend shown in the Oslo material, and is presumably linked with the general strengthening of trading contacts with the Netherlands during the mid 17th century, and perhaps a preference for pipes of a quality assured by newly established Dutch guilds.



Figure 5.114. Clay pipes of mid-late 17th century date from Trondheim. L-r: Pipe from Bristol, England with maker's name (1662-1687);⁹⁸⁴ a Jonah pipe (c. 1630 - 1670) from B-site (TA1971/2);⁹⁸⁵ Jonah pipe from the Library Site.⁹⁸⁶

Loktu's study suggests that smoking equipment was more widely dispersed both topographically and socially in Trondheim by the mid-late 17th century, including contexts such as a possible tavern in the urban centre and servants' quarters in the regional governors' residence (*Herrehus*) in Kongsgården (5.4.4.3).⁹⁸⁷ Again, anecdotal evidence suggests that all basis forms of Dutch pipe are represented in the

⁹⁷⁹ Loktu 2009.

⁹⁸⁰ Loktu 2009: 72.

⁹⁸¹ Oswald 1975: 37-39.

⁹⁸² Drawings courtesy of I. Reed; photo: L. Loktu.

⁹⁸³ Ian Reed pers. comm., and Loktu's study is also consistent with this broad trend.

⁹⁸⁴ I. Reed pers.comm.

⁹⁸⁵ Photo: Riksantikvaren

⁹⁸⁶ Exact provenance and acquisition number unknown. Photo: P.E. Fredriksen.

⁹⁸⁷ Loktu 2009: 66, 73-76, 80.

Trondheim material.⁹⁸⁸ My own case study (Chapter 6) provides a small sample of clay pipes which were presumably in wider circulation in Trondheim from the late 17th century and well into the 18th century. This includes imported Dutch pipes and pipes of Norwegian manufacture (illustrated below and see Appendices K and L).



Figure 5.115. Clay pipe bowls of Dutch basis type 2 N131873;⁹⁸⁹ N121941 & N131543. From the first provisioning managers' residence privy, Kongsgården (TA1991/1).

Norwegian pipe production

Prior to 1752 all clay pipes used in Norway were manufactured in England and the Netherlands. The first Norwegian clay pipe factory was established in 1752 at Bragernes in Drammen, near Oslo (Christiania), and material recovered during a pre-War excavation at the site has been the subject of an historically contextualised study.⁹⁹⁰ The factory was built by Jacob Boy, an enterprising industrial pioneer. In the mercantile spirit of the time, he convinced the authorities to award him exclusive rights to pipe production in the Akershus district for a period of ten years in order to retain capital in Norway and provide work for local people.

He managed his factory between 1752 and 1770, producing a range of 13 types of long and short clay pipes modelled closely on Dutch and English pipes of the day. A survey of his factory in 1754 recorded that he employed 30 people and the factory stock was estimated at ca. 1000 gross (ie. 144,000 pipes). Not content with his monopoly on production in Norway, he managed to convince the king to place an embargo on the import of foreign pipes in 1759, giving Boy a monopoly on pipe sales in Norway. As a condition, however, Boy was required to supply Trondheim, Bergen and Kristiansand with sufficient stocks of pipes of all types in his range, administered by an agent in each city. Trondheim's standing supply was set at 400 gross (57,600 pipes). In addition the price he could charge was capped at a price equivalent to that charged for similar pipes from England (48 Danish shillings/2 marks for a gross). However, transport costs and difficulties (breakages, restricted seasonal sailings etc.) made maintaining these levels of stock problematical. In addition, the authorities were becoming less protectionist, and Boy's exclusive right to produce pipes in the Akershus district lapsed, and his manufacturing monopoly was challenged by a competitor, Knud Rist, in 1766.

These difficulties, and the factory's failure to make a satisfactory profit, led Boy to gradually reduce production after 1766. He sold his factory in 1770, although it continued for a few more years in other hands at a greatly diminished capacity. The large imports of foreign pipes in Trondheim's registered in toll lists for 1770 suggests that by that year at least the embargo was no longer in effect, presumably as a result of the demise of Boy's enterprise. Boy was succeeded by a number of pipemakers who established themselves in the Oslo fjord area during the second half of the 18th century.⁹⁹¹

⁹⁸⁸ I. Reed pers. comm.; Duco 1987.

⁹⁸⁹ The example to the right in this pair had a crowned 'R' stamp on its heel placing its manufacture after 1696.

⁹⁹⁰ Pettersen 1944; Alsvik 1944.

⁹⁹¹ Ludvigsen 2010. Lorentz Wahlstrøm and Iver Nielsen in Christiania, Knut Rist and Hans Jaspersen in Drøback and Christopher Bocklum in Larkollen are the best known.



Figure 5.116. **Top:** Three views of a Jacob Boy so-called 'English' pipe. The bowl bears an impressed cartouche showing 'IB' (ie. Jacob Boy's initials), with crowned letters L and B placed to either side of the heel N144230. **Bottom:** a possible Boy 'English' pipe ('hand' mark under heel) N143216.⁹⁹²

Pipes from Boy's factory at Drammen (1752-c.1770) have been registered in Trondheim. The examples illustrated above lay in deposits external to the second provisioning managers' residence in Kongsgården. Among these (Fig. 5.116, top row) is a type with an impressed cartouche which Alsvik suggests corresponds to the largest so-called 'English' pipe produced by Boy ('*Længste Engelske Piber*'). It was among his most expensive, priced at 6 marks per gross, and may have had a stem which measured 1 alen (c. 60 cm) in length.⁹⁹³

Other pipes: a rare socketed pipe from Kongsgården

A pipe of unique character was found in the privy for the second provisioning manager's residence in Kongsgården (Chapter 6) (illustrated below).



Figure 5.117. **Left & middle:** Socketed pipe with relief decoration from Kongsgården N146137 (TA1991/1). **Right:** An early-mid 18th century socketed pipe from Khmelnytsky, Ukraine.⁹⁹⁴

This is a well-preserved example of a socketed clay pipe, and to my knowledge, the only example of its type found in a Norwegian archaeological context. The pipe is 5.5 cm long by 5 cm tall and consists of light buff-brown clay. The pipe was made in a two-piece mould, and a longitudinal mould seam is visible on the underside and front face of the bowl. In its form (though not decoration), this example has parallels with socketed bowls produced in Eastern Europe during the 18th century, including

⁹⁹² These pipes resemble Dutch basis type 4 pipes in form. The hand stamp (also present on N145755) was used on both Gouda products and pipes produced by Boy at Drammen. Compare Alsvik 1944: 51.

⁹⁹³ Alsvik 1944: 49, 53.

⁹⁹⁴ Finds drawing in museum archive. Photo of Ukraine pipe: courtesy Arjan de Haan.

contemporary examples from Ukraine.⁹⁹⁵ The pipe bears moulded relief decoration, in the form of a coat-of-arms flanked by two supporters on the bowl's front and sides, each standing on pedestals reminiscent of upturned stylised horns, while the rims of the bowl and the stem socket bear short striations, and the underside a fan-like decoration. In addition, a series of letters, or initials, is placed above each figure: namely, E·E·S and B·T·B. Pipes of this type normally had hollow wooden or cane stems. This was probably originally the case here, but it has been replaced with a (broken) white clay pipe stem as a makeshift substitute.



Figure 5.118. Side and front views of the socketed pipe from Kongsgården N146137 (TA1991/1).

The coat-of-arms is the Greater (Royal) Coat-of-Arms of Denmark-Norway of the type used between 1699 and 1819.⁹⁹⁶ The two flanking figures are semi-naked 'wild men' supporters wearing headdresses and carrying clubs, a heraldic device frequently (though not always) depicted on 18th-century Denmark-Norway and later Danish arms (Fig. 5.119).⁹⁹⁷ It may be noted that there is a discrepancy in the arrangement of the heraldic insignia on the pipe compared to the normal arrangement. The pipe's place of manufacture is unknown.



Figure 5.119. The Denmark-Norway coat-of-arms in a variety of forms and contexts. **Left:** From Rosenborg Castle, Copenhagen. **Middle:** A military colours, or standard, in Trondheim Military Museum. **Right:** From the heading on the first issue of *Kongelig allene privilegerede Tronhiems Adresse-Contoirs Efterretninger*, 1767.⁹⁹⁸

⁹⁹⁵ D. Higgins and A. de Haan pers. comm. Compare examples in Vyšohlíd 2009, for example.

⁹⁹⁶ https://en.wikipedia.org/wiki/Coat_of_arms_of_Denmark (accessed 19.05.2018).

⁹⁹⁷ Wild men comprise mythical figures in the art, folklore and literature of medieval Europe, surviving as heraldic figures in Renaissance times and later.

⁹⁹⁸ Trondheim's and Norway's first newspaper. https://wikivisually.com/wiki/Royal_coat_of_arms_of_Denmark (accessed 19.05.2018).

5.5.2.8. Category 8: Clothing & footwear

Functional sub-categories	Artefact types	Sources
Items of clothing	Textile fragments, corset/stay	Uncertain
Clothing-related equipment	Buckles, fasteners, buttons	Uncertain
Footwear	Shoes, mules	Uncertain

Figure 5.120.

Occasionally, items are found which provide insights into how individuals dressed, and the importance of status and how it was communicated in the highly stratified society of the time. Only a few items of clothing and footwear will be dealt with here, largely due to their comparative rarity. Most are associated with the provisioning managers' residences in Kongsgården (Chapter 6), and comprise textile fragments, a stay, buckles and fasteners, buttons, and leather shoes. Many finer buckles and buttons can be regarded as personal display-orientated ornaments, but have been categorised here as items functionally integral to clothing as fasteners etc.

Items of clothing

Textiles survive only in suitable preservation conditions, and the majority that survive comprise fragments of cloth, often strips or rags from clothing which are found in privy pits which were presumably reused as sanitary napkins. These are of interest in textile-historical terms, but their analysis requires specialist expertise.

One interesting and recognizable item of clothing found in the privy of the second provisioning managers' residence in Kongsgården comprised the remains of a whalebone stay, an early form of corset (illustrated below). Although not confirmed in this instance, such stays were usually made of linen. Stays were an essential item of underwear for women during the 18th century. They comprised compartments into which thin strips of flexible whalebone were inserted to shape the female torso to the desired cone-shaped form.⁹⁹⁹



Figure 5.121. **Left:** parts of a textile (linen?) and whalebone stay N145706 -7, 145729-30 (TA1991/1). **Right:** a comparable early 18th century linen and whalebone stay.¹⁰⁰⁰

Clothing-related equipment

Metal buckles for fastening (and decorating) shoes and clothing became more widely used during the 17th and 18th centuries, and they were produced on a mass scale in a wide range of varieties and qualities. Simpler, practical forms in copper alloy and pewter are occasionally found in Trondheim, and a few

⁹⁹⁹ Victoria and Albert Museum Collections: <http://collections.vam.ac.uk/item/O115752/stays-unknown/> (accessed 19.05.2018).

¹⁰⁰⁰ From the Brooklyn Museum Costume Collection. Photos: (l-r) P. E. Fredriksen/ Nidaros Domkirkes Restaureringsarbeider & The Metropolitan Museum of Art.

typical examples are illustrated below, all from contexts associated with the provisioning managers' residences in Kongsgården.

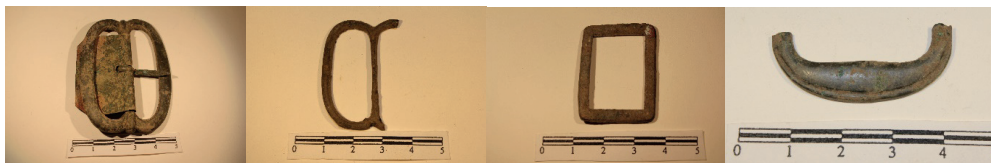


Figure 5.122. A selection of copper-alloy metal buckles from Kongsgården (TA1991/1) N130352, 146410, 142708, 129758. The fragment to right is possibly from a simple buckle for fastening breeches at the knee.

A particularly fine and rare find in the form of a decorative silver knee buckle was recently discovered in a mid-18th century privy at Søndre gate 7-11 (TA2017/3) (see below). This would have been part of male formal wear, one of a pair used to fasten a gentleman's breeches at the knee, and may have matched his shoe buckles.



Figure 5.123. **Left:** Decorative silver knee buckle (TA2017/3). **Right:** Gentleman's stockings leg with silver knee and shoe buckles.¹⁰⁰¹

Varieties of metal hooks and eyes were used for fastening clothes. A small selection of elaborate and simple metal clothes fasteners from contexts associated with the provisioning managers' residences in Kongsgården is shown.



Figure 5.124. Diverse clothes fasteners in copper alloy N147716, 145093, 143427, 128420 (TA1991/1).

Buttons are a common find, with examples in metal, bone, wood and glass. These were produced in a great variety of forms, both plain and decorated, and with differing forms of attachment. The figure below shows a selected range of buttons, predominantly metal (copper alloy, pewter and possibly silver) and one wooden button, from contexts associated with the provisioning managers' residences in Kongsgården (c. 1695 - c. 1780). The eyeleted buttons may include examples of both sleeve buttons

¹⁰⁰¹ Photo: NTNU Vitenskapsmuseet. Painting: Metropolitan Museum of Art.

(N143426) and waistcoat buttons, while those with multiple attachment holes are probably waistcoat buttons.¹⁰⁰²



Figure 5.125. A selection of 18th-century buttons from the provisioning managers' residences, Kongsgården (TA1991/1). **Top row:** decorated and plain and copper alloy flat-faced buttons with eyelets N143426, 130831, 130077. **Second row:** plain copper alloy flat-faced buttons with eyelets N129293 and decorated and plain silver or pewter flat-faced buttons with eyelets N143485, 118269. **Third row:** decorated and plain hollow, convex copper alloy buttons with attachment holes N144628, 118268, and decorated convex copper alloy button with eyelet N130795. **Fourth row:** decorated hollow, convex copper alloy button with inlaid wood panel on obverse face N129413, decorated flat-faced copper alloy button with inlaid bone panel on obverse face N143467, plain wooden button with coarse thread attached N144868.

Footwear

Medieval leather turn-shoes were lightweight, stitched inside-out, and consisted of few parts, principally the sole and upper. In the 16th century, new manufacturing techniques and shoe types emerged. From around 1600, welted shoes – in which pieces of leather were inserted between the sole and the upper – appeared with multiple layered soles and heels composed of layers of leather or wood. Welting improved waterproofing and stabilised shape. In the 16th and 17th centuries, the main types of footwear were the closed shoe, the mule (an open-backed shoe), and the boot. In addition, the wooden clog has a long history of use in Norway as a utilitarian workshoe or everyday shoe, though these rarely survive in archaeological contexts. The mule was used especially by women, both summer and winter, and outdoors and indoors. Its open structure required less adaptation than a closed shoe and was easier and cheaper to manufacture. Closed shoes could be turned into mules by cutting off the backs of worn shoes.¹⁰⁰³

Prior to the second half of the 17th century, there were few differences between women's and men's shoes. In the 17th and 18th centuries, the strap-shoe was popular among both men and women in the upper social classes. From the late 17th century it became common for men to use it in combination with a shoe buckle, while the concealment of their shoes by women's clothing meant this accoutrement was not adopted by them at the time. Among curated shoes from the first half of the 18th century are numerous fine women's laced strap-shoes, a type of shoe that was probably more common than the buckled shoes of the period. The uppers of many high status women's shoes were made of fabrics, colourful silk or delicate leather, and sometimes decorated with gold and silver lace and braid. From

¹⁰⁰² White 2008.

¹⁰⁰³ Jäfvvert 1938: 45; Haugsand 1997: 40.

about 1660 to 1730, women's shoes developed an increasingly narrower pointed toe. Men's shoes, on the other hand, had a spacious square toe until about 1720, after which it became more round or oval. Heels on women's shoes had a more elegant, indented form than men's heels from the late 17th century and well into the 18th century. In the latter half of the 18th century, until about 1790, the buckled shoe appears to dominate. These were more expensive than laced shoes, and were rarely used by the lower classes. Buckles, usually brass, varied greatly in size, shape and ornamentation. Around 1770 shoe straps reach their longest and broadest extents, and buckles their largest size. After the French Revolution, strap-shoes with buckles became outmoded, gentlemen adopting the laced shoe, while women used lighter slippers without laces.¹⁰⁰⁴



Figure 5.126. Leather shoes from Kongsgården (TA1991/1). **Top** (l-r): sole and insole of female strap- or buckle shoe? N145608; sole, insole and upper of female strap- or buckle shoe? N145611; upper and insole of mule, with tall wooden heel N145613. **Bottom** (l-r): sole, insole, upper of mule N145612; tall wooden heel (N145610).

Specialist studies of post-medieval shoes derived from archaeological contexts are comparatively rare.¹⁰⁰⁵ The mid 18th-century privy of the second provisioning managers' residence in Kongsgården produced a small assemblage of leather soles, uppers and wooden heels belonging to 14 leather women's shoes (Fig. 5.126). These conformed to the comparatively limited range of women's shoe types of the day, notably wooden-heeled strap- or buckle-shoes and mules. The heights of the heels suggest that they were not working shoes.

Soles with a long pointed toe (e.g. N145608) characterise women's shoes during the first half of the 18th century. In the mid-1700s, the toe became blunter, as is the case with N145611. The relatively high heels are consistent with a mid-18th century date.¹⁰⁰⁶

5.5.2.9. Category 9: Jewellery, personal ornaments & accessories

Functional sub-categories	Artefact types	Sources
Jewellery & ornaments	Brooches, fingerrings, semi-precious stones, beads	Uncertain
Accessories	Fans	Uncertain

Figure 5.127.

Apart from their aesthetic and alluring qualities, jewellery and other objects of personal adornment comprised important outward tangible signs of position, status and gender.

¹⁰⁰⁴ Swann 2001: 38, 124; Jäfvvert 1938: 66.

¹⁰⁰⁵ Though see Pettersson 2008 and Engen 2013 for analyses of post-medieval shoes from Oslo.

¹⁰⁰⁶ Trond Engen pers. comm.

Jewellery and ornaments

Items of jewellery worn on the person are comparatively rare finds, and encompass varieties of metal brooches, fingerings, semi-precious stones, beads and other forms of decorative personal ornaments. Examples from 17th and 18th-century contexts in Kongsgården, the urban area and the cathedral graveyard are illustrated below.

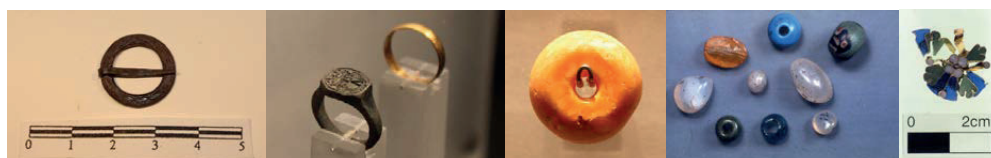


Figure 5.128. L-r: Annular copper-alloy brooch N146138, copper-alloy signet ring and gold fingering N130075, amber bead N146906, from Kongsgården (TA1991/1); glass beads (B-site, TA1971/2); enamelled glass brooch (TA2004/21).

Accessories

Fragmented bone sticks from a discarded folding fan were found in association with the second provisioning managers' residence in Kongsgården. They are decorated with engraved cross-hatching and motifs depicting what appears to be a Chinoiserie landscape of trees and vegetation. The fan proliferated throughout the 'long' 18th century as a ubiquitous costume accessory worn by royalty, aristocracy, and the middling classes. By the close of the century, even the lower orders could afford to purchase simple printed fans.¹⁰⁰⁷



Figure 5.129. Bone sticks for a folding fan from Kongsgården N144863, 144683, 144849, 144867 (TA1991/1).¹⁰⁰⁸

5.5.2.10. Category 10: Health, hygiene & toiletry

Functional sub-categories	Artefact types	Sources
Pharmaceutical items	Pharmaceutical bottles, apothecary jars	Imported
Hygiene/toiletry/ grooming equipment	Chamber pots, spittoons, combs, toothbrushes, manicure set, earspoon, tweezers, perfume bottles, textile sanitary napkins	Imported & local
Ophthalmic equipment	Lenses for spectacles, magnifying glass	Imported?
Human biological-related	Human osteological and organic remains, human parasite eggs, human hair	

Figure 5.130.

¹⁰⁰⁷ <https://www.google.com/culturalinstitute/beta/exhibit/BAlIPOiNaP7RJg> (accessed 19.05.2018).

¹⁰⁰⁸ Drawings show Chinoiserie decoration front and back. Photo: P.E. Fredriksen/Nidaros Domkirkes Restaureringsarbeider.

This category encompasses items used in connection with the care and well-being of the human body, including containers for pharmaceutical preparations and medicines, and equipment used in connection with personal hygiene, cleanliness and grooming. Also included is equipment use to aid sight. In suitable preservation conditions, traces of parasites passed in human faeces may be found which provide insight into medical conditions. A prime source of information regarding human health, pathology and genetics comprises the human osteological and organic remains (e.g. brain tissue) that survive in contemporary burials.

Pharmaceutical items

Fragments of small pharmaceutical phials and bottles in green and clear glass are frequent finds in rubbish pits and privies. They presumably contained medicines for various ailments. From the mid 18th century on, pharmaceutical bottles were produced at the Norwegian glassworks, and varieties are illustrated in the Weyse catalogue. Various well-preserved pharmaceutical bottles were found discarded with a variety of earthenware and stoneware jars and costrels normally used by apothecaries, and other types of ceramics and bottles, in a rubbish pit excavated on a property owned by Trondheim's second apothecary, Arnoldus Von Westen, between 1680 and 1698 (Fig. 5.131, left).¹⁰⁰⁹



Figure 5.131. **Left:** Assemblage of bottles and ceramic vessels T11975a-s, including items used by an apothecary (TA303). *Top row (l-r):* German redware pipkin; two German stoneware costrels; German redware ointment jar; crucible made in Hesse, Germany.¹⁰¹⁰ *Bottom row (l-r):* German stoneware 'ointment' jars/albarelli; Dutch and German tin-glazed 'ointment' jars; possible Frechen stoneware jug; diverse pharmaceutical bottles and wine bottle.¹⁰¹¹ **Right:** Three German stoneware 'ointment' jars/albarelli N146358 (Kongsgården TA1991/1).



Figure 5.132. Small bottles for volatile liquids. **L-r:** Complete blue bottle N6959 (E-site TA1972/2); spouts and bases for blue and green bottles (Søndre gate 7-11 TA2017/3); a Weyse Catalogue illustration of an equivalent bottle; a small clear-glass flat-walled bottle, possibly for perfume/toilet water N6982 (E-site).

Eighteenth-century contexts in Trondheim often produce fragments of distinctive, fragile, small, thin-walled bottles with blue colouration. Similar types of bottle described as being of possibly French origin, used for storing volatile liquids, notably toilet water, brandy and other spirits are known from

¹⁰⁰⁹ TA303 Søndre gate 6. Prior to 1681, this was the site of Trondheim's first apothecary.

¹⁰¹⁰ A type often used in testing for gold and other precious metals.

¹⁰¹¹ Photo: after Supphellen 1997: 200 (NTNU Vitenskapsmuseet?).

European contexts.¹⁰¹² A complete example of a blue bottle of this elongated type was found in the E-site glass assemblage (Fig. 5.132), and numerous fragments (e.g. N146660) derived from the second provisioning managers' residence's latrine (TA1991/1) and Søndre gate 7-11 (TA2017/3). Examples in green glass are also known. Bottles of this distinctive form called '*Ollie Glas*' (oil glasses) were produced at Nøstetangen during the mid-18th century. While they may have been multi-purpose storage and distribution bottles, used to hold a variety of liquids and oils (see Category 4), they were also used by apothecaries, and as such have been included here.¹⁰¹³

Hygiene/toiletry/grooming equipment

This sub-category comprises items used in connection with personal hygiene, and the care, cleansing and grooming of the body.

Chamber pots were an increasingly customary item in 17th- and 18th-century households, providing a simple and ready means of disposing of human urine and faeces, which could be carried in the pot from the house to the outside privy. During the course of the 17th and 18th centuries chamber pots manufactured in a variety of stonewares and earthenwares including Westerwald, Dutch whitewares and Trønder redware are found here (illustrated below). Trondheim's earliest examples date from the second half of the 17th century.¹⁰¹⁴

Occasional spittoons in 18th-century refined redwares have also been found. Spittoons formed another receptacle for disposing of human waste, in this case human spittle (below). They were used predominantly by men, often in association with the chewing of tobacco.



Figure 5.133. 18th-century chamber pots and spittoon. L-r: Westerwald stoneware, from the second provisioning managers' privy, Kongsgården (TA1991/1); Westerwald stoneware (B-site, TA1971/2); Dutch tin-glazed ware (B-site); spittoon in English refined redware from E-site (E77, TA1972/2).¹⁰¹⁵

Combs were used for personal grooming, but also to remove lice. A particularly finely-made

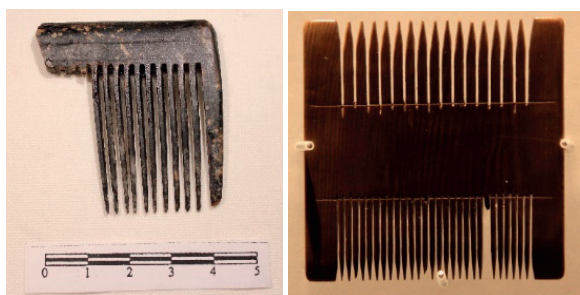


Figure 5.134. Combs. L-r: double-sided and single-sided bone combs N145726, 146182 (TA1991/1).

double-sided 'louse comb' was found in the privy for the second provisioning manager's residence, along with a fragment of single-sided comb (Fig. 5.134).

Toothbrushes are a rare find, but appear in local contexts from the late 17th century on. These include a particularly fine and well-made bone toothbrush found in a privy on B-site (TA1971/2), dating to c. 1700 (illustrated below, Fig. 5.135). It is hand-carved, flat on one side, convex on the other. The holes for the bristles are neatly bored and arranged in an ordered pattern. They contain remains of bristles (horsehair?). Copper alloy staining in the holes and the back of the head is presumably traces of metal fixtures in the holes.

¹⁰¹² Henkes 1994: 284-285, cat. nr. 59.2.

¹⁰¹³ Johansen 2011: 261.

¹⁰¹⁴ I. Reed pers. comm. And Reed 2009: 189-190.

¹⁰¹⁵ Photos: I.Reed.



Figure 5.135. Three views of bone toothbrush N9301 from B-site (TA1971/2).

A less refined bone toothbrush was found in a cellar on site FK which burned in the fire of either 1681 or 1708. Although the handle seems not to have been fashioned, the brush has a narrow neck and a flattened head with neatly bored holes. And finally, the head of a simple, crudely manufactured bone toothbrush was found in connection with the second provisioning managers' residence in Kongsgården (mid 18th century), displaying a slightly irregular arrangement of drilled holes (both illustrated below).

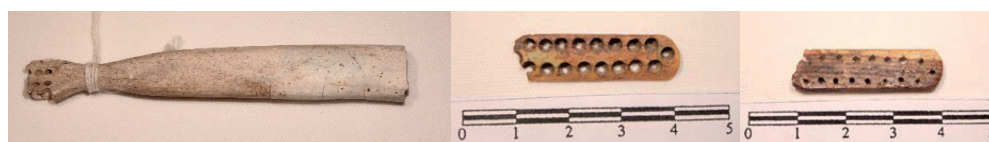


Figure 5.136. L-r: Bone toothbrush (burnt) from FK-site N18529; head (front & back) of bone toothbrush from Kongsgården N144866 (TA1991/1).

Items of equipment specially designed to remove dirt from beneath nails and wax from ears are found occasionally.¹⁰¹⁶ They could also be used to scrape plaque from teeth. A fine manicure set made of bone was found in 17th-century deposits in Kongsgården, possibly an item lost by one of the officials who resided or worked here at the time (illustrated below, left). Such finely-made items were often used as dress accessories, and this might have hung from the owner's belt as an item of display.



Figure 5.137. Personal grooming equipment from Kongsgården (TA1971/1). L-r: 17th-century manicure set made of bone;¹⁰¹⁷ combined earscoop and nail cleaner in copper alloy N119032; copper-alloy tweezers N118266.

A humbler and more functional tool in copper alloy which is probably a combined earscoop and nail cleaner derived from contexts associated with the first provisioning managers' residence in Kongsgården (Fig. 5.137, middle). This might also have functioned as a cosmetic tool used to hold and apply small amounts of ointments, powders, or other cosmetics. A pair of tweezers from the same context is included here as a possible grooming item, though tweezers have many uses.

¹⁰¹⁶ Earwax was also harvested to be used to lubricate thread used in sewing.

¹⁰¹⁷ Photo: D. Makridis/ Nidaros Domkirkes Restaureringsarbeider.

Perfumes and toilet waters such as Eau de Cologne were popular in the 18th century. Eau de Cologne was invented, manufactured and distributed widely across Europe by the fragrance factory of Farina, established in Cologne in 1709.¹⁰¹⁸ This was distributed in bottles similar in form to the distinctive blue bottles mentioned above, though usually made of dark green or clear glass. It is possible that some bottles, as yet not definitely identified, reached Trondheim. A small clear-glass bottle of unknown origin which may possibly have held perfume or eau de toilette was also found at E-site (TA1972/2) (Fig. 5.132).

As mentioned above (5.5.2.8), textile fragments and rags found in privies may have functioned as sanitary napkins.

Ophthalmic equipment

Given their fragility, glass lenses for spectacles rarely survive intact, though occasional instances have been recorded, such as a recent find of two lenses in a mid 18th-century privy at Søndre gate (TA2017/3). A rare find of a fragment of a lens interpreted as a magnifying glass, an item often used as an aid for reading, was found in contexts associated with the second provisioning managers' residence in Kongsgården.



Figure 5.138. Ophthalmic equipment. Two views of a fragment of a large glass lens, probably a magnifying glass N144680 (TA1991/1).

Human biological-related

The contents of privy fills provide preservation environments for organic components associated with human biology, such as hair clippings, for example. Of particular interest are eggs of human parasites passed in faeces. Samples taken from the privy of the second provisioning managers' residence in Kongsgården, for example, contained eggs belonging to whipworm and roundworm (see Chapter 6).¹⁰¹⁹

5.5.2.11. Category 11: Literacy & numeracy

Functional sub-categories	Artefact types	Sources
Book-related items	Metal book clasps	Imported
Writing equipment	Inkpot/inkwell, slate pencils, slate, wax seals	Imported
Accounting equipment	Jettons, tallysticks	Imported & local

Figure 5.139.

This category incorporates items associated with practices involving skills of literacy and numeracy.

Book-related items

Metal book clasps made of copper alloy could be attached to the covers of large books to secure them in a closed position. This system began in the 14th century when books were made of wooden covers and contained calfskin pages that would expand when they encountered moisture in the air. Metal clasps would have been used on bibles, devotionals, travel guides, or medical books, for example. The examples

¹⁰¹⁸ https://en.wikipedia.org/wiki/Eau_de_Cologne (accessed 19.05.2018).

¹⁰¹⁹ Hartvigsen 1997.

illustrated below are from deposits in Kongsgården and are probably of 16th or 17th century date, and possibly produced in England or Germany.



Figure 5.140. Book clasps. Copper alloy clasps N15011, 148817 from Kongsgården (TA1991/1).

Writing equipment

Stubs of used soft slate pencils are occasionally found, in some instances in small caches which have been gathered together and thrown out. The privies at Søndre gate 7-11 (TA2017/3) and the second provisioning managers' residence in Kongsgården produced small caches (Fig. 5.141). These could be used to write on paper or slate tablets, an example of the latter being found in Kongsgården. A small opaque white glass inkpot/inkwell with hand-painted decoration was found in the mid-18th century privy pit at Søndre gate 7-11 (Fig. 5.141).



Figure 5.141. L-r: Slate pencil stubs from the second provisioning managers' residence Kongsgården (TA1991/1) and a glass inkpot 402854 from Søndre gate 7-11 (TA2017/3).



Figure 5.142. **Left:** fragment of wax seal bearing a monogram¹⁰²⁰ N148071 (TA1991/1). **Centre:** drawing of a seal fragment bearing a coat-of-arms¹⁰²¹ N148070 (TA1991/1). **Right:** Two wax seals from the E-site rubbish pit E77 bearing a family coat-of-arms (TA1972/2).¹⁰²²

Although not writing equipment *per se*, wax seals are closely connected with the practice of letter-writing. Discarded fragmentary wax letter seals bearing distinguishable stamps illustrated here (Fig.

¹⁰²⁰ Possibly an official seal. It has similarities to the Trondheim Toll seal (illustrated in Supphellen 1997: 286).

¹⁰²¹ Possibly showing a 'wild man' figure holding a club in his right hand? Compare arms of Jacob Madsen Lindemann, Peder Magnus Wiingaard, Jens Ochenius Willer cited in Nissen & Aase 1990: 197.

¹⁰²² The Bernhoft family seal. Cf. Nissen & Aase 1990: 35. Photo: Riksantikvaren.

5.142) derive from two mid 18th-century contexts: the privy of the second provisioning managers' residence, Kongsgården, and the rubbish pit at E-site (TA1972/2).

Accounting equipment

Copper or brass jettons, or reckoning counters, were coin-like objects used throughout Europe between the 13th and 17th centuries in the calculation of accounts prior to the introduction of written accounts using Arabic numerals. Each represented a value by means of its position on a reckoning table (or cloth). The illustrated examples (Fig. 5.143) include jettons manufactured by Master Wolf Lauffer which were found in association with the first provisioning managers' residence in Kongsgården. These and the others illustrated here were made in Nuremberg, a principal source of production, although other centres existed. They are typical of medallic types produced, sometimes in sets, in the family workshops of guild masters Lauffer, Schultes and Krauwinkel in the period c. 1550-c.1651.¹⁰²³

Tallysticks of wood inscribed with tally marks were used to count wares (Fig. 5.143, right).



Figure 5.143. **Left & middle:** Brass jettons/reckoning counters from Kongsgården (TA1991/1) (Mathias & Wolf Lauffer, Hans Schultes & Hans Krauwinkel). **Right:** 18th-century wooden tallysticks from E-site (TA1972/2).¹⁰²⁴

5.5.2.12. Category 12: Textile working

Functional sub-categories	Artefact types	Sources
Weaving equipment	Weaving comb	
Spinning equipment	Spindle whorl	
Sewing equipment	Needles, pins, thimbles, bone needle case	
Laceworking equipment	Lace bobbin	

Figure 5.144.

This category encompasses a very limited range of textile working equipment since much was made of wood and bone, and has not survived. The limited scope of my survey also means that some such equipment, such as fragments of hand-looms, weaving swords, loom-weights, spinning wheels, drop spindles, distaffs and the like, may exist as yet unclassified in the museum collections. Spinning equipment, which would have formed an important material component in contemporary households, is only represented here by a stone spindle whorl for spinning wool from the second provisioning managers' residence in Kongsgården (not illustrated). Similarly, only one possible item of weaving equipment has been identified.

Weaving equipment

A large bone comb with widely-spaced teeth may be a 'weaving comb' or 'comb beater' (*vevgaffel/vevkam*) used to push down weft threads between the warp threads on a warp-weighted loom (Fig. 5.145).

¹⁰²³ Mitchener 1988.

¹⁰²⁴ Photo tallysticks: O.A. Ulvik.

Sewing and laceworking equipment

Sewing equipment is represented by metal needles, pins and thimbles. Examples from the provisioning managers' residences in Kongsgården in Trondheim are illustrated below, as is a fine needle case of bone with a threaded end from B-site (TA1971/2).

Skill with a needle was considered an essential part of a well-bred young woman's upbringing. Samplers were produced as teaching tools to acquire the needlework skills necessary for decorating clothing and household furnishings as well as household maintenance tasks such as marking and mending linens. Pins were a necessity for sewing and for the fastening of clothing and the arrangement of dress accessories. Their importance for women as a personal requirement and expense is reflected in the term 'pin-money', the sum originally allocated to meet this essential cost. A major advance in the manufacture of pins came in the 16th century with the use of a steel draw-plate with a graduated series of holes. Wire, usually brass, could be drawn through this to any gauge, permitting standardisation of pin size. The heads were made from fine coils of wire soldered in place.¹⁰²⁵

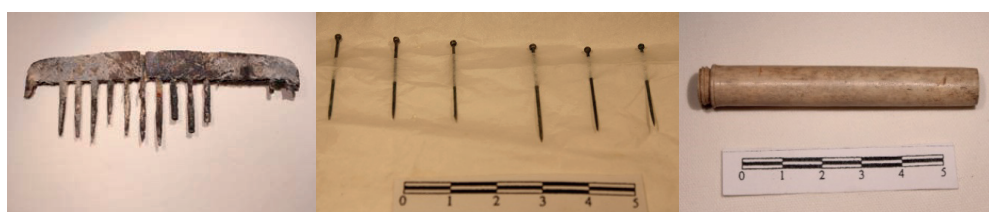


Figure 5.145. Weaving and sewing equipment. **Left:** Possible weaving comb/comb beater, from the second residence's privy in Kongsgården N145605 (TA1991/1). **Middle:** Round-headed pins N122949 from Kongsgården (TA1991/1). **Right:** bone needlecase N9342 (B-site TA1971/2).

There are two types of thimble: open (also called sewing rings) and closed. The former are generally used for heavier work, for example by tailors, while closed thimbles are for finer work. The vast majority are made of copper alloy (brass). From the 14th century, Nuremberg, a major brass-working centre, exported thimbles on a massive scale, although other Dutch and English manufacturers eroded their pre-eminence during the 16th and 17th centuries. Indentations were originally applied by hand, or, after 1620, by mechanical knurling. Examples from the 18th-century provisioning managers' residences in Kongsgården are illustrated below (l-r): a possible Dutch type H1 or English type (1730-1800), a possible Dutch type II (1650-1730) and a sewing ring. The closed thimbles are cast, with regular, small, machine-made indentations. Sewing rings, used for heavier work, usually had larger indentations.¹⁰²⁶



Figure 5.146. Thimbles. Two closed thimbles N145013, N143425 and an open thimble/sewing ring N129465 from Kongsgården (TA1991/1).

Lace production was organised on an industrial scale across post-medieval Europe, but could also take place in the home. The two main methods of making lace are distinguished by the names of the tools used for the manipulation of fine linen thread. Needle lace uses a single thread and a needle to make stitches that gradually build up a fabric. Bobbin lace uses many threads attached to small

¹⁰²⁵ <http://collections.vam.ac.uk/item/O130592/card-of-pins-unknown/> (accessed 19.05.2018).

¹⁰²⁶ MacGregor & Gilmour 2014a: Datasheet 9.

bobbins, which are interwoven in various combinations to create a pattern. The finest laces of both types required many hours to produce, and were consequently expensive, although bobbin lace was quicker to produce than needle lace, and relatively cheaper. A lace bobbin made of bone with inlaid amber decoration on the head was found in association with the provisioning managers' residence in Kongsgården (Fig. 5.147).



Figure 5.147. Lace-making equipment. A bone lace bobbin N115015 from Kongsgården (TA1991/1) (finds drawing).

5.5.2.13. Category 13: Metalworking

Functional sub-categories	Artefact types
Metalworking equipment	Crucibles, moulds
Metalworking waste	Slags, hammerscale, offcuts

Figure 5.148

Medieval metalworking sites have been excavated within the urban core, on Trondheim's northern and western peripheries, and in the Archbishop's Palace. Much waste, production debris and structural remains associated with diverse processes, including iron smithing and casting of copper alloys and precious metals, has been recovered.¹⁰²⁷ Less evidence for post-medieval metalworking has been recorded, though some isolated instances suggest this was conducted on a smaller scale in peripheral locations (see 5.4.4.1 and 5.4.7.1). This is restricted to waste products in the form of charcoal, hammerscale, slags and occasional crucible and mould fragments.



Figure 5.149. Slags and charcoal from the floor of a 16th-century smithy excavated at Torvet (TA2014/5).

5.5.2.14. Category 14: Children's toys & curios

Functional sub-categories	Artefact types	Sources
Dolls	Wooden doll	
Figurines	Pipeclay, porcelain & ceramic figurines	Imported & local
Other	Stone marble	

Figure 5.150.

Few toys have come to light, possibly because many were made of organic materials. However, the body of a well-preserved carved wooden doll was preserved in the privy of the second provisioning managers's

¹⁰²⁷ Espelund et al 1989; Bergquist 1989; Bergquist & McLees 2005.

residence in Kongsgården. It consists of one piece of wood carved to replicate the body form of a clothed female. The torso has an inverted flattened cone shape, resembling a corseted torso, while the lower flat-bottomed half is rounded, though profiled at the back to represent the curved fall of a long dress. A transverse slot on the top presumably housed an attachment for the head, and perhaps arms. This doll would probably have been clothed in the fashion of the times (mid 18th century).



Figure 5.151. Body of a carved wooden doll, front and side views N145905 (TA1991/1).

Small ceramic pipeclay figurines depicting a variety of human figurative forms, animals and birds are found in post-medieval contexts throughout Europe and the Americas. Their various uses are uncertain, but some early forms were possibly used for devotional purposes (see Category 25) and pilgrimage souvenirs, while others probably had secular uses, as trinkets, toys or mantelpiece ornaments.¹⁰²⁸



Figure 5.152. Two ceramic figurines from Kongsgården (TA1991/1). **Left:** Pipeclay figurine N148469 depicting the renowned Dutch naval commander Michiel de Ruyter (pictured).¹⁰²⁹ **Right:** Front and rear views of a Chinese porcelain figurine N143728. Possibly a calligrapher's water-dropper, brush-washer or water-pot.

A small number of complete and fragmentary pipeclay figurines have been found in Trondheim (see also Category 25). A particularly fine example from Kongsgården comprises a small figurine manufactured in the Netherlands which has parallels recovered from widely dispersed 17th and early 18th contexts in the Netherlands, USA, Britain, and Port Royal (Jamaica) (illustrated above, left). It has lost its head, but comprises a male figure in 17th-century dress holding a pair of gloves and a tipstaff (military commander's staff). It depicts an historical person, the renowned Dutch war hero, Admiral Michiel de Ruyter (1607-76).¹⁰³⁰

¹⁰²⁸ Gaimster 2003; Gaimster 2007.

¹⁰²⁹ Portrait of Michiel Adriaenszoon de Ruyter by F. Bol. National Maritime Museum, Greenwich.

¹⁰³⁰ Jan van Oostveen pers. comm. He commanded the Dutch fleet at the battle at Chatham/Battle of the Medway in 1667, a raid on the British navy during the Second Anglo-Dutch War. A personal friend of the Danish

Another interesting figurine is a small polychrome glazed porcelain figurine of Chinese origin (Fig. 5.152, right), found in the destruction levels of the second provisioning managers' residence in Kongsgården. Now without head or hands, it depicts a thin human figure with a bare torso sitting or squatting behind what looks like a large bowl, but which is probably a bamboo fish basket or trap of a type typically used by Asian fishermen. The trap's top is perforated by a hole. Small, hollow Chinese porcelain objects, including figurines, perforated with holes are known to have functioned as so-called water droppers.¹⁰³¹ These comprised one of an array of accessories used by scholars and practitioners of calligraphy. Water droppers were small containers used to hold water which was added to the inkstone when the dried ink (inkstick) was ground on it. They usually had two holes to regulate the intake of air and flow of water so that only a few drops of water fell at one time. Other accessories included water pots and brush washers, which might also be made of porcelain, also occasionally in the form of figurines.¹⁰³² Given that there is no sign of a second hole, and that the hole in the fish trap is relatively large, it is possible that this is may be a water pot or brush washer rather than a water dropper. By the late 17th and early 18th century such objects were being manufactured in biscuit porcelain, and coloured glazes such as green, aubergine or turquoise were popular.

A great amount of porcelain objects of variable quality and price were produced for export to the West during the 18th century in particular. These included figurines of seated monks, as well as, for example, Chinese gods and goddesses, figurines with nodding heads, laughing boys, figurines of Dutch men and women, birds and animals, including cows, cranes, dogs, eagles, elephants, pheasants, monkeys and puppies.¹⁰³³ This object was probably not made for the general export trade, but instead found its way to Europe as a small side-batch of items. Its occurrence in a mid-18th century context in Trondheim is intriguing, and to my knowledge, it is the only find of its type yet found here. Given its exotic origins and character, it was presumably regarded as a whimsical curiosity by children and adults alike. As a novelty divorced from its original scholarly function, it was perhaps used as a toy or an ornament. If it was a recent import at the time it was discarded, its find context places its production within the Qing Dynasty (1636-1912).

Two fragmentary pipeclay figurines derived from deposits associated with the second provisioning managers' residence in Kongsgården: namely, a fragment of clothed torso and a pedestal base, probably for an animal figurine (Fig. 5.153).



Figure 5.153. Fragmentary pipeclay figurines from Kongsgården. L-r: three views of a human torso in drapery N144888 and (right) a pedestal base for animal N148476.

Figurines were also produced in local Trønder redwares during the 18th and 19th centuries (Fig. 5.154).¹⁰³⁴

king Frederik 3, he commanded an expeditionary fleet for Denmark-Norway against the Swedes, managing to liberate Nyborg in 1659, for which he was knighted. https://en.wikipedia.org/wiki/Michiel_de_Ruyter (accessed 19.05.2018)

¹⁰³¹ I. Reed pers. comm. Water-droppers may be made of copper, jade and stone, but ceramic ones were the most popular.

¹⁰³² Gotheburg.com (accessed 19.05.2018).

¹⁰³³ https://en.wikipedia.org/wiki/Chinese_export_porcelain (accessed 19.05.2018).

¹⁰³⁴ Reed 2009: 188-189.



Figure 5.154. L-r: Trønder redware cockerel and figure on a horse; mould for production of ceramic horse Trønder Redware.¹⁰³⁵

5.5.2.15. Category 15: Leisure & pastimes

Functional sub-categories	Artefact types
Gaming equipment	Gaming pieces, boards, dice

Figure 5.155.

A great variety of gaming equipment, including gaming pieces and boards for the Viking boardgame hnefetafl, various chessmen (including an Isle of Lewis type queen), carved discs used for playing games of tables, boards for merels and a great variety of dice has been recorded in medieval deposits in Trondheim.¹⁰³⁶ Chessmen, carved discs for tables variants such as backgammon, and varieties of dice also derive from post-medieval deposits. Some exhibited examples from the Archbishop's Palace/Kongsgården are illustrated below. The chess pieces exemplify non-figurative and figurative types of chess pieces current in late-medieval and post-medieval contexts.

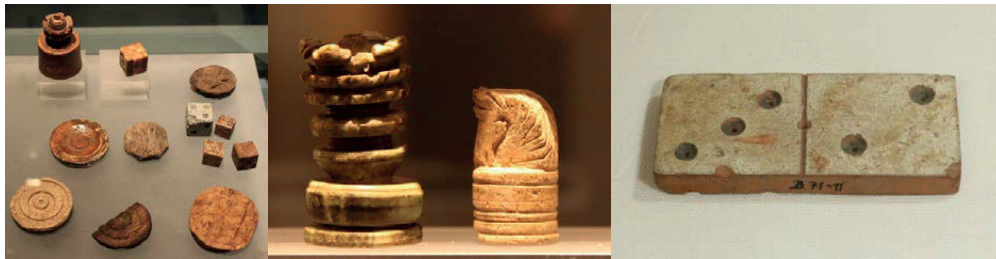


Figure 5.156. Gaming pieces and dice. **Left:** A chess piece (king?), dice and tables pieces from 16th and 17th century contexts in Kongsgården (TA1991/1). **Middle:** Two chess pieces (king/queen and knight) N115235 from 17th and 18th century contexts in Kongsgården. **Right:** A domino tile in fired clay N9244 (from B-site, TA1971/2).

A domino tile in fired clay was found at B-site (TA1971/2). Dominoes has Asian origins, known in China during the 12th century, and first appearing in Europe during the 18th century in Italy and France, possibly as a result of missionary and secular contacts. Tiles may be made in a variety of materials, including ivory, bone or metal.

5.5.2.16. Category 16: Weapons

Functional sub-categories	Artefact types
Crossbows & related items	Crossbow parts, bolts
Firearms & related items	Musket triggers, flints, flint pads, lead shot, shot moulds, powder containers
Cannon & related items	Cannon balls

Figure 5.157.

¹⁰³⁵ Photos: I. Reed.

¹⁰³⁶ McLees 1990.

This overview does not include *melée* weapons (daggers, swords, spears, pikes, battleaxes, warhammers, halberds, clubs, maces, bayonets etc) or armour. While a few examples are recorded in immediate pre-Reformation contexts in the Archbishop's Palace and Steinvikholmen castle (Fig. 5.159), none were registered in my survey of post-Reformation contexts here or elsewhere in Trondheim. During the decades immediately prior to the Reformation the precinct of the Archbishop's Palace was the site of a workshop in which crossbow parts were manufactured (Fig. 5.158). Items associated with firearms were also found, notably lead bullets and moulds for making them (Fig. 5.159). This material is dealt with extensively elsewhere,¹⁰³⁷ but some items will be used here to illustrate the nature and range of 16th-century weaponry in Trondheim.

From the late 17th century, the Palace, now known as Kongsgården, became a military depot. Deposits associated with the provisioning managers' residences in Kongsgården produced a small variety of items associated with gunpowder firearms which are also illustrated below.

Crossbows & related items

The crossbow-related material from the pre-Reformation decades in the Archbishop's Palace comprises some of the earliest material evidence for crossbow use and manufacture in Norway.



Figure 5.158. Crossbow-related items from immediate pre-Reformation contexts in the Archbishop's Palace (TA1991/1). **Left:** arrowhead and crossbow bolts. **Right:** trigger mechanisms (nuts), runner plates and offcuts/fragments of decorative mounts in bone and antler for crossbows.

The crossbow continued in use well into the 17th century, though principally in the context of hunting and target shooting from the mid 16th century on.¹⁰³⁸

Cannon, firearms & related items

Cannon are first mentioned in Norwegian documents of the late 15th century, although they may have been used here as early as the 14th century. The first recorded use of firearms (handguns) in Norway dates from 1492, though it is likely that, in common with Sweden and Denmark, they were known in certain contexts by about 1400.¹⁰³⁹ The early use of cannons and firearms was confined to the military. At the Reformation, the inventory for the castle at Steinvikholmen, itself designed to withstand and use cannon effectively, attests a well-stocked arsenal of gunpowder weapons.¹⁰⁴⁰ Fragments of cannon, chambers for breech-loading cannons, cannonballs (stone and iron), lead shot/bullets and shot-moulds have been found in contexts dating to Reformation times both at the Archbishop's Palace and Steinvikholmen (Fig. 5.159). It is from the Reformation period that the first named firearms makers (*bøssemaker*) are named among the archbishop's retinue and elsewhere.¹⁰⁴¹

¹⁰³⁷ Booth 1998; Saunders 2001; Nordeide 2003.

¹⁰³⁸ Norheim 2011: 95, 147-149, 171-173.

¹⁰³⁹ Norheim 2011: 98; Rasch-Eng 2004: 23.

¹⁰⁴⁰ Rasch-Eng 2004: 19.

¹⁰⁴¹ Rasch-Eng 2004: 26; Nordeide 2000b.



Figure 5.159. 16th-century weapons. **Left:** Early 16th-century weaponry and other items from excavations at Steinvikholmen Castle, including (foreground) two mug-shaped chambers for breech-loading cannon and a variety of cannon balls.¹⁰⁴² **Middle & right:** Gunpowder-related items from pre-Reformation deposits in the Archbishop's Palace (TA1991/1): a mug-shaped chamber for a breech-loading cannon/swivel gun, part of a barrel for a cannon (possibly a small cannon, or hand cannon/culverin?), and two stone moulds for lead bullets/shot with *in situ* half-fabricated lead bullet.

Matchlock muskets were the earliest firearms to be used in Norway, and by c. 1550 farmers were also using them, particularly for hunting. At about this time wheel-lock, and particularly snaphance, or snaplock muskets, were introduced, replacing matchlocks during the second half of the 16th century. While firearms were made in Norway, large amounts were imported from Denmark to supply fortress garrisons and the soldiers levied from the rural population. Snaplock muskets were an early form of flintlock, and were widely used by the military and farmers throughout the 17th century up to about 1700, by which date they were replaced by 'true' flintlock muskets. The replacement of snaplocks by flintlocks in the Danish-Norwegian army began in the 1670s-80s. Pistols followed the same technical development, but were predominantly used by cavalymen, and since the Danish-Norwegian army only had dragoons (mounted infantry), only a few pistol models were used.¹⁰⁴³



Figure 5.160. Firearm-related items from 18th-century Kongsgården (TA1991/1). **Top** (l-r): Flintlock musket trigger N125735; trigger with part of flintlock mechanism? N131485; straploop for musket N125735; gunflint fragment N130113. **Bottom** (l-r): lead 'flint pad' N148829; scissors-moulds for casting lead shot/bullets; lead musket shot/bullet N131034; two used lead musket shot/bullets N148200.

¹⁰⁴² Also shown here are armour-piercing crossbow bolts, a mace-head, a warhammer and battle axe. Exhibited at Vitenskapsmuseet i Trondheim.

¹⁰⁴³ Rasch-Engb 2004: 19, 23-37, 65-70; Norheim 2011: 98-127.

Excavations in Kongsgården produced a variety of items related to flintlock firearms. These include iron triggers, occasional gunflints and lead ‘flint pads’, which held the flint in the jaws of the hammer of the flintlock mechanism, as well as various gauges of lead shot and moulds for casting them, including both iron scissors moulds and stone pouring moulds (Fig. 5.160).

Powder containers and flasks were essential firearms accessories.¹⁰⁴⁴ The privy of the second provisioning managers’ residence in Kongsgården produced three hollowed-out wooden powder containers, or charge holders. One is illustrated below, together with a wooden stopper.



Figure 5.161. Powder container. L-r: A wooden ‘Apostle’ powder container/charge holder N145776 and wooden stopper N145600 pictured with comparable wooden ‘Apostles’ and a reconstruction drawing of a 17th-century musketeer wearing a bandolier with Apostles, bullet pouch and powder flask.¹⁰⁴⁵

From as early as the 16th century, a matchlock or snaphance musketeer carried powder containers hung from a leather bandolier worn on the left shoulder and reaching diagonally to the right side of the hip (see illustration above). During the 17th century, the number of containers was usually 12, and consequently became known as ‘apostles’.¹⁰⁴⁶ Each held a standard quantity of gunpowder for one shot which was poured into the muzzle of a matchlock or snaplock musket on loading. Apostles could be made of different materials and in various shapes. Metal and leather examples are known, but wood was often used due to its low price and durability. Apostles had holes and protrusions for tying the laces or leather straps which attached them to their bandoliers. The Kongsgården examples were found in a mid-18th century context, and were presumably outmoded items which had been curated for some time (as curiosities?) prior to being discarded.

5.5.2.17. Category 17: Heating & lighting

Functional sub-categories	Artefact types	Sources
Heating-related equipment	Ceramic stove tiles, ceramic oil lamps, stone and iron oven parts	Local, Norwegian & imported
Lighting-related equipment	Metal and ceramic candlesticks, stone and ceramic oil-lamps, brass candlesnuffers, glass window panes, lead sprues, iron fittings	Local, Norwegian & imported

Figure 5.162.

Heating-related equipment

This includes ceramic stove tiles in German redwares, predominantly in lead green-glaze, but also smaller amounts of polychrome tiles. A few locally-made late 17th century examples have recently been found at the Torvet excavations.¹⁰⁴⁷ Small numbers of tile fragments have been found in urban contexts and the Archbishop’s Palace/Kongsgården, from 15th, 16th and 17th-century contexts. They attest to the use of free-standing ceramic stoves, although their specific character, incidence, socio-economic associations and contexts of use must await future research.

Small stone slabs of steatite from small domestic stoves have occasionally been found in 17th-century contexts. The use of free-standing cast-iron stoves occurs in elite contexts first during the 17th century, becoming more widespread in use during the course of the 18th century. Debris associated with

¹⁰⁴⁴ Norheim 2011: 189-205; MacGregor & Gilmour 2014a: Datasheet 11.

¹⁰⁴⁵ Pictures sourced from Pinterest.

¹⁰⁴⁶ Norheim 2011: 190, 204.

¹⁰⁴⁷ TA2017/11.

the destruction of domestic buildings occasionally contains metal panels for varieties of cast-iron stoves (e.g. F-site and site FH).

Lighting-related equipment

This is represented largely by fragmentary candlesticks in metal (copper-alloy or iron) or ceramics, and iron holders for resin-sticks (*tyristikker*). Fragments of finely modelled cast copper-alloy candlesticks derived from 16th-century contexts in the Archbishop's palace/Kongsgården, for example, while iron candlesticks and resin-stick holders take simpler forms (illustrated below).



Figure 5.163. Lighting equipment. **Left:** Parts of fine cast copper-alloy candlesticks and an iron candlestick (16th century, TA1991/1). **Middle:** stone oil lamp and complete brass candelstick (16th century, TA1991/1). **Right:** Staffordshire creamware candlestick from Ravelsveita 6 (18th century, TA2004/18).

Occasional examples of ceramic candlesticks are known from 16th-century and later deposits. Oil-lamps (for burning fishoil) in stone are a traditional lighting form, while lamps in Dutch and Trønder redware ceramics are also known from 17th and 18th-century contexts. Occasional fragments or complete examples of finely-made brass candelsticks occur.

The improved provision of natural light to building interiors through glass windows is a significant development in late-medieval/early post-medieval domestic architecture in Norway. Some of the earliest archaeological evidence for its use in secular buildings derives from the Archbishop's Palace (TA1991/1), where window glass was used in small late 15th-century workshop buildings. Window glass became more widely used during the course of the 17th century in particular, and urban deposits from that time on contain frequent amounts of green window glass which had been mounted in window frames using lead sprues.



Figure 5.164. L-r: Broken pane of green window glass (N132115) with marks left by leading, from first provisioning managers' residence privy, Kongsgården (TA1991/1); broken pane of inscribed window glass (E-site, TA1972/2 pit E77); iron hinge-fitting for window (N144173) (TA1991/1).

Prior to the establishment of the Norwegian glassworks after 1740 (see 5.5.2.3), all window glass was imported: expensive finer glass, including crown glass from England and France, and cheaper broad sheet glass from Germany (Pommern and Mecklenburg). Some cheap broad sheet window glass was produced at Nøstetangen from the 1740s. The first crown glass production in Norway was established at Hurdal in 1754, and cheaper broad sheet glass production began at Biri in 1766. Norwegian factories

gained a monopoly on window glass manufacture following the introduction of an embargo on glass imports in 1760.¹⁰⁴⁸

5.5.2.18 Category 18: Furniture, fixtures & fittings

Functional sub-categories	Artefact types	Sources
Moveable furniture	Legs for chair/stool/spinning wheel?	
Fixtures & fittings	Ceramic (Delft) decorated wall tiles	Imported
	Hinges, latches, mounts for chests?	

Figure 5.165.

This category encompasses only a few items used to furnish and equip house interiors, including moveable or fixed items of furniture and architectural fixtures and fittings. Only a few items are included here since furniture was made of wood, and rarely survives. Iron fixtures and fittings for doors, hinges, latches and possible decorative mounts for chests occur, but are often badly corroded and rarely curated. Glazed decorated Delft tiles are occasionally found, and are included here as architectural fittings for interiors given their specific use as components in protective fire-walling behind stoves.



Figure 5.166. L-r: Finds drawing of possible legs for a stool, chair or spinning wheel? N145907 (TA1991/1); decorated Delft wall tiles bearing biblical scenes N146379-83 from the second provisioning managers' residence privy, Kongsgården (TA1991/1).¹⁰⁴⁹

The only examples of furniture included here comprise two small, turned wooden pieces, one complete (c. 20cm long) and one fragmentary, which may be legs, or parts of legs, for an item of furniture (chair or stool?) (Fig. 5.166). Given the complete example's small size, an alternative suggestion is that they comprise legs for a dismantled spinning wheel/treadle wheel. They were found in the privy for the second provisioning managers' residence.

A group of six ceramic tiles bearing biblical scenes derived from the same privy (Fig. 5.166). Dutch monochrome decorated tin-glazed earthenware wall tiles, known generically as Delft tiles but produced in huge quantities at a number of Dutch centres, are found in local urban deposits. They were used as a practical but decorative means of fireproofing fireplaces or the section of wall immediately behind freestanding iron stoves (see Chapter 6).

Tiles with biblical scenes were popular. They were coloured blue (cobalt) or purple (manganese) from the mid-17th century on. During the 17th and 18th centuries the central scene was often surrounded by a double circle, with corner motifs consisting of a stylised ox-head or spider. The examples illustrated above are purple, with scenes surrounded by double circles, and spider corner motifs.

¹⁰⁴⁸ Amdam et al 1989: 12-20.

¹⁰⁴⁹ Christ healing the centurion's servant (?); curing the paralytic of Betesda (?); Samson rending the lion; Samson tied to a pillar (?); the Crucifixion.

5.5.2.19. Category 19: Security

Functional sub-categories	Artefact types	Sources
Security equipment	Locks, keys	Local & imported

Figure 5.167.

A study by Julian Cadamarteri has demonstrated that a wide range of locks and keys was used from early medieval times in different localities in Trondheim. They were manufactured in both copper alloy and iron, although iron examples predominate from the mid 14th century on. Medieval locks included varieties of fixed/mounted locks for doors and chests, and padlocks which could be used for securing gates, doors, chests, and cupboards, for example. These locks were opened by various types of push key, slide key, screw key and rotary key.



Figure 5.168. Examples of locks (unconserved) and key from Kongsgården (TA1991/1). **Top**: three padlocks N148806, N131488-131247. **Bottom** (l-r): mechanism for fixed chest lock(?) N125943; two barrel padlocks without loop and locking bolt N12586, N143000; a rotary key N145214.

Rotary keys dominate for the mounted locks, while there is a plethora of different locking mechanisms within the padlock material. Several new padlock varieties appeared during the 16th and 17th centuries, and these predominate in the material retrieved from Kongsgården, while older types persist in use side-by-side with the new varieties in the urban area. Indeed, the material from Kongsgården is completely dominated by various types of padlocks and keys. Post-medieval keys include varieties of slide keys, screw keys and rotary keys, the latter predominating in post-medieval contexts.¹⁰⁵⁰

5.5.2.20. Category 20: Building materials & equipment

Functional sub-categories	Artefact types	Sources
Wall, chimney, flooring & roofing materials	Bricks, roof tiles, ceramic floor tiles, mortar	Local & imported
Tools & equipment	Mason's trowel, nails, pegs	

Figure 5.169.

Bricks and roof tiles are found in profusion on post-medieval sites in Trondheim in the form of fragmented building debris, usually levelled or redeposited in burned-out cellars after major urban fires, for example. Floor tiles are less common. Bricks, roof- and floor tiles are found in significantly smaller

¹⁰⁵⁰ Cadamarteri 2011.

amounts and among more limited medieval archaeological contexts, including only a handful of buildings, cellars and ruins associated with the ecclesiastical or secular elite (the Archbishop's Palace, Sverresborg castle, and Elgeseter Priory, for example). A brick kiln, originally in royal hands and then given to the archbishopric in 1277, is recorded at Bakklandet. We have no archaeological knowledge of its character, production capacity or longevity, although a post-medieval brick factory probably occupied the same site (5.4.7.4).

Both medieval and post-medieval bricks and tiles from excavations in Trondheim have been largely neglected as a source material, being only erratically sampled, curated and studied.¹⁰⁵¹ However, a recent study of curated archaeological finds of brick and tile in Trondheim by Eystein Østmoe examined their distribution and use in time and space. His main conclusions, qualified by source-critical problems, are that brick and very small amounts of roof- and floor tile were used to a limited extent in Trondheim from the early 13th century on, but that their use ceases during the late medieval period. The exception is the Archbishop's Palace where brick, roof- and floor tile are utilised in the 15th century and the decades immediately preceding the Reformation. Brick and floor tile continued in use to a lesser extent in post-Reformation Kongsgården (roof tile being absent here until the 18th century), while the increased and widespread use of brick and roof tile in the urban area occur first in the 17th century. Red bricks of a variety of sizes and formats occur, as well as differing forms of roof and floor tile, including varieties of glazed floor tile. The limited use of brick in medieval and early post-medieval contexts here is possibly a reflection of its exclusive association with the secular and ecclesiastical elite - principally the monarchy, archbishopric, monastic foundations and the post-Reformation secular administration - as a means of materialising and displaying power and wealth. This material's paucity in medieval contexts may also reflect a high level of removal, reuse and disposal.¹⁰⁵² That said, wood and stone were overwhelmingly the materials of choice for elite monumental and ancillary buildings in both the medieval and post-medieval periods, brick often being utilised as a subsidiary architectural medium, incorporated in fireplaces and chimneys, for example.

Different types and sizes of red brick proliferate in post-medieval urban contexts, as brick was increasingly adopted as a building material among the general population for use in their urban properties. However, its use was restricted principally to the construction of hearths and chimneys or, more rarely, components in half-timbered house walls. Buildings built entirely of brick are rare, often institutional, and of 18th-century and later date (e.g. the Cathedral School). Small amounts of smaller yellow bricks are first registered in pre-Reformation deposits in the Palace,¹⁰⁵³ but these increase significantly in numbers and finds locations first during the 17th century. These were imported to Trondheim from the Netherlands, as were red roof tiles, which also proliferate among urban properties during the 17th century. The medieval kiln at Bakklandet may have satisfied the apparently limited local demand for brick. Huge amounts of imported bricks (presumably mostly from Holland) are recorded in toll-lists from the late 17th century on,¹⁰⁵⁴ although red brick and roof tile production is known to have taken place at Bakklandet during the post-medieval period. Ceramic floor tiles might also have been produced locally, though they may also have been imported. Glazed and unglazed varieties have been recovered (5.4.4.3.) (Fig. 5.170).

Timber predominated as walling material and flooring medium during our period, however, incorporated in houses built using the traditional *laft* (interlocking corners) technique. Houses either burned or were demolished to floor level, and wall timbers and floor planks only occasionally survive archaeologically in fragmentary form. Timber was also used in various ways to line cellars, wells, rubbish pits and privies (5.4.4.5.). Iron nails and wooden pegs associated with carpentry and joinery are ubiquitous but rarely collected.

¹⁰⁵¹ Though see Nordeide 1999 for material from the Archbishop's Palace.

¹⁰⁵² Østmoe 2014.

¹⁰⁵³ Nordeide 1999: 100.

¹⁰⁵⁴ For example, the 1685, 1724 and 1725 toll lists for Trondheim list numbers in the hundreds of thousands for imported bricks - '*murstein*' - (164,000, 140,000 and 171,000 respectively): see <https://databaser.lokalhistoriewiki.no/customs/GoodAndPlace.jsp?a=3459&b=Trondheim> (13.06.2018)

Few tools specific to building work have been identified, the exception being a large iron mason's trowel found in association with the provisioning managers' residence in Kongsgården (Fig. 5.170).



Figure 5.170. L-r: Typical 17th-century Dutch yellow brick; glazed and unglazed floor tiles from 16th- and 17th-century contexts in the Archbishop's Palace (TA1991/1); an iron mason's trowel N31735 (TA1991/1).

5.5.2.21. Category 21: Fishing & hunting

Functional sub-categories	Artefact types
Fishing equipment	Fishhooks, net-weights/sinkers
Hunting equipment	Arrowheads

Figure 5.171.



Figure 5.172. Stone and fired-clay net-weights and a 16th-century iron hunting arrowhead, from Kongsgården (TA1991/1).

Items connected with fishing comprise for the most part varieties of fishhooks, predominantly made of iron. Net-weights or sinkers include varieties in stone or fired clay. Occasional arrowheads designed for use in hunting are rarer finds.

5.5.2.22. Category 22: Horse furniture & equipment

Functional sub-categories	Artefact types
Equipment & harness fittings	Horseshoes, horseshoe nails, harness fittings

Figure 5.173.

Varieties of iron horseshoes, whole and fragmentary, are found in medieval and post-medieval deposits, together with nails and occasional metal objects which may be fittings for harness.¹⁰⁵⁵ Only a few horseshoes from post-medieval Kongsgården are included in the present study (illustrated below). A distinguishing feature of Scandinavian horseshoes from the late medieval period up to the 17th century is the presence of a groove, or fullering, running around the internal face in which the holes for nails lay.¹⁰⁵⁶ Only a couple of items of possible harness equipment from Kongsgården are included here.

¹⁰⁵⁵ A study of horse- and riding equipment by Eilin Antonsen has dealt predominantly with medieval finds from Trondheim: Antonsen 2011.

¹⁰⁵⁶ Eilin Antonsen pers. comm.



Figure 5.174. Horseshoes and possible harness equipment from Kongsgården (TA1991/1). L-r: Horseshoe with fullering and in situ nail, early post-medieval(?); two horseshoes from 18th-century contexts, possible keyhole type (left) and type with fullering N142997; possible iron terret ring N144000; possible horse brass N143182.

5.5.2.23. Category 23: Bone-, leather-, & woodworking

Functional sub-categories	Artefact types
Tools & equipment	Auger, bolstered awl
Waste	Offcuts, shavings, hair, lime

Figure 5.175.

These craft activities used varieties of specialised tools and generated characteristic types of waste. Regarding the latter: excavations in Trondheim have occasionally encountered post-medieval deposits containing leather offcuts or bone/antler offcuts, as well as deposits of hair and lime which may derive from tanning processes and preparation of hides (5.4.7.2). Few tools have been recovered, however. The examples illustrated here derive from contexts associated with the first provisioning managers' residence in Kongsgården.



Figure 5.176. Woodworking auger N146248 and bolstered awl for leatherworking N148691 (TA1991/1).

5.5.2.24. Category 24: Trade- or commerce-related items

Functional sub-categories	Artefact types	Sources
Money	Coins	Imported
Cloth seals	Leaden cloth or bale seals	Imported

Figure 5.177.

Coins of copper-silver alloy are regularly found as lost items in post-medieval contexts. The Archbishop's Palace was the site of a small mint workshop in the decades immediately preceding the Reformation (5.4.4.3). It is beyond the scope of this study to present a satisfactory appraisal of this material which is dealt with in detail elsewhere.¹⁰⁵⁷

Cloth seals made of malleable lead were used in Europe (particularly the Low Countries and England), to mark cloth for commercial sale between the 13th and the 19th centuries, and were part of a system of industrial regulation, taxation and quality control. They were attached to newly-woven cloth by their makers, and a second stamp could be attached by an official to verify the quality. In England they could also be used to indicate payment of a tax to the Crown ('alnage seal'). The rivet type of leaden

¹⁰⁵⁷ See for example Risvaag 2006 and Lohne *et al* 2010 for studies of medieval and post-medieval coinage in Trondheim and the operations of the late-medieval archbishop's mint.

cloth seal was specifically devised for marking commercial textiles and was common from the late 16th century onwards. These could comprise either two or four discs linked by an integral stem and sealed by a rivet. Two discs were the norm prior to the end of the 16th century when four-disc types first appeared. There was great variety in size and shape, however, and a plethora of marks, or stamps. The stamp was impressed on one of the two discs in a two-disc seal and on the central discs in a four disc type.¹⁰⁵⁸

Leaden cloth seals are found in contemporary archaeological contexts in Norway. Numerous examples were found in immediate pre-Reformation deposits in the Archbishop's Palace.¹⁰⁵⁹



Figure 5.178. Leaden cloth seals. **Left:** Late 15th- early 16th century two-disc seals from the Archbishop's Palace. **Middle & right:** 18th-century seals: a two-disc type with stamp N129217 and two discs from a four-disc type with rivet N142715.

These are likely to have derived from imported cloth used as a means of payment for the archbishops' retinue. Illustrated above are a selection of two-disc seals bearing coats-of-arms of cloth centres in the Low countries and Germany found in pre-Reformation deposits in the Archbishop's Palace, a stamped two-disc seal and the outer disc with rivet and unstamped inner disc of an originally four-disc seal from contexts associated with the provisioning managers' residences in Kongsgården (TA1991/1).

5.5.2.25. Category 25: Religious/devotional items

Functional sub-categories	Artefact types	Sources
Devotional figurines	Pipeclay figurine	Imported
Other	Portable altar	Local?

Figure 5.179.

This category is confined to two items associated with religious devotion. Pictured below is a small headless pipeclay figurine of a Madonna-and-Child (Fig. 5.180). Religious devotion often took place within the medieval home, and miniature figurines in pipeclay were mass-produced in Cologne and the Netherlands during the late-medieval period to satisfy demand for sacred or devotional figurines of saints which could be used as material aids to enhance rituals and practices of domestic devotion. They could be afforded by most households, and the production of such devotional statuary in large amounts reflects a demand at the lower end of the social spectrum in Northern Europe immediately prior to the Reformation, as well as an emphasis on private rather than public piety. The most popular iconography centred on the Virgin Mary, the Christchild and female virgin martyrs. These portable figurines may have been used by the faithful to help them negotiate the trials of conception, pregnancy and childbirth. This example was probably produced in Cologne during the 15th century, although it was found in a 17th-century context in Trondheim, opening for its possible use also after the Reformation.¹⁰⁶⁰

¹⁰⁵⁸ Egan 1994: 1-6; MacGregor & Gilmour 2014a: Datasheet 3.

¹⁰⁵⁹ Dyrendal 2003.

¹⁰⁶⁰ Gaimster 2003, 2007; McLees 2011: 56-58.



Figure 5.180. Views of a 15th-century Madonna-and-Child pipeclay figurine from Cologne. Found in a 17th-century context at the Hotel Residens site (TA2009/6).

The figurine depicts a female figure in a long, draped gown. Her head is broken off, but her flowing waist-length hair is represented on her back. She holds a branch-like object in her right hand, possibly a lily, a common attribute of the Virgin and a symbol of her virginity and purity. Alternatively, it may represent a stem or flowering branch of the Tree of the patriarch Jesse, a reminder of Christ's ancestral royal lineage and the prophesied role of Mary as the means by which Christ, the 'shoot of Jesse', was born into the world.¹⁰⁶¹ She holds the Christchild, whose head is also absent, cradled in the crook of her left arm. The child is dressed in an ankle-length gown with a decorated hem. His right arm extends to the neck of the Virgin, while he holds a circular object in his left hand. This is probably an apple, the fruit of the Tree of Knowledge and, by extension, symbolic of man's original sin and his fallen state. However, here it symbolises the fruit of salvation and Christ's role as the new Adam, the Redeemer who took upon Himself the burden of Man's sin.



Figure 5.181. Portable altar of steatite from Steinvikholmen castle. Exhibited in Vitenskapsmuseet.

As well as altars in the structural sense, it was customary in the medieval Western Church to have *altaria portatilia* (portable altars), more commonly referred to in English as 'altar stones'. When travelling, a priest could take one with him and place it on an ordinary table for saying Mass. They could also be inserted into the centre of structural altars, in which case, it was the altar stone that was considered liturgically to be the altar. The illustrated example (Fig. 5.181) was found in Steinvikholmen castle, and dates to the time of the Reformation. It is made of steatite with crosses engraved at each corner and the middle.¹⁰⁶²

5.5.2.26. Category 26: Pottery manufacture

Functional sub-categories	Artefact types	Sources
Production waste	Wasters	Local
Kiln furniture	Ceramic supports, stilts and rings	Local

Figure 5.182.

¹⁰⁶¹ As prophesied by Isaiah: 'And there shall come forth a rod out of the stem of Jesse, and a Branch shall grow out of his roots'.

¹⁰⁶² A similar portable altar is known from Iceland.

https://www.academia.edu/8122181/Holy_stones_and_portable_altars_2014?auto=download (Sten Tesch powerpoint); <https://en.wikipedia.org/wiki/Altar> (both accessed 19.05.2018).

No kilns associated with local Trønder pottery production from the late 17th century on have yet been found in Trondheim. However, production waste and kiln furniture (equipment for stacking pottery in kilns) which lay in close association with pottery sites, including 18th-century wasters (badly-fired pottery) and clay supports from the Baklandet suburb, and 19th-century kiln furniture in the form of ceramic stilts and rings from the *Statens hus* site.¹⁰⁶³



Figure 5.183. Kiln furniture: ceramic stilts and rings (TA1998/16)¹⁰⁶⁴

5.5.2.27. Category 27: Miscellaneous items

Functional sub-categories	Artefact types	Sources
Household-related	Ceramic vases, ceramic flowerpots, ceramic moneyboxes	Local & imported
Sugar manufacture	Sugar moulds, molasses jars	Imported

Figure 5.184.



Figure 5.185. **Top:** Moneyboxes and flowerpots in Trønder slipwares (18th-19th century).¹⁰⁶⁵ **Bottom:** vase in Chinese porcelain with gilded decoration (18th century, E-site pit E77, TA1972/2) and molasses jar of Dutch redware (found in Baklandet).¹⁰⁶⁶

Ceramic moneyboxes in Dutch lead-glazed whitewares and Trønder slipwares dated to the 17th - 19th centuries are occasionally found, as are flowerpots and vases also produced in local slipwares.¹⁰⁶⁷ Vases are also found in imported ceramics, such as the fine Chinese porcelain example illustrated above.

¹⁰⁶³ TA1988/4; TA1998/16. Reed 2009: 98-99.

¹⁰⁶⁴ Photos: I. Reed.

¹⁰⁶⁵ Photos: I. Reed.

¹⁰⁶⁶ Photo left: I. Reed. Molasses jar from private collection (I.Reed).

¹⁰⁶⁷ Reed 2009: 182-185.

5.6. Materialities of practice in Early Modern Trondheim: a thematic discussion.

The following discussion draws upon and synthesises the data and theory presented above,¹⁰⁶⁸ and points in some instances forward to the case study presented in Chapter 6. Its central preoccupation is identifying nexuses of practice-material arrangements and social phenomena¹⁰⁶⁹ within a sample of archaeological material associated with the socio-historical time-space of Early Modern Trondheim (c. 1500-1800).

The city of Trondheim can be regarded as a 'socio-material assemblage' constantly made and unmade by alliances of heterogeneous actors at sites of practice (homes, workplaces, markets, streets, institutions etc.). As such, it is a unique geo-historical composite of multiple and changing nexuses of practices and material arrangements, by means of which peoples' lives hung together in space and through time.

This section will attempt to identify some of these nexuses and social phenomena at a number of spatial and chronological scales, ranging from changes in the topography and spatial composition of the built urban environment over time, to the nature of practices and their associated material arrangements at particular times and places.

The first sub-section takes a broad view of topographical developments and the archaeological evidence for practices associated with them, while subsequent sections delve more deeply into the materialities of specific practices; namely, those associated with dwelling, consumption and sociability, personal appearance, and personal and public health. This will be followed in Chapter 6 by a more detailed presentation and discussion of the practice-material arrangements and social phenomena which unfolded at a particular 'site of the social' within this overall nexus: namely, the 18th-century military depot in Kongsgården.

5.6.1. Trondheim's historic spaces and places: the built environment in long-term perspective

My presentation of Trondheim's historic built environment provides some insight into aspects of its spatial organisation and material constituents in the transition from medieval to modern times. In this section, I will attempt to synthesise some of this information through the analytical filters mentioned previously, with particular focus on the *materials*, *competences* and *meanings* inherent to the practices that gave rise to this particular geo-historical urban assemblage.

Likewise, bearing in mind Henri Lefebvre's maxim that space is permeated with social relations, being itself produced by, and productive of, social practices, attention will be paid to the dimensions of space that shaped, and were shaped by, the lives of urban dwellers through time, and the ways in which the city was imagined, built and lived. Trondheim's historical spaces and places are essentially amalgams of the materials of which they were composed, the bodies and minds that engaged with them, and the ideas and meanings associated with their conception, realisation through enactment, and use. Given that these elements were involved in an ongoing process of 'becoming' through time, the nature of space changed in tandem with the nature and composition of the practices with which it was entangled, and it is the material residues of this process that archaeology captures.

Important features of the urban topography during our period include the remarkable longevity and stability of the medieval urban plan which underwent only slight modifications prior to 1681; the reappearance of some old plan elements (alleys, property boundaries) after the comprehensive baroque urban replanning of that year; the persistent use of timber as the dominant building material for urban housing throughout our period; and the emergence of new forms of building and building materials during the 17th and 18th centuries.

¹⁰⁶⁸ Chapters 3, 4 and 5.1-5.5.

¹⁰⁶⁹ The material entities - human, artefacts, things of nature, organisms - that are connected and configured by manifolds of organised human actions (practices) as human coexistence (social life) unfolds and transpires in time and space. Social phenomena are aspects of, or slices of, such nexuses. For the theoretical aspects informing this analysis, see chapters 3.5 and 4.

Environments and sites of practice

Rather than viewing the urban environment as a consistent, bounded whole, I have characterised it as an assemblage of differentiated urban areas, or zones of socialised spatial ordering, which in turn comprise aggregates of time-space routines, spatial structures, and sites and networks of practice through which social life was produced and reproduced (Fig. 5.4). Emerging early within the medieval period, these zones persisted, with some modifications, up to the radical baroque urban replanning in 1681.

These were essentially differentiated - though interlinked - environments of practice, each characterised by distinctive configurations of practice-material nexuses, or alliances of materials, competences and meanings. It was in these environments that the 'lived biographies' of people and things transpired, mediated through historically and geographically particular conjunctions of people, things and ideas.

To the south lay a segregated area of royal and ecclesiastical institutionalised power, the latter distinctively materialised in monumental stone architecture. This was the site of ideological, ceremonial, administrative, economic, technological and domestic practices performed by the medieval archbishops and kings and their respective retinues and craftsmen, and by the king's aristocratic representatives and the Danish-Norwegian army following the Reformation. North of this, in the urban core, the population of urban dwellers in all its social, gendered and ethnic diversity lived and worked in a regulated, densely-packed timber-built environment of small buildings, alleys and streets. It was here that multiple, juxtaposed and intermingled practice-material assemblages associated with domestic, commercial, religious and craft-related practices emerged and disappeared.

Segregated from this area in an industrial zone fringing the fjord to the north, metalworkers performed their fire-hazardous and noisy specialised practices in a collective context, while the urban fields to the west were cultivated for cereals and used as pasture and hay meadows for animal husbandry from the Iron Age and well into the 18th century. These distinctive environments of practice emerged and changed through a historically contingent process in which differentiated flows of people, power relations, ideas, materials, organisms, skills, and ways of living and being-in-the-world converged and transformed through time.

Viewed through the prism of Lefebvre's triad of spatial dimensions, each zone's differentiated nature in terms of spatial composition, material practices and people, can be characterised as a distinctive amalgam of conceived, perceived and lived space. At the risk of adopting a structuralist tone, one cannot ignore the probability that the spatialities of all zones of the pre-1681 city were rooted in, and perpetuated by, spatial orderings and legal arrangements conceived and regulated by secular and ecclesiastical authorities.¹⁰⁷⁰ They are consequently linked to the material inscription of dominant ideologies and social orders. However, the content, character and use of each area's differentially arranged physical environment was contingent upon the particular situated and embodied practices and routines of everyday life that took place within it. Furthermore, each comprised an affective 'lived' space which individuals experienced differently through their sensory perception of the physical world and their particular social and cultural understanding of that world's structures, symbols and signs.

These 'lived' spaces were the loci of social expressions and action, and encapsulated symbolic meanings, ideas, and aspirations, and ways in which space was actively enrolled and contested in social practice. For example, the monumental space of the Archbishop's Palace - post-medieval Kongsgården - held different and changing meanings and associations for those generations who lived and worked there and those it was designed to impress or exclude. Furthermore, as we will see, streets and dwellings

¹⁰⁷⁰ The urban plots are rooted in those of the 10th-/early 11th-century trading centre (*kaupang*) laid out by the first kings, or maybe even earlier by the earls of Lade. The royal and ecclesiastical enclosures were created on the site of a pre-existing farm possibly confiscated by one of the early kings, while the northern metalworking zone may have been established by royal decree in the 12th century as an attempt to reduce the danger of fire. Owned by the king in the medieval period, the majority of the western fields remained in royal ownership well into the post-medieval period.

in the mid 17th-century city became the sites of material transformations which were entangled with individual and collective social aspirations linked to new notions of social differentiation and comfort.

Timber, stone and lived space

Timber is the ubiquitous material which prefigured and constituted the urban fabric and the practices within it, both prior to and throughout our period. Its persistent use - even though catastrophic urban fires decimated the city on numerous occasions - reflects the enduring strength and entrenchment of the traditional and long-lived *laft* (corner-jointing) building technique. This building practice was intricately enmeshed with this accessible natural resource's affordances and qualities, and the skills and competences involved in its use.¹⁰⁷¹ In the medieval and early post-medieval urban core prior to changes in the 17th century, it was used to construct small single-storeyed turf-roofed dwellings (*stuer*), outbuildings and occasional two-storeyed *laft*-buildings which housed people, their provisions and possessions, animals and domestic- and craft-related practices, as well as commercial goods and practices (buying and selling of wares, for example).

These buildings filled regulated elongated plots with a systematically organised layout and internal pattern that was by-and-large replicated throughout numerous phases of rebuilding following urban fires. The internal structure and composition of these properties (*bygårder*) with their small buildings housing differentiated activities and practices constitutes a translation into a new social environment and spatial setting of customary arrangements on rural farms; a spatial ordering of domestic practices which, on current evidence, did not undergo any radical change here until the 17th century. The integrated and intimate latticework of streets and alleyways, laid out in accordance with the local natural topography, facilitated mobility; notably the passage of vehicular and pedestrian traffic, the movement, circulation and sale of goods, as well as access to, and connections between, dwellings, places of work, harbour and market. They comprised public spaces of social interaction, commercial exchange, communication and display, and recurring patterns of daily life, as well as interstitial urban spaces, located at the intersections of public and private life, home and workplace.

The city's streets, passages and courtyards were paved in wood well into the post-medieval period, more robust surfacing in sand or stone appearing intermittently during the 17th century. The medieval wharfs which extended out into the river along its western bank were also timber-built, as were the large post-medieval warehouses established on caisson foundations which eventually replaced them during the course of the 16th and 17th centuries.

Prior to the Reformation, this low-roofed timber cityscape was punctuated intermittently by stone churches and their graveyards. The use of stone in local medieval building practices was restricted almost exclusively to ecclesiastical architecture: the cathedral, the majority of parish and monastic churches, and the Archbishop's Palace. The affordances of steatite, the soft, workable, regionally-derived building stone of choice, ensured its utility and popularity among medieval masons and stoneworkers for both structural and decorative purposes. Practices associated with building in stone relied largely on the competence and skills of foreign stoneworkers whose services were paid for by the archbishopric, the central socio-economic power actor locally.

These churches and their interior spaces were enmeshed in liturgical practices, which, like most of the buildings themselves, vanished from Trondheim following the Reformation. This arguably marks one of the major changes in the character of the urban environment of practice and the 'lived space' experienced by its inhabitants following the Reformation. Apart from signifying change in religious practice, the removal of these tangible representations of Divine presence and ecclesiastical authority from their intimate location embedded within the urban population must have impacted in other ways on the collective mind and daily lives of the urban population. Put in Lefebvrian terms, the 'concrete' space of everyday life was no longer colonised, formed and ordered by the 'abstract' space of religion and its ideals of the city as a worldly manifestation of the divinely planned cosmos.¹⁰⁷²

¹⁰⁷¹ Høgseth 2007.

¹⁰⁷² Medieval religious thinkers and urban planners thought of the body, city and cosmos as formed and functioning according to divine plan. The city acquired a transcendent cosmological symbolism through spatial forms and functions, and the arrangement of its constituent parts - including churches - into a hierarchical moral

Interestingly, there are grounds to suggest that this Catholic Divine cosmology may have been reconceived and rematerialised, though in a subtle and coded manner, in the form of Trondheim's new baroque urban plan of 1681. The historian Eystein Andersen has recently made a strong case for the persistence within this plan of medieval Catholic ideals centred on the recreation of Paradise on Earth through urban form and design. He maintains that Trondheim's new urban plan of 1681, with its unique form and particular geometry, is a manifestation of the application of these ideals combined with an arcane Catholic numerical symbolism by its planner, Johan Casper von Cicignon, who was himself a Catholic and active Counter-Reformationist. Andersen suggests that the plan's physical proportions were calculated and designed using a complex and mathematically harmonious number symbolism expressive of diverse religious significations, which can be deciphered in the specific number of streets, their breadths, and the size and shape of the large baroque square. In its form and size, the latter in particular was linked symbolically to conceptions of perfection and harmony, as well as the Heavenly Jerusalem and King Solomon's Temple.¹⁰⁷³

This represents another colonisation of urban life by an 'abstract' ideological space, although in a layered form that incorporated two nested ideologies: an overtly secular one and a more covert religious ideology which ran counter to, and subverted, the established orthodoxy of the Protestant Danish-Norwegian state. The extent to which most contemporary urban dwellers were aware of these arcane antithetical meanings in the urban fabric as they went about their daily lives within it, of course, debatable. As has been documented above (5.4.3.3), the neglected and rubbish-filled city square was in reality far from being an earthly manifestation of the Heavenly Jerusalem!

Social and spatial changes following the Reformation

Excavations in the precinct of the Archbishop's Palace revealed an extraordinary body of material remains associated with the archbishopric's apparatus of economic, military and technological power in the decades prior to the Reformation.¹⁰⁷⁴ However, we have little insight into the character of Trondheim's urban built environment and the everyday lives and practices of its inhabitants during the 15th and 16th centuries. We can only assume that, following the social upheavals represented by the catastrophic urban fire of 1531 and the Reformation in 1537, the urban plots were rebuilt along accustomed lines as they had been following previous conflagrations.

It is not until around the turn of the 17th century that the first attempts by royal authority to intervene and instigate substantive changes to the urban plan are detectable with the establishment of two broad fire-break streets - *Øvre langgate* and *Nedre langgate* - and the widening and resurfacing of *Breddegata* in a more robust medium than the customary wooden paving.¹⁰⁷⁵ This impinged on some pre-existing properties which might have created a need for an extension of residential properties into the northern urban fringe, previously the segregated domain of metalworkers; a development which has some archaeological support. This created an entirely new urban residential neighbourhood along the fjord shoreline which attracted seafaring traders with the North who established themselves in Trondheim during the early 17th century in response to new trading privileges and economic upturn.¹⁰⁷⁶

Another emergent social group of the 17th century, the mercantile elite, congregated nearby in the north-eastern part of the urban core. It is here that we see significant tangible changes in the organisation of urban space connected with self-conscious initiatives aimed at the material differentiation of individual and collective status and identity in the urban landscape. These spatial transformations were relationally and performatively enmeshed with new conceptions and uses of public and private space. They saw the colonisation of street frontages and corners by new types of dwelling houses adopted by this urban elite, as well as the construction on their large properties of stone

topography that mirrored that of the Christian universe as a whole. The aim was to bring life on earth closer to God by making the earthly life and home as like the heavenly Jerusalem as possible. Lilley 2009: 7-12; Andersen 2015: 27.

¹⁰⁷³ Andersen 2015.

¹⁰⁷⁴ See 5.4.4.3.; Nordeide 2000a; Nordeide 2003.

¹⁰⁷⁵ See 5.4.3.2.

¹⁰⁷⁶ See 5.2.1.

cellars and large timber waterfront warehouses, both of which constituted physically impressive repositories of wealth.¹⁰⁷⁷

The use of stone in cellar construction, where its affordances facilitated a cool, stable storage environment and security against fire and theft, was formerly the preserve of the royal and ecclesiastical elite in Trondheim. The fashion of building cellars beneath dwellings became more widely adopted among the urban population during the 17th century, but in most cases they were built of timber. This again illustrates the pervasive utility and popularity of this material, which was also used increasingly to line rubbish and latrine pits in attempts to improve sanitation. Other building materials in the form of brick, stone and window glass were adopted only selectively and strategically in new forms of urban housing.¹⁰⁷⁸ There are clear indications that practice-material assemblages associated with urban dwelling were in a process of transformation, something which is evident in both the built environment and the array of portable material culture associated with domestic and other practices within the properties (see below).

The urban periphery - the transitional edge between the built-up residential area and the fjord to the north and fields to the west - was relatively stable in terms of its location until the 1681 replanning. However, shifts in the character and location of practice-material assemblages here are observable through time, associated ultimately with a transition from agricultural or craft-industrial practices to residential ones as the urban area expanded slowly in the 17th century.

Excavated workshops and waste accumulations indicate that specialised metalworkers were established in segregated zones on the northern and south-western urban peripheries during the 12th century.¹⁰⁷⁹ The picture is not entirely clear yet, but there is evidence for a decline in numbers and intensity of activity following the Black Death, after which the metalworkers seem to have migrated to the western side of the northern periphery, and to the former fields on the western periphery (on the site of the later baroque market square). By the early 17th century, metalworkers may have been confined to the north-western urban fringe, where they were joined by leatherworkers and tanners, whose materials and practices also posed environmental hazards to the city and its inhabitants. Following the 1681 replanning, crafts and industries of this nature, as well as others, moved to the new urban periphery constituted by the extramural suburbs at Baklandet and Ila.

The urban replanning of 1681 and its aftermath

The colonisation of the everyday by the dominant discourses and practices of power, described by Foucault as the disciplining of the lifeworld through various technologies of social control, is for many an important feature of modernity.¹⁰⁸⁰ The radical urban replanning of 1681, instigated and regulated by royal and military-bureaucratic authority, and possibly supported by the leading citizenry, might be construed as just such a top-down imposition of a 'conceived space' of Absolutist bureaucratic power and discipline. Integrated as it was with new state-of-the-art perimeter fortifications, a major impulse behind its conception and instigation was to transform Trondheim into a modern and spatially well-ordered Scandinavian fortified garrison city and regional military-administrative centre. As such, it projected and manifested the power and presence of the Absolutist regime in Copenhagen both spatially and symbolically.¹⁰⁸¹

A central premise for the plan - evident in its unusually wide streets - was to reduce the impact of urban fires, although this was partly undermined from the start by the fact that no meaningful regulatory plan to replace timber with stone or brick as building material was put in place.¹⁰⁸² Furthermore, despite efforts to mitigate against the impact of the plan on existing properties, the broad firebreak streets destroyed a number of properties for which no adequate financial compensation was

¹⁰⁷⁷ See 5.4.4.2 - 5.4.4.4. & 5.6.2.

¹⁰⁷⁸ See 5.4.4.3 - 5.4.4.5.

¹⁰⁷⁹ See 5.4.2.1., 5.4.7.1.

¹⁰⁸⁰ Gardiner 2000: 64.

¹⁰⁸¹ See 5.4.2.3., 5.4.9.

¹⁰⁸² General Johan Wibe drew up plans for model brick-built dwelling houses which he tried to persuade the local citizenry to build after the fire of 1708. While some were possibly built, they were the exception rather than the rule. Supphellen 1997: 181.

provided. This and the disruption and impracticalities inherent to the over-dimensioned nature of the streets and the increased density of plots compressed into the new intervening urban blocks, or quarters, caused dissatisfaction among the population. Indeed, in certain subsequent modifications to the plan we can detect the resistant quality of everyday life which, in its contingent mix of multiple, unsystematised and unpredictable human desires, impulses and practices, has the capacity to undermine assimilation and domination by autocratic planning and rationalised systems.¹⁰⁸³

In effect, the new urban environment was modified pragmatically in response to the population's practical everyday needs and practices. Portions of some of the medieval alleys and streets reappeared within the baroque grid's expansive new urban quarters, and new ones sprang up, re-establishing accustomed routes of communication within the new formalised structure. Some stone cellars which lay in the lines of new streets continued to be used. People established gardens and entranceway annexes that extended into streets. New plots were intended to occupy the fields on the south-western periphery to compensate for loss of plots under the broad new streets, but because many displaced property owners refused to move to these less prestigious plots, the area remained as fields long into the 18th century. In addition, a ribbon development of poorer housing along the fjord shore to the north was retained, as was a ribbon development along the main access road from the west.

One of the most eloquent examples of the unforeseen ways in which the idealised 'conceived space' of the king's military planners was transformed into a pragmatic 'perceived' social space of everyday urban life and practice is the fate initially suffered by the new market square.¹⁰⁸⁴ Such squares were normally planned to function as the social, economic and symbolic centrepiece of a baroque urban plan. However, in this instance it was sidelined from the start and became a peripheral, neglected and transiently used space. In effect, it was an ambiguous - or liminal - space; a boundary or threshold of tension between ideals and practice, hegemony and counter-hegemony, and public and private lives.

In terms of its size, the square was over-dimensioned in relation to Trondheim's needs for a marketplace, and any intended function as a centre for urban administration and public buildings was undermined by practical and economic considerations. Neither the state nor the local administration had economic resources enough to build new public buildings or a church here. The city hall was not moved here, the local administration preferring a location nearer the harbour and the main concentration of properties belonging to the urban elite. As archaeological excavations at the square have shown, only half-hearted attempts were made to surface and drain it, and it was used as a convenient dumping ground for the domestic refuse of the local populace for much of the 18th century, and as a place where army units assembled in times of crisis. The square only adopted a more central role in urban life later in the 18th century, when some members of the elite chose to build their large timber mansions beside it, and when a large water stand for public use was placed at its centre.¹⁰⁸⁵

5.6.2. Dwelling: the organisation and use of domestic space in post-medieval Trondheim

The survey of archaeological evidence for the types and organisation of urban plots and the buildings and associated structures on them from medieval times to the 18th century identifies aspects of tradition and innovation regarding the materials, competences and meanings associated with dwelling-related practices.¹⁰⁸⁶ Persistent practice-material arrangements include the retention of medieval timber-building techniques, plot layout and boundaries prior to the 1681 replanning, though with some modifications and additions in space and time. Even the radical imposition of the 'conceived', abstract space of the baroque urban planners after the fire of 1681 did not eradicate them or elements of the old street pattern entirely. Many properties survived in modified or reduced form within the new urban quarters, presumably signifying that the citizenry retained customary and long-established legal and material frameworks for their dwelling arrangements.

Nonetheless, changes to traditional arrangements in the physical organisation and composition of the urban landscape are detectable already in the decades prior to 1681. This notably takes the form

¹⁰⁸³ Certeau 1984: 60; Gardiner 2000: 16.

¹⁰⁸⁴ See 5.4.3.3.

¹⁰⁸⁵ See 5.4.4.5.

¹⁰⁸⁶ See 5.4.4.

of a change in the siting of certain dwellings and their associated structures within these properties; a change which manifests a new configuration of materials, competences and meanings in the performance of social practice (see *svalgangshus* discussion below).

Building materials – traditional and new

The maintenance of customary practices and their material arrangements in the sphere of dwelling is discernible in the persistence of the use of timber as building medium - and 'carrier' of practice - throughout the period, despite the drastic impact of periodic urban fires. This demonstrates a strong adherence to local building traditions and competences which do not seem to have assimilated new or exotic building ideas, materials, competences and practices to the extent evident in 17th- and 18th-century Oslo, for example.¹⁰⁸⁷ Local craftsmen and their clients retained an enduring preference for timber's tried and tested affordances, and importantly, given climatic conditions, its thermal insulating qualities.

Building in regionally-sourced timber and roofing in planks or turf was also comparatively cheap compared to using brick and tile.¹⁰⁸⁸ Some of the latter may have been produced locally, although as the amounts recorded in toll records indicate, hundreds of thousands of bricks were imported from the Netherlands from at least the late 17th century on.¹⁰⁸⁹ The use of brick and tile was restricted to elite contexts during the medieval and Reformation periods, although brick in particular was utilised in increasing amounts in ordinary dwellings from the later 17th century on. Bricks may have been used principally to construct tall chimney stacks, which were instrumental to the innovative adoption of two-storeyed domestic buildings in which rooms on the upper floor could now be heated, and glazed Delft wall tiles provided a simultaneously efficient and decorative means of fire-proofing walling behind new free-standing iron stoves (see below and Chapter 6).

Timber continued to be the predominant choice of building material for even the wealthier sections of society during our period.¹⁰⁹⁰ Indeed, the local elite's huge panelled timber mansions (*paléer*) of the second half of the 18th century represent the apogee of local prestigious timber architectural practices of the period.¹⁰⁹¹ This may suggest that, in addition to its material affordances, timber also carried important and enduring meanings and cultural associations.

Despite timber's dominance, the archaeological record testifies that an increasing variety of materials were intrinsic to post-medieval urban building practices. Stone was used principally in foundation walls for timber buildings, in large open chimney-hearths for cooking and heating (*peis*), or for the construction of cellars beneath wealthier dwellings. Some of this stone was taken and reused opportunistically from the ruins of the city's medieval churches. The use of window glass in a secular context is first documented archaeologically in timber buildings in the Archbishop's Palace precinct at the time of the Reformation, but, judging from archaeological finds, it entered wider circulation during the 17th century.

The penetration of natural lighting into previously dark interiors, and the elimination of smoke and the greater dissemination of heating by the abandonment of the flueless hearth and the adoption of the chimney, chimney-hearth and free-standing forms of heating ovens, were important material developments during the 17th and 18th centuries in Trondheim.

Access to beneficial energy flows of light and heat facilitated and improved by the affordances inherent to wood, glass, stone, ceramics and iron was integral to significant changes in the organisation and use of buildings and domestic interiors. These included greater differentiation and segregation of space, people, resources and practices, and the facilitation of greater privacy and comfort in the domestic environment, for example.

¹⁰⁸⁷ Roede 2001; Kregnes 1981: 104.

¹⁰⁸⁸ Timber-framed construction was 1.5 times more expensive than full-timbered construction, for example (Sørensen 2002: 415).

¹⁰⁸⁹ See 5.4.4.3., 5.4.7.4.

¹⁰⁹⁰ Sørensen 2002: 412.

¹⁰⁹¹ Kavli 1966.

During the 17th century, for example, ceramic stoves represented a significant intervention into the home environment, providing smokeless central heating and a special ambience, particularly when candlelight reflected off the glazed surfaces of the decorated ceramic tiles. This new sensory experience, combining warmth, light, and the symbolism represented on the tiles, engendered a form of fashionable distinction among those who could afford it. During the 18th century, similar sensory experience and distinction took new material form; namely, free-standing iron stoves and decorated Delft wall tiles (Fig. 6.23).

Building types – traditional and new

With a few exceptions, our understanding of architectural developments in relation to the types of dwelling used in Trondheim during our period are reliant on historical evidence, occasional surviving buildings, and the scholarship of architectural historians. Medieval residential buildings of the single-storeyed *stue* type have been excavated in the urban area and the precinct of the Archbishop's Palace, including a few variants dating to the 16th century.¹⁰⁹² Their interiors were small, dark and restricted in terms of differentiation of functions, dominated as they were by the larger *stue*, or parlour room; a permeable, semi-public space with a stone-built corner hearth in which most domestic practices took place. As the remains of 16th-century buildings in the pre- and post-Reformation palace precinct demonstrate, the *stue*-type buildings could nonetheless show great variation in internal organisation, and in the placement of hearths within them. Furthermore, some buildings here are reminiscent of two- or three-roomed buildings with elongated cellular plans known from contemporary Oslo.

At present, we have no evidence to assume otherwise than that the bulk of Trondheim's stock of dwelling houses during the 16th century comprised small, single-storeyed, two- or three-roomed timber buildings of the long-established traditional *stue*-type, with the possible addition of some cellular variants. In addition to the paucity of excavated 16th-century building remains within the city, there is a corresponding lack of associated portable material culture. It is uncertain whether this reflects a diminished built environment and a low level of consumption of portable material culture among the population, or alternatively, the impact of poor preservation conditions and the wholesale removal of post-medieval deposits down to earlier levels. The lack of material evidence consequently prohibits any meaningful archaeologically-based discussion regarding the nature of material assemblages associated with domestic space and practices in the city at this time. That said, some contemporary artefacts connected with sustenance and sociability have been found, and will be discussed in that context (see subsequent sections).

We have a larger body of material evidence relating to 17th-century urban domestic buildings, though it is still poorly represented in terms of range, and can only rarely be closely contextualised in time and space. Utilising historical and archaeological evidence, however, we can document the arrival of a new type of dwelling house in Trondheim during the first half of the 17th century.¹⁰⁹³ This took the form of a two-storeyed timber house with an external gallery - the so-called *svalgangshus* (galleried house) - a type modelled on European Renaissance urban houses, and regarded by the authorities and the population at the time as the epitome of a 'modern' townhouse.¹⁰⁹⁴

This building type was equipped with chimneys, fireplaces, a cellular room plan and windows. The earliest example that is securely documented historically and archaeologically in Trondheim is *Herrehuset*, an impressively large *svalgangshus* built in 1640 to accommodate the local governor's (*lensherre*) domestic and administrative functions in Kongsgården.¹⁰⁹⁵ *Herrehuset* was one of a few large timber *lensherre* buildings constructed outside south-eastern Norway during an elite building boom during the first half of the 17th century.¹⁰⁹⁶

¹⁰⁹² See 5.4.4.3.

¹⁰⁹³ See 5.4.4.3. & Chapter 6.

¹⁰⁹⁴ Christian IV proclaimed that the new city of Christiania's best houses should all be two-storeyed (Roede 2001: 52-53).

¹⁰⁹⁵ There is ambiguous evidence that it may have had a galleried predecessor built on the same site in the late 16th century. See 5.4.4.3 and Fig. 5.21.

¹⁰⁹⁶ Sørensen 2002: 246-248, 297-298.

Trondheim's wealthier burghers appear to have adopted the *svalgangshus* as a model for their dwellings during the 17th century. Judging from Maschius's urban prospect (Appendix C), a number of the wealthier property owners who congregated behind their warehouses in the eastern part of Trondheim had adopted this elite fashion prior to 1674, moving their dwelling houses from their earlier customary location deeper within the plot to align them sideways facing onto the streets (*Krambugata* and *Øvre almenning*).

This was confirmed by Even Bjørdal's analysis of the locations of excavated cellars belonging to these and other buildings in the area, which suggests that most 'front buildings' with cellars (both wooden and stone) were built after about 1650. In his opinion, this combination of house and cellar is a new 'urban' phenomenon, and, together with the placement of houses against street frontages, and particularly at street corners, is expressive of an increasingly self-conscious, distinctive and assertively display-minded *urban* elite.¹⁰⁹⁷

The enrolment of urban space in elite dwelling practices

In light of the theories of space and practice introduced above, we can observe here the integrated nature of the material and the social as ideas, materials and urban and architectural space are enrolled in the enactment of practices of personal and collective social identity. By virtue of their particular material form and locations, the new *svalgangshus* comprised physically imposing and exotic elements in an urban landscape which, in terms of its building stock, maintained strong traditions, including some rooted in, or shared with, rural contexts. Being two-storeyed, and placed with a long side equipped with glazed windows fronting the street, they stood in marked contrast to the smaller, comparatively poorly-lit single storeyed *stue*-type dwellings placed further within the properties which had presumably until recently been the norm. Their windows and prominent locations in the streetscape afforded their owners the practical and social benefits of light, visual control and visibility.

These new types of large, outwardly facing and prominently sited houses, were - with their occupants - freed of traditional spatial and structural constraints. This form of spatial 'emancipation' entailed also a loosening of, or departure from, former social constraints. The new dwellings' emergence relationally constituted, and was constituted by, new ideals of self-fashioning and display among Trondheim's emerging burgher class. They comprise material choices and enactments in a process contributing to the internal consolidation and cohesion of a specific social group. At the same time, they asserted differentiation outwardly through the private appropriation, through visibility, of the public domain, a phenomenon previously the preserve of ecclesiastical and secular overlords. As such, they manifest a central contemporary discourse between and among people, a discourse to which materials were integral,¹⁰⁹⁸ and they mark a crucial development in the creation of a new urban environment in social, visual and material terms.

Importantly, Bjørdal characterises this new preoccupation with placing the household in close physical and visual contact with the street as a particularly *urban* trait, and one that contributed to the erosion of the traditional collective urban spirit of medieval times.¹⁰⁹⁹ Certainly, this is a development which resonates with our modern preoccupations of individuality and conspicuous consumption, and the desire to 'see and be seen'. We can further surmise that the *svalgangshus* as a building type may have been introduced locally by the Danish governors in Kongsgården. The 17th-century urban elite also contained a small number of wealthy immigrants, and it is tempting to ask whether we might perhaps be witnessing here a cultural transfer and material re-enactment of ideas and practices?

¹⁰⁹⁷ Bjørdal 2006: 82-83, 98-100, 104-108. A movement of the dwelling house to the street frontage is observable in Swedish urban centres during the 15th and 16th centuries. With the placement of the living room/parlour facing the street, this is regarded by Joakim Thomasson as showing how the emerging burgher class increasingly placed emphasis on living their lives in the public domain - in essence a material manifestation of class consciousness and distinction created through everyday practices (Thomasson 1997: 714, 722-726).

¹⁰⁹⁸ See 3.4.2.5 and the contention that 'material culture constitutes a form of discourse, between and among people as well as between materials and people' (Beaudry 2010: 148).

¹⁰⁹⁹ Bjørdal 2006: 100, 104-105; Thomasson 1997: 704-705.

Lefebvre's schema of the social production of space defines the circulation and integration of actors, ideas and materials within three interconnected spatial dimensions.¹¹⁰⁰ Using this, we can see this phenomenon at the outset as a *conceived* space, in that it comprises an appropriation and application in a specific socio-historical context of concepts and codified ideals of elitist European architecture. Such 'representations of space' are - as in this instance - usually associated with constellations of power, knowledge and spatiality in which the dominant social order was materially inscribed and legitimised. As a 'conceived' space of exotic knowledges and ideas, these new buildings essentially 'colonised' the traditional spatialities that were rooted in regional collective tradition.¹¹⁰¹ Nonetheless, these notions and ideals were translated, modified and materialised using local building materials and expertise into a particular form and spatial setting in mid 17th-century Trondheim; a 'moment' of practice in the past-present-future amalgam of 'activity time-space' in this particular place.

By virtue of their 'difference' in terms of architectural design and prominent public locations, these buildings comprised *lived* social spaces *experienced and imagined* by both their occupants and those who gazed on them from outside. Due to their physical prominence in the streetscape, they were the loci of a very public form of social performance and action linked to a desire for contact with the public arena and street life, and the assertion of a proprietary claim to urban space. They carried symbolic meanings, ideas, and aspirations, and provided a particular way in which urban space could be appropriated by one group in this particular place and time: in this instance through the creation of a materially distinctive mercantile urban quarter.

At the same time, these dwellings and the properties within which they stood, also constituted a new concrete and sensorily *perceived* space that was entangled with the performance of 'spatial practices'¹¹⁰² of everyday life, some of which now had an interface with the public arena, but including others that were concealed from public scrutiny. These household practices were less public in character, but were potentially as socially dynamic, contentious or subversive.

The rooms and cellars within the buildings constituted new forms of segmented domestic space and interiors. With the accompanying backyards and ancillary buildings, these created lived 'affective' spaces within which multiple interdependent household social practices were enacted utilising diverse material arrangements. These may have included, for example, sleeping, social and sexual intercourse, entertaining guests, washing, child-rearing, writing, reading, needlework, food preparation and consumption, brewing, animal husbandry, waste disposal, maintenance tasks and so on. With their more rationalised spatial ordering and improved provisions for heating, lighting, rubbish disposal and sanitation, these new spaces facilitated both greater personal comfort and 'social' comfort, with an increased emphasis on the individual, privacy, emotional and physical well-being, and civil behaviour.¹¹⁰³

As will be discussed more fully in Chapter 6, domestic interiors during the course of the 18th century were increasingly designed to segment, differentiate and either display or hide certain aspects of domestic life from outsiders' gaze. The parlour (*stue*) became a buffer zone, where normatively correct material culture could be displayed and people entertained, while back rooms contained more private functions. As these arrangements permeated social boundaries during the course of the 18th century, this process, allied with the increased sensory experience of perceived comfort engendered within new material environments, gradually saw the wider social dissemination of an 'ordinary modernity'.¹¹⁰⁴

The emergence of this complex performative meshing of materials, competences and meanings connected with the Trondheim urban elite's differentiated dwelling houses and households during the mid-to-late 17th century may also be explained by the generative nature of habitus and 'doxic'

¹¹⁰⁰ Lefebvre 1991 and see 3.5.11.

¹¹⁰¹ Compare the introduction of 'Renaissance' stone houses among the burghers of Swedish cities in the 17th century. Thomasson 1997: 720.

¹¹⁰² The situated, embodied and ritualised activities of daily life by which social life is produced and reproduced and acquires meaning in concert with its material surroundings.

¹¹⁰³ de Vries 2008: 21-22, 126-129.

¹¹⁰⁴ de Vries 2008; Taylor 1999. See 4.3.4. and 4.3.5.

practices.¹¹⁰⁵ The tacit practical knowledge and habitual practices which form the basis of living and sociability that characterise habitus are generated and collectivised as a result of the *regulated* interaction of individuals with the particular ‘social field’ in which they participate. In this historic instance, this comprised the socio-economic, familial and cultural microcosm constituted by Trondheim’s emerging burgher class.¹¹⁰⁶

This group of individuals became collectivised through a shared personal cultural inheritance of embodied patterns of thought, habits, assumed values, behaviour and tastes which took the form of creative, but socially constrained, sets of regulated improvisations, or practices. They included the standards that informed practices of taste and social distinction, the so-called ‘doxic practices’ by which individuals and groups reproduced their culture by making creative choices within a range of acknowledged and unacknowledged possibilities.

Crucially, as Jan de Vries has pointed out, although socially constrained, these were not materially constrained. Social distinction is produced through an ability to discern and discriminate between ‘ranked and ranking objects’ - so-called ‘positional goods’ - which are constantly shifting and being replaced in the flow of competing regimes of value and authority. In this instance, we can discern the creative practices of a group of Trondheim burghers who chose to adopt a new, socially ranking and materially comfortable form of dwelling house which distinguished their presence materially in their physical and social landscape. As the ebb and flow of values, tastes and creative practices continued, this was replaced with other architectural forms, as were the varieties of portable material culture associated with their changing household and social practices (see following sections).

Stone cellars were also entangled with these elite creative practices and their practice-material arrangements. Valuable household items, goods, resources and commercial wares were previously stored in separate above-ground *loft* buildings. These new stone cellars, physically and intimately sequestered beneath their owners’ feet, offered improved access to these resources, better security from theft and fire, and a valuable cold-storage facility. They comprised another material distinction from the rest of the urban population, although not all members of this elite group adopted stone cellars. Perhaps the retention by some of wooden cellars may be another manifestation of the resilience of customary building traditions, or perhaps an outcome of differentiated needs or economic resources within the group? Whatever the case, this practice of sequestered storage in close proximity to the household was mimicked and adopted by other social actors who utilised smaller, cheaper, and less fire-proof, wood-lined cellars.

Viewed through the practice-theoretical lens laid out above,¹¹⁰⁷ the aforementioned examples illustrate how practices that organise people’s lives are sustained in time and space by provisional networks of competences and meanings carried by people, material objects and built space. Objects and buildings are ‘knots of socially sanctioned knowledge’ that ‘bind human actors and participate in developing specific forms of social order because they allow for common practices to develop, stabilize and structure time.’¹¹⁰⁸

Furthermore, the role of objects and buildings should be understood not as passive symbols and carriers of cultural meanings, such as symbolic distinction and taste, but as contributing to an active and pragmatic *stabilisation* of social and cultural phenomena *through use, competence and practical knowledge* as well as through exchange and display.¹¹⁰⁹

As structured, situated and enacted arrangements, practices are always in a process of formation, re-formation, or de-formation. They unfold and evolve as their elements change. In the arrival and adoption of the *svalgangshus*, their positioning against the street, and the increased use of cellars beneath front buildings, we see the unfolding integration of the constitutive attributes that ‘carry’ new practices of dwelling and social distinction.

¹¹⁰⁵ See 4.3.3.

¹¹⁰⁶ See 5.2.1.

¹¹⁰⁷ 3.5.6 - 3.5.8.

¹¹⁰⁸ Preda 1999: 362, 355.

¹¹⁰⁹ Ingram et al 2007: 16.

Although this was a type of dwelling possibly originally introduced to Trondheim by the Danish nobility (the *lensherrer*), its local dissemination does not represent a *diffusion* or direct 'top-down' transplantation of new forms of dwelling and household practices. Rather, it is an example of how practices migrate through the *re-enactment* of their components by willing actors at multiple sites, a process which, as we have seen, may result in their transformation and adaptation to local or individual circumstances. It is through their active integration and enactment in practice (performative 'doing') that knowledges, materials and competences are reproduced or 'carried' between individuals, populations, times and places.¹¹¹⁰ This should be borne in mind when considering the nature of many of the practice-material arrangements that unfolded in Trondheim during our period.

The writing of practice-material histories – problems and possibilities

Unfortunately, few complete 17th- and 18th-century properties within the urban core have been excavated in their full areal extent.¹¹¹¹ Even in the best instances, this evidence is restricted to hurriedly excavated cellars, rubbish pits and privy pits, with little in the way of building remains or closely associated portable material culture. Consequently, the construction of detailed practice-material histories encompassing the spatial environment and practices of individual households is inhibited. That said, some general observations regarding 17th and 18th-century household practices will be discussed in connection with the other themes, most of which encompass material which was used in domestic contexts.

In addition to the aforementioned *Herrehus*, the only fully excavated example of a *svalgangshus* in Trondheim is the first residence of the military provisioning managers, built on the same site in Kongsgården at the end of the 17th century (Chapter 6). This building was replaced sometime between 1716 and 1730 by a newer form of archetypal two-storeyed dwelling house of the period, which was also excavated: namely, a *midt-kammershus*, a variant of the *midtgangshus* (central-passage house), a type characterised by a broadly symmetrical layout of rooms placed to either side of a central passage and staircase.

The excavated remains of the buildings and their associated material culture and historical sources provide a basis for a close contextual analysis - or practice-material history - of this particular 'site of the social'. This encompasses comparative aspects of the buildings' construction and spatial organisation, and how these different forms of domestic space were entangled with domestic and other practices in the practice-material nexus constituted by the military depot Kongsgården during the 18th century.

However, before focusing on my case study, I will introduce and discuss practice-related themes which deal with some central aspects of the range of material culture which has been presented in the present chapter and which will also feature in Chapter 6.

5.6.3. Sustenance and sociability: practices relating to the consumption of food, drink and tobacco

Ceramic wares and consumption practices

In her analysis of consumption practices in the Danish city of Aarhus based predominantly on a study of ceramics found at urban locations, the archaeologist Jette Linaa identifies seven stages of urban consumption from the Viking Age to modern times.¹¹¹² Her Stage 5 (the late medieval city 1400-1550) is characterised by the introduction of new ceramic ware types which she links to a transition from medieval food-related practices to the emergence of new foodways¹¹¹³ and food traditions: namely, a decreased emphasis on porridge, gruel and one-pot dishes in favour of a more varied, specialised and refined cuisine including fried foods and individual servings.

¹¹¹⁰ See 3.5.8.

¹¹¹¹ Though see 5.4.4.2 for an example of a property where a significant proportion was caught by excavation.

¹¹¹² Linaa 2016: 147, 163-181. Evidence relating to monetisation (coins) and cloth (cloth seals) is also used.

¹¹¹³ A term used by anthropologists, archaeologists, folklorists, sociologists, historians, and food scholars to define the study of what we eat, and how, why and under what circumstances we eat it i.e., the practices associated with the production, procurement, preparation, presentation, and consumption of food and how food has shaped human life socially, economically, and in other ways.

New ways of preparing and serving food, perhaps resulting from Hanseatic influence, utilised internally glazed redware tripod pipkin cooking pots from the 15th century on. Redware 'pans' (skillets), which she connects with frying, and decorated and undecorated plates appear during the 16th century. During Stage 6 (the Early Modern city 1550-1750) consumption patterns are marked by increasing diversity accompanied by an increase in the quantity and types of ceramics entering the city. These included both utilitarian and luxurious types, in particular glazed and decorated 'display' type tablewares, such as Low Countries tin-glazed ware, stonewares from Cologne, Westerwald and Frechen, Ræren type stoneware and a range of whitewares, and, during the 18th century, the introduction of porcelain. Specialised sets of plates also make an appearance, emphasising the move to individual servings. Linaa views this diversity as part-and-parcel of the general increase in wide varieties of luxurious traded commodities reaching Aarhus, including exotic and native European foodstuffs and beverages.¹¹¹⁴

Although my ceramic survey¹¹¹⁵ is qualitatively, chronologically or spatially less nuanced, and does not include a review of the medieval evidence, there are broad correspondences with the Aarhus study's late- and post-medieval consumption stages. Kitchenwares used for cooking or heating food and the storage of foodstuffs are well represented in the archaeological record, and, like Aarhus, are dominated by coarse earthenware cooking vessels between the 15th century and c. 1750. Earthenware skillets which could be used for frying appear first during the 15th century, slightly earlier than Aarhus. Dutch redware tripod pipkins appear in Trondheim during the 15th century in certain high status locations, such as the Archbishop's Palace. Historical sources indicate that the Archbishop enjoyed a varied and sophisticated cuisine during the archbishopric's final decades, and this is supported by the testimony of animal bone assemblages and macrofossils excavated in the precinct. There was also some evidence that the workmen and craftsmen who worked in the pre-Reformation precinct had a more restricted diet.¹¹¹⁶

The new earthenware kitchenwares (and other forms of food preparation and storage vessels) occur in urban contexts from the 16th century on. It can be noted that tripod pipkins and skillets, well suited for use in connection with open chimney-fireplaces, appear at a time when such fireplaces may have become more commonplace in Trondheim. Their simultaneous occurrence may suggest their joint enrolment in the enactment of new culinary practices, sustained in time and space by affordances, competences and meanings 'carried' in people, food preparation equipment and hearths.

Ceramic and non-ceramic vessels used for storage and essential food preparation and conservation processes, such as pickling, preserving and dairying, also occur. However, the full nature, range and differentiation of food preparation equipment, practices and foodstuffs utilised by the urban populace generally, both immediately prior to the Reformation and during subsequent centuries, are as yet unexplored analytically in Trondheim. Due to a lack of systematic sampling and analysis of zoological and botanical material from post-medieval contexts generally, we have little material to provide insight into foodways amongst the urban community.¹¹¹⁷

Semi-durable goods, 'breakability', sociability and the pursuit of comfort

In accordance with the notion advanced by Jan de Vries,¹¹¹⁸ we have already seen that an important motivation inspiring choice in the organisation of domestic space in Trondheim during the 17th and 18th centuries was the pursuit of greater personal and social comfort. This is associated with a more refined, differentiated and specialised household consumer behaviour and acquisition of household goods, including 'positional goods'; those scarce or exotic goods, the consumption of which sets one apart from others. Paradoxically, as de Vries points out, this process of elaboration was accompanied by a process of cheapening, or 'breakability', whereby expensive, durable items with a high secondary market value

¹¹¹⁴ Linaa 2016: 176-179.

¹¹¹⁵ See 5.5.2.1 - 5.5.2.4.

¹¹¹⁶ Nordeide 2003: 295-321.

¹¹¹⁷ Though see Chapter 6 for evidence of foodways and cooking practices in 18th-century Kongsgården.

¹¹¹⁸ See 4.3.3.

were replaced by cheaper, less durable, goods; such as the replacement of plates and drinking vessels of metal and wood with equivalents in ceramics and glass, for example.

Declining quality and increased demand reduced prices, but reduced durability led to more frequent breakage and replacement. These semi-durable goods were more fashion-sensitive, however. In terms of material, design and finish, each item - be it a tin-glazed ceramic dinner plate, a crystal drinking glass, a clay pipe, or a cotton dress - embodied a shortened fashion life-cycle, being readily replaceable by alternatives featuring new stylistic elements. However, 'breakability' does not necessarily imply inferior quality, since the shift to less durable materials did not necessarily reduce functionality. Furthermore, the use of new materials facilitated the introduction of stylistic elements that emphasised differentiation of taste and fashion by design and craftsmanship, with greater emphasis placed on the standard of workmanship rather than the standard of material.¹¹¹⁹

This phenomenon is reflected in the increasing volume and diversity of literally broken items, predominantly varieties of semi-durable ceramic vessels, drinking glasses, bottles and clay pipes, which ended up in Trondheim's backyard deposits, rubbish pits and privies during the course of the 17th and 18th centuries. Furthermore, two remarkable and voluminous assemblages of ceramics and glass items found in the urban area, and used as sources for this study, demonstrate that some households occasionally got rid of their stock of household ceramics and glasswares - much of it still intact - *en masse* in single episodes of clearance dumping.¹¹²⁰ Such events may perhaps have happened following a death, or in connection with a move or a desire to replace outmoded semi-durable goods with more fashionable items.

As in Aarhus, there is a noticeable increase in numbers and varieties of ceramic types, and most particularly tablewares and serving wares, including fine 'display' items, reaching Trondheim from the 17th century on (Chapter 6). Many of the European and more exotically sourced types found in Aarhus are also found here. In addition, increasing local demand for kitchenwares, tablewares and serving wares may have contributed to the initiation of pottery production in Trondheim, a practice representing an entirely novel integration of materials, competences and meanings within the local community.¹¹²¹

Materialities of eating, drinking and smoking

As my material survey and case study document, local eating and drinking practices made use of an increasingly diversified range of semi-durable ceramics and glass vessels, both imported and Norwegian-produced. Tablewares and serving wares comprised predominantly plates, bowls and dishes in varieties of coarse and refined earthenwares, with considerably smaller amounts of refined stoneware and porcelain (European and Chinese). Both utilitarian and luxurious types occur, and many types suited to display were utilised, as were increasing numbers of sets. Wooden, metal and glass tablewares and serving vessels are generally poorly represented (although some fine 17th- and 18th-century glass vessels occasionally occur). The small number of eating utensils recovered principally comprises varieties of table knives, both utilitarian and more luxurious types, a few fragmentary metal forks (with two or more prongs) from 17th- and 18th-century contexts, and varieties of spoons in metal (copper-alloy, pewter, silver), bone or wood.

The only drinking glass so far identified from secure 16th-century contexts comprises a few fragments of *Maigelein* cups and *stangengläser* from the elite Archbishop's Palace. However, the numbers, variety and find contexts of imported glass vessels expand from the early 17th century on, encompassing many of the well-known European varieties of beakers and stemwares in both soda-lime glass and crystal. Numbers and types of bottles, for both wine and spirits, also increase during the 17th century, only to explode during the 18th century, a period when imports of glasswares generally were ultimately replaced by mass-produced, mercantilist Norwegian products. These wares range from utilitarian wine, spirits and beer glasses to finely engraved ceremonial goblets and carafes. These - and

¹¹¹⁹ de Vries 2008: 129-133, 145; Hutchison 2012: 143-144. See 4.3.3.

¹¹²⁰ See 5.4.4.5. The dump of mid-18th-century glasswares and ceramics at E-site and early 18th-century ceramics at Dronningens gate 14 (TA2004/13). The mixed assemblage of material from the second provisioning managers' privy in Kongsgården may also be a single clearance dump (see Chapter 6).

¹¹²¹ See 3.5.8.

the plethora of discarded wine and spirits bottles in urban deposits - indicate the extent to which alcohol consumption was woven into everyday life and practices of sociability and conviviality, both formal and informal. Alcohol dependency and abuse were rife, and unseemly behaviour arising from this was the cause of much pious complaint, particularly during the 18th century.¹¹²²

Tobacco could also be a social lubricant, the act of smoking being a convivial practice when performed in taverns or in social gatherings of friends and colleagues. Clay pipes are one of the most ubiquitous artefact types found in Trondheim's post-medieval deposits from the early 17th century on. These were highly 'breakable' items, both in terms of their fragility, but also in terms of their cheapness, replaceability, short fashion life-cycles, and the ongoing emergence of new stylistic types.

A recent study by Lise Loktu examined a sample of Trondheim's 17th-century pipe material in terms of socio-historical context, social practice and habitus.¹¹²³ The way in which they were assimilated within this changing urban community possibly mirrors in some ways the processes by which many of the new varieties of 'breakable' commodities and the practices they 'carried' were adopted here.

The earliest pipes (pre-1650) are found primarily in contexts associated with the wealthier classes, notably the local merchants, but also high-ranking seafarers. By the mid-late 17th century, smoking equipment was more widely dispersed both topographically and socially in Trondheim, perhaps indicating that the practice of smoking and use of specific forms of smoking equipment were entangled in a process of social mimicry. Pipes found in association with a possible tavern signify the extension of smoking practices into the public sphere, and its association with communal sociability and the consumption of alcohol, perhaps in environments where differing social groups met and interacted. Indeed, Loktu suggests that taverns may have been a major driving force behind the import of pipes and the wider adoption of smoking as a customary and public social practice.

Loktu also examined material from a contemporary high status context: namely, the regional governors' residence (*Herrehuset*) in Kongsgården. Pipes appear here first after a national smoking ban introduced in 1632 was withdrawn in 1643, indicating that it was upheld, at least in this environment. Similar pipes to those utilised in the tavern were found here, reflecting access to similar sources and perhaps their circulation among a similar social group, since the material from the building is associated with a room probably used by the governors' servants after 1660.¹¹²⁴

The Trondheim clay pipe material as a whole awaits further study, but a provisional assessment suggests that after an initial English predominance, the bulk of imports originated in the Netherlands, and that many of the types and variants produced there reached Trondheim. As in the case of glasswares, mercantile enterprise and an import embargo during the mid-18th century saw the emergence of Norwegian clay pipes, although the pipe embargo and monopoly were comparatively short-lived. With the influx of new varieties of semi-durable glasswares and ceramics, these 'breakable' items contributed to the proliferation of objects utilised by an increasingly wide proportion of the urban (and rural) population in the performance of an increasing array of shifting fashionable practices conducive to personal and social comfort.

This phenomenon was not limited to practices injurious to health and sobriety, however! A new and exotic range of non-alcoholic beverages - tea, coffee, chocolate and mineral water - appeared in Norway during the 18th century, together with their associated genteel practices of consumption and specialised material accoutrements. The consumption of tea in particular, using purpose-made equipment such as Chinese porcelain cups and saucers (among other forms), became an increasingly common formalised gendered ritual within domestic households, giving women a means of socialising and entertaining independent of the control of an otherwise all-pervasive patriarchal authority. Varieties of ceramic mugs and jugs also formed part of a household's stock of beverage-related vessels.¹¹²⁵

These semi-durable goods with short fashion lifecycles that were purchased specifically for consumption (rather than investment) constituted a renewable range of material markers of distinction used to reinforce boundaries of social stratification and shape the personal tastes of self-fashioning

¹¹²² Notaker 1993: 120-121.

¹¹²³ Loktu 2009.

¹¹²⁴ Loktu 2009: 66, 73-76, 80.

¹¹²⁵ Telste 2014. See 5.5.2.3 for examples and 6.4.4.4 for discussion of the practice of tea-drinking.

individuals. They were initially the preserve of patrician elites, but were increasingly prevalent among middling and lower orders who selectively appropriated aspects of elite consumption. De Vries characterises this as a form of 'defensive' consumption; a reactive striving for 'respectability' through the acquisition of positional goods. However, this may not have been slavish emulation. Because the new world of goods was so large and varied it facilitated a certain freedom of choice, and people chose to spend what they could afford on goods that could appropriately express their social aspirations.¹¹²⁶

Dining and drinking sociably - whether informally with family or friends or in larger formal social occasions - were practices by which people organised their daily lives and made their way in the world, articulated their values, constituted their identity, and related to family, friends, social peers or superiors, colleagues or servants. They occurred at the interface of peoples' internal and external worlds, and between individuals and other individuals who constituted society. Dining practices in particular engendered a form of gentility and ordered relations in households of the period. The practice of using forks kept hands clean and separated bodies from food, allowing the mundane act of eating to be performed with manners and grace. Matching sets of plates and serving dishes facilitated individual servings and multiple courses, and their glazed decorative character was simultaneously aesthetically pleasing and a medium of display. Indeed, the allure of new sensory experiences (the 'feel' and the 'look') afforded by the materialities of ranges of colourful, variably decorated and textured tablewares, forms of cutlery and even clay pipes is central to their enrolment in these practices of consumption.

Each household, in accordance with its means, sensibilities and social standing, would have made necessary and strategic choices regarding the range of foods they could afford, the ways in which they were prepared, served and consumed, and the range and quality of equipment used in these practices. The identification of diversity of practice and the choices made by people at different times and places in the past is something archaeology can attempt utilising its material. This is not yet possible in general terms in Trondheim, but these aspects and others surrounding domestic consumption here during the 18th century - including a more detailed account of foodways - will be addressed in connection with my study of the dwellings of the provisioning managers in Kongsgården (Chapter 6).

5.6.4. Personal appearance: clothing, adorning and grooming the body

As previously stated, the human body comprises the most intimate scale of social practice.¹¹²⁷ As a 'carrier' of practice, it is entangled through performance with other materialities, competences and meanings in an ongoing process of the co-constitution of the self and its lifeworld. Entangled as they are with time- and place-specific ideas, conventions and beliefs about the body, mind, soul and so on, the role of things (clothing, jewellery, accessories etc.) is central to processes of enactment involving the fashioning or presentation of the self. The body is touched and formed by things, which in their turn may carry associations with, or traces of, their owners' personality, or their ethnicity, status, gender, sexuality, religion and culture, for example.

Bourdieu's concept of habitus as the embodied state of historic process provides one way of viewing human relationships with the material stuff of life. The habitus of individuals in Early Modern Trondheim was constituted by material things appropriated through the senses and actions of the body; a 'culture of materiality' that shaped the social world and mediated social relations between individuals and groups. Clothing and personal accoutrements are enmeshed in the communication of the sensibilities and cultural intelligence of producers and consumers, and fashion, combining as it does a tension between freedom and constraint, is particularly susceptible to the various and changing influences of distinction, authority and power.¹¹²⁸

Improvement, self-fashioning and management of the body

Most of the material relating to personal appearance in my survey and case study derives from 18th-century contexts. During the course of that century, Enlightenment-inspired cultural shifts in attitudes towards progress, 'improvement' (of both self and society),¹¹²⁹ politeness, refinement and elegance of

¹¹²⁶ de Vries 2008: 21-22, 126-129, 148-149.

¹¹²⁷ See 4.3.2 Theme 3.

¹¹²⁸ Roche 2000: 3, 193-220.

¹¹²⁹ Defined above in 3.2.3 as a defining trait of 'modernity'. Tarlow 2007.

appearance manifested themselves in the shaping of the body. The body became a place where new ideals and practices of self-control, polite conduct, deportment and demeanour could be mediated, emphasising neatness, elegance and a 'natural' body shape.¹¹³⁰

Previously, the management of personal appearance, including treating physical deformities and impairments, was regarded as counter to Divine design and symptomatic of pride and vanity. Flawed bodies were consequently socially limiting and had negative connotations. New ideals of improvement and self-mastery, however, made intervening to alter the shape of the body's God-given characteristics more acceptable. Through practices that intentionally managed and manipulated the body, deformities were concealed, posture was refined, and physical attributes enhanced to the extent that outward appearance was increasingly thought to communicate inner character and sensibility. Altering or enhancing the body to create an impression of harmony became a feature of daily life for an increasing swathe of elite and middling society. A large number of manufactured goods - or 'technologies of the body' - which shaped and 'improved' the body were involved in this process, including, for example, steel razors, steel-framed spectacles, wooden legs, elastic trusses, bone or porcelain dentures and even wigs.¹¹³¹

The 18th century was an age of 'politeness' and decorum among the elite and middling classes, and genteel manners and behaviours were entangled with ownership of positional goods, wearing of fashionable clothes and attendance at appropriate social events.¹¹³² The negotiation of social status and relations through practices of self-fashioning and personal grooming that utilised an increasing variety of objects was central to the practices of taste, fashion and social distinction within the hierarchical, elitist and rank-conscious society of the period.

Clothing, jewellery, and other objects of adornment acted to project politeness onto the body, and were entangled in the shaping of bodies and personal appearance, the presentation of the self and the constitution of personal identity or group affiliation. Specific items of clothing and objects of adornment were, by virtue of their material qualities and cultural associations, actively enrolled in doxic practices and the accumulation and expenditure of economic, social and symbolic capital. However, ordinary people also invested much emotional capital in humbler items of clothing and trinkets, for example. Unfortunately, this aspect of their lives is as poorly represented in my material as their housing.

Individual and collective lives and choices mirrored in objects

Many of these objects bring us into tenuous, but nonetheless close, contact with anonymous individuals and their lives, the creative choices they made, and their personal, social and cultural expectations in terms of work, leisure, age, class and appearance. It is at the scale of the individual as active agent in their own and others' lives that we can envision aspects of conformity or contestation, diversity, variability or idiosyncrasy, for example. Through these objects and their associations with individuals, we can capture fragmentary 'momentary' insights into the complexities and ambiguities of individual and collective lives. We may glimpse aspects of individuality or the diversity of connections and collective action that characterise human social life at multiple scales of interaction; such as between individuals, within a household, a social group, a community, a country or globally. These manufactured goods can also indicate aspects of consumer choice and marketplace diversity and availability which impact upon individual perceptions and expressions of identity.¹¹³³ Furthermore, recalling the tropes introduced above, many of these objects and technologies augmented and expanded the areas of practice which impinged on personal and social comfort and the emergence of an 'ordinary modernity'.

Unfortunately, my material survey includes only a fraction of the wide range of objects that would have been involved in the enactments of practices relating to the clothing, adornment, shaping and grooming of the multitude of bodies that inhabited Early Modern Trondheim. Many finer items owned by wealthier individuals were curated and have entered museum collections, while numerous others - lost or discarded - have disintegrated in the soil, or been dug away unnoticed. However, as we

¹¹³⁰ Withey 2016.

¹¹³¹ Withey 2016: vii, 2-14.

¹¹³² Withey 2016: 7.

¹¹³³ White 2009b.

will now see, some interesting items - including some of humble, utilitarian character - have occasionally been salvaged.

Clothing

Textiles survive only exceptionally. The discovery of a stay (an early form of corset) in the privy of the second provisioning managers' residence in Kongsgården is a rare instance of female clothing found in an archaeological context (Fig. 5.121).¹¹³⁴ Humble and utilitarian as it may be, in its active shaping of the body, this simple yet intricately assembled 'technology of the body' enabled the embodied enactment of a particular form of self-fashioning. It amalgamated a distinctive set of material qualities and affordances, competences of manufacture, and cultural norms and meanings relating to improvement, refinement and elegance.

Stays were an essential undergarment for women (and some men) during the 18th century. By mid-century (when this example was discarded), the fashionable female torso comprised an inverted cone shape. Achieving smoothness of profile and firmness of contour were the primary function of 18th-century women's stays, rather than emphasising the bust or constricting the waist. They played a prominent role in achieving the desirable body shape that laid the foundation for the dress which overlay them. As such, they exemplify the agency of objects whose affordances compel certain actions.

Although custom-made and intricately designed, such stays were usually very plain, in contrast to more modern corsets. They essentially comprised textile compartments into which thin strips of whalebone (baleen) were inserted. Although stays appear very rigid, whalebone was flexible, softening with the heat of the wearer's body, allowing the stays to mould to her shape. The stays of the 18th century, therefore, did much more to support the body and 'remind' its wearer of good posture than they did to pinch in the waist in the way later corsets did. Women of the nobility and middling sorts wore stays most of the time, and their children wore them to learn proper posture. In shaping an ideal female form, they could also 'correct' deformities. While fashionable ladies' stays were worn to achieve a desired shape and visual aesthetic, working women also used them to provide good body support. The stay was popular among women, and was an accepted technology used to transform and reconstruct the female body as a socially mediated artefact, worn as a private and concealed structure that translated the body into a culturally acceptable image.¹¹³⁵

Interestingly, a wooden doll found in the same context reproduces the same fashionable body shape of the period (Fig. 5.151). Even this plaything that was entangled with the intimate lifeworld of a child carried within it the pervasive meanings, norms and fashionable ideals of the contemporary world experienced by the members of a particular mid-18th century household in Trondheim.¹¹³⁶

Shoes were personal items and carriers of individual and collective practice, entangled in shifting alliances of materials, competences and meanings associated with self-fashioning, shoemaking expertise, functionality, taste and fashion. The form, material, size and condition (pristine, repaired, worn etc.) of shoes convey not only individuals' choices in the manner of their dress, visual appearance and identity construction, but also their socioeconomic status, age, and gender. Studies of wear patterns can provide insight into their wearers' physical health and well-being. This includes the nature of their gait and the impact of deformities, both congenital or caused by trauma; such as bunions, osteoarthritis and hammer toe, for example. The impact of their own physicality and that of their environment is conveyed tangibly and materially in the nature of their shoes' condition, and tells something of the nature of the wearers' daily experiences. In short, a discarded shoe can tell us something meaningful about a human life and the context in which it took place.¹¹³⁷

Such a study has not been undertaken in the case of my own material, which is confined to a small sample of shoes from the privy of the second provisioning managers' residence in Kongsgården.

¹¹³⁴ 5.5.2.8. Category 8: Clothing & footwear. See also Chapter 6.

¹¹³⁵ Sorge-English 2005: 31-37; Victoria & Albert Museum Collections:

<http://collections.vam.ac.uk/item/O115752/stays-unknown/>;

<http://www.history.org/history/clothing/women/wglossary.cfm> (accessed 10.05.2018).

¹¹³⁶ 5.5.2.14. Category 14: Children's toys & curios.

¹¹³⁷ White 2009a.

However, it reveals that women living in this place and time wore shoes of types which conform to fashionable varieties of the mid-18th century.¹¹³⁸ Future analysis of their wear patterns may provide us with information regarding the physical traits and daily experiences of these women.

The most common items related to male dress and embodiment that one encounters in archaeological contexts are buckles and buttons in copper alloy and pewter. Buckles could be used in connection with shoes, breeches and hats, for example. They and metal buttons (and buttons made of organic materials) came in many different styles and degrees of quality, ornamentation and expense, and there was a great amount of choice involved in selecting them. Decoration was used to visually set the wearer apart, marking oneself as an individual, while the selection of a particular buckle or button also marked a person as part of a larger social grouping.¹¹³⁹ A local example of just such a gendered elite marker that formed part of a gentleman's attire is the fine ornamented silver knee buckle found in a high-status context in Trondheim (Fig. 5.123).¹¹⁴⁰

Buttons were linked with a gender-related hierarchy in ways of fastening clothes in which the *sewn* was distinguished from the *draped*. Buttons were an almost exclusively male item of attire, and were a strong marker of masculine identity and power, women and children fastening their garments with pins and laces.¹¹⁴¹ Buttons were worn prominently on coats, waistcoats and shirtsleeves. Purchased separately from the textile used to make a garment, they were selected as a means of visually conveying individual rank and class affinity.¹¹⁴² The range of buttons found in association with the provisioning managers' residences in Kongsgården include varieties of sleeve and waistcoat buttons, some of them of very fine quality (Fig. 5.125).¹¹⁴³

Accessories

Items of adornment or display carried about the person may be categorised as accessories. Folding fans comprised important dress accessories used exclusively by women during our period. During the course of the 18th century in Europe the folding fan transitioned from a fashion accessory that was exclusively the preserve of the aristocracy and court to one that was accessible to the middling classes as an indispensable accessory for everyday use. Great varieties of luxury fans were produced for the higher end of the market. Their leaves could be made of paper, parchment or the very fine leather of lambs or kids, and were frequently hand-painted with a bewildering variety of designs, such as stately homes, country pursuits and pastoral fantasies that evoked a sense of an idealised aristocratic lifestyle.

However, during the early part of the century, cheap imported fans from China flooded the lower end of the market, prompting European manufacturers to start mass-producing printed fans for those unable to afford the luxury painted and jewelled fans with ivory or tortoiseshell sticks owned by the elite. From the beginning of the 18th century on, European fans often carried designs painted in the Chinoiserie manner, a European decorative style that imitated and combined elements of Asian art and design with those of Western Europe, and a style also used in other fashionable material objects such as porcelain and wallpaper, for example. These fanciful designs conjured the perceived exoticism which the Far East evoked in the minds of Europeans.¹¹⁴⁴ The objects they decorated in effect materialised distant places within the home, and facilitated their imagination in contemporary minds: a contemporary imagination which was becoming more global as the range of such accessible goods expanded.

The decorated bone ribs for a folding fan found in the privy of second provisioning managers' residence in Kongsgården (Fig. 5.129) exhibit just such a design.¹¹⁴⁵ It is uncertain whether this is a Chinese import or a European product. However, its presence in this household is yet another example of how the middling classes of mid 18th-century Trondheim actively participated in European fashionable practices and had access to an expanding array of fashionable material accoutrements. That members

¹¹³⁸ 5.5.2.8. Category 8: Clothing & footwear.

¹¹³⁹ White 2008: 24-27.

¹¹⁴⁰ 5.5.2.8. Category 8: Clothing & footwear.

¹¹⁴¹ Roche 2000: 195.

¹¹⁴² White 2008: 27-29.

¹¹⁴³ 5.5.2.8. Category 8: Clothing & footwear.

¹¹⁴⁴ <https://www.google.com/culturalinstitute/beta/exhibit/BAliPOiNaP7RJg> (accessed 10.05.2018).

¹¹⁴⁵ 5.5.2.8. Category 8: Clothing & footwear.

of this household had an attachment to, and interest in, other fashionable exotic material things can be seen associated finds of Chinese porcelain cups and saucers, and a small polychrome Chinese porcelain figurine, presumably a curio or ornament (Figs. 5.72 and 5.152).¹¹⁴⁶ The latter in particular must have exercised the imagination and fantasy of adult and child alike in the manager's home.

While clay pipes are items of equipment used to consume tobacco, and have been discussed above in terms of their entanglement in practices of sociability, we might also view them as ubiquitous accessories of display carried about the body. Their initial likely association with wealthier groups in Trondheim society and their subsequent wider adoption through social mimicry has been suggested. While many are of utilitarian character, clay pipes had differing price classes, qualities and degrees of ornamentation. They were also used by both men and women. Various international studies detail clay pipes' design and uses as material means of communicating coded meanings, often of a political or ideological nature.¹¹⁴⁷

I cannot here attempt a survey aimed at characterising and differentiating clay-pipe use along these lines within Trondheim's population. However, I can point to an individual object which provides an intriguing, if as yet somewhat enigmatic, example of a clay pipe which, in terms of its design and ornamentation, carried certain qualities which must have served to convey something of the particular professional status and social affiliations of its owner (Figs 5.117 and 5.118).¹¹⁴⁸ This is also an item that was discarded in the aforementioned privy of the provisioning managers, the men appointed by the Danish-Norwegian king to administrate the supplies at the army depot in Kongsgården.

It is a unique find in a Trondheim context of a socketed pipe, which, in its form, has parallels with socketed bowls produced in Eastern Europe during the 18th century. While unusual and exotic in itself, it is the moulded design on its bowl that suggests that it would have had a particular affective, ideological and professional significance for its owner. The pipe bears upon it the coat-of-arms of Denmark-Norway, the manager's nation of allegiance and his employer. In style, this coat-of-arms resembles contemporary representations on military standards, for example (Fig. 5.119). By virtue of its combination of an unusual form and a patriotic symbol, this pipe would have engendered pride in its owner, and, when carried, smoked and displayed, it would have eloquently communicated his identity, distinction and affiliations to the gaze of others.

Grooming equipment

As mentioned above, neatness, elegance and harmony of appearance were important ideals central to conveying inner character and sensibility in 18th-century polite society. The body's surfaces were to be kept neat, clean, plucked and shaved. For both sexes the removal of facial hair and the management of facial features such as eyebrows showed a desire to create a body that was socially pleasing. The cleaning of teeth became important as attitudes towards the smile changed.¹¹⁴⁹ Well-groomed hands were symbols of beauty and virtue and implied good character and breeding. Consequently, the care of hands, especially the manicuring of fingernails, was important.¹¹⁵⁰

Varieties of grooming equipment were utilised to manage the body in desired ways and show fastidious attention to physical appearance.¹¹⁵¹ Hairstyles were maintained using varieties of combs, which could also be utilised to remove lice (Fig. 5.134). Eyebrows were indicators of character, and tweezers used to maintain them and to remove other unwanted facial hair were important items of toilette equipment (Fig. 5.137). Masculine ideals of a smooth, clean-shaven face could be more readily realised from the mid-18th century on though the tensile qualities of cast steel which made razors

¹¹⁴⁶ 5.5.2.14. Category 14: Children's toys & curios.

¹¹⁴⁷ Reckner 2001; Yamin 2001.

¹¹⁴⁸ 5.5.2.7. Category 7: Tobacco consumption.

¹¹⁴⁹ Associated with a new culture of sensibility that valued the expression of emotion as a marker of an individual's essential humanity. To smile a truthful, unforced smile was to present yourself as a person of taste, discernment and feeling. <https://www.theguardian.com/books/2014/oct/17/smile-in-eighteenth-century-paris-review-colin-jones> (20.05.2018).

¹¹⁵⁰ Withey 2016: 12-13.

¹¹⁵¹ 5.5.2.10. Category 10: Health, hygiene & toiletry.

sharper, and more durable and flexible.¹¹⁵² They also made the practice of shaving more *comfortable* and something a man could do himself rather than rely on a barber. The removal of earwax could be facilitated by a purpose-made ear spoon. A simple utilitarian example from 18th-century Kongsgården combines an ear spoon and manicuring tool in one (Fig. 5.137), while a very fine manicure set of 18th century date shows that grooming practices were present in elite circles in Trondheim by the 17th century (Fig. 5.137). Fine examples were also items of display, carried on a chain about the body.

Toothpicks and toothbrushes became more widespread, eventually becoming standardised items of mass production. While all toothbrushes of our period were handmade, two early toothbrushes of late 17th- or early 18th century date from Trondheim are of customised character, while an example from mid-18th century Kongsgården is typical of later forms which have standardised, 'mass-produced' shapes and drilled holes on the head (Figs 5.135 and 5.136).

Both men and women of fashion who could afford them wore cosmetics and fragrances, and certain tools were used to apply powders and ointments to the face and body. The ear spoon just mentioned may also have been utilised in such a role. Perfumes became more widespread during the 18th century, notably *eau de Cologne*. Some of the distinctively shaped bottles found in Trondheim may have been used for bottling perfume (Fig. 5.132).

Spectacles had long been a means of managing the body and correcting a physical deficiency, but also these came to be entangled with the projection of the polite self with the advent of steel-framed spectacles around the mid-18th century. The tensile strength of steel transformed the design of spectacles from their traditional armless *pince-nez* design to a form with side arms that used pressure to stay conveniently and comfortably tight against the wearer's temples. Steel could be polished to make them more decorous, and where previously spectacles were concealed objects associated with physical deficiency, they became objects that could be worn confidently in public, communicating the wearer's enlightened quest for knowledge through reading, learning, and literally 'seeing' the world.¹¹⁵³

5.6.5. Health: hygiene, sanitation and health care.

As a densely-built environment populated by individuals living in close proximity to each other, Trondheim has from medieval times onwards experienced challenges associated with urban living, notably public and private hygiene and sanitation, and the health and care of its urban population. These challenges were confronted through individual and collective initiatives and strategies regarding the disposal of waste, the provision of safe water supplies, and improved access to medicines and medical care, for example; all of which involved the active performative alliance of technologies, people and things.

As pointed out above, physical and biological 'flows' - such as matter-energy and organisms - are materialities integral to the practice-arrangement nexuses that create society.¹¹⁵⁴ These arrangements crystallise matter-energy flows, or capture moments of biological flows. In our period, for example, the impact on humans of flows of bacteria, viruses, parasites, and pests were mediated and regulated by the means by which waste was managed, clean water provided, houses insulated and heated, food cooked and eaten, and the ways bodies were nourished, cared for and healed, for example. Technologies and changing constellations of ideas, competences and material resources and goods were important in stabilising and transforming practices associated with these aspects of life, as they were in others. The material study presented a small sample of practice-material arrangements associated with waste disposal, water provision, and personal and public health,¹¹⁵⁵ and these aspects will now be discussed.

Waste and water management

Waste disposal practices and provisions in Trondheim during the medieval period have received little attention. However, remarkably few rubbish pits and privies of medieval date have been found in the excavated areas, in contrast to the numbers and varieties dating from the 17th and 18th centuries. Much medieval rubbish accumulated in open areas on urban plots, often deliberately dumped *en masse* prior

¹¹⁵² Withey 2016: vii, 5-6, 12-13.

¹¹⁵³ Withey 2016: 13.

¹¹⁵⁴ See 3.5.4.

¹¹⁵⁵ 5.4.4.5; 5.4.5.2; 5.5.2.10. Category 10: Health, hygiene & toiletry.

to episodes of rebuilding to level-up ground, while some ended up as fill in waterfront caisson foundations. Occupation deposits also contain perceptible traces of human excrement. There is historical mention of a communal rubbish dump, though no trace of it has yet been found. It is possible that medieval households disposed of some of their rubbish in the river or the fjord, despite legal restrictions against dumping in the river. Some built small privies on their plots, but these are few in number.

In contrast, excavations in the urban area encounter frequent post-medieval rubbish pits and latrine pits for privies. Simple unlined rubbish pits dug into back yards and even into street surfaces (!) appear during the 17th century. Large wood-lined purpose-built rubbish pits used for depositing domestic rubbish and/or manure from domesticated animals also appear during the 17th century, possibly initially on wealthier properties. Their construction and maintenance required an economic investment, but they could be emptied and reused over time. As such, they represented an important material-technological intervention that facilitated the safe and convenient containment and ultimate removal of hazardous and unpleasant household-generated waste.

Domestic rubbish also ended up in wood-lined latrine pits, also a feature of 17th and 18th-century backyard contexts. On 18th-century urban plots, privies are usually placed towards the rear of the property, presumably marking a desire to segregate them from the dwelling house. From the 17th century on, the task of emptying household privies was given to a paid workman, the *nattmannen* (night-soil man). However, this was presumably not sufficient to meet demand across the urban social spectrum, since much domestic rubbish - food refuse in the form of animal bones, shells and the like, as well as broken pottery - continued to be simply discarded directly onto open backyard surfaces. This may suggest that most ordinary households had difficulty in disposing of an increasing amount of semi-durable 'breakable' household goods in circulation among the urban population from the 17th century on. Indeed, public space was also used flagrantly for the dumping of household rubbish long into the post-medieval period, as testified by the extensive deposits of 18th-century refuse excavated recently on the surface of the market square (Torvet).¹¹⁵⁶ The urban authorities struggled to keep public areas clear of refuse, and no public refuse collection or cleaning authority was established until the early 20th century.

It is difficult to gauge the extent to which drinking water was readily accessible to the medieval population, since medieval wells are a comparatively rare find archaeologically, although cisterns for collecting surface water seem to have been used. As in the case of privies and rubbish pits, post-medieval wells are encountered more frequently, and historical evidence suggests that sturdy, wood-lined wells were commonly installed on post-medieval properties. The quality of local well water was probably poor, and wealthier citizens paid for clean water to be carted in from a stream on the western urban outskirts. This stream was eventually harnessed as the source of a piped-water system, established in 1777 and financed by a charitable fund with the dual purpose of piping fresh drinking water into the city, and providing better provision of water for fighting fire, an ever-present threat to life and property.¹¹⁵⁷

Efforts at supplementing water supplies by piping water into wells and cisterns from other sources are documented archaeologically from medieval times, but these were limited, small-scale arrangements. In terms of function, structural character, ambition and scale, the 18th-century piped-water system was unprecedented locally, and represented the city's first major public infrastructure initiative. It established a network of wooden pipes buried in the streets, with 12 strategically placed public water stands and other privately financed tributaries into wealthier properties, which must have had a great impact on public health and well-being. This scheme exemplifies the pervasiveness and social impact of the ethic of 'improvement' which - as touched upon above - characterised practices in many areas of private and public life during the course of the 18th century.

We might also identify the scheme as an amalgam of Lefebvrian spatial dimensions, whereby the idealistic conceptions of its planners were realised in concrete material form as publicly accessible water stands and cisterns sited at street junctions and other strategic points. This constituted a new form of space used and encountered in urban daily life by people who were drawn here to fetch an important

¹¹⁵⁶ See 5.4.3.3.

¹¹⁵⁷ See 5.4.4.5 & Appendix H.

life-supporting medium; namely fresh, clean water, a newly accessible materiality which became entangled in other practices performed within the city. Simultaneously, the water stands engendered a form of 'lived', social public space where townspeople - presumably chiefly servants - experienced new forms of social interaction and engagement with each other (Fig. 5.27).

Entangled in the practices that created this new urban spatial formation were a multitude of materials and practical and engineering-related competences linked to its construction: for example, the damming of water, the harnessing of gravity, tree-felling, the hollowing-out of tree-trunks, their transportation and assemblage in iron-linked, clay-sealed rows placed in deeply dug trenches, and the construction of functioning water stands.

The care and health of the human body: materialities of mortality, health and hygiene

Disease was commonplace during our period, as was violence and malnutrition. Trondheim's graveyards and crypts filled with individuals who fell victim to malnutrition, plague and varieties of viral or bacterial diseases, complications in childbirth or the effects of trauma, to name but a few causes of mortality.¹¹⁵⁸

Osteological analyses of 18th- and early 19th-century burials in the cathedral graveyard have provided details regarding the health of low-status segments of Trondheim's population. These include a comparatively low age at death of males, generally low adult stature, and a variety of pathological traits and disease, such as lesions caused by chronic infection and diseases arising from poor nutrition (*osteomalacia* and scurvy) and bacterial infection (leprosy, tuberculosis, and venereal syphilis).¹¹⁵⁹ Documented disorders and traumas in another group from an even poorer sector of the graveyard, included poor dental hygiene, *periostitis*, *cribria orbitalia* (the result of chronic anaemia), *osteoarthritis*, tuberculosis, bone tumours, septic arthritis and broken bones.¹¹⁶⁰

The contents of latrine pits provide another source of insight into biological flows through the local community. Analysis of human excrement can provide insight into diet, nutrition and the presence of human parasites (see Chapter 6 for closer discussion). While we are on the subject of bodily waste, the advent of the ceramic chamber pot in Trondheim during the 17th century comprised an important advance in managing and disposing of it. Being in essence a portable toilet, a chamber pot could be used to transport urine and faeces conveniently and safely from inside the dwelling to the outside privy, for example. Chamber pots could be placed in bedrooms for night use or in a cupboard in parlours for daily use. Furthermore, their contents could be readily scrutinised by physicians to diagnose illness.¹¹⁶¹

Chamber pots in many varieties are a common find in 17th and 18th century contexts. Spittoons, another receptacle for disposing of unwanted human waste, namely spittle, are occasionally found (Fig. 5.133). They were used predominantly by men, both within the home and in public places, particularly with the advent of the practice of chewing tobacco. They were considered an aid to the advance of private and public manners and hygiene, and were intended to prevent spitting on floors and streets.

The items listed above in connection with personal grooming also played a role in promoting personal health. Toothbrushes appear in Trondheim during the late 17th century, presumably initially among the elite and eventually among the middling classes. While they may have served to reduce tooth and gum decay in some instances, the evidence of the burials cited above attests that dental disease was prevalent, at least amongst the lower classes.

A particularly interesting discovery made in the poorest section of the cathedral graveyard was evidence of medical dissection in the form of sawn crania and limbs, possibly dating to the early 19th century (Fig. 5.34). It was at about this time that urban authorities, scientists and physicians in Europe began to address public sanitation and health seriously. Previously, the main threat to public health had been perceived as poor morals rather than a squalid, unhealthy physical environment, poor urban infrastructure and low provision of institutional and medical care.¹¹⁶²

¹¹⁵⁸ See 5.4.5.2.

¹¹⁵⁹ Reed et al 1998.

¹¹⁶⁰ Rapport Arkeologiske utgravninger Trondheim TA2004/21, nr. 07/2007.

¹¹⁶¹ See 5.5.2.10.

¹¹⁶² Legnér 2010: 271.

Professional health expertise did not reach Trondheim until 1661 when the city got its first publicly authorised physician (*medicus*) who could diagnose scientifically and prescribe medicines. Prior to this people relied on barber-surgeons (largely for blood-letting), medical books, and traditional folk remedies. The first pharmaceutical medicines were supplied by the city's first licenced apothecary who also established himself here in 1661.¹¹⁶³ A rubbish pit associated with Trondheim's second apothecary, Arnoldus von Westen (practicing between 1680 and 1698), produced a rich assemblage of apothecary's specialised storage jars and bottles and other items (Fig. 5.131).

In addition to facilitating their preparation and storage, the availability of mass-produced ceramic jars and glass bottles enhanced the widespread dissemination of pharmaceutical potions. Fragments of small purpose-made pharmaceutical phials and bottles in blue, green and clear glass, which presumably contained medicinal fluids and compounds for a variety of ailments, as well as ceramic ointment jars, are frequently found in urban rubbish pits and privies, particularly those dating to the 18th century (Figs 5.131 and 5.132).

Institutional health care can be traced back to the medieval period in Trondheim, which had a leper hospital which continued in use well into the post-medieval period, when it also functioned variously as a poor house, mental asylum and infirmary, although the standard of medical care was presumably basic. In addition, from the early 17th century on, various institutions designed to provide shelter for orphans, elderly widows and the elderly poor were established. With the addition of workhouses, poor houses and houses of correction, Trondheim by the mid-18th century had in place the country's most comprehensive system of urban poor relief and social correction.¹¹⁶⁴

We have no archaeological evidence from these places at present, but the contents of their latrines and rubbish pits would provide insights into the lives, practices and experiences of the anonymous inhabitants of these places of institutionalised care and social order.

5.6.6. Concluding remarks

Only a small proportion of the materials engaged with by past generations in the course of their lives entered the archaeological archive, and only a fraction of that has been fortuitously preserved, excavated and curated in museum collections. My material survey and thematic discussion present only a tiny sample of this source material. All these factors limit its representativity as a document of past material lives. Specific problems in Trondheim's instance include the fact that we have little material from 16th-century urban contexts, and that the majority of the material currently retrieved derives from contexts associated with wealthier households of the 17th and 18th centuries. The houses and material culture of the lower classes and urban poor are rarely encountered, as many of these lay outside the area of urban excavation limited to the protected medieval city. Similarly, we have little material from sites of post-medieval urban crafts and industry sited on the periphery or in the 18th-century suburbs.

Nonetheless, it is hoped that this survey has gone some way to demonstrate that the people of Trondheim, dwelling as they did on the northern periphery of Europe, were active participants in, and recipients of, the rapidly expanding world of goods and flows of shared ideas, practices and material culture that characterises the centuries following the Reformation. Much of our material has direct equivalents found elsewhere in contemporary Scandinavia, Europe and the Americas, for example. That said, I hope that I have been able to reveal some of the particularities of how materials were entangled in lives that unfolded in this specific corner of an increasingly interconnected world, and the nature of the specific ways in which alliances of people, ideas and materials were integral to processes of change and continuity in the transition to modernity in Trondheim. These aspects will be explored in more detail in the following chapter, where materialities of practice connected with particular households are presented and discussed.

¹¹⁶³ Supphellen 1997: 198-199.

¹¹⁶⁴ See 5.4.6.

Chapter 6

'Proviantforwalterensz Huus'

Materialities of practice at the residences of the army's provisioning managers in Kongsgården c. 1695 – 1783

6.1. Introduction to the analytical case study

6.1.1. Background and aims

This micro-study deals with the materiality of social practices performed by people within a specific historical social context: namely, the managers of military provisions, materiel and equipment¹¹⁶⁵ who, with their families and servants, lived and worked within the precinct of the Nordenfjeldske army's arsenal and supplies depot in Trondheim during the 18th century. Its central aim is to characterise the nature of social life in this particular place and time by examining the surviving material traces of its practices. In so doing, I hope to present an account of life and work at a particular place and time which can contribute to a wider perception of how social life unfolded at this juncture in Trondheim's and Norway's history.

The arsenal and supplies depot was housed in the former medieval Archbishop's Palace, which was expropriated by the Crown following the Reformation in 1537, after which it became known as *Kongsgården*. The Danish-Norwegian military authorities took this existing complex of stone buildings and its walled precinct into use as the regional depot for military provisions, ammunition and materiel in 1686. At some point soon after this, the first of a succession of nine named provisioning managers was installed in lodgings here. The last manager to live here moved out in 1783. The historical and archaeological traces of their lives form the main subject of this analysis.

The eastern and southern wings of the precinct, or courtyard, were archaeologically excavated in the 1990s.¹¹⁶⁶ These large-scale excavations constituted a rare instance where post-medieval deposits were systematically recorded and their associated finds collected and curated, and as such it provides one of the few available subjects for a case-study of this nature in Trondheim, and, indeed, Norway. The material remains of two successive residential complexes used by the provisioning managers during this century-long period of occupation were recovered here. These comprised the foundations of two successive dwelling houses, and various associated farm buildings, ancillary buildings and structures, as well as a variety of objects associated with the two main phases of occupation.

This site has been chosen as a suitable case study due to the well-documented nature of the archaeological remains, and the broad range of curated finds material which can be closely correlated with the excavated residential complexes. There is also associated historical evidence in the form of contemporary maps, and primary and secondary historical records and references, including a fire-insurance survey of the second residence.

¹¹⁶⁵ The post's full title was *Proviant-, ammunisjons- og materialforvaltere ved Trondhjemsfestning*, directly translatable as Provisions-, ammunition- and materiel managers at Trondheim Fortress. In some records, this professional title is shortened to *Proviantforvalter* – literally, Provisions Manager. I adopt the term Provisioning Manager in my text, as I feel this more closely conveys the active nature and authority of the post. Managers of military supplies in the army were - and are - known as quartermasters. However, this is a military rank for a post filled by an enlisted soldier; with one exception, all these men were civilian officials appointed by the king. Furthermore, quartermaster is normally translated as *kvarttermester* or *intendant* in Norwegian and Danish.

¹¹⁶⁶ Nordeide 2000a.

As will be shown, the combination of historical and archaeological sources allows us to assemble and closely contextualise a varied array of material evidence. This can be operationalised within the theoretical framework discussed above: namely, as remnant assemblages of buildings and objects that were closely entangled with the practices performed by those who lived and worked here. The integration of archaeological and historical evidence affords fine-grained interpretive insight into changing configurations of materials, competences and meanings associated with practices enacted by historically identifiable social actors in this place.

These shifting practice-material arrangements can be associated with the provisioning managers and their families, colleagues, and servants, as well as with the army and local community. By correlating written and archaeological evidence it has been possible to trace the changing character of the managers' living conditions and domestic and social practices during the course of the 18th century.

6.1.2. The nature of the evidence and source-critical aspects

The analysis utilises a body of historical and archaeological evidence that has been fortuitously and partially preserved. Being an analysis focusing on human practices in a historical context far removed from our own time, we cannot hope to stage a *reconstruction* of the past in which presentist viewpoints reflect our own modern assumptions or subjectivities rather than those of the people we are studying. The incompleteness of the evidence impedes our insight into the full range and nature of practices performed here. Furthermore, not all practices left physical traces, and of course, unlike social studies of contemporary society, we have no living actors to interview. Instead, we can only construct a material history from fragments and provide a suggested reading, or approximation, of the nature and diversity of social practice at this particular place and time.

A variety of 'fragments' form the principal sources for the present study. The stratigraphic information and analyses presented for Period 11 in the site reports for the Archbishop's Palace excavations comprises a principal archaeological data source.¹¹⁶⁷ These reports sorted the individual excavated stratigraphic contexts and their artefact content into spatially, temporally and interpretively closely-defined groups, a framework which provides a sophisticated means of contextualising the building remains, deposits and their content of associated artefacts in time and space. In addition, the site's finds database provided an invaluable search tool for generating, sorting and manipulating the finds material. Finds from contexts which can be associated to a greater or lesser degree with the occupants of the buildings have been prioritised. These comprise *primary* contexts which demonstrably contain material which is likely to have originated from the residences (principally fills of latrine pits used by the residents), and *secondary* contexts containing material which, while likely to have originated from the residences, may also contain a proportion of residual (earlier) or intrusive (later) material (e.g. open area deposits external to the buildings).

Objects from selected contexts and groups were examined in the Trondheim University Museum's storerooms, and it is this finds corpus that provides the empirical basis for the study. The material includes items manufactured in ceramics, metal, glass, wood, bone, textile and leather.

The range of finds is extensive and includes items that have been sorted according to the functional categories presented in the previous chapter. Some bulk items - such as iron nails and bricks, for example - have been excluded due to the exigencies of time. Some animal bone from the northern end of the site has been analysed previously (age- and species determined),¹¹⁶⁸ however, the analysis is not closely enough integrated with the stratigraphic sequence to allow close contextualisation. The analysis's broad conclusions with regard to the animal bone from Period 11 will be referred to in the discussion sections.

The historical material comprises contemporary maps of Trondheim from the late 1600s to the late 1700s, many of which have been digitalised.¹¹⁶⁹ These show the Archbishop's Palace - or Kongsgården as it was then known - and the buildings within its precinct in a variety of representations

¹¹⁶⁷ Published in the series *Utgravningene i Erkebispegården i Trondheim*, NIKU temahefter 5-11, NIKU, Trondheim.

¹¹⁶⁸ Hufthammer 1999.

¹¹⁶⁹ <http://kartverket.no/Kart/Historiske-kart/Historiske-kart-galleri/#16/28> (accessed 11.5.2018).

and degrees of detail. The most detailed plans and drawings of Kongsgården and the second managers' residence were produced in 1758 by a military draughtsman, Captain J.N. Eckleff (Appendices L and M).¹¹⁷⁰ As with all historical documents, precautions regarding inaccuracies in the representations produced on these maps must be borne in mind, particularly those arising from their authors' selectivity, biases and omissions.

Other sources for the architectural history and practice analysis of the manager's buildings include a fire-insurance survey (*branntakstprotokoll*) of 1766, and historical references in secondary literature.¹¹⁷¹ The names of the individual managers and their periods of tenure have been identified using secondary sources and digitalised primary sources, such as military personnel lists, local tax lists, census lists and mortgage registers.¹¹⁷² Unfortunately, no wills or probate registers for any of the individuals were found in the national archive despite an extensive search.

6.1.3. The structure of the analysis

Section 6.2. outlines the specific historical background and context for the case study, notably the place and role of Kongsgården depot within the national military organisation of the period (6.2.1). The professional role and responsibilities of the case study's chief historical actors, namely the nine military provisioning managers, are also outlined here. This is followed by a short appraisal of their known biographies and likely status within the social hierarchy of the time (6.2.2). Historical evidence for the topographical-architectural development of Kongsgården and the two successive residences provided for these men and their families is then presented (6.2.3 and 6.2.4), followed by the archaeological evidence associated with each residence (6.3). This is presented in close interplay with the historical evidence in order to obtain a spatially and temporally accurate context for the material analysis. The aim is to create a nuanced and closely contextualised account of the building remains and everyday objects associated with social practices performed here. Each sub-section (6.3.1 and 6.3.2) includes summarised interpretive accounts of the building evidence and the associated objects, the latter in particular contextualising the objects in terms of their particular areas of practice.¹¹⁷³ Finally, the study rounds off with a synthesised discussion of the materialities of space and practice in 18th-century Kongsgården (6.4).

6.2. Kongsgården military depot and the provisioning managers' residences: historical context and sources

6.2.1. The military depot at Kongsgården: organisational background

This study focuses on an important military institution, namely the depot used for the storage of supplies and materiel used by the Norwegian army regiments based north of the Dovre mountains. During the latter half of the 17th century, Norway's military organisation and capability was restructured in response to the tensions and periods of conflict between Denmark-Norway and Sweden prior to 1718. A Norwegian army based on conscripted members of the rural population was built up within the Danish army command, and a number of modern fortresses and urban fortifications were built in the major urban centres.

In Trondheim's case, Munkholmen island was fortified after Sweden's brief occupation of the city in 1658, while more comprehensive urban fortifications were constructed after 1681, reflecting its key strategic role as the base for the Nordenfjeldske army regiment.¹¹⁷⁴ This building work - which

¹¹⁷⁰ J.N.Eckleff 'Grund-Riss af Kongsgaarden ved Trundhiem' 1758. Two plan drawings: KBK XVIII-1 56b and IB1719 archived respectively as EA-5930 in Riksarkivets kart- og tegningssamling, serie T041 – KBK Kongens Håndbibliotek, København and T034 – IB Ingeniørbataljonen.

¹¹⁷¹ Lein: 1998. Trondheim branntakst protokoll 1766. <http://digitalarkivet.uib.no/sat/1766brtxt/1766index.htm> (accessed 11.5.2018). Lysaker 1989.

¹¹⁷² E.g. Ovenstad 1948 & 1949; Rentekammerets norske bestallinger 1660-1814 (Finne-Grønn 1932).

¹¹⁷³ Detailed listings of historical evidence and the finds material are provided in Appendices I, J, and K.

¹¹⁷⁴ Established at the time of the Norwegian army's creation by Christian IV in 1628. The first regiment had conscripted companies drawn from the counties surrounding Trondheim fjord. After 1718 two more were added for counties in outlying parts of the region. A cavalry regiment, the Nordenfjeldske Dragonregiment, was established in 1701 (Aarsand 1999).

included a new fortress at Kristiansten and a system of urban ramparts - was part of the comprehensive urban replanning of Trondheim along baroque lines by royal initiative after the catastrophic urban fire of 1681.¹¹⁷⁵

In the fire's aftermath, Trondheim's military garrison experienced problems housing its stores of ammunition, supplies and equipment. The situation was so precarious, that in 1686 King Christian V permitted the army to use his Crown property Kongsgården¹¹⁷⁶ as an arsenal and supplies depot ('*Proviantgaarden*'). Significant demolition, refurbishment and new building work began in 1687 in order to turn the enclosed medieval building complex into a depot capable of storing large supplies of grain, flour, biscuit bread, gunpowder, weapons and other stockpiles of necessary provisions. In addition, a military bakery was established here. The depot was supervised by a provisioning manager, who, as the only person allowed to reside in the precinct, was provided with lodgings there.¹¹⁷⁷

Prior to the late 17th century, the Norwegian army had no organised system for provisioning itself. However, the development of centralised storage capacity at the new fortresses, the provision of uniforms from the 1670s on, and the need for access to better equipment in a troubled time of war laid the foundations for an organised supply structure. Institutional responsibility for provisioning the army lay under the General War Commissioner in Copenhagen and his regional commissioners. The only organs for this service were the centralised storage depots at the country's fortresses, which reported to Rentekammeret¹¹⁷⁸ in Copenhagen. After 1660, when the fortresses were placed directly under the Crown, the men filling the new post of '*Proviant-, ammunitions- og materialforvalter*' had responsibility for buying and distributing provisions and military materiel and for supplying the local garrison. They belonged to the fortress's staff, and fell under the authority of the Commandant. In terms of their work, they were responsible to the county prefect (*amtmann*) who procured supplies from the district. As royal appointees, however, they answered ultimately to the King.¹¹⁷⁹

The office of provisioning manager held great responsibility, since he was in charge of everything the depot contained in the form of provisions and materiel, at least prior to the early 18th century. A detailed instruction document from 1698 distributed by Rentekammeret defines a provisioning manager's main responsibilities as being the receipt, storage, and distribution of all forms of supplies and materiel which had to be accounted for to Rentekammeret. It provides detailed instructions for accounting and oversight of money and provisions. The manager had to send quarterly summarised accounts both to Rentekammeret and the General War Commissioner, although monthly accounts for stockpiles of money, grain, flour, malt, bread, smoked and salted meat, peas, lead, bullets, iron bars, steel and charcoal were sent to the local commissioners only.¹¹⁸⁰ One of the manager's chief tasks was to secure supplies of bread, tobacco, spirits, beer and animal fodder. He took receipt of grain levied from local farmers by the county prefect, and delivered grain or flour to local contracted bakers. Most fortresses had access to a mill which produced flour from grain stored in the depot.¹¹⁸¹

Two annotated charts combining plans, elevations and drawings of Kongsgården were drawn up by Captain J.N. Eckleff in 1758 (Appendices L and M). Eckleff was a military engineer and draughtsman who produced a number of plans of military installations at the time. His survey of Kongsgården was part

¹¹⁷⁵ 5.4.2.3.

¹¹⁷⁶ The former medieval Archbishop's Palace (*Erkebispegården*). It comprised a walled precinct, the northern and western wings of which contained large medieval stone buildings which could be readily converted and used for large-scale storage (Eckleff's plans of 1758, Appendices L & M.).

¹¹⁷⁷ Records detailing losses in a major fire of 1708 mention 3,500 barrels of rye and rye flour, 411 barrels barley and barley flour, 939 barrels of oats, 2,560 pounds oatmeal, and 16,000 kg hard biscuit bread. Mercifully, 900 barrels of gunpowder stored in vaulted cellars escaped the flames! Also salvaged were the war chests, ammunition, and 584 new muskets (Lysaker 1989: 39-40, 44-47).

¹¹⁷⁸ The central office in charge of State finances.

¹¹⁷⁹ Aarsand 1999: 50-52.

¹¹⁸⁰ Aarsand 1999: 52, 91.

¹¹⁸¹ Aarsand 1999: 50-52, 91.

of a wider inventurisation of military assets, and provided the authorities (and us) with a detailed graphic account of the depot's buildings and their functions.¹¹⁸²

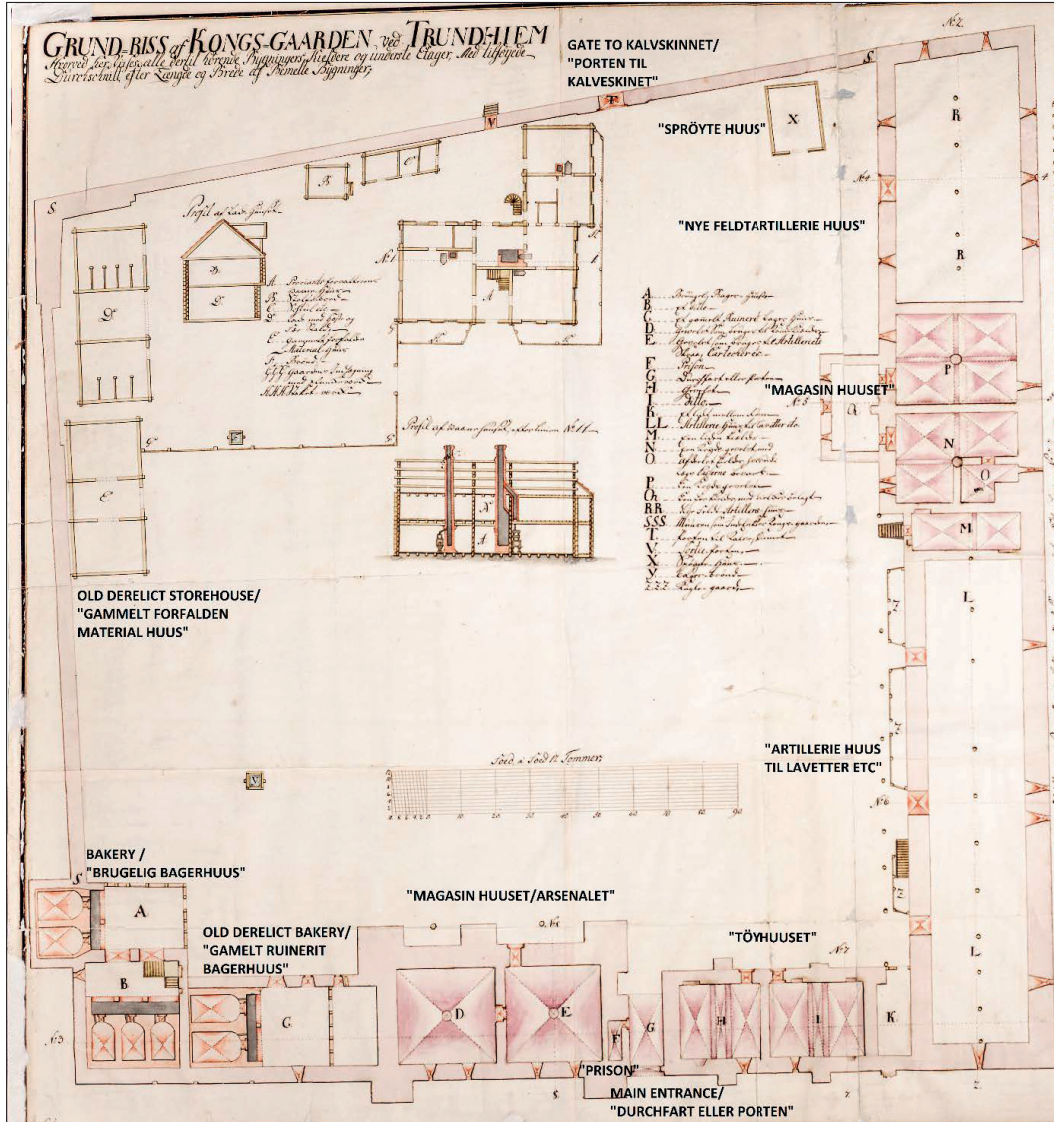


Figure 6.1. Annotated detail of Eckleff's plan of Kongsgården in 1758 showing the names and functions of the main buildings in the northern and western wings. North to bottom.¹¹⁸³

The depot's functioning bakery equipped with five ovens can be seen in the north-eastern corner of the complex (Fig. 6.1). This was built in 1739, replacing the derelict original military bakery with two ovens beside it in the north wing. Beside this, the largest of the old medieval stone buildings in the north wing was used as an arsenal for storing munitions ('*Magasin Huuset*').¹¹⁸⁴ Its eastern vaulted stone cellar contained gunpowder, while the neighbouring vaulted cellar stored artillery projectiles, specifically

¹¹⁸² His descriptions of the buildings' functions are not comprehensive, focusing primarily on the storage of artillery munitions and gun-carriages. Other sources provide supplementary detail (see Lysaker 1989).

¹¹⁸³ KBK XVIII-1 56b, Riksarkivet. My annotations are transcribed translations of Eckleff's own annotations.

¹¹⁸⁴ Also called '*Arsenalet*' on Eckleff's plan.

grapeshot and cartouches, or canister shot.¹¹⁸⁵ The building's upper floors were possibly used for storing flour and grain. On the other side of the main entrance, the smaller medieval stone building ('*Tøyhuuset*') was, as implied by its name, presumably used for storing military equipment, particularly weapons.

The northernmost building in the west wing ('*Artillerie Huus*') - also of medieval construction - housed gun-carriages ('*lavetter*') on its ground floor, while grain was stored in its heightened upper 'loft' floors. Cannonballs would have been piled in the fenced-off areas fronting the building ('*Kugle-gaard*'). The medieval stone building adjoining this to the south ('*Magasin Huuset*') also housed gunpowder in its two vaulted stone cellars, although part of its northernmost cellar was walled-off to act as a secure vault for the royal treasury's money chests.¹¹⁸⁶ The southernmost building in the west wing - '*Nye Feldt Artillerie Huuset*' - was built in 1753-55. This was the only purpose-built stone building constructed by the army, though it is not specified what it was used for. In addition to the main storage buildings, Eckleff's plans also show various timber buildings and associated structures in the precinct's courtyard. These include a building that housed fire-fighting equipment ('*Sprøyte Huus*'), an old, derelict timber storage building in the east wing ('*et gammelt forfalden Material Huus*'), a well for the bakery, and the fenced-off residential enclosure for the provisioning manager, of which more will be written below.

As their cumbersome professional title implies, these managers' area of responsibility encompassed supplies of ammunition and military materiel in addition to food. At some fortresses, however, responsibility for each area was divided between different individuals, and this seems increasingly to have been the case after c. 1715.¹¹⁸⁷ Some fortresses employed a Master of Equipment (*tøymester*) who was responsible for materiel (weaponry and ammunition). In instances where such positions are not recorded, responsibility for materiel may have been delegated to an unnamed officer.¹¹⁸⁸ A number of 18th-century documents referring to the Trondheim managers and their residence use only the abbreviated title '*Proviantforvalter*'. This may have simply been for the sake of convenience, or it may suggest that also here he was now primarily in charge of food supplies. However, the use of '*Proviant-, ammunitions- og materialforvalter*' was retained in official documents in connection with all but the last occupant of the residence.¹¹⁸⁹ Consequently, in the absence of evidence to the contrary, I have assumed that the managers here continued to have a wide area of responsibility throughout the 18th century.

The army provided residential housing for senior officers and staff who lived and worked in its fortresses.¹¹⁹⁰ This was also the case for the provisioning managers who lived and worked in Kongsgården, and two successive residences for the managers that were built in the precinct are the principal subjects of this study.

6.2.2. The provisioning managers at Trondheim Fortress: biographical details and social status

Nine provisioning managers had periods of tenure and lived parts of their lives in Kongsgården from c. 1695 to 1783 (Appendix I). The information I have gleaned from primary and secondary historical sources is confined to brief accounts of their dates and periods of employment, references to their rank and titles attained before, during or after their tenures, and other posts they occupied before or after their time here.¹¹⁹¹ I have found records of place of birth in two instances: Rasmus Hansen Fyhn, who was born in Eiker in southern Norway, and Aage Rasmusen Hagen, who grew up on a farm in Hage i Verdalen, and was reportedly of aristocratic descent.¹¹⁹² Consequently, it is difficult to confirm nationality in most instances, and some may have been Danish.

¹¹⁸⁵ '*Artilleriets skraa, cartecher etc*'. Grapeshot comprised canvas bags containing metal or lead musket balls, while canister shot comprised metal cans filled with the same. Both were anti-personnel projectiles, used against infantry and cavalry.

¹¹⁸⁶ '*Lagd? Cassene*'. The part of the cellar marked 'O' on Eckleff's plan. Lysaker 1989: 56.

¹¹⁸⁷ An example from 1714 at Galleieskadren near Kristiansand fortress is provided in Teige 2008: 99.

¹¹⁸⁸ Teige 2008: 63.

¹¹⁸⁹ See the nomenclature used for the managers in *Rentekammerets Norske Bestallinger*: see Appendix I.

¹¹⁹⁰ Kavli 1970; Hvinden-Haug 2008: 74.

¹¹⁹¹ See Appendix I for biographical details from documentary sources.

¹¹⁹² Jacob Hersleb was the son of a toll officer from Fosen and a member of the established burgher class in mid Norway (Lars Jacob Hvinden-Haug pers. comm.).

Most were married, and their wives are named occasionally, some of whom were Norwegian by birth.¹¹⁹³ At least one married *extremely* well while in office: Jacob Hersleb married the daughter of one of Trondheim's wealthiest merchants, Lorentz Mortensen Angell. Cornelius Griflow married into the Mecklenburg family, one of the country's richest and most influential families, after he left office. Children are occasionally mentioned and enumerated. Rasmus Hansen Fyhn and his wife Maren parented 12 children (seven boys and five girls), all of whom were born between 1723 and 1743. The dates of the managers' deaths are recorded in most instances, and the places of death occasionally. Only one - Rasmus Hansen Fyhn - died in office.¹¹⁹⁴ Only rarely do other details or events connected with their tenures or their past and future lives emerge.

With regard to their profession, ranks, titles and position within the social hierarchy of the period: These men belonged to a class of government officials (*embetsmenn*) which emerged during the course of the restructuring of bureaucratic state power and administration which is a marked feature of the period of the Danish-Norwegian Absolutist State between 1660 and 1814. The Danish king expected his officials in the client state of Norway to be loyal executors of his will, and it was in their interests that they were. As the king's appointed representatives, they oversaw and administrated numerous social, economic, and military institutions and areas of national and regional life in accordance with directives, rules and norms generated by the centralised seat of institutionalised royal power in Copenhagen.¹¹⁹⁵

These men, who were usually able, educated individuals, were in possession of much social, cultural and economic capital. This enabled advancement in the stratified hierarchical society of the period, and its system of honorary ranks to which they gained increasing access after 1693.¹¹⁹⁶ Indeed, appointed state officials rapidly formed a distinctive sub-group within the social elite, which also comprised the nobility, senior military officers and wealthy urban citizenry. A principal role of this group of elite bureaucrats was to administrate the levying of high levels of taxation and military service on the Norwegian population demanded by the Danish-Norwegian State, as well as the exertion of political and religious control of the population.¹¹⁹⁷

Although the provisioning managers at Trondheim fortress worked for the army, only one seems to have had a military rank.¹¹⁹⁸ They were what can be defined as *civilian-military functionaries*; civilian administrative officials employed by the Danish-Norwegian Commissariat based in Copenhagen who worked in its military administration. In his study of the Christiania social elite during the first half of the 18th century, the historian Ola Teige classifies such officials, including provisioning managers, as members of the contemporary social elite.¹¹⁹⁹ Utilising Bourdieu's theory of class distinction, Teige defines membership of the elite at this time in terms of the amount of economic, social, cultural and symbolic capital one possessed.¹²⁰⁰ As he notes, their status as government officials appointed by the king bestowed them with significant symbolic capital, important in cementing hierarchical position. They were important, salaried officials who were in a position to award local merchants lucrative contracts for the delivery of supplies to the army. They possessed specialist skills in administration and bureaucracy, and are likely to have established network contacts through marriage, family ties, friendship, and patron-client relationships.¹²⁰¹

These networks were built on mutual interest, trust and obligations. For example, many officials who dealt with public funds had to acquire officially registered sureties or guarantees¹²⁰² from independent guarantors in case, through misfortune, mismanagement or dishonesty, they came to owe

¹¹⁹³ In only one instance – Arve Gudmansen – have I found no mention of a wife.

¹¹⁹⁴ He was buried at the cathedral. An archive search for his probate inventory was unsuccessful.

¹¹⁹⁵ National administration, and the administration of the judiciary, finances, tolls, mines, forests, mints and roads, for example. Weidling 2000.

¹¹⁹⁶ Rian 2003: 5-6; Dyrvik 1998: 318-319.

¹¹⁹⁷ Rian 2003: 122; Dyrvik 1998: 319-320.

¹¹⁹⁸ Peter Sønnech, the last known administrative officer connected with Kongsgården.

¹¹⁹⁹ *Sivilmilitære embetsmenn eller kommissariatsbetjenter* (Teige 2008: 56 footnote 104).

¹²⁰⁰ Respectively: wealth; social contacts; education and abilities; possession of symbols with great prestige value, such as titles or prestigious work (Teige 2008: 29-30; Bourdieu 1996).

¹²⁰¹ Teige 2008: 99, 124-125, 140-141.

¹²⁰² *Tinglyste kausjoner*.

the king money and could not repay the debt themselves. To stand as guarantor entailed financial risk, and was thus an expression of trust, created by binding personal networks.¹²⁰³ At least three of the Trondheim managers - Jacob Hersleb, Rasmus Hansen Fyhn and Arve Gudmansen - acquired such sureties. Hersleb, a member of the local wealthy elite through birth and marriage, also stood as guarantor for others.¹²⁰⁴

Many contemporary urban households in Trondheim retained at least one servant, although elite and middling households normally employed multiple servants.¹²⁰⁵ I have found only one reference to servants in connection with a manager's household: In a tax census of 1687, the first manager, Paul Steen, is recorded as having a household numbering 14 people, which included himself, his wife, four children, his sister, a private teacher, three house servants, two maids, and two male outside servants (possibly farmhands) (Appendix I). It is likely that Steen's successors employed equivalent numbers of servants, and, where appropriate, a private live-in tutor, given their status and the requirements of their households and its attached farm.

We may assume that the provisioning managers at Trondheim fortress were educated men with administrative and book-keeping skills, essential requirements for this post as we have seen. Indeed, before entering the post, the first manager - Paul Steen - was a *skibsmåler* (an estimator of ship size and cargo capacity for toll purposes). In addition to being provisioning manager, he was deputy regional supervisor of the collection of tolls and taxes.¹²⁰⁶ Jacob Hersleb also functioned as Secretary to the County Court in Røros during and after his time as manager. Three others (Griflow, Kortholt and Hagen) are recorded as holding the professional title of *bokholder* (bookkeeper) during their tenures.¹²⁰⁷

The post seems in some instances to have offered a springboard to important positions elsewhere, and in some cases entry into, and advancement within, the hierarchical ranking system of the day. Two men are recorded as gaining the title *Krigsråd* (War Councillor) after their periods of service here (Griflow and Hagen). This was an honorary title that placed the recipient in the 7th (lowest) ranking class. Such titles could also be bought by those who had the means to do so, and did not necessarily have any connection with a particular position.¹²⁰⁸ Hagen ascended the ranking system to the 5th class later in life, becoming *Justisråd* (Law Councillor) in 1740. He was also a friend of - and local agent for - the renowned Norwegian author, historian and satirist Ludvig Holberg, with whom he exchanged letters. Another, Arve Gudmansen, gained the title *Virkelig krigsråd* (Real War Councillor) during his tenure, a title which placed him in the 6th ranking class.¹²⁰⁹

The last person connected with the administration of the depot is Peter Sønnech. However, he is not referred to explicitly as 'provisioning manager' in the available sources. Prior to coming to Trondheim, he acted as *Vaktmester Intendant* (caretaker quartermaster) at Kristiansand Fortress, and, being a soldier, he may have retained a similar military title for this area of work on his move to Trondheim. Alternatively, we may speculate as to whether the title and function of provisioning manager had now ceased to exist at Trondheim. The fact that his immediate predecessor Arve Gudmansen was discharged from his position ('*avskjed 1765*') may be indicative of this. Furthermore, in contrast to all his predecessors, Sønnech was a career soldier holding a military rank, and a lowly one at that. He was a sergeant when he came to Trondheim Fortress, although he rose to captain during his time here, then to major and ultimately colonel when he subsequently became the Commandant of Munkholmen Fortress: quite a rise for a man who was apparently also hard of hearing!

As far as can be judged from the few details I have found regarding their professional and personal lives, for most of these men the post of provisioning manager provided a secure and respected

¹²⁰³ Teige 2008: 101.

¹²⁰⁴ In the instances of Fyhn and Gudmansen, these were taken out explicitly as sureties for the King ('HKM'). Fyhn himself placed a property he inherited from his mother-in-law as security in one instance (see Appendix I).

¹²⁰⁵ Øverland 1975: 24-7.

¹²⁰⁶ *Landkommissariefullmektig Nordenfjelds*.

¹²⁰⁷ Of these Kortholt held the higher ranking title of *Krigsbokholder* in tenure, while the others acquired that higher rank after their tenures.

¹²⁰⁸ Øverland 1975: 10.

¹²⁰⁹ Ordbok over det Danske Sprog. Historisk Ordbog 1700-1950.

position for themselves and their families within local society. For the earlier managers (notably Griflow, Hersleb and Hagen) this seems to have been a springboard to higher office elsewhere.

As regards their financial circumstances, I have not been able to establish what they earned in terms of salary. However, although their income levels are undocumented, the fact that in some cases others stood as guarantors for them, and that they stood as guarantors for others, indicates that the post offered a comfortable income (although, of course, those who married well, or held additional posts, will have had access to other sources of income and wealth).

The upper echelons of the elite - principally the wealthier merchants and senior state or local officials - usually had a net taxable wealth over 1000 riksdaler.¹²¹⁰ Middling officials earned between 500 and 1000 riksdaler, on a par with leading local administrators such as county prefects (*amtmenn*), while local tax collectors (*fogder*) earned 150-200 riksdaler.¹²¹¹ By comparison, we might assume that the managers may have been in receipt of an annual income somewhere in the lower hundreds. An indication of this may be the severance pay set at an annual rate of 200 riksdaler awarded Arve Gudmansen when he left his position.¹²¹²

The managers' salary would have been supplemented by income and foodstuffs from the farm and kitchen garden that were at their disposal. Indeed, the managerial income may have been sufficient to stretch to the buying of a title, if that is how Gudmansen, for example, gained his.

As the life trajectories of a number of the managers subsequent to leaving their tenures indicate, the acquisition of titles, social climbing through marriage, for example, client-patron relationships and social mobility were important dynamics in the highly status-conscious society of the time. As has been noted, at least one manager married into one of Trondheim's wealthiest merchant families while in office, while others went on to marry well and occupy other important posts elsewhere, and gain higher-ranking titles. We can conclude therefore, that, although situated at the lower end of the elite hierarchy, the post provided its occupant with a degree of economic and social capital, and provided some of these men with a means of access to the ranking system and more important professional opportunities within the bureaucratic hierarchy.

6.2.3. The first managers' residence (c. 1695 - c. 1730)

There are only a few historical sources of information about the first residence provided for the managers. Kongsgården was taken into military use in 1686, and the first dwelling house was presumably built at some point in time following that. According to a census of 1687, the manager at the time, Poul Steen, appears to be living in a house in the city together with his large household of 14 people.¹²¹³ The earliest reference to a building identified as the managers' residence takes the form of an annotated plan of Kongsgården drawn up in 1708 by General Johan Wibe, the officer commanding the Nordenfjeldske regiment (Fig. 6.2, left). This shows a single building in the otherwise empty eastern wing of Kongsgården, drawn with a hard line and accompanied by a text clearly identifying it as the manager's house.¹²¹⁴ Johan Stockhoff's map of the same year also shows a solitary building located in the east wing (Fig. 6.2, right). That the south wing was empty at the time is confirmed by the addition to Wibe's plan of a rectangle of dots accompanied by a text identifying it as a place suitable for the construction of a new building which could accommodate the 'Commandant'.¹²¹⁵

¹²¹⁰ According to an analysis of the 18th-century Christiania elite. Teige 2008: 59-60.

¹²¹¹ Dyrvik 1998: 316.

¹²¹² Appendix I.

¹²¹³ Appendix I; Vigerust 2000: 20.

¹²¹⁴ 'Proviantforwalterensz Huus'

¹²¹⁵ 'Disze Punckter udviszer dend Platz huor eett husz for Commandanten kunde byggis ifald dett bleff agreeeret'. 'These dots show the place where a house for the Commandant could be built if agreed' (my translation). This was presumably prompted by the homeless plight of the Commander of the Trondheim Fortress (Trondhjems festnings kommandant), Colonel Otto Frederik von der Osten, following the urban fire of 1708. Wibe drew an elevation and plan of this building, a fine, if modest, example of an early symmetrical baroque house with a central passage ('midtgangshus'): cf. Kavli 1966: 72 ill. 12, 76 (Riksarkivet D.K.17).

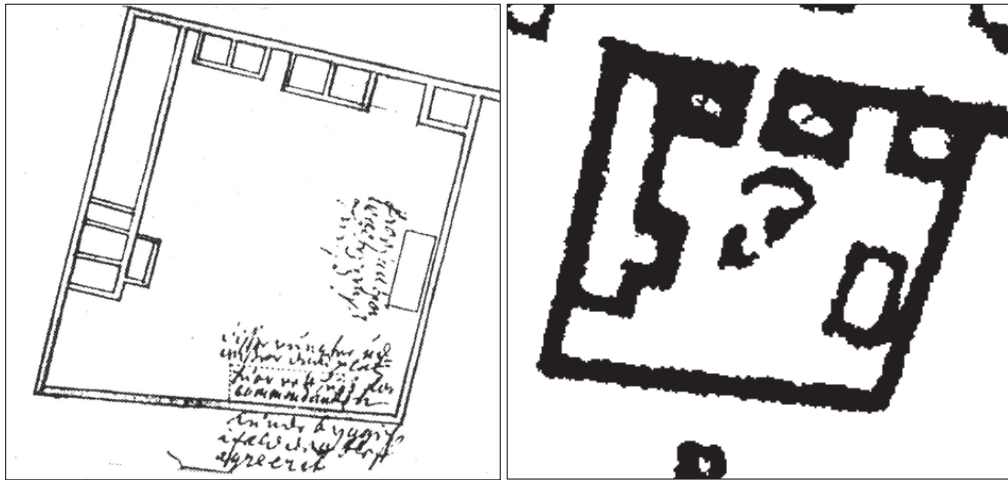


Figure 6.2. **Left:** Detail from General Johan Wibe's annotated map of Kongsgården dated 1708. **Right:** Detail from J. Stockhoff's map of 1708 showing Kongsgården and the same isolated building in the east wing.¹²¹⁶

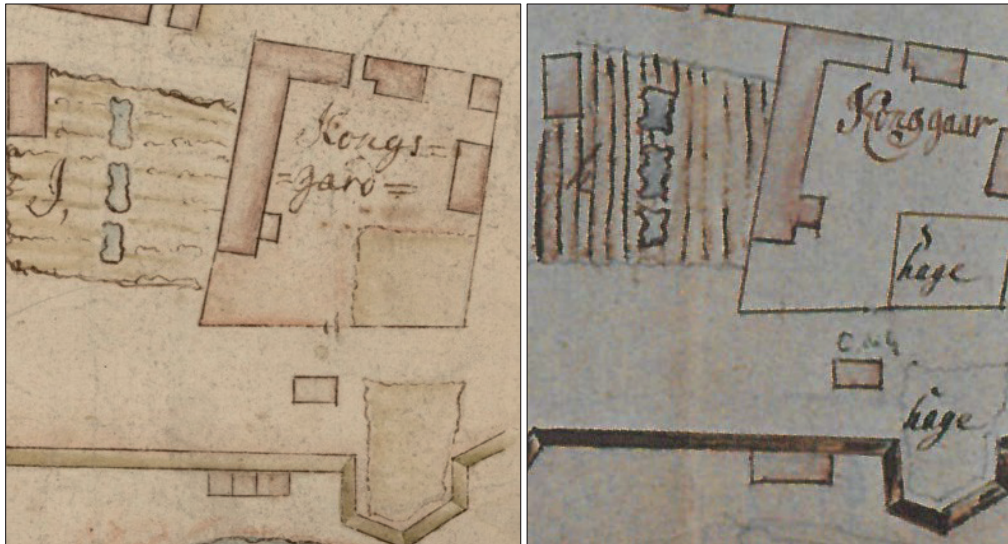


Figure 6.3. Details from two similar maps signed by A. Lillie in 1716 showing Kongsgården. A solitary building stands in the east wing, with gardens marked inside and outside the precinct and three fishponds to the west.¹²¹⁷

This was never built, and archaeological evidence indicates that the south wing lay open during the time the first managers' residence stood in the east wing. This is corroborated by Lillie's maps of 1716 (Fig. 6.3) which show a solitary building standing in the east wing, presumably the same building shown on the 1708 maps. Indeed, if the scales on the respective maps are correct, this building is of identical size to that shown on Wibe's map of 1708: namely, approximately 30 alen/19 metres long and

¹²¹⁶ Situasjonstegning av domkirken, domkirkegården og Kongsgården høsten 1708 (Riksarkivet) & Teigning af Trundhiembs Byess Nyanleggeltze, forsaavit som udj seneste uløckelige Ildebrand afbrente. Trundhiemb d. 18. Augst Ao 1708 (Riksarkivet).

¹²¹⁷ Carta som presenterer den ubebyggede og mestendehl oppløyede land Kalvskindet kaldet (Riksarkivet). These fishponds appear to lie in a cultivated plot with a possible pleasure house/garden pavilion. Given the plot's proximity to Kongsgården, it may have formed part of the manager's holding, like the later garden attached to the second residence. This is very uncertain, however.

15 alen/9.5 metres wide.¹²¹⁸ The south-east corner of the precinct is designated as a garden ('hage'), presumably the manager's private kitchen garden. Another garden lies outside the precinct on the bastion to the south. This may have been an orchard; a later map of 1761 appears to show a stand of trees here as well as meadowland and small fields situated beside Kongsgården which the manager was granted for farming (Fig. 6.7). The farm was an important supplement to his income, and he was allowed to build a couple of small farm buildings within the precinct.¹²¹⁹ These are not shown on the 1708 or 1716 maps, and we have no direct archaeological evidence regarding their location (though see 6.3.1.1).

Trondheim was again ravaged by a major fire in 1708. The manager's residence is mentioned in a report to the king written in August of that year by General Johan Wibe who described the devastating effects of the fire which spread from the cathedral to Kongsgården. He noted in particular that, in contrast to many of Kongsgården's stone buildings, a number of timber buildings with turf roofs within the precinct managed to escape the fire, including the manager's house and a farm building, possibly a combined byre/stable and hay barn.¹²²⁰ Indeed, the residence was in such good condition, that the commander of Trondheim Fortress, Colonel Otto Frederik von der Osten and his family - who lost their own house in the fire - moved in, forcing the resident manager, Johan Hartvig Henrik Weber, and his family to move into the 'loft'.¹²²¹ This may be taken as evidence that this was a two-storeyed building, since at this time the loft usually constituted the upper storey in the residential building.¹²²²

Apart from information regarding its location within the precinct, its approximate size, and that the residence was timber-built, roofed with turf, and equipped with a 'loft' (i.e. probably two-storeyed), we have no other historical evidence for the building's architectural character. This is provided instead by the archaeological evidence, which will be presented below (6.3.1). Map and written evidence verify the building's existence by 1708, but it is uncertain exactly when it was built and how long it stood after 1716 prior to its replacement by a new residence built in the south wing.

To conclude, it is suggested that the first residence was constructed sometime between 1687 and 1708 and was demolished sometime between 1716 and 1730, at which date we have map evidence for the existence of a new residence to the south and new buildings in the east wing (see below).

The period from 1687 to 1730 coincides with the following seven managers' periods of tenure: Poul Steen (1685-93), Cornelius Griflow (1693-1703), Jacob Hersleb (1703-1707), Johan Hartvig Henrich Weber (1707-1709), Christian Kortholt (1709-1716), Aage Rasmusen Hagen (1717-1720), and Rasmus Hansen Fyhn (1720-1748).¹²²³

6.2.4. The second managers' residence (c. 1730 – 1783)

As stated, map evidence indicates that a new residence was built in the south wing of Kongsgården's walled precinct at some point between 1716 and 1729/1730. Following Lillie's map of the first residence in 1716, the earliest dated map I have found which shows buildings in the precinct dates to 1729. This depicts elongated rectangular buildings in the eastern and southern wings, probably a simplified representation of the situation recorded on a map of 1730 and another possibly near contemporary map (Fig. 6.4). The latter two show two buildings in the south wing, one of which has a distinctive L-shaped ground plan, and two differently sized buildings placed end-to-end in the east wing on the former site of the first residence. As will be discussed below, with the exception of the L-shaped building, they show an arrangement of buildings that differs from that recorded on later maps.

¹²¹⁸ The maps are scaled in alen (1 sjællandsk alen = 62.80 cm from 1683 to 1698, and 62.77 cm between 1698 and 1820). https://no.wikipedia.org/wiki/Dansk_alen and <https://snl.no/alen> (22.05.2018).

¹²¹⁹ Lysaker 1989: 45.

¹²²⁰ Lysaker 1989: 47-48. Lokalia nr. 14, Statsarkivet. The building is described as '... en Stald med Proviantforvalterens Høe': a byre/stable with the manager's hay.

¹²²¹ Lysaker 1989: 48. This intrusion and inconvenience seems to have contributed to tensions between the two men, which ultimately resulted in Weber being relieved of his post!

¹²²² Separate, free-standing 'loft' buildings used for storage and guest accommodation are known from medieval times and into the post-medieval period, so the presence of such a building here cannot be entirely ruled out.

¹²²³ Appendix I.



Figure 6.4. Details of three maps showing Kongsgården with the second managers' residence and other buildings in the south wing, dated respectively 1729 (left), 1730 and undated.¹²²⁴

The distinctive L-shaped ground plan allows us to identify the building on the map of 1730 as the manager's new dwelling house. A building with the same ground plan is depicted on later maps and plans which explicitly identify it as such. The most informative of these are the two complementary plans of Kongsgården drawn up by Eckleff in 1758.¹²²⁵ Not only do his plans depict Kongsgården's main stone buildings in the north and west wings, but they also show a fenced-off enclosure containing a number of timber buildings in the south wing, one of which has a distinctive L-shaped ground plan (Figs 6.5 and 6.6.). These detailed, annotated plans clearly identify this building as the provisioning manager's dwelling house.¹²²⁶ A large neighbouring timber building to the east is identified here and elsewhere as a threshing barn, which also contained stalls for both horses and cattle and a wagon shed.¹²²⁷ The plans depict this multi-purpose barn and the dwelling house in plan, cross-section and elevation. Two smaller buildings stand against the southern perimeter wall, identified on Eckleff's plan as a shed and a raised storage building.¹²²⁸ The dwelling house, barn, outbuildings and a well all stand within a fenced enclosure which demarcates the limits of the manager's combined residence and farm. To the east, the fence meets a single timber building which stands to the north of the barn building and projects into the unfenced area of the precinct. This is identified on the plan as an old, dilapidated storehouse,¹²²⁹ presumably part of the military depot rather than the manager's enclosure. This is the southernmost of the two buildings shown here on the maps of 1730, both of which were also documented by excavation lying over the first residence.

¹²²⁴ Left to right: Søndre Trondhjems amt nr 12: Situations Carthe over Trundhiem oc Nider-Aas Elves løb, Sør-Trøndelag, 1729 (Kartverket); Søndre Trondhjems amt nr 16: Situation over Trundhiems Bye, Sør-Trøndelag, 1730 (Kartverket); Carte over Trundhiems Bye. Uncertain date, though probably after 1730 (NTNU UB).

¹²²⁵ Appendices L & M.

¹²²⁶ 'Proviants forvalterens Vaane Huus'.

¹²²⁷ 'Lade, med Heste og Fae Stald', and see further below.

¹²²⁸ Respectively 'Schiul etc.' and 'Stolpe boed' ie. a *stabbur*, or storehouse raised off the ground on posts.

¹²²⁹ 'Gammelt forfalden Material Huus'.

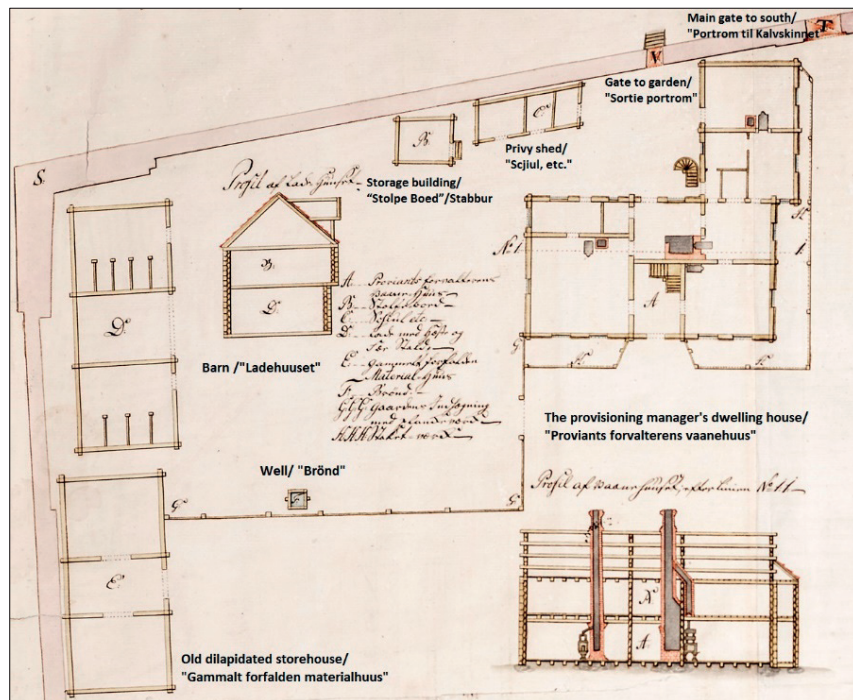


Figure 6.5. Detail of Eckleff's 1758 plan of Kongsgården with my annotations showing the buildings in the provisioning manager's fenced enclosure.¹²³⁰ The ground floors of the buildings as well as cross-sections of the dwelling house and barn are depicted. North to bottom.

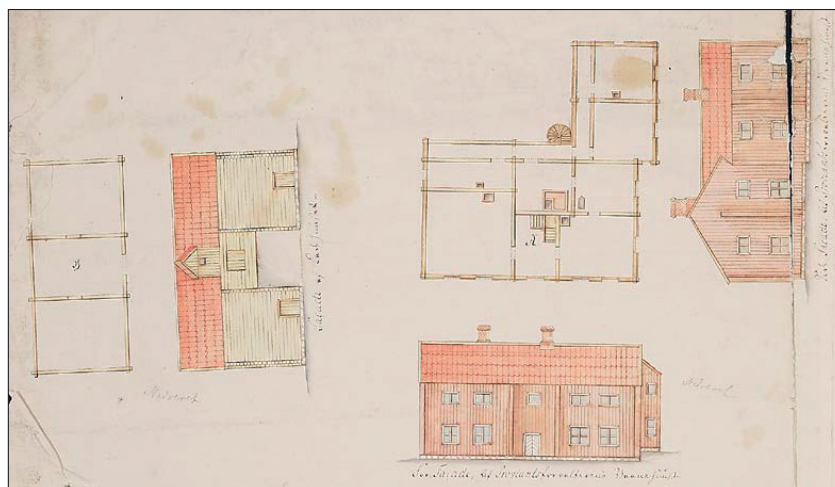


Figure 6.6. Detail of Eckleff's 1758 plan of Kongsgården showing the plans of the first (upper) floors of the dwelling house and barn and elevation drawings of their facades.¹²³¹

Eckleff also drew a map of Trondheim dated 1761 which shows the two larger buildings in the same enclosure within Kongsgården's precinct. The L-shaped building is identified here as the manager's dwelling house (Fig. 6.7). Interestingly, this map also shows a formal garden situated outside the precinct immediately to the south of the manager's enclosure, from which it was accessed via a gap in the precinct

¹²³⁰ KBK XVIII-1 56b (Riksarkivet).

¹²³¹ IB1719 (Riksarkivet).

wall (corresponding to a gate depicted on Eckleff's 1758 plan of Kongsgården). The managers' tilled fields, hayfields and pastureland are marked ('Z'), extending to the east and west of Kongsgården.¹²³²

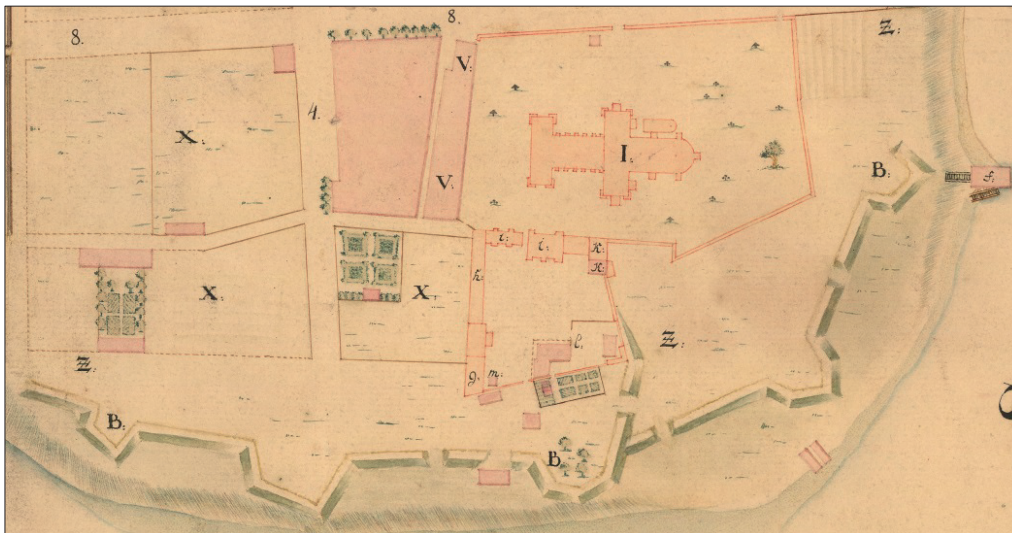


Figure 6.7. Detail from Eckleff's map of Trondheim dated 1761 showing the Cathedral, Kongsgården and immediate environs. The fields belonging to the managers' farm are marked 'Z'.¹²³³

The manager's enclosure inside Kongsgården, with its dwelling house and barn, as well as the garden and fields outside it, are also shown on a later map of 1775 (Fig. 6.8).¹²³⁴

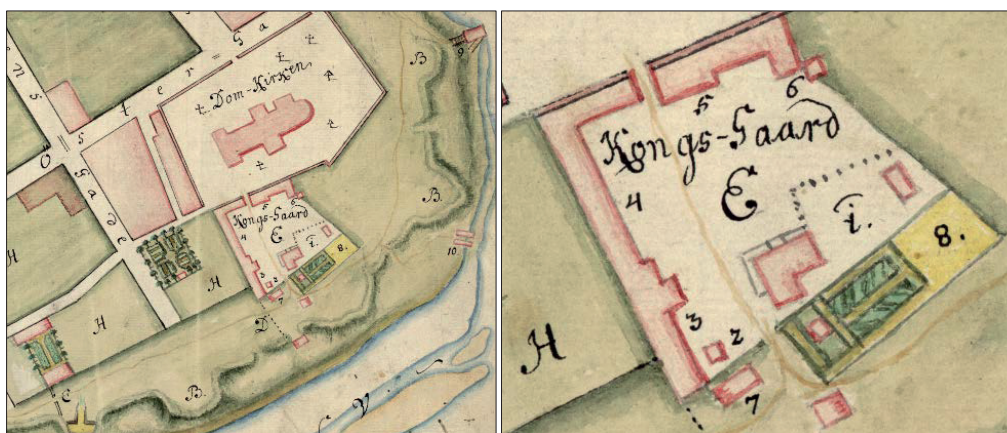


Figure 6.8. Details of Berlin's map of 1775 showing the Cathedral, Kongsgården and immediate environs.¹²³⁵

As touched upon above, discrepancies between the 1730 map, Eckleff's 1758 plans and the later maps raise questions about developments in the spatial organisation of the eastern and southern wings after c. 1730. As in the case of the first residence, the archaeological evidence provides insight into the character of the historically recorded buildings, and the area's development in space and time, including

¹²³² The map's key states: 'Proviants forvalteren tillagt'.

¹²³³ Søndre Trondhjems amt nr 47: Situations Cart over Trondhjem By og Fæstninger. J.N. Eckleff (Kartverket).

¹²³⁴ The map's annotations state that the area from J to C was used by the manager: 'fra J til C er af Proviand-Forvalter Heren brugt'. In addition, the yellow area numbered 8 marks an easterly extension of the garden after 1766: 'Kongs-Gaards Haugen som er 1766 bleven større anlagt, som med den gamle Coullör marqueret er'.

¹²³⁵ Plan Over Fastningens Grunde udi Tronhiem. J. D. Berlin, 1775. (NTNU UB).

structures that are *not* recorded historically. A synthesised interpretation of the archaeological and historical evidence will be presented in the following section in order to more closely identify the architectural character of the buildings and the enclosure's changing structural composition and development in space and time. Also included will be the testimony of a fire-insurance survey of the dwelling house conducted in 1766, which provides further information regarding the architectural character, layout and use of the dwelling house in particular.

The house stood for at least 53 years until 1783, at which time it is recorded as being dilapidated and a danger to health, forcing its occupant to move into the city.¹²³⁶

The building's period of use coincides with the tenures of three managers: Rasmus Hansen Fyhn (1720-1748), Arve Gudmansen (1748-1765), and Peter Sønneck (1765-1783).¹²³⁷

6.3. The managers' residences: their associated practice-material assemblages

The previous section presented topographical developments in Kongsgården's precinct during the period in question based predominantly on the testimony of historical sources. This section provides an account of the archaeological evidence - building foundations, deposits, structures and objects - associated with the two successive manager residences which we have identified through the historical sources. However, it also attempts to interpret the archaeological evidence by means of a synthesis with available historical evidence. In so doing, it provides a contextualised exposition on the nature of the material assemblages which form the basis for a discussion of the nature of social practice and the production and use of space in this locale (section 6.4).

For more detailed descriptive accounts of the building remains, and categorised and quantified breakdowns and illustrations of the range of objects discovered by excavation for each residence, the reader is referred to Appendices J and K.

6.3.1. The first residence (c. 1695 - c.1730)

6.3.1.1. The buildings, garden and external features

The first important thing to note is that, rather than the solitary building depicted on Weber's and Lillie's maps, excavation revealed that the east wing was in fact occupied by two buildings placed end-to-end and parallel with the precinct's eastern wall (Fig. 6.9 and Appendix J). Stratigraphic evidence suggests that the northern building (K332) was built first, although the interval between that event and the construction of its southern neighbour (K334) may have been months or years. That they eventually stood simultaneously as closely-spaced neighbouring structures is nonetheless clear. A coin dated 1706 was found in the gap between the cellar walls and cellar cut for building K334; if not intrusive, this may provide a *terminus post quem* for its construction. Both buildings were demolished down to their foundations preserving their full rectangular ground plans.

The two buildings have different architectural characteristics, and stood end-to-end at the same time. The question therefore arises: which of these is the building depicted on the maps of 1708 and 1716 and identified there as the manager's dwelling house? If one functioned as the dwelling house, what was the function of its neighbour? Alternatively, should we interpret both buildings as a functionally integrated unit housing differentiated activities and practices related to the managers' first residence?

In an attempt to resolve this uncertainty, the dimensions of the buildings depicted on the maps of 1708 and 1716 (Figs 6.2 and 6.3) and the excavated buildings K332 and K334 (Fig. 6.9.) may be compared. This shows that, if the buildings depicted on Wibe's and Stockhoff's maps of 1708 (Fig. 6.2) were drawn in accordance with the scales provided on them, there is good correlation in size between a) the buildings as shown on both maps, and b) the buildings shown on the maps and the excavated building K334. The building depicted on each map is approximately 30 alen long by 15 alen wide (ie. c.

¹²³⁶ Lysaker 1989: 52-53.

¹²³⁷ Appendix I.

19 metres by 9.5 metres).¹²³⁸ This corresponds closely with the excavated dimensions of building K334, which was 18.75 metres long by 9 metres wide. The excavated dimensions of the smaller building K332 were 15 metres by 7.5-8 metres. In addition, the position of the building within the east wing as depicted on the maps corresponds closely to that of building K334. Consequently, this evidence strongly suggests that building K334 is identical with the building identified as the residence in 1708.

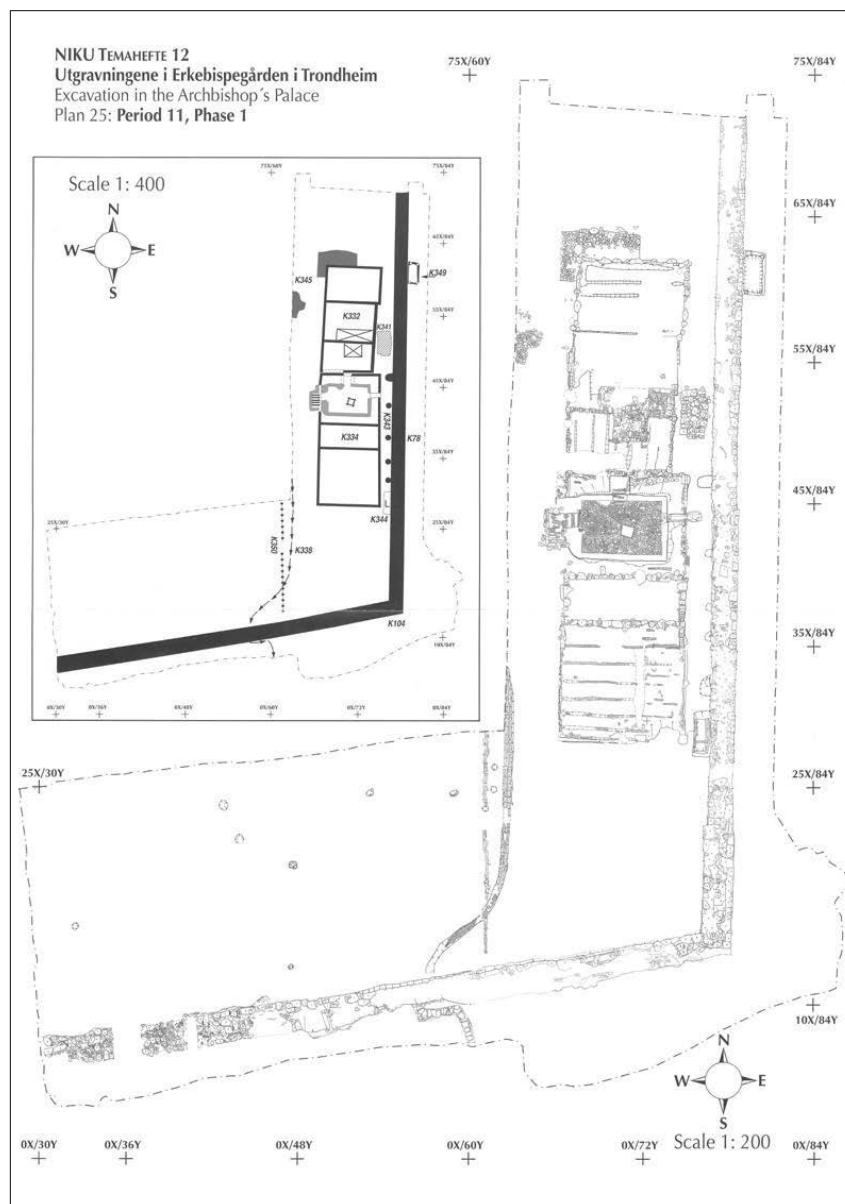


Figure 6.9. The first managers' residence and associated features: excavation plan with explanatory key (inset).¹²³⁹

¹²³⁸ 1 sjællandsk alen = 63.26 cm between 1541 and 1683; 62.80 cm from 1683 to 1698; and 62.77 cm between 1698 and 1820. https://no.wikipedia.org/wiki/Dansk_alen and <https://snl.no/alen> (22.05.2018).

¹²³⁹ After Nordeide 2000a, Plan 25, Period 11 phase 1. Not to original scale. See Appendix J for scaled plan.

This correlation is not corroborated by Lillie's maps of 1716, however (Fig. 6.3). The dimensions of the building shown there are c. 35 alen long by 15 alen wide (c. 22 metres by 9.5 metres). This is longer than excavated building K334, but not as long as buildings K332 and K334 combined. There is therefore no direct correlation in size between the building depicted on Lillie's maps or either of the excavated buildings (or even both buildings combined). While the location of the building on Lillie's maps coincides reasonably well with that of building K332, the northern end of an enclosed garden occupies the space where archaeological evidence attests the presence of building K334. Consequently, there is no agreement in terms of either size or location between the building shown on Lillie's maps or the excavated buildings.

The ambiguities arising between the conflicting testimonies of the map and archaeological evidence cannot be conclusively resolved. If we choose to equate building K334 with the dwelling house shown on the 1708 maps, we then have to ask why building K332 was omitted. One answer is that it may not have existed at this time, being built subsequently, although there is archaeological evidence to suggest that K332 was built prior to K334. Another explanation might be that building K332 was not regarded as important enough to depict. This seems to have been the case for two farm buildings which also stood in the precinct according to contemporary documents.

Given the uncertainties regarding the identification of the dwelling house presented above, and further ambiguities within the archaeological evidence which will be presented below, I have chosen to provide two interpretations of the evidence. Both, however, see the buildings as units in a functionally integrated residential complex, though in differing ways.

The first interpretation is that building K334 is the building identified as the residence in 1708, while building K332 is a separate kitchen building, in which food consumed by the residents of K334 was prepared. Indeed, K332 may also have housed other practical functions related to the household as well as the manager's farm, and as such it might be interpreted as a 'smokehouse' (*eldhus*). Perhaps this was one of the two 'farm' buildings mentioned in 1708? Such an ancillary function and status may have also ruled out its depiction on the maps of 1708. As a two-storeyed *svalgangshus*, building K334 comprises a type commonly used as a dwelling house in contemporary urban and rural contexts. However, as will be seen, its interpretation as a dwelling is compromised somewhat by its lack of unequivocal remains of hearth and chimney foundations. The absence of a large foundation for a kitchen hearth may be explained by the interpretation offered for building K332, however, and explanations for the apparent absence of foundations for chimneys and heating hearths are offered below.

Although it does not coincide as well with the map evidence, an alternative interpretation is that K332 was the dwelling house in which the family resided. This has support in the building's provision of heating and cooking facilities. However, the building was smaller than K334, with correspondingly smaller rooms, and no clear evidence to suggest that it was anything other than single-storeyed. Consequently, the family would have had a restricted living space if they were confined to this building. However, building K334 may also have provided the family with dwelling space, if, for example, its upper floor (the 'loft' mentioned in 1708?) contained rooms which could be used for sleeping, for example. Perhaps building K334 had a dual function, its ground floor and cellar perhaps being utilised in connection with the manager's professional role, while the upper floor provided the family with extra domestic space? Alternatively, this building may have been devoted entirely to military purposes, perhaps acting as a storage building, for example.

Of these alternatives, I favour the first. In doing so, I place emphasis on the better correlation of the archaeological evidence with the map evidence of 1708, the customary utilisation at the time of the *svalgangshus* building type as dwelling houses, and the possible explanations for the lack of clear evidence for hearth and chimney foundations in building K334 suggested below. This choice has influenced the way in which the following descriptions of the buildings have been compiled, although this is done with all due reservation.

Building K334: a 'svalgangshus'

The archaeological evidence strongly suggests that the largest building K334 was a *svalgangshus* (galleried house).¹²⁴⁰ This is a type of building familiar in Norwegian urban and rural contexts from the 16th to 18th centuries, where it normally functioned as a dwelling house. It was usually a large, two-storeyed, log-built house with a cellular room plan and one or two external passages, or galleries (*svalganger*), running the length of one side of the building at ground- and/or first-floor (*andre etasje*) levels.¹²⁴¹

The external galleries that characterise the archetypal *svalgangshus* facilitated access to rows of rooms which may or may not have had internally communicating doorways. The evidence that building K334 had an upper gallery serving rooms in a second storey lies principally in the row of holes (K343) for supporting posts placed along the building's eastern side. In addition, the stone foundation K341 may have supported the base of a staircase to the upper gallery that projected from its northern end. Such galleries often had a privy (*lokum*) built into one end. The privy pit K344's location is consistent with the presence of such a toilet situated directly above it at the southern end of the external gallery. Further evidence that the building was two-storeyed lies in the larger pad stones placed at the corners of the building, presumably provided to bear the weight of two floors at the jointed corners, as well as the sturdy partition wall foundations which would have helped to support an upper floor.

That the building had a cellular room plan is evident in the layout of its ground floor, which had a row of three rooms of varying sizes occupying the full breadth of the building. Each might have been accessed from the outside via a ground-floor passage/gallery situated below the upper floor's projecting gallery. However, no archaeological evidence for a ground-floor passage survived below building K334's upper gallery to the east. Indeed, if the staircase to the upper gallery stood on stone foundation K341 it would have blocked access to this passage from the north, while the privy's latrine pit would have blocked access from the south. Consequently, the ground-floor rooms may have been entered via one or more doors in the western side of the building. Although speculative, I suggest that access may have been gained via a single door placed at the western end of the building's narrow central room, from which access to the neighbouring rooms would have been facilitated via internal doors. Since there was no archaeological evidence for an external passage against this frontage, but rather a compacted gravelly surface, it is suggested that the ground-floor was accessed directly from the courtyard.

A thick-walled, stone-built cellar occupied the space beneath the building's northern room. The cellar was not stone vaulted, but rather lay directly under the room's plank floor. The provision of two entrances to the cellar, one from the room above via a trapdoor, and one from the exterior via a sunken stairwell in the western wall may indicate that it had a dual role, serving both private and official functions (see further below). The fact that the cellar's external entrance lies to the west and not to the east may also provide tentative support for the suggestion that the ground floor was entered from the west. There was clear evidence that the building's southern room was also plank-floored. The total floor area of the building, combining both floors, was c. 338m² (2 x 169m²).

The absence of clear evidence for hearth and chimney foundations is problematic if K334 is to be interpreted as a dwelling house. Heating would have been essential, and hearth and chimney foundations are a normal feature of this type of building. Consequently, an alternative interpretation as a storage building cannot be ruled out entirely.¹²⁴²

The apparent absence of hearth foundations might, however, be explained by their having been relatively insubstantial and completely removed during the building's demolition. A low, floor-level brick or stone foundation for a ceramic or iron stove, for example, would not necessarily have been set in a deep foundation hole. However, a large open hearth (*peis/grue*) would have required sturdier foundations, as would a chimney spanning both floors. Alternative solutions may explain this absence: for example, a chimney foundation may have been placed on the cellar wall, while ground-floor hearths or stoves may have been connected to chimney pipes which were mortared directly onto the timber

¹²⁴⁰ See Appendices J and O, and Fig. 2.3 which shows the excavation of K334's foundations in progress.

¹²⁴¹ Sellæg 1991; Ekroll 1991; Christensen 1995: 120-132; Roede 2001: 103, 253-256; Eliassen 2006: 198.

¹²⁴² Lars Roede pers.comm.

rafters supporting the upper floor.¹²⁴³ Furthermore, as suggested above, the absence of a large kitchen hearth foundation might be explained by the possibility that kitchen functions - and the hearth for them - were housed in the neighbouring building to the north, K332.

Another possibility emerged as I re-examined excavation documentation in the final stages of writing this study which could suggest that there might have been a partly robbed-out stone foundation at the eastern end of the middle room (see Fig. 2.3).¹²⁴⁴ This is not included on the final phase plans, and consequently originally escaped my notice. If this loose concentration of large stones represents a foundation, it may have supported a centrally placed chimney to which free-standing stoves in neighbouring rooms could have been attached.

We do not know the exact number of rooms in building K334: three were recorded on the ground floor, and we can assume that there was at least an equivalent number on the second floor (*loft*) above.¹²⁴⁵ We can only speculate regarding their functions. If we accept that this was the dwelling house, then the ground floor presumably contained a living room (*dagligstue*) in which family members gathered daily and in which some family members may have slept. This may have been the northern room above the stone cellar. This room was also nearest to the neighbouring kitchen building. A separate room (*salen*) may have been provided for entertaining. Such rooms could be located on the upper floor, and could also have been used for accommodating guests. The upper floor could also have contained a bedchamber for family members, as well as a storeroom for clothing and other items. The provision of a privy at the end of the passage serving this floor may provide support for the presence of at least one bedchamber here.¹²⁴⁶ The narrow middle room on the ground floor may have functioned as a bedchamber, or alternatively, an entrance hall, although this is speculative. We do not know whether the building contained an office like its successor, although a possible candidate might be the large southern room on the ground floor.

Building K332: dwelling house or possible 'eldhus'?

This timber building, equipped with chimneys and hearths in contrast to its neighbour K334, may have functioned as the managers' dwelling house, comparatively smaller though it was. However, if the interpretation that building K334 is the dwelling house identified on maps of 1708 is accepted, then another interpretation must be advanced for K332. It has been suggested that it was an ancillary building which housed functions closely related to the domestic requirements of the occupants of the *svalganghus* K334, and possibly also functions related to the running of the manager's farm. This may find some support in the archaeological evidence.¹²⁴⁷

Like K334, building K332 possessed a cellular ground plan, although there is no firm evidence that it also possessed a *svalgang* or was more than a single-storey building. Indeed, it is questionable whether its stone foundations were substantial enough to carry a second floor. Furthermore, the eastern foundation for its northern room projects slightly, suggesting that it was a later addition, or extension, to an originally smaller, single-storeyed building.

Building K332 contained deep-set stone and brick foundations for a chimney and two hearths, which contrasts with the lack of similarly substantial foundations in K334. The foundation in K332's stone-floored central room is interpreted as a combined base for a large open hearth (*peis/grue*) and chimney. The hearth occupied roughly a quarter of the room's floor area. The hearth's proportions and the stone-paved flooring suggest that this room was used for practical functions, such as the preparation of food, rather than as a living room (*stue*), for example. The central room was flanked by two slightly smaller rooms, both plank-floored, of which only the southern room contained a hearth. It is uncertain whether each room was accessed independently from the courtyard to the west, or via a single doorway

¹²⁴³ Jo Sellæg pers. comm.

¹²⁴⁴ A concentration of large stones can be seen at the east end of the building's central room behind the bent figure in dark blue at foreground right in this excavation photograph.

¹²⁴⁵ See Appendix O for a suggested schematic representation of the building's internal organisation.

¹²⁴⁶ Christensen 1995: 130.

¹²⁴⁷ See Appendix J.

to the central room and internal doorways, for example.¹²⁴⁸ The building was 15m long x 7.5-8m wide, with a total floor area of c. 120 m².

The provision of separate buildings equipped with hearths for cooking, baking and brewing - so-called smokehouses or *eldhus* - was a familiar and long-established arrangement on farms and within urban tenements at this time.¹²⁴⁹ Although such buildings were predominantly single-roomed, examples with more than one room are known. Given its cellular plan with three small rooms, and its two hearths, the building may have been built to house multiple functions usually associated with an *eldhus*. In addition to cooking, baking and brewing, these may have included butchery, smoking meat, corn-drying, cheese-making and other dairying processes, washing laundry, heating water and preparing feed for livestock. The building may even have provided lodgings for servants, farmhands or guests, possibly in the southern room with its hearth. Essential equipment installed in this building would have been a large metal brewing pan and a griddle for baking flatbread. The large open hearth in the central stone-floored room might have functioned as a combined cooking hearth and corn-drying and baking oven, for example.¹²⁵⁰

Evidence for a well and a neighbouring farm building?

As mentioned, historical records state that the manager was granted the use of nearby fields and pastureland and two small farm buildings which stood within the precinct. One of these was a stable/byre in which hay was stored, indicating that the manager farmed livestock. We have no firm historical evidence regarding the locations of these farm buildings. However, since the area to the south of building K334 was demonstrably empty of buildings, and utilised as a garden and dumping area, it is suggested that at least one building may have stood just to the west of the excavated buildings. Evidence for this may lie in the wood-lined drain K338 which might have originated in a byre or stable, for example, built to facilitate the removal of animal effluent from the precinct. As a possible *eldhus*, building K332 could have housed activities of central importance to the running of the farm, as listed above. Although mentioned in contemporary historical documents, the farm buildings are not shown on the maps of 1708 which only show the manager's residence, presumably because the other buildings (including K332?) were not considered important enough to be recorded.

A conveniently situated well would have been essential to the running of both farm and household. It is suggested that the well shown on Eckleff's later plan of 1758, and described there as the bakery well, was originally dug to serve the first residence.¹²⁵¹ This would have been located conveniently just a few metres to the west of building K332.

6.3.1.2. The objects (portable material culture)

Numerous deposits and occasional structures containing objects lay in synchronic association with the buildings. However, the privy pit K344 comprised the only secure *primary* context which contained material which can be securely associated with the occupants of the buildings.

The majority of artefacts derived from deposits which accumulated outside them; *secondary* contexts which may contain some residual objects which derived from earlier occupation, as well as material deriving from other sources in the precinct. They include an open area to the north of building K332, trampled surfaces immediately to south of building K334, a fence-line and drain, and accumulations in the open area to the south of K334. The only finds not to be included here are those from the garden soil in the south (site group 335). This area would probably have been the recipient of much contemporary household refuse. However, it also contained much residual (older) material since it also lay open during the previous phase of occupation and was frequently dug over, meaning its content of material is of insecure relation with the first residence. The buildings were eventually

¹²⁴⁸ See Appendix O for a tentative reconstruction of the building's internal organisation, access and permeability. I have provided two alternative scenarios, although I favour access via the central room.

¹²⁴⁹ Christensen 1995: 91-94. Such buildings were also known as *bryggehus* (brewhouse), *størrhus* or *masstu/matstue* (food parlour).

¹²⁵⁰ Christensen 1995: 92.

¹²⁵¹ The well marked 'V' near the bakery on Fig. 6.1.

demolished down to their foundations, leaving little debris. Deposits in the open area to the south may contain material associated with this process.

Functional categories and spheres of practice

The material has been categorised in accordance with the functional categories outlined in Chapter 5 and is presented in detail in Appendix J. The following account summarises and discusses the range of categorised material with specific regard to its association with practices possibly performed in and around the buildings described above.¹²⁵²

A broad range of functional categories was represented in the material generally. However, with the exception of the ceramic sherds associated with categories 1 - 4, most are represented by comparatively few items, often fragmentary. This may reflect differential patterns of disposal and waste management, as well as the more unquantifiable and arbitrary outcomes of chance loss, removal or differential preservation. Most categories lay in deposits near and to the south of building K334. No significant correlations between individual categories and buildings were discerned, with the exception of sewing equipment (category 12) which was confined to the area north of K332.

The preparation, storage and consumption of food and drink (categories 1 - 4)

The most apparent observation is that the bulk of objects which entered both the privy pit K344 and the external deposits were associated with the preparation, storage and consumption of food. Of these, the most numerous artefact type was pottery in the form of sherds of kitchenwares, tablewares, teawares and other beverage related vessels. Tablewares were the most numerous - 51% of ceramic sherds in external deposits - while kitchenwares comprised 34%. The bulk of kitchenwares (category 1) were imported, notably Dutch and German cooking pots (31%) although local Trønder redware cooking pots may have occurred in very small quantities. Tablewares (category 2) were dominated by imported wares, principally Dutch blue tin-glazed wares (29%), although locally produced Trønder tablewares were represented (13%). Tablewares were in the majority in the privy K344, most of which were fragments of Dutch tin-glaze plates. The only other items associated with food consumption (category 2) were a few table knives, a two-pronged fork and a fragment of a particularly fine 17th-century *façon de venise* comfit or salt bowl.

Glass drinking and serving vessels (category 3) were present in significantly fewer numbers than their ceramic counterparts. Nonetheless, a broad range of imported glass drinking vessels are represented, encompassing both long-established types in soda-lime glass and newer arrivals on the contemporary market represented by Bohemian/Silesian potash-lime and English potash-lead glass varieties. The long-established types found here take the form of Roemer, *passglass*, and *façon de venise* filigree beakers and *façon de venise* stemwares, while newer forms comprise English-style lead-crystal stemwares. Some fine *façon de venise* serving vessels are represented in the form of decanter jugs. That both wine and spirits were being consumed here is confirmed by the presence of fragments predominantly deriving from globular wine bottles and square case bottles (usually for spirits), with individual examples of Kuttrolf and hexagonal forms (category 4). Drinking vessels in ceramics included a small amount of imported Chinese porcelain in the form of teawares in the external deposits (1% of the ceramic assemblage).

As stated, the only animal bone (category 5) to be systematically analysed was that which was recovered to the north of building K332.¹²⁵³ Although analysed, it was not contextualised closely, and the bone may have been dumped here as food refuse that originated in both residences, since the area in question lay open throughout the period in question. Since it cannot be tied to one particular residence, this material will be discussed more generally in the analytical section (6.4). Bone from the privy pit K344 was unfortunately not analysed, but analysis of the botanical remains revealed the presence of exotic fruits in the managers' diet, notably figs and grapes (presumably raisins).¹²⁵⁴ A hen's egg from the same context may have originated from the manager's own hen coop.

¹²⁵² These include practices associated with the 'contexts of practice' laid out in Chapter 4 i.e., Dwelling, Sustenance and sociability, Personal appearance, and Health, as well as others.

¹²⁵³ Hufthammer 1999.

¹²⁵⁴ Sandvik 2000.

That ceramics make up the vast majority of discarded items associated with food preparation and consumption is not surprising. Ceramics generally were relatively cheap (in comparison to metal) and, although prone to breakage, were easily replaceable. Metal vessels had scrap value, and would have been melted down when they became redundant. Wooden vessels may have ended up as firewood. A few of the wares found here - notably the Dutch tin-glazed wares and Chinese porcelain - would have been more expensive than the redwares and slipwares used at table or for cooking. That only a few metal eating utensils were discarded or lost is not surprising given their intrinsic value. What is surprising is that so few glasswares entered the deposits. However, this is likely to indicate that common-sense precautions were taken to dispose of sharp broken material in contexts where it would not pose a danger to health. Most glass, including a large amount of broken window glass, ended up in the privy pit and the more secluded south-eastern corner of the precinct, while other rubbish pits and middens may have lain outside the area of excavation.

While some form of selective refuse management may have been practiced, discarded material still ended up in the external deposits near the buildings. Most of the food- and drink-related items (categories 1 to 4) were distributed throughout the deposits to both north and south of the buildings, as well as the small primary assemblage in privy pit K344. Their distributions relative to the buildings was examined in order to see if there was any correlation between their location and the suggestion that building K332 may have functioned as the kitchen where food was prepared for consumption in the neighbouring dwelling house K334. No differentiation in the distributions of tablewares, kitchenwares and glass vessels could be discerned in *external* deposits which might have suggested their particular association with practices conducted exclusively in one or other of the buildings. The only ware type with an exclusive distribution to the south was Chinese porcelain. The southern area contained the greatest range of ware and vessel types and the greatest amount and range of objects generally, and may have constituted a convenient 'dead area' used for dumping refuse from the residence.

However, the most significant testimony in this regard is offered by privy K344. It produced a small, but nonetheless varied assemblage of items which we can reasonably assume to have originated in the *svalgangshus* K334. It contained a few potsherds which may have been used to prepare food, but the vast majority comprised tablewares, notably Dutch tin-glazed plates. In addition, the privy contained imported glass stemwares and serving vessels, some of very fine quality, a small amount of food refuse, and clay pipes. In its character and range, this material is arguably consistent with K334's interpretation as a residential building in which people gathered to eat, drink, and smoke.

Clothing, personal adornment and grooming, health and hygiene (categories 7 - 10)

There are disappointingly few items linked to practices associated with the care, grooming or presentation of the human body or person. Items of clothing and adornment (categories 8 and 9) encompassed only a fragmentary shoe, a shoe buckle, three clothes fasteners, a possible aiglet, and a semi-precious stone from an item of jewellery. Those connected with the residents' toiletry, health and hygiene (category 10) comprised only a few fragments of bottles for pharmaceutical products and possibly also eau-de-cologne, a double-sided bone comb and a combined ear spoon and manicure tool.

Clay pipes (category 7) can be regarded as items of personal equipment, used to aid the ingestion of an addictive stimulant drug. They were fragile, inexpensive items, carried and used in close association with the person. The bowls are types current during the late 17th and early 18th centuries. The fact that all are of Dutch origin matches their predominance in Norwegian toll lists at this time. Although the pipe material is not large, we can conclude that smoking was an established practice in the early 18th century households, underlined particularly by the presence of pipes in building K334's privy pit.

Literacy, numeracy, trade, commerce, children's toys and pastimes (categories 11, 14, 15, 24)

Items linked to literacy and numeracy, and to the spheres of trade and commerce are poorly represented (categories 11 and 24). Of particular interest, however, are four Nuremberg jettons. These were manufactured prior to 1660, and may be residual from earlier activity on the site. However, they were found on the gravel surface to the north of building K332, and, despite their antiquity, could conceivably have been used as casting counters in the earliest managers' accounting procedures. In addition, a slate pencil, a few coins and three leaden cloth seals were found. The only item which might have been a

child's toy or a curio (category 14) was a fragmentary pipeclay figurine, while a single possible gaming piece for tables/backgammon was all that can be associated with recreational pastimes (category 15).

Craft-, construction- and maintenance-related practices (categories 6, 12, 13, 23)

Very few tools (category 6), craft-related equipment and waste lay in connection with the buildings (categories 12, 13 and 23). These can nonetheless be variously linked to building and maintenance work (masonry work), farming (reaping/grass-cutting), textile-working (sewing and spinning), leatherworking, woodworking, boneworking and metalworking (smithing and casting). The sewing equipment lay exclusively to the north of building K332.

The use of weapons and firearms (category 16)

Given Kongsgårdens role as a military depot, it is unsurprising that items of military equipment appear in the deposits (category 16). However, these are remarkably few in number. Two iron cannonballs and five musket triggers have the most demonstrable connection with the depot's role as a store for arms and ammunition. A few gunflints, a lead 'flint pad' for holding a gunflint in place, and lead musket balls were also found. A screwdriver (category 6) may have been used in a variety of contexts, but a particular use for mounting and maintaining musket trigger mechanisms might be suggested for it.

Domestic fittings, heating, lighting and security (categories 17, 18, 19)

With the exception of broken window glass, very few items associated with heating, lighting and securing the residence were found (categories 17 and 19). In addition to window glass, a few lead comes and an iron hinge-plate for a casement window were recovered, as was a small amount of ceramic tile fragments which may have originated from demolished stoves in building K334, for example. Locking equipment was confined to a few rotary keys and a padlock. There were likewise few domestic fixtures, fittings or furnishings (category 18), which were confined exclusively to decorative metal and bone mounts which may have been placed on chests, for example.

The care and use of animals (category 22)

There were no traces of farm or domesticated animals, with the exception of a few items of horse equipment in the form of two horsehoes and some horseshoe nails.

Dating of the associated artefact assemblage

The ceramic material deriving from these contexts is not closely datable to the degree of refinement required for a study such as this. However, the coins (date range 1588-1699), associated clay pipe bowls and glass vessels, as well as the presence of local Trønder ware (introduced during the mid-late 17th century) and Chinese porcelain (not imported to Norway on a significant scale prior to 1700), combine to indicate that the material was produced and in circulation during *the late 17th and early 18th centuries*. This corresponds to the period of occupancy of the first residence suggested by historical sources.

6.3.1.3. Summary conclusion: a functionally integrated residential and farm complex

Based on the comparison of the historical and archaeological evidence presented above, it is possible to propose that the two excavated buildings represent functionally integrated elements in the first managers' residential complex: namely, their dwelling house - *svalgangshus* K334 - and a smaller neighbouring kitchen-building, or multifunctional *eldhus* K332. An alternative interpretation, that K332 was the dwelling house and K334 a storehouse with loft above, is possible, though it is felt that the weight of evidence favours the former interpretation. In addition, archaeological evidence provides slight evidence for the presence of an historically documented farm building just to the west of K334.

It was in these buildings that numerous practices associated with the day-to-day running of the household and farm took place, and in which many of the objects found in association are likely to have been used. The privy pit attached to building K334 contained a small but interesting assemblage of fragmentary items predominantly associated with the preparation and consumption of food, the serving and consumption of alcohol, and the consumption of tobacco. These are practices associated with sustenance and sociability, and are likely to have been used in building K334 by the members of the managers' household. A large range of fragments of kitchenwares, tablewares and glasswares also lay in

deposits surrounding both buildings, although there was no exclusive correlation of concentrations of kitchenwares with building K332 which may have helped to confirm its interpretation as the site of food preparation practices. A few jettons might be connected with the manager's profession, while only a few tools and waste products which may have been used in connection with craft-, maintenance or farm-related work practices were found. Likewise, items relating to the personal appearance, health and hygiene of the individuals who lived and worked here were comparatively few.

6.3.2. The second residence (c. 1730 – 1783)

6.3.2.1. The buildings, yard and garden

Excavation revealed the foundations of the building with a distinctive L-shaped ground plan in the south wing shown on contemporary maps and plans, and identified as a second dwelling house provided for the provisioning managers: K355 on Figs 6.10 and 6.11.

With the exception of its western walls, most of its foundations were caught within the area of excavation. In addition, the foundations of three smaller neighbouring timber buildings were revealed in the south wing (K356=K358, K362 and K376), as well as two in the east wing (K373 and K374) (Figs. 6.10 and K.1.). See Appendix K for detailed descriptions.

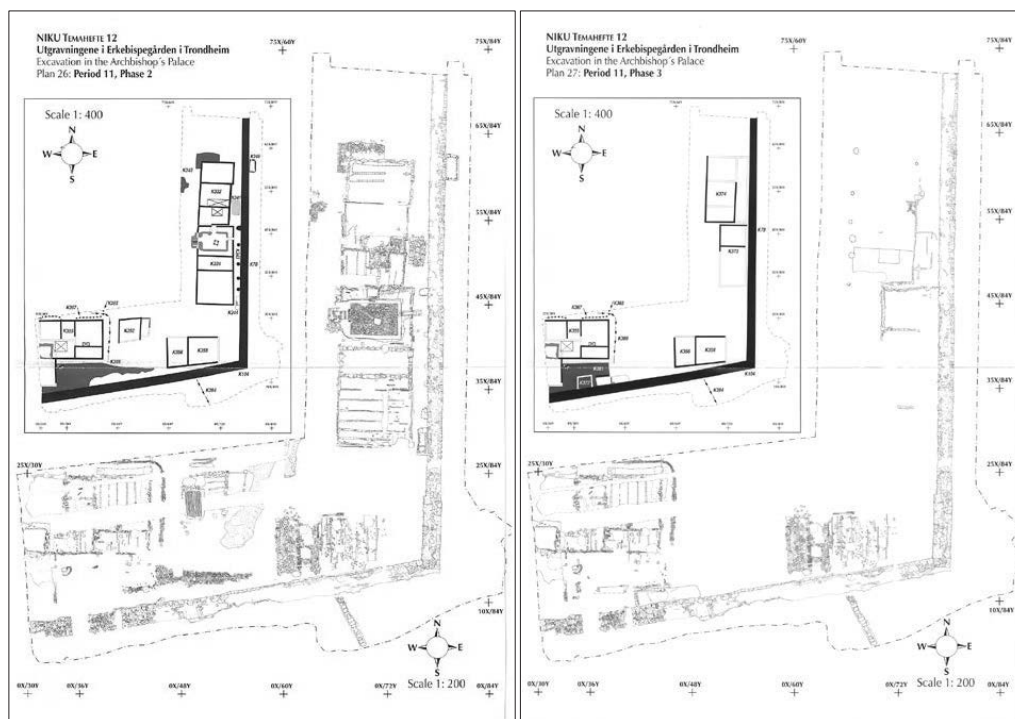


Figure 6.10. **Left:** The first and second managers' residences, associated buildings and structures: excavation plan with explanatory key (inset) (Period 11 phase 2). **Right:** The second managers' residence, associated buildings and structures (Period 11 phase 3).¹²⁵⁵

The dwelling house K355 stood throughout three phases of spatial and structural changes in the area neighbouring it to the east and north. The first (Fig. 6.10, left) encompasses the construction of building K355 and buildings K362 and K356=358 to the east of it. The earlier residence's buildings K332 and K334 in the east wing presumably stood at least until the new buildings were completed and taken into use. The first residence's buildings were subsequently demolished, and two new timber buildings

¹²⁵⁵ After Nordeide 2000a, plans 26 & 27. Not to original scale. See Appendix K for scaled plan.

(K373 and K374) were erected over their foundations in the east wing (Fig. 6.10, right). This phase also saw the construction of the small shed K376 containing a privy against the southern precinct wall (location marked 'L' on Fig. 6.10's inset, right) and the demolition of the small building K362 immediately to the east of the dwelling house.

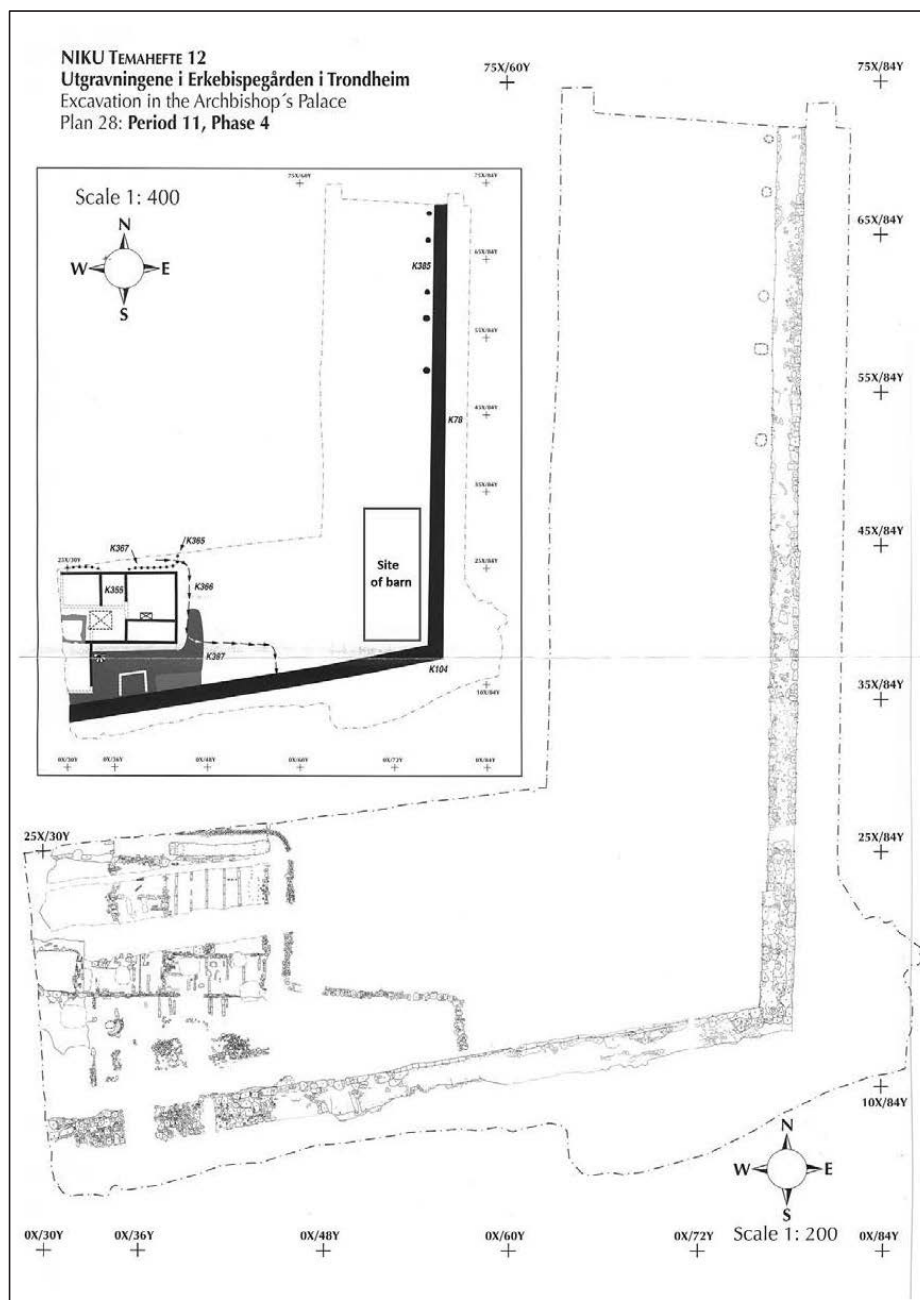


Figure 6.11. The second managers' residence (Period 11 phase 4).¹²⁵⁶ Site of completely demolished barn marked in blue on key.

¹²⁵⁶ After Nordeide 2000a, Plan 28. Not to original scale. See Appendix K for scaled plan.

The final phase (Fig. 6.11) saw the demolition of building K356=358 in the south wing and buildings K373 and K374 in the east wing. However, the south-eastern corner of the precinct was in reality not empty since the barn building shown on Eckleff's 1758 plan stood here at this time (marked in blue). Its foundations were absent. On historical evidence, the first phases are dated to c. 1730 - c. 1752 and the final phase to c. 1752 - 1783.

A better range and quality of available historical source material provides a more detailed basis for interpreting the archaeological remains than in the case of the first residence. The following interpretive presentation draws on contemporary map evidence and a fire-insurance survey of 1766¹²⁵⁷ which provide insight into architectural and spatial arrangements not captured by excavation. However, as in the case of the first residence, archaeology provides evidence not available from historical sources.

The dwelling house K355

As we have seen, this building's distinctive L-shaped ground plan is depicted on maps dating from at least 1730 through to 1775. Eckleff's plans of 1758¹²⁵⁸ identify it as the managers' residence, and provide detailed drawings of it in plan and elevation (Fig. 6.12).

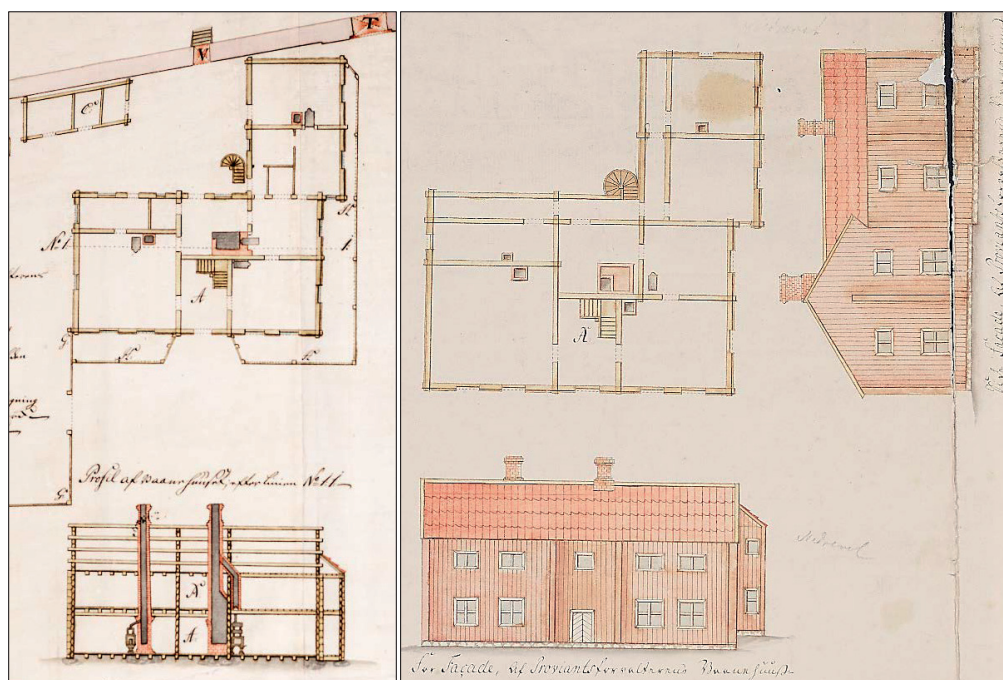


Figure 6.12. Details from Eckleff's plans of 1758 showing the manager's dwelling house. **Left:** the ground floor and a cross-section through the building. **Right:** the first (upper) floor and elevations of the northern and western façades. North to bottom.¹²⁵⁹

The residential building represented on Eckleff's plans caught the attention of the architectural historian Guthorm Kavli who includes it as one of Trondheim's earliest examples of baroque-inspired architecture in his survey of regional building traditions.¹²⁶⁰ He interpreted it as a *'dobbeltromhus'*, a symmetrical house with two pairs of rooms placed to either side of a central passage and stairwell. This is a variant of the Norwegian *'midtgangshus'* (central-passage house), a type characterised by a near-

¹²⁵⁷ *Trondheim branntakst protokoll 1766*. Lein 1998.

¹²⁵⁸ Appendices L & M.

¹²⁵⁹ KBK XVIII-1 56b & IB1719 (Riksarkivet).

¹²⁶⁰ Kavli 1966: 108-109.

symmetrical layout of rooms placed to either side of a central passage and staircase.¹²⁶¹ The Norwegian *midtgangshus* has its origins in the 17th-century European Palladian baroque style, and its variants share a common ideal: namely, the desire to build around a mid-axis with a symmetrical ground plan and with a façade characterised by an elaborate entrance and windows grouped regularly around it.¹²⁶²

Kavli's *dobbeltromhus* classification is questioned by building historians Jo Sellæg and Lars Roede.¹²⁶³ Roede prefers to interpret it as a *midtgangshus* or *midtkammershus*,¹²⁶⁴ and the latter interpretation is adopted here. Sellæg points out that its ground plan does not conform to customary variants of the *midtgangshus*, pointing to a number of characteristics which indicate an unusual layout. In particular, he notes that one rarely encounters long, narrow rooms of the type seen here in central-passage houses. In addition, while the building appears to have a central passage layout when seen from the front, the mid-section at the back is expanded into a larger room. Furthermore, the two front rooms have different depths, making the room layout very flexible, which at ground-floor level facilitates ready access to five rooms from the front hallway. Other unusual aspects include the provision of a *svalgang* (external gallery) on the main building's upper floor only, the normal situation being one on each floor. This may have been an open-sided *svalgang*. The spiral staircase is an antiquated feature, rare, and usually associated with older high-status buildings.¹²⁶⁵

Along the east side of the south wing, the *svalgang* was drawn into the main body of the building to form an internal enclosed corridor. This is also a rare feature according to Sellæg. Of particular note is the fact that the timber walls of the main building and south wing appear from the drawing to have been physically jointed together, a solution which Sellæg regards as advanced, since the standard solution was to build two separate free-standing buildings. He concludes that this building would have been more expensive to build than would have been the case for customary *midtgangshus* variants because, unlike these, it was not adapted to, or restricted by, the limitations inherent to the traditional *laft* timber building technique. Consequently, the choice of this unusual and costlier form of building suggests that its builder was in possession of a degree of social status, economic resources, and knowledge of European-inspired vernacular architecture above the average.

Interestingly, although its date is unknown and it differs in certain details, the archived plan of a now demolished urban house at Erling Skakkes gate 13 (Fig. 6.13) suggests that the plan of the second residence's main section may not have been unique in Trondheim. However, it was much smaller (10m x 6m) and had no attached rear extension.

The historical and archaeological evidence provides detailed insight into the second residence's architectural character, notably its structural composition, layout and internal organisation, as well the nature of its roofing and facades, and the provisions made for heating and lighting. This evidence will be presented below (see also Appendix K).

¹²⁶¹ See for example Erling Skakkes gate 15 on Fig. 6.13.

¹²⁶² Building historians cite Dutch and English (Christensen 1995: 134) or German and Swedish influences and prototypes for the earliest Norwegian baroque buildings, while the *midtgang* plan was probably commonly used for wealthier non-elite baroque houses in Europe generally, and was known in Germany and Sweden in the 17th century (Hvinden-Haug 2008: 132-133).

¹²⁶³ Sellæg pers. comm; Roede pers. comm.

¹²⁶⁴ The *midtkammershus* /'central-chamber house' is a variant of the *midtgangshus*. Instead of having a corridor that completely bisects the house, it has a room at the rear, blocking off the corridor. This arrangement spread widely in Norway during the later 18th century and the 19th century especially. In instances where the kitchen forms the rear *kammer*/chamber this was practical since it could serve both sides of the building. This form may have arisen in urban contexts, where it was only necessary to provide a formal front entrance from the street since the rear of the building normally led onto a backyard with utility buildings rather than a formal garden (as was often the case in elite buildings in rural contexts) (Hvinden-Haug 2008: 130, note 37). See for example Fig. 6.13., Erling Skakkes gate 13.

¹²⁶⁵ Roede pers. comm.; Hvinden-Haug 2008: 136.

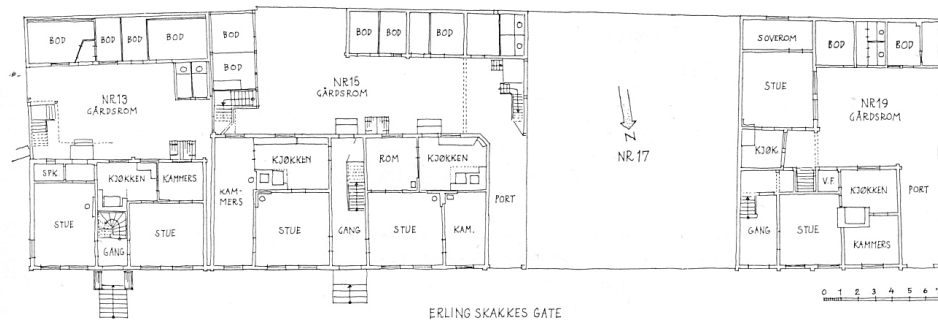


Figure 6.13. Ground plans in a row of 18th-century houses in Trondheim (Erling Skakkes gate 13 furthest left).¹²⁶⁶

Roofing, walls and floors

Eckleff's elevation drawings show that, in contrast to the first residence, the building was roofed with ceramic tiles.¹²⁶⁷ The building had a gable roof (*saltak*), a simple roof design shaped like an inverted V, widely used in this type of house, in contrast to the hipped roof (*valmtak*) which was largely the preserve of the elite. The section and plans also indicate that the external and internal walls were constructed using the traditional *laft* technique of interlocking notched logs. The walls of the main building and the side-building/ south wing were physically integrated with each other. This is an unusual technical arrangement, as side-buildings and main buildings were usually built as separate units.¹²⁶⁸ The elevation drawings depict the walls as being clad externally with vertical plank weather-boarding. All floors were planked and supported on regularly spaced joists.

Windows

The building had 27 casement windows: 13 larger 'double' windows and 14 smaller 'single' windows, all filled with panes of leaded glass.¹²⁶⁹ The accentuation of the ground floor using double windows has baroque stylistic origins, but would have been customary architectural practice by the mid-18th century.¹²⁷⁰

The building's symmetrically arranged north façade comprised grouped pairs of windows placed to either side of the centrally placed doorway: larger double windows on the ground floor and single windows on the first floor (with a smaller window set above the door). Two narrow windows (one single, one double), one for each floor, were placed in the northern end of the projecting southern wing. The western façade contained four double windows on the ground floor and four single windows on the first floor, one for each room, in contrast to the pairs of windows provided for the rooms in the north façade. The gable end of the south wing contained only one single¹²⁷¹ window for the first floor room, the room below it not provided with a window. The wing's eastern façade contained only one single window at ground-floor level, while the main building's south-facing façade contained only three windows (two doubles and a single), one for each room at ground-floor level. And finally, the main building's eastern façade had two double windows at ground-floor level, one for each room, but only one (single) window at first-floor level, serving the small room at the rear.

¹²⁶⁶ Number 13's ground plan closely resembles that of the second residence's main building, with a kitchen blocking off the rear. Number 15 exhibits a *midtgangshus* plan with a through-going central passage. After Kavli 1966: 378, plansje 18.

¹²⁶⁷ Also confirmed by the 1766 fire-insurance survey i.e., 'tækt med Steen' (Lein 1998). Roof tiles were commonplace in urban contexts from the early 18th century, in response to fire-prevention directives (Eliassen 2006: 200).

¹²⁶⁸ Jo Sellæg pers. comm.

¹²⁶⁹ The 1766 survey: '13 fag Dobbelt og 14 dito Enkelte Vindue i Blye Indfattet' (Lein 1998).

¹²⁷⁰ Lars Jacob Hvinden-Haug pers. comm.

¹²⁷¹ Where windows are not illustrated on facade drawings, I assume they conform to equivalents in corresponding positions.

Chimneys, hearths and stoves

Eckleff's drawings show three brick-built chimneys, two in the main building, and one in the south wing. Connected to these were one large open hearth and four cast-iron wood-burning stoves in the main building, and one cast-iron wood-burning stove in the south wing. The 1766 survey also records the presence of five iron stoves, a large open stone- or brick-built hearth ('*muur*'), which it places in the kitchen, and two '*skorsteene*'.¹²⁷² Etymologically, the word '*skorsteen*' at this time denotes an open hearth with a chimney, rather than just the chimney alone.¹²⁷³ This may imply the presence of another open hearth in addition to the kitchen hearth, although this is not discernible on Eckleff's drawings.

The large open hearth ('*muur*')¹²⁷⁴ occupied the central room at the rear on the ground floor, which we can consequently identify as the kitchen. With one exception, all the iron stoves were located in ground-floor rooms. The room to the west of the kitchen was warmed by an iron stove directly connected through the dividing wall to the kitchen hearth from which it was fired - a so-called *bileggerovn*. Also connected to the central chimney was an iron stove located in the large front room to the north-west, while the large front room on the opposite side of the hallway also had an iron stove connected to the smaller chimney. Eckleff's cross-section drawing through the building (Fig. 6.12) shows these to be tall, multi-storeyed *etasjeovner*: the former a cast-iron stove with three storeys, the latter being a stove with two storeys.¹²⁷⁵

The ground-floor room at the rear of the south wing was provided with a chimney and an iron stove. Given the apparent absence of a dividing wall separating the back of the stove from the neighbouring room to the north, it might be suggested that this stove stood in a niche and in effect warmed both rooms.¹²⁷⁶ The first-floor above was provided with only one iron stove, placed in the room in the main building's south-western corner.

Cellar

A feature not shown on Eckleff's plans, but revealed by excavation, was a small, stone-walled cellar below the floor of the small ground-floor room immediately to the west of the room with the large hearth. This had an internal floor area of 7.30m², and was only 1.5m deep, and would have constituted a small under-floor storage space accessed by a trap-door in the room's floor.

Internal layout and rooms

The main building and its integrated rear extension, or south wing, were rectangular structures, each containing two floors and possibly a loft in the roof space. Measurements derived from Eckleff's plans and excavation correlate directly and provide the following areal dimensions: the main building measured c. 16m by 9m (144m²), while the south wing measured c. 8m x 6m (48m²).¹²⁷⁷ The two sections' combined ground-floor area was c. 192m², and the combined area of the building's ground- and first floors was c. 384m².

The two floors were subdivided into a total of twenty rooms (excluding the upstairs corridors and the cellar), twelve of which lay on the ground floor and eight on the first floor (*andre etasje*).¹²⁷⁸ The

¹²⁷² 'Kjøkken med Muur... 5 jern ovne, 2de Skorsteene...' (Lein 1998).

¹²⁷³ Jo Sellæg pers. comm.

¹²⁷⁴ Also known as *grue* or *peis*.

¹²⁷⁵ Wood-burning stoves with a low firing chamber above which air and smoke was drawn in a zig-zag through one or more cast-iron chambers stacked above it, a more efficient form of heating than simple wood-burning stoves with a single firing chamber. Multi-storeyed cast-iron stoves (*etasjeovner*) appeared during the 1730s and 1740s, often elaborately decorated with moulded reliefs. Between c. 1750 and 1800, the two-storeyed stove type was the most affordable, while three- or four-storeyed stoves were chiefly owned by wealthier sections of society. Christensen 1995: 170-172; <https://oppistua.wordpress.com/2013/01/30/jernovner-i-norge-1530-1930/> (accessed 11.05.2018).

¹²⁷⁶ Jo Sellæg pers. comm.

¹²⁷⁷ Respectively c. 50x30 and 27x20 'foed' on Eckleff's plan (1 Danish-Norwegian foed = 31.385 cm from 1698).

¹²⁷⁸ Two main rooms were divided into smaller rooms by partitions: The north room in the south wing was divided by partition walls into three smaller rooms and a small vestibule or antechamber (counted here as a room), and the narrow ground-floor room at the rear of the main section. The front hall with stairs is counted as two rooms (ie. an upstairs hall and downstairs hall).

building's internal layout was designed to allow permeability and ease of communication between the majority of rooms in the house, both within and between floors (see Fig. 6.16). This was particularly the case on the ground floor, though to a lesser degree on the first floors of both the main building and south wing. The main building could be entered via two entrances at ground-floor level, placed opposite each other at front and rear. The two ground-floor rooms in the south wing were accessed independently by doors opening onto the back yard. The upper floors in both the main building and south wing could be accessed from the back yard via the spiral staircase, *svalgang* and internal corridor.

With regard to internal communication: doorways in the front entrance hall opened into the larger front rooms, each of which had internal doorways communicating with neighbouring rooms, allowing full permeability between all the ground-floor rooms in the main building. Although slightly unclear, it appears that internal access was also provided at this level to the north room in the south wing's ground floor by two internal doorways. The rooms on the main building's upper floor were accessed via a centrally placed staircase in the front entrance hall. While most rooms here were connected by internal communicating doorways, the degree of permeability between rooms here was less than on the ground floor. In particular, the small room at the rear could only be accessed directly from the *svalgang*, and the large room to the north-east had only one door leading into it. The first floor rooms in the south wing could only be accessed independently via the internal corridor, with no communicating doorway between them.

The functions of the rooms

The 1766 fire-insurance survey includes the dwelling house, the barn building, and a raised storage building, as well as buildings elsewhere in the precinct associated with the military depot (the stone buildings housing the King's grain, a bakery with four ovens, a building for storing fire-fighting equipment and a storehouse).¹²⁷⁹ It provides a point of departure for interpreting the use of individual rooms in the house. However, it mentions only *eight* of its twenty rooms, presumably those considered the most important.

A reading of the sequence in which the rooms are listed in combination with Eckleff's plans suggests that these all lay on the ground floor (Fig. 6.14).¹²⁸⁰ The sequence in which the rooms are listed in a fire-insurance survey usually matches the route the surveyor took on his progress through the house. The room interpretations offered below are consistent with a circulatory progress from room to room on the ground-floor which began in the north-eastern front room and ended with the small chamber in the south-east corner. The relevant part of the survey reads as follows (my translation):

'Kongsgården Herr War Councillor and Provisioning Manager Arve Gudmansen's Lodgings Two floors, albeit low, 2 Parlours, Bedchamber, 2 Offices, Kitchen with Hearth, Pantry and a Chamber beside the Parlour without a stove...'

¹²⁷⁹ The 1766 fire-survey text in full: 318 Kongs-Gaarden Hr: Krigs-Raad og Proviantz-Forvalter Arve Gudmansen Logementer Dobbelt Etage, dog lave, 2de Stuer, Sæng-Kammer, 2de Contoirer, Kiøkken med Muur, Spids-Kammer og et Kammer ved Stuen uden ovn, 5 jern ovne, 2de Skorsteene, 13 fag Dobbelt og 14 dito Enkelte Vindue i Blye Jndfattet, tækt med Steen, i garden staaende een nye Laave med Træske lade og derunder Hæste-Stald og Koe Fæe Huus, et lidet Stabur tækt med tagsteen træ bygning, viidere af graae-steen opmuuret, Kongens Korn Magaziner, 3de Etage og derover Højde, Baghuuset med 4re Bagerovne og 3de opgaaende Skorsteene og 4re fag Smaa Vindue, tækt med Tagsteen, Sprøyte- og Material-Huus med bord tag: 2500 rd. (Lein 1998).

¹²⁸⁰ Building historian Jo Sellæg provided expert advice in interpreting the room functions, though any errors and unfounded speculation are entirely my responsibility.

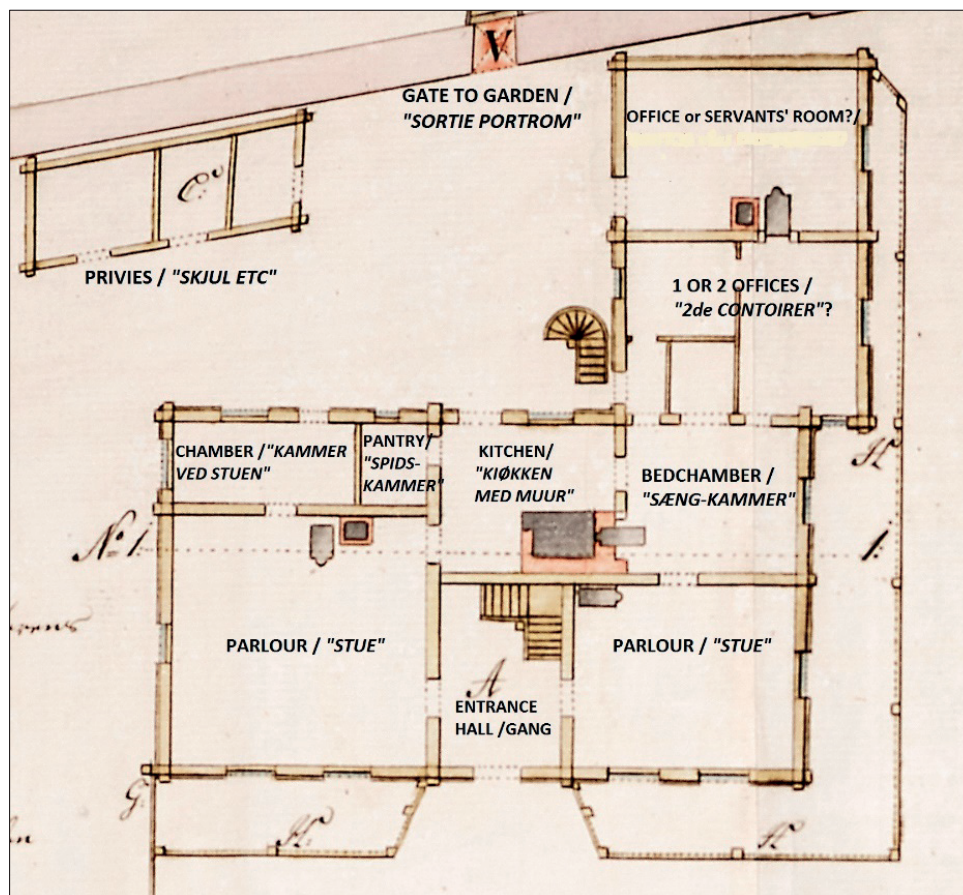


Figure 6.14. An interpretation of the **ground-floor rooms** (*1. etasje*) shown on Eckleff's plan of the manager's dwelling house based on the 1766 fire-insurance survey. North to bottom.¹²⁸¹

The kitchen is readily identifiable as the room with the large open hearth at the rear of the main building. The two large front rooms to either side of the entrance hall are likely to be the two main living rooms, or parlours (*stuer*), each equipped with an iron stove. One of these may have been a '*dagligstue*', a 'common parlour' in which the family gathered daily to eat meals and socialise, and in which some family members may have slept. The other - a '*storstue*' or 'great parlour' - would have been reserved for entertaining guests and formal occasions.¹²⁸²

Eckleff's cross-section through these rooms (Fig. 6.12) shows that they contained different forms of stove. The north-western room contained a triple-storeyed *etasjeovn*, probably the most expensive stove in the house. This is likely to have been located in the great parlour. This room is also more removed from the rear of the house, and the domestic functions located there. The small room leading off both the western parlour and the kitchen is probably the bedchamber, warmed by an iron stove linked to the kitchen hearth. As noted, excavation revealed a cellar beneath the room's floor. This was a secure place where food, wine, important papers and valuables could be kept under the close eye of the manager who presumably slept here. The small room leading off the kitchen to the east is likely to be the pantry, where food, other provisions and cooking and eating utensils were kept, while the narrow room behind it in the south-east corner is presumably the 'Chamber beside the Parlour without a stove', which may have served as a bedroom, for example.

¹²⁸¹ KBK XVIII-1 56b (Riksarkivet).

¹²⁸² Hvinden-Haug 2008: 141.

The locations of the 'two offices' are less certain. Two interpretations are offered: that both ground-floor rooms in the south wing were used as offices, or alternatively, that the room beside the bedroom was partitioned off into two smaller interconnecting rooms, and that these were used as separate offices. Heating would have been essential, and, as pointed out, both ground-floor rooms in this wing could have been heated by the single iron stove which was placed in the wall between them. The stove may have been tended by an assistant to the manager who used the southern room at the rear as a separate office. Alternatively, this may have been the clerk's bedroom if he lived in the household as a lodger, or the bedroom for a children's tutor or another lodger. A further alternative is that this relatively isolated room, which could only be accessed from the backyard, may have been occupied by one or more servants, one of whose tasks may have been to tend the household's fires, including this stove which could be tended without disturbing the master and his assistant in the neighbouring offices.

That the manager and an assistant used the two larger partitioned sections of the northern room in the south wing as their respective offices seems the more satisfactory interpretation. The connecting doorway would have allowed the manager and his clerk to communicate with each other more readily. The clerk presumably occupied the smaller partitioned section which could be entered from the backyard via a small vestibule, thus avoiding the need to enter the main house. The manager, however, could conveniently enter the larger office from his bedchamber via the same vestibule. The northern room also had a smaller partitioned section adjoining the bedchamber onto which it opened. This was possibly a small closet or alcove, for example, and may have been where the cellar beneath the bedchamber was accessed via a trapdoor.

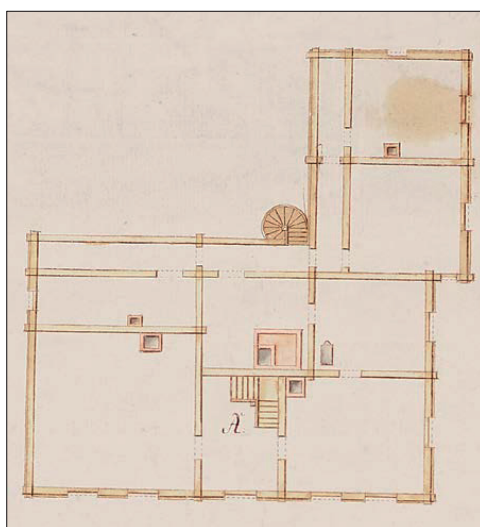


Figure 6.15. Detail from Eckleff's plan of 1758 showing the **first floor** (2. *etasje*) of the second residence. North to bottom.¹²⁸³

The rooms listed in the survey are presumably those which the household used most.¹²⁸⁴ None of the first-floor (2. *etasje*) rooms are mentioned (Fig. 6.15). These were probably reserved for storing items owned by the household - such as clothing - and perhaps even for items associated with the manager's profession, for accommodating guests and servants, or perhaps for more occasional use. For example, the larger upstairs front rooms without iron stoves may have been used as parlours during the summer. In addition, household servants would have required places to sleep. As suggested, the room at the rear of the south wing's ground floor may have been a room for one or more servants. Maidservants could also have been accommodated in the kitchen, but perhaps the small room with an

¹²⁸³ IB1719 (Riksarkivet).

¹²⁸⁴ Compare the rooms named on the almost identical ground-floor plan for Erling Skakkes gate 13, Fig. 6.13.

iron stove on the first floor functioned as a maid's bedroom? This room lay directly over the main bed chamber, and would also have been warmed from below. Alternatively, this may have been a bedroom reserved for guests, while some or all of the upstairs rooms which could be accessed via the rear passage were the servants' bedrooms?

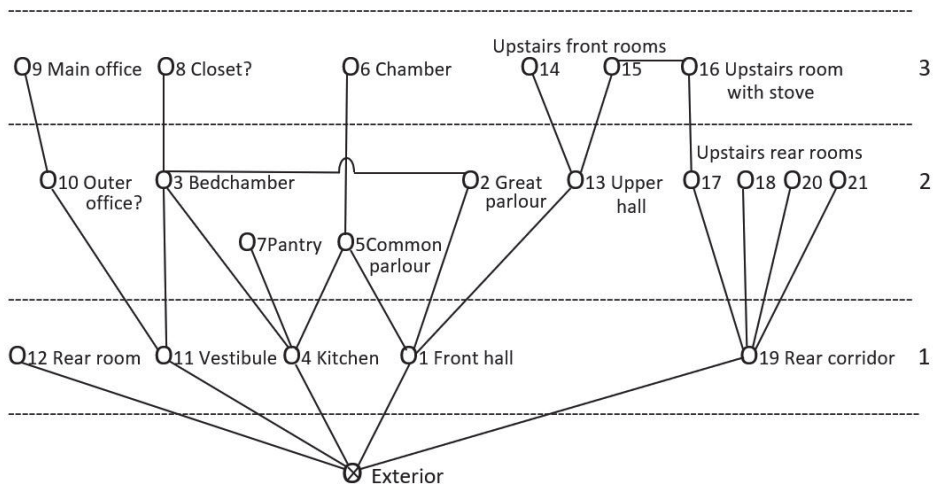
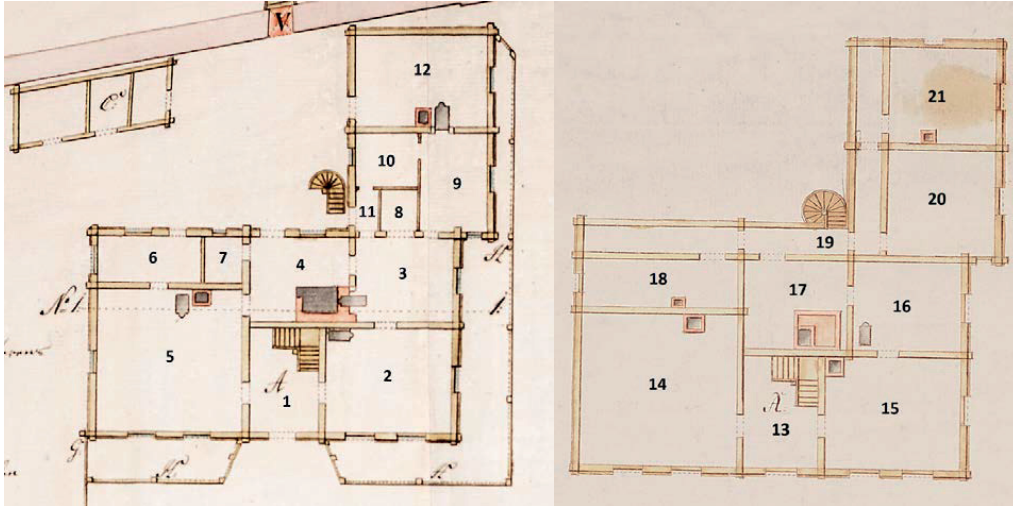


Figure 6.16. Justified access diagram for the interior of the second managers' residence (both floors)

Figure 6.16 above provides a graphic representation of the building's sophisticated spatial organisation which facilitated differentiated degrees of access and permeability between rooms, and regulation and control of movement, encounters and interaction.¹²⁸⁵

Each room on both floors is numbered and represented by a circle on the diagram, and the connections between them via doors or stairs are shown with line segments. Each room's 'depth' within the building i.e., the number of spaces separating it from the exterior, both front and rear (an encircled 'x'), is plotted on a horizontal depth-value scale; in this instance, a scale of depth from 1 to 3. The lower the number, the more directly the room could be accessed from the public or communal domain, while a higher value signifies a greater degree of depth within the building, and a higher potential for privacy and seclusion from the public domain.

¹²⁸⁵ This is a version of a so-called 'justified access graph' (Hillier & Hanson 1988).

As can be seen, the front hall, kitchen, rear corridor and the small vestibule serving the office could be accessed directly from outside. These comprised the main points of entry, the front hall being the point of first contact between people who lived in the household and visitors. The other points of entry were presumably reserved for the family, servants, the manager's clerk, and possibly colleagues and employees in the depot who were allowed direct access to the manager's office. These constituted relatively accessible sites of mobility and daily encounters between household members as they performed their daily routines and practices.

Access to the other rooms from these semi-public spaces was differentiated and regulated on a hierarchical scale, the most private and secluded rooms having a value of 3 on the diagram. So, for instance, we can see that a visitor entering the front door could only have accessed the ground-floor front parlours via the front hall in the company of a family member or servant. To access the upstairs front rooms from the front, a visitor had to use the stairs and upper hall, which involved an even higher level of 'intrusion' into the private household domain. Consequently, this arrangement allowed access to the interior and rear of the building on both floors from the front to be strictly controlled.

To enter the ground floor of the building from the rear, one had to walk through the kitchen to gain access to the pantry, the common parlour (with its attached chamber) and the main bedchamber. Since the kitchen was undoubtedly a busy place, the main hub of household activity frequented by the manager's wife and servants, this provided another 'barrier' to intrusion, and ensured the security of the family's foodstuffs in the pantry.

The main bedchamber, with its small closet, was clearly an important room, forming something of a hub for the manager's internal movements with its three points of access: from the great parlour, the kitchen and a small vestibule which also served the offices. As suggested, this is likely to be where the manager slept, as well as the place where he would have kept valuable items, documents and goods, including his wines, for example, secured in the cellar beneath its floor. From here, he could access his office via the connecting vestibule and outer office (which was also accessed separately from outside), and gain direct access to the front great parlour where he might receive important visitors. The bedroom was private, but also close to the kitchen, which provided it with warmth via an iron stove stoked by a servant from the kitchen hearth.

As stated, the room at the rear of the south wing was only accessible from outside, its segregation (and stove) suggesting its occupation by the clerk, a lodger, or perhaps one or more servants. The rear rooms on the upper floor were accessed directly via the spiral stairs and the continuous connecting passage (*svalgang*). Most were segregated in terms of distance and access from the rest of the house, which is strongly suggestive of their use for storage and/or servants' quarters. Only the centrally placed room at the rear allowed access to the main building's other upper floor rooms, in the first instance the room with an iron stove, a possible bedroom/ guestroom.

The barn: a multipurpose farm building

As stated, no archaeological traces of this building survived. This was clearly an important element in the manager's enclosed residential complex, as indicated by its inclusion on Eckleff's plan and the 1766 fire-insurance survey. It may have been built in, or just before 1752, if, as seems likely, it is the same as the 'newly-constructed' building incorporating stalls for cattle and horses and a wagon shed mentioned in a report of that year.¹²⁸⁶ On his plan, elevation and cross-section of the building, Eckleff identifies it as a barn containing horse and cattle stalls, while the fire-insurance survey of 1766 describes it as a new barn-building incorporating a threshing barn placed above a stable for horses and a cattle byre.¹²⁸⁷

¹²⁸⁶ 'Udi Kongsgaarden, ved Proviantforvalterens Vaaning er Heste- og Koe-Stald, tilligemed Vognskuret af nye bleven opbygd'. Omkostninger 204 rdr. Ra. Kom. General I C, pk- 244 (Lysaker 1989: 50).

¹²⁸⁷ Eckleff 1758 (Appendices L & M): 'Lade huuset'; 'Lade, med Heste og Fae Stald'. The fire-insurance survey of 1766: 'i garden staaende een nye Laave med Træske lade og derunder Hæste-Stald og Koe Fæe Huus' (Lein 1998).

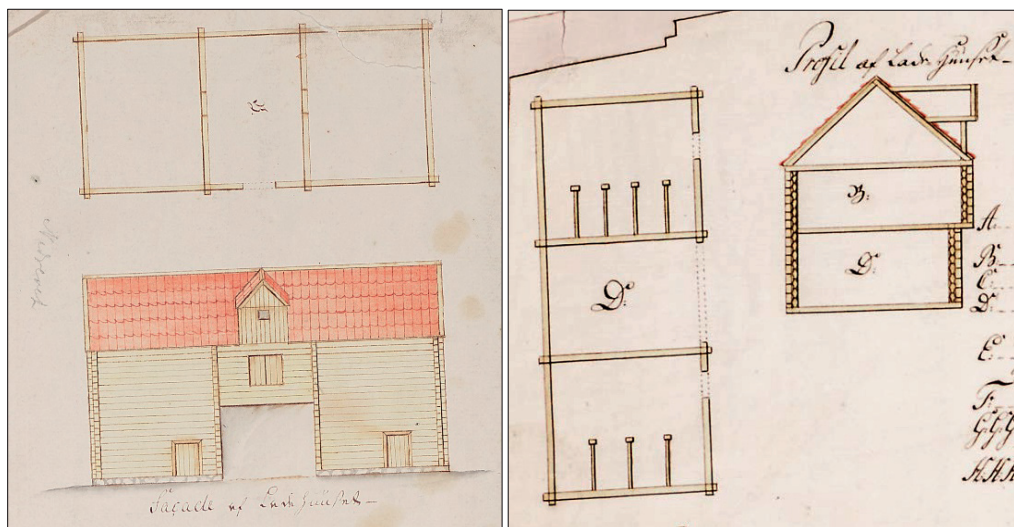


Figure 6.17. Details from Eckleff's plans of 1758. **Left:** Elevation of the barn's façade and plan of first (upper) floor. North to left. **Right:** Plan of ground floor and cross-section E-W through the middle of the building. North to bottom.¹²⁸⁸

The building's structural character and layout

Eckleff's drawings (Fig. 6.17) reveal that the building's walls comprised interlocking notched-log (*laft*) timbers. In contrast to the dwelling house, it was not clad externally with vertical plank weatherboarding. Its roof was tiled. The building was two-storeyed with a loft above, from which extended a small projecting independently roofed turret-room over the mid-section. The ground floor covered an area of 16m x 6m (96m²), while the first floor (upper floor) was slightly larger with an area of 16m x 7m (112m²), the cross-section showing that it projected slightly out to the east beyond the ground-floor wall (combined floor area 208m²).¹²⁸⁹ Each floor was divided into three equally sized rooms. On the ground floor, the central room was completely open to the east, and apparently had a plank floor. This room separated two rooms which contained partition walls for animal stalls: four stalls in the northern room, and five stalls in the southern room. These rooms were entered by doors placed asymmetrically in the façade. Above, on the first floor, the central room had a large door or window placed in the centre of the façade, and two small internal doors leading off it to each of the side rooms. These were presumably accessed via simple stairs or ladders from one or more of the rooms below.

The rooms' functions

The historical sources provide a good basis for interpreting the rooms' functions. The large open-sided central room on the ground floor is likely to be the place where one or more wagons were sheltered and equipment kept (*'Vognskuret'*). The rooms to either side clearly functioned as byre and stable (*'Hæstestald og Koe Fæe Huus'*), the southern room with five narrower animal stalls perhaps being the byre.

The rooms on the first floor would have been devoted to the threshing of harvested oats and/or barley (*'Træske lade'*), and possibly also the storage of hay and straw. The sheaves of grain would have been brought in from the fields and taken up into the threshing barn via the large central window/door. It is suggested that this may have been done using a mechanical winch which was housed in the small projecting turret room.¹²⁹⁰

This arrangement differs from most known contemporary two-storeyed threshing barns whose first floors were usually accessed directly via a ramp (*låvebru*) placed centrally at the front. The threshing

¹²⁸⁸ IB1719 & KBK XVIII-1 56b (Riksarkivet).

¹²⁸⁹ This is not depicted on the elevation, however.

¹²⁹⁰ Winch mechanisms housed in roof spaces with projecting turrets were in fact to be found nearby: namely in the depot's main storage buildings in the west and northern wings. See Eckleff's plans, Appendices L and M.

barn on the upper floor consisted of three rooms. One (or two?) of these would have been used to store the sheaves prior to threshing (*logolv/ståll*), while threshing took place in another room (*treskelåve*). The third room may alternatively have been used to store hay for feeding the animals housed below (*høygolv*).¹²⁹¹

The other outbuildings and structures

Four other buildings stood to the south and east of the dwelling house within the fenced enclosure. Only two are shown on Eckleff's 1758 plan i.e. a shed containing privy K376 and a small, raised storage building beside it (no archaeological remains). Building K356=358 was found during excavation and probably equates to a building shown on a map of 1730 (Fig. 6.4). This was probably demolished before 1752 or 1758, as was the small excavated building K362, which does not appear on any map.

Privy shed K376

On Eckleff's plan this is identified enigmatically as a 'shed, etc.' (*'Scjiul, etc'*) (Fig. 6.5; Appendix L). Excavation uncovered only part of a low stone ground wall and two wood-lined latrine pits placed side-by-side within the building (Fig. 6.18). Eckleff's plan indicates that the shed itself measured c. 3m x 7m (21m²). Although it comprised a small, simple timber superstructure placed up against the precinct wall, the plan interestingly reveals that it was divided internally into three separate rooms, each accessed by its own door: in effect, three separate privies. This was achieved by dividing the western half into two smaller rooms by means of a thin partition wall. The western room was entered through the gable-end wall, while the other two were entered through the long north wall.

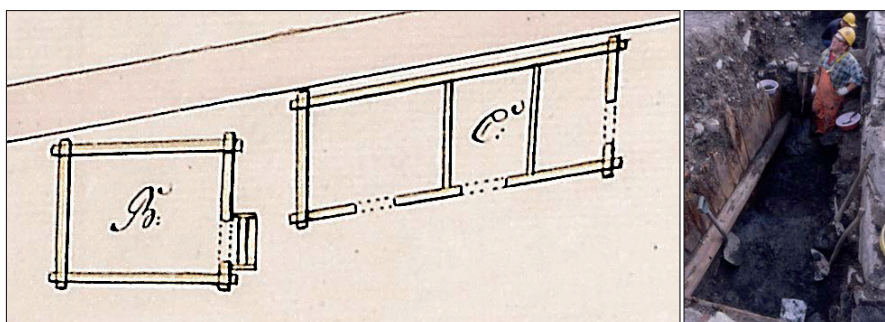


Figure 6.18. **Left:** Detail from Eckleff's plan of 1758 showing the privy shed (right) and a raised storage building/stabbur. North to bottom. **Right:** The wood-lined privy latrine pits during excavation.¹²⁹²

The shed's two wood-lined latrine pits were also used for dumping domestic refuse, which forms an important closed group of source material for this analysis (see Appendix K).

The raised storage building (stabbur)

This building's foundations were not found by excavation, although this is not surprising since it would have probably only been supported on stone pad stones placed at each corner. Eckleff describes this as a *'Stolpe Boed'*, and the steps shown on the plan are consistent with its identification as a storage building raised on posts (*stabbur*). The plan indicates it had a single room with a floor area of 3m x 4m (12m²). It probably also had a loft above, though this is uncertain.

¹²⁹¹ Post-medieval threshing barns (*parløer*) consisted (like this one) of three rooms. However these were either built on ground-floor level only, or in the case of taller examples, only the mid-section of the building was raised to first-floor level, and it was here that the threshing floor (*treskelåven*) was situated, accessed by an external ramp. This floor lay at a higher level than the floors of the two side rooms in which the sheaves and hay or straw were stored. The space under the raised middle section (*underlåven*) was used as a store for threshed husks, for storing equipment or, in later examples, as a byre. Kulturhistorisk leksikon bind 10, 1981: 136-139; Roede 1986: 16; Christensen 1995: 106-107; Våge 2000: 148-150.

¹²⁹² KBK XVIII-1 56b (Riksarkivet). Photo: Riksantikvaren.

Stabbur buildings were an integral part of Norwegian farms from medieval times, principally used for storing foodstuffs. The raising of the building above ground level provided good ventilation and hindered access to rodents. The foodstuffs stored here would normally have included grain, flour and flatbread, usually stored in special containers. From the ceiling would have hung dried and smoked meats, and horse furniture and other equipment would have been hung on the walls. If the building had an upper floor, or loft, it may have been used for storing clothes.¹²⁹³ The building would have had a central role in the life of the household and farm, as emphasised by its proximity to the rear of the dwelling house where the kitchen was located. Since it also contained much of value, its location allowed it to be kept under close surveillance.

Building K356=358: possible byre and/or stable?

This small two-roomed building's function is uncertain (Fig. 6.10). Each of its rooms contained a different flooring medium, suggesting it housed differentiated, though possibly related, functions. The smaller eastern room's stone- and brick-built floor suggests that whatever it was used for required a robust, hard-wearing floor. This room's floor area was 32.5m², while that of its eastern neighbour was 45.5m² (combined area 78m²).

This building's location equates with that of a rectangular building shown on a map of 1730 (Fig. 6.4). It stands in a part of the yard later occupied by the barn building shown on Eckleff's plan. That building combined multiple farm-related functions, including a stable, byre and wagon shed. One interpretation of building K356=358 is that it housed similar functions, and was in effect the later barn's smaller predecessor. For example, it may have functioned as a combined stable and wagon shed, the stone-floored western section comprising the latter, while horses were stabled in the eastern section. Alternatively, the building may have been either a stable or a cattle byre, or perhaps combined both. The central line of bricks in the stone floor may have functioned as an internal drain, while the robust stone-built drain leading southwards from the building out of the precinct may have been built to carry off effluent from animals housed here.

Building K362

This building is not documented historically, and its function is uncertain (Fig. 6.10, left). Structurally, it was small and lightly-built, with a main room and a narrower outer room or corridor measuring 30m² and 10m² respectively. A large rectangular pit (3.5m x 2.3m) with a plank-lined base occupied the main room. This sunken feature is an enigma: it may have held the foundation for some form of heavy equipment, or perhaps the base of a large sunken container. It presumably had some form of domestic or farm-related function. Slags and charcoal were found in deposits outside the building. However, rather than indicating that the building was a smithy or contained some other activity involving the use of fire, this waste material was possibly brought in from elsewhere to consolidate external surfaces in the yard, in particular the path that ran diagonally in front of the building to the well further north. The siting of a smithy so near the dwelling house is questionable given fire risk.

The well

This lay outside the area of excavation, but is shown on Eckleff's plan, where it is identified as a 'Brönd' and depicted as a square timber-built (probably *laft*) structure (Fig. 6.5; Appendix L). It was located at the northern perimeter close to the fence. This location places it almost equidistant between the barn and the dwelling house. Frequent traffic between the latter and the well is indicated by the well-trampled path that crossed the farmyard diagonally towards it from the rear of the house.

Cobbled surfaces with drain K366, K381 and K387; fences K365 and K367

The archaeological evidence suggests that only the area in the immediate vicinity of the dwelling house was paved (Figs 6.10 and 6.11). The unpaved yard area was the site of accumulated deposits, and its surface was crossed by a rough path between the house and the well. The paved surface comprised beach stones set in sand, and was renovated and resurfaced at least twice during the lifetime of the building. The paving contained an integrated stone-lined drain which extended from the north of the

¹²⁹³ Christensen 1995: 94.

building around its eastern side before turning east to exit the precinct through the precinct wall. This was subsequently modified at its eastern end.

Eckleff's plan (Fig. 6.5; Appendix L) depicts the two different types of fencing which demarcated a) the perimeter of the manager's enclosure¹²⁹⁴ and b) fronted the dwelling house on its northern and eastern sides. The former consisted of 'plankeverk' – a type of fence made of rough planking. A gate placed in the section just to the north-east of the dwelling house provided the main point of access to the farmyard, through which animals could be taken to pasture, for example. The fencing along the dwelling house's façade comprised 'stakeverk', a form of picket fencing (*stakittgjerde*). This fence of regularly spaced standing planks was carefully constructed and aligned to provide an aesthetically pleasing demarcated boundary around the open, public side of the dwelling house, while the farm enclosure's rougher planked fence had a more functional character. This differentiation was also evidently deemed worthy of representation on Berlin's map of 1775 (Fig. 6.19).

The garden

The excavation plans and Eckleff's 1758 plan show the presence of a narrow gap in the south perimeter wall of the precinct which Eckleff describes as 'Sortie Porten' (a gate or door) (Figs 6.5 and 6.10). This lay immediately to the south of the dwelling house, and provided the only point of access to the manager's private garden (Fig. 6.19).

The area occupied by the garden was only partly captured by excavation, and although a humus-rich garden soil was identified here, no garden features were noted. Map evidence is nonetheless quite detailed, showing a rectangular fenced-in garden, divided up into geometrically ordered square and rectangular plant beds separated by paths. In addition, a small pavilion or summerhouse (*lysthus*) stands within a separately defined area at the western end. The garden evidently underwent changes between 1761 and 1775. Berlin's map records its name - 'Kongs-Gårds Haugen' - and that it was extended towards the east in 1766.¹²⁹⁵ This extension does not seem to have been divided up into beds, while the existing ones were combined into two long parallel beds. In 1761 the enclosed garden covered an area of 586.5m² (15.6m x 37.6m), while in 1775 it covered 1058m² (15.6m x 67.8m).¹²⁹⁶ Map evidence shows that the garden survived into the early 19th century.



Figure 6.19. Details of maps of 1761 (left) and 1775 (right) showing the enclosed garden outside the precinct.¹²⁹⁷

6.3.2.2. The objects (portable material culture)

The following section presents a summary overview of the categorised material with regard to their associations with practices, as well as their spatial distributions. The material has been sorted in accordance with the functional categories outlined in Chapter 5 and is presented in detail in Appendix K.

¹²⁹⁴ 'Gaardens Innhaegning'

¹²⁹⁵ '8. Kongs-Gaards Haugen, som er 1766 bleven størrer anlagt, som med den guule Coullör marqueret er'. (*Haugen=hagen=garden*).

¹²⁹⁶ 4 roder x 10 roder and 4 roder x 18 roder (1 rode = 12 Rhenländsk fot. 1 Rhenländsk fot = 31.385 cm).

¹²⁹⁷ Søndre Trondhjems amt nr 47: Situations Cart over Trondhiems Bye og Fæstninger. J.N. Eckleff (Kartverket) & Plan Over Fastningens Grunde udi Tronhiem. J. D. Berlin (NTNU UB).

Items found in the privy K376 provide a 'closed group' of material evidence which can be associated with the occupants of the second residence.

The privy's twin pits contained primary deposits of human excrement mixed with organic inclusions, including animal bone, human hair, moss, and seeds, as well as a number of objects. Above these were more mixed sandy deposits containing household refuse (Fig. 6.20) and a fair amount of building debris. These mark the pits' abandonment and deliberate infilling, and they contained the majority of objects. During the pottery analysis, it was observed that a fair number of cross-fits occurred between potsherds found in the two stratigraphic horizons, indicating that material from the abandonment episode filtered down and intruded into the primary latrine deposits. Due to this cross-contamination, the two horizons have



Figure 6.20. A dumped pile of pottery, bottles, drinking glasses and wall tiles in privy K376. Photo: E. Baker/ Riksantikvaren.

not been treated as two separate analytical entities, and the material from both has been collated and analysed as a single depositional assemblage. Although some items may have entered the primary deposits over a longer period of time in multiple depositional events, while others were deposited rapidly in a single episode following the privy's abandonment, the objects from both primary and secondary fills can be associated closely with the residence's occupants.

Material from deposits which accumulated in open areas within the enclosed yard is also included here. These secondary contexts have a less secure association with the households than the material from the privy, and were potentially deposited over a longer period of time. However, given the enclosed nature of the residential and farm complex, their association with activity and practices performed here is likely.

Functional categories and spheres of practice

The preparation, storage and consumption of food and drink (categories 1 - 4)

The overwhelming majority of artefacts from both the privy and the external deposits can be associated with practices related to the preparation, storage and consumption of food and drink. Ceramic vessel fragments predominated, with only occasional fragments of metal cauldrons found. The greatest numbers of sherds in the privy derived from imported wares (76.5%), principally Dutch tin-glazed wares, redwares, slipwares and whitewares (57%), with smaller proportions of German and English redwares, slipwares and stonewares (9%) and Chinese porcelain (10.5%) present. Local wares in the form of Trønder redwares and slipwares were nonetheless reasonably well represented in this assemblage (22.5%). Imported wares also formed the vast majority in the external deposits (60%). As in the privy, these were dominated by Dutch tin-glazed wares (27%), with smaller proportions of Dutch and German slipwares and whitewares (11%) and Chinese porcelain (3%), while Trønder redwares and slipwares comprised 19%.

Kitchenwares used for the preparation and storage of food (category 1) were poorly represented in the privy's ceramic assemblage (14%), being largely confined to fragments of tripod cooking pots and skillets, colanders and storage jars. Kitchenwares were also comparatively poorly represented in the external deposits (32%). Only a handful of other items associated with food preparation and storage was recovered: a possible wooden cutting board and spatula, and fragments from an iron cauldron, a quernstone, and glass canning jars from the privy, and a single cauldron fragment from the external deposits.

Items relating to food consumption (category 2) were best represented numerically, almost exclusively in the form of sherds of ceramic tablewares. The majority of sherds in the privy (61%) derived

from plates, serving dishes and bowls. The vast majority of the former consisted of Dutch tin-glazed wares, particularly blue tin-glazed plates, including fragments from sets. Exactly half the bowl fragments in the privy assemblage derived from imported wares (predominantly Dutch slipwares, white tin-glazed or blue-decorated tin-glazed wares), and the other half from local Trønder wares. Although their functional associations are ambiguous, the imported tin-glazed and slipware bowls are classified as tablewares for the purposes of this analysis. The majority of Trønder wares were also slipwares, with only a small number of redware bowls. These are also categorised as tablewares, though some may have been used for food preparation (e.g. separating bowls in a dairy). The same may be said of the dishes, although most are likely to be serving dishes. Most were Dutch tin-glazed wares, with one Chinese porcelain example.

The external deposits produced a similar range of tablewares (57% of ceramics here), also dominated by imports, particularly Dutch tin-glazed wares, though with a fair number of Trønder wares. Vessel types were not distinguished here, although, based on ware types, one might reasonably expect a similar profile in terms of plates, dishes and bowls. Only a few items of cutlery were recovered, including a wooden spoon from the privy and a small number of table knives, a two-pronged fork and three silver spoons from the yard deposits.

Some 17% of the ceramic assemblage in the privy was associated with the consumption and dispensing of beverages (category 3), and consisted mainly of Chinese porcelain cups and saucers (c. 14%) used to consume of warm non-alcoholic beverages, principally tea, though potentially also coffee and chocolate. The only other items were a fragment of an English refined redware teapot, and a few jugs and mugs/tankards in Staffordshire stoneware and Dutch blue tin-glazed ware. The majority of items associated with this category comprised fragments of glass drinking vessels. Over half (51.5%) of the 64 identified drinking and dispensing vessels in the privy consisted of stemwares. These comprised principally varieties of crystal wine goblets produced at the Nøstetangen glass factory, including examples from matching sets, and lids for ceremonial goblets. Only a few earlier soda-lime stemwares were represented, including engraved varieties. A dram/firing glass and a few beakers, including beer glasses, from Nøstetangen were also identified, along with a few *passglass* fragments and fragments from two decanters or serving bottles, including both an imported type and a type produced at Nøstetangen. The privy also contained fragments of a limited variety of at least 52 wine- and spirits bottle types produced at Nøstetangen and/or Aas (category 4), wine bottles predominating (67%).

The external deposits produced a comparatively small amount of glass drinking and serving vessel fragments, most of which consisted of 17th-century beakers and stemwares (*façon de Venise*, *passglass*, Roemer, Bohemian crystal), at least one *façon de Venise* decanter, and a few 18th-century stemwares, tumblers and decanters, including examples from Nøstetangen. Much of the imported glass dates from the late 17th and early 18th centuries and may be residual from the first residence, or from the early years of occupation of the second residence. Numerous bottle fragments for wines and spirits were found, though only about 35% could be securely identified, with a slight majority deriving from wine bottles. Both these and the case bottles were probably produced at Nøstetangen/Aas. A fair number of sherds of Chinese porcelain teawares were found (3% of the ceramic assemblage). The only other beverage related equipment comprised a metal handle for a coffee mill and a fragment of a metal barrel tap, presumably for dispensing wine or beer.

Food remains (category 5) recovered from the privy were confined to a hen's carcase and eggshells, and microfossils of a variety of exotic and local plants: namely, fig, raspberry, strawberry, crowberry, cloudberry, blueberry, coriander, and barley. Some 640 kilos of animal and fish bone were recovered from the external deposits to the north.

Clothing, personal grooming and adornment, health and hygiene (categories 7 - 10)

Practices associated with the health, grooming and presentation of the person were poorly represented materially, although a variety of interesting objects was recovered. The privy produced a few items of clothing and footwear (category 8) in the form of copper alloy buttons, women's leather shoes, and parts of a stay. It also contained items associated with health, personal hygiene and toiletry (category 10), including sanitary rags, two bone combs, fragments of five chamber pots, fragments of glass medicine and eau de cologne bottles. Human parasite eggs (whipworm and roundworm) were found in the

excrement deposits.¹²⁹⁸ The external deposits produced a small variety of copper alloy buttons, buckles and clothes fasteners (category 8), a gold finger ring and sticks for a folding fan (category 9), a toothbrush, a copper alloy tweezers and fragments of pharmaceutical bottles (category 10).

Smoking is included here as a practice closely linked to the person and self-presentation. The privy produced a small assemblage of smoking equipment (category 7). Dutch and Norwegian clay pipe stems and bowl fragments were identified, including six poorly-finished bowls resembling Dutch basis type 4 pipes which are probable copies/variants produced in Norway at Jacob Boy's factory at Drammen (1752 - c. 1770). Two well-finished Dutch basis type 3 bowls bore Gouda makers' marks, and are likely imports. A particularly interesting pipe, a unique find in Trondheim (and possibly Norway), was an ornamented socketed clay pipe bearing the Danish-Norwegian coat-of-arms. Of 53 bowls found in the external deposits, a little over half comprised Jacob Boy products resembling both Dutch basis type 3 and 4 bowls (his so-called 'English' pipes) and a spurred variety. The rest included Dutch imports of basis types 2, 3 and 4 (dating from c. 1675 to the mid-18th century).

Literacy, numeracy, trade and commerce (categories 11 and 24)

Items linked to reading and writing (category 11) and the spheres of trade and commerce were poorly represented in both the privy and external deposits, the former producing a few wax seal fragments, the latter a slate and slate pencil stubs, a metal book clasp, a fragment of a magnifying glass, 15 coins and a few leaden cloth seals.

Craft-, construction- and maintenance-related practices (categories 6, 12, 13, 23)

Miscellaneous tools and equipment (category 6) from the privy comprised wooden bucket parts (including a complete bucket), while external deposits produced a few knives, scissors and whetstones. Textile working (category 12) was represented by a possible weaving comb from the privy, and sewing equipment (a needle, pins, needle house, sewing ring and thimbles) and a laceworking bobbin from external deposits. Metalworking (category 13), both casting and smithing, was represented by a few slags in the privy and crucible fragments, slags and a metal punch in external deposits. Only a few bone antler offcuts in external deposits attest to boneworking (category 23).

Children's toys and curios (category 14)

The privy produced a child's wooden doll and a fragment of a pipeclay figurine, possibly an animal, while external deposits produced a small polychrome Chinese porcelain figurine (a Chinese calligrapher's 'water-dropper' or 'brush washer'), and a few stone marbles.

The use of weapons and firearms (category 16)

The only items linked to weapons and firearms comprised three wooden powder bottles - so-called 'Apostles' for use with matchlock or snaphance muskets - and a gunflint from the privy, and ten iron musket triggers, a few fragments of iron cannonballs, and a number of gunflints from external deposits.

Domestic fittings, heating, lighting and security (categories 17, 18, 19)

Items associated with heating and lighting (category 17) found in both the privy and the external deposits were confined chiefly to numerous fragments of window glass, and a few lead comes and ceramic stove tile fragments. Six decorated Delft wall tiles from the privy and two fragments from external deposits, as well as a few possible fragments of furniture and chest mounts from the same contexts are all that can be categorised as fixtures and fittings (category 18). Security equipment (category 19) was limited to a few barrel locks from external deposits.

Fishing equipment and horse-related equipment (categories 21 and 22)

Only a single stone net-sinker and one horseshoe, a few nails and a possible brass harness mount from external deposits can be connected with these categories.

¹²⁹⁸ Hartvigsen 1997.

Dating of the artefact assemblage and its possible connection with historical individuals

The privy K367

The date ranges of the pottery, glass vessels, clay pipe bowls (and some stems) found in both fills of the privy combine to suggest that the objects entered the latrine pits during the mid-18th century, and that there is no significant chronological difference between the material in the two stratigraphic horizons. The pottery assemblage contains ware and vessel types known to have been in circulation during the mid-18th century. A Trønder ware fragment bearing the painted-on date '1745' was found in the privy, providing a *terminus post quem* for its deposition. The privy's content of drinking glass produced at Nøstetangen must have been deposited *after* 1748, the start date for expanded production at this factory, which ended in 1777. The clay pipes include examples produced at Jacob Boy's factory in Drammen between 1752 and c. 1770. Being fragile, these are likely to have been discarded shortly after purchase. Most Dutch pipes in the privy are likely to have been produced after c. 1740.

On this evidence, it is suggested that most of the material entered the privy after c. 1750, possibly in connection with a single clearance episode. This may have been in 1783 when the residence was ultimately abandoned. However, the dating profile is arguably more in keeping with a clearance episode associated with an earlier break in occupancy. Arve Gudmansen entered the post of manager in 1748 and left it in 1765. It is suggested that much of the material in the privy might have been associated with his household.

The external deposits

The ceramics from these deposits are of types broadly commensurate with those found in the privy, although some earlier and later types - notably a small amount of Pearlware produced *after* 1770 - were also recovered from them. The deposits contained some clay pipes and examples of drinking glass which are of 17th-century date, indicating the presence of some residual material from earlier periods of activity, although some of this may relate to the occupancy of the first residence which was established at the end of the 17th century.

6.3.2.3. Summary conclusion: a 'modern' differentiated residential and farm complex

In contrast to the uncertainties and ambiguities regarding the first residence, the combined historical and archaeological evidence provide clear and comprehensive insight into a well-ordered enclosure set aside for the second provisioning managers' residence, workplace and farm buildings. Gathered within differentiated boundary fences were a number of buildings with distinct but interrelated functions. They included what for its time and place was a comparatively new, modern type of dwelling house designed on near-symmetrical lines. Built of timber in two-storeys and weather-boarded, roofed with tiles and provided with numerous glazed windows and sources of heat, it contained a comfortable and intricately spatially organised interior which could accommodate - and internally segregate - a large domestic household and its diversified practices, as well as the manager's office.

Replacing an original, smaller building in the yard was an equally modern type of building in the form of a compact multifunctional barn which accommodated horses and livestock, presumably cattle, the managers' wagon, and a loft where cereal crops from their fields could be threshed and hay stored. The yard also contained ancillary buildings and structures in the form of a well, a raised storage building for storing food and equipment, and a large compartmentalised, three-roomed privy. In addition, the managers' comfortable and well-ordered residential complex could boast one of Trondheim's characteristic small formal gardens from which they could presumably also supply their kitchen.

6.4. Discussion: materialities of practice in 18th-century Kongsgården

6.4.1. Introduction: aims and theoretical points of departure

A main premise for this study is that understandings of historical social phenomena can be sought in arrangements of materials enrolled in social practices: namely, the ‘practice-material arrangements’ that constituted human sociality in the past. All happenings and changes in social life arise from the events, processes, and actions occurring in and to these nexuses, or combinations, of materials, competences and meanings.¹²⁹⁹ By examining the material residues of practices at this particular place and historical juncture, I hope to offer a ‘practice-material history’ of otherwise forgotten lives and the world they inhabited.

The previous sections presented the traces of past practice-material arrangements that have survived in the form of archaeological, architectural and historical material associated with 18th-century Kongsgården: namely, the buildings, spaces and objects that existed here at the time, as well as contemporary documents that contain information about it and the people who lived and worked there. The following discussion aims to synthesise and expand upon this evidence in order to characterise the nature of practices that took place within Kongsgården military depot during the course of the 18th century. In particular, it offers a reading of patterns and configurations of the materialities of practices performed by the depot’s only permanent residents, the provisioning managers, their families and servants: principally practices associated with their everyday domestic lives, expressions of selfhood and identities, and their sustenance, sociability, health and work.¹³⁰⁰

Space is central to the study of the materiality of practice in this particular ‘site of the social’. In keeping with the practice-theoretical framework I have adopted, space is regarded as a material phenomenon with temporal, performative and ideational dimensions, enacted into being and transformed through practice.¹³⁰¹ Practice is situated in space, but space and practice constitute each other. Space is not a ‘scene’ or ‘arena’ of human activity, but rather an active ‘carrier’ of practice. It is essentially a convergence, or alliance, of the matter of which it is composed (*materials*), the bodies and minds that engage with it (*competences*), and the ideas and mentalities associated with its conception, representation, perception and use (*meanings*). Furthermore, it is closely connected with social reproduction at a variety of scales, from the intimate spaces associated with the body, to domestic space and public or institutional space, for example.

As proposed above, these dimensions of practice dovetail with Henri Lefebvre’s three dimensions of space production and social reproduction: namely, conceived (abstract) space, perceived (concrete) space, and lived (social) space. ‘Conceived’ space is the dimension of knowledge, ideas and discourses; the mental (abstract) space in which space is constructed theoretically in the minds and plans of its planners, architects and builders. The material outcome of this process of conceptualisation and applied practical knowledge is ‘perceived space’, or concrete space, the dimension of everyday practices performed in a material context that is perceived by the human senses. Objects, physical space, bodies and minds are enmeshed in the performance of practice, through which the abstract and concrete become intelligible. Integral to this is the production of meaning, whether specific or multiple, static or shifting. In this way, space is ‘lived’, or experienced. ‘Lived’ spaces are affective spaces where creative imagination, emotions and actions unfold. They are spaces in which, for example, authoritarian power may assert itself (through monumental architecture, sightlines, processional routes and the like), or is itself contested through the creative imagination of people and their emotional engagement with the material environment, symbols and memory.¹³⁰²

¹²⁹⁹ Practice is defined as a nexus, or integrated mesh, of practice-material arrangements which are the outcome of a creative coalescence of materials, natures, humans, animals, organisms, tools, technologies, meanings, desires and competences (Schatzki 2010: 146). See 3.5. for the theoretical basis for my analysis of practice and space in this context.

¹³⁰⁰ See 4.3.2 for research themes i.e. Dwelling; Sustenance & sociability; Personal appearance; Health.

¹³⁰¹ See 3.5.9 - 3.5.10.

¹³⁰² See 3.5.11. Lefebvre 1991: xx-xxi, 21, 23-4, 48-50.

Viewed through the lens of Lefebvre's spatial triad, these comprise interdependent dimensions of practice associated with Kongsgården's conception, use and meaning. These dimensions exist in conflict or alliance with each other, in a process that produces and transforms social space in and through time. Crucially, this must be seen as an *historically contingent process*. Space is continually shaped and reshaped both materially and discursively, perpetually entangled as it is in ongoing processes of 'becoming'; namely, the emerging and disappearing practices through which these spatialities acquire their materially, culturally and historically specific uses and meanings. Because materiality is a dimension of all social practice and phenomena, changing configurations of materials characterise processes of change in social life. In other words, material arrangements associated with social practices and phenomena change over time.¹³⁰³ The discernment of such changing constellations and patterns of materials and practice in Kongsgården is central to this study.

My case study provides a well-defined subject for the analysis of historically contingent, spatially-embedded practice in an historic context. As a state institution and a place where people lived and worked, the Kongsgården military depot existed as a distinctive and unique material and social environment during the 'long' 18th century. It was an amalgam of institutional and domestic spaces, and the lives of those who spent their days in this 'site of the social' were formed and transformed through myriad practices that involved shifting constellations of people, knowledge, and things. Lefebvre's spatial triad - in alliance with theories of practice - provides an analytical matrix within which I will discuss the distinctive arrangements of materials, competences and meanings associated with social practices enacted in this unique social space.

The discussion examines the ways in which Kongsgården was conceived and planned as military-bureaucratic space and domestic space; how space and buildings and material things were integrated within institutional practices and the everyday practices of the people who lived and worked here; and how these people may have experienced this lived space and their 'world of things' in terms of feelings of identity, belonging, alienation and the like.

6.4.2. Kongsgården as institutional space

We can begin by asking how the space constituted by the Kongsgården military depot was *conceived*? In Lefebvrian terms, conceived - or abstract - space is the dimension of knowledge and concepts usually wielded by those in authority who produce representations of space which may be responses to individual or collective needs, desires, visions or memories, for example, or to ideologies, elite discourses, institutional directives or demands, and so on.

In this particular instance it might be useful to highlight Lefebvre's characterisation of conceived (abstract) space as a consequence - or product - of constellations of power, knowledge and spatiality in which the dominant social order is materially inscribed and legitimised, and colonises the concrete space of the everyday. The appropriation of Kongsgården by the army may be viewed as an instantiation of the bureaucratisation *of* space, whereby an administrative system marks out its own sphere of action, and a heightened bureaucratisation *through* space, involving the materialisation of juridical-political arrangements by which social life is made subject to systematic surveillance and regulation by the state.

The Kongsgård depot was planned and taken into use by a military bureaucracy to serve a pragmatic and strategic military-related purpose, and comprised an important component in the restructuring of military organisation during a time of international conflict. While it was the outcome of prevailing bureaucratic and militaristic requirements, planning and thinking, the depot was also an outcome of ideas and conceptions about how society should be organised at a number of levels. However, the spatial organisation of the building complex as a whole, and the managers' residences in particular, was also the outcome of the interplay of new practical knowledges, materials and people with the possibilities and restrictions inherent to the medieval precinct's pre-existing material fabric.

By examining the material outcomes, therefore, can we, for example, perceive dominant top-down political, social and cultural regulation of the precinct's spatial organisation? Conversely, can we detect contingencies and ambivalencies resulting from the particular entanglements of materials, competences and ideas within this built space? What particular forms of knowledge and competence

¹³⁰³ Pred 1984; Schatzki 2010: 142.

were involved in the production and use of different forms of space here? Did the building complex contain visible and invisible boundaries: social, gender-related, or institutional, for example? These and other questions relating to the production and use of this particular space will be addressed in the following sections.

Kongsgården and the Absolutist State

At a broad analytical scale, we can construe the military depot at Kongsgården as a component of the abstract space produced by and for the particular constellations of power, knowledge and spatiality that comprised the Absolutist State. As an important regional centre of military administration and the storage and redistribution of the materials necessary for the pursuit and practice of war, it owed its existence to the instruments, institutions and practices of power which legitimised, underpinned and maintained the Danish-Norwegian state. It was an outcome of the complex historical-geographical dynamics of a militaristic state political economy, and in terms of its function - the acquisition, storage and redistribution of military provisions and equipment - it constituted in a sense a form of engine - or 'technology' - of military and political power.

In previous sections (6.2.1- 6.2.2), I presented the depot's role within the context of a regime of increased systematic military organisation during the period of the Absolutist State, a time which also saw the rise of a class of state officials whose role was to administer the institutions, directives and mechanisms of state power. The Kongsgården depot was such an institution, the functions of which were administrated by the provisioning managers whose material existence is the chief subject of this study. It comprised a bureaucratic and bureaucratised space, a physically demarcated enclave or sphere of action where the material and immaterial components of regional and national military power were centralised and regulated, and could be subject to administration, control and surveillance.

Such a role and function was not new for the enclosed building complex of medieval stone buildings that the army took over in the late 17th century. As a monumental space, it was enacted into being through practices associated with the administration of institutional power, both ecclesiastical (the powerful medieval Archbishopric of Nidaros) and secular (the Danish regional governors following the Reformation, and the Diocesan Prefect in the early decades of the Absolutist State).¹³⁰⁴

The changing constellations of power and knowledge, materials, competences and meanings associated with the emergence and disappearance of these various dominant authorities formed and transformed the character of this enclosed monumental building complex in various ways. This ongoing, unfolding process of the co-constitution of space and practice exemplifies the dynamics involved in the notions of prefiguration and 'activity timespace' mentioned above, whereby what people do is seen to have a historical and present setting while being future orientated.¹³⁰⁵ In other words, practices, material arrangements and the use of space in the present are enmeshed with the outcomes of practices and spatial configurations of the past, and will in their turn become entangled with, and redefine, future configurations of materiality and practice.

Changing configurations of practice and space

Although shaped through the outcomes of differing traditions, meanings, material arrangements and competences that enabled the enactment of different forms of practice in the past, the Kongsgården building complex offered the army an existing, monumental and materially robust spatial resource suited both structurally and symbolically to its own particular requirements and practices. This space constituted a stabilising physical setting that was intricately involved with the unfolding enactments of military, bureaucratic and other practices. It would itself shape, and itself be reshaped and redefined by, new interdependent associations of people, materials, competences and meanings in the course of time. In contrast to the medieval and early post-medieval complex, the military depot was no longer the official residence of a nationally or regionally important individual socio-political actor. It functioned exclusively as a storage and redistribution centre for military provisions and materiel that enabled the projection of power and authority of a more distant political regime based in Copenhagen.

¹³⁰⁴ Nordeide 2000 & Nordeide 2003.

¹³⁰⁵ 3.5.3.

The absence of actor-centred institutional power and status in spatial production and use is evident in the functional, pragmatic and utilitarian nature of the replanning, modification and reuse of the complex. The large stone residential and representational hall-buildings previously used by the medieval archbishops and aristocratic post-Reformation governors and prefects as the material components of their ceremonial and administrative practices linked to the enactment of political, social and cultural power were now converted into storehouses for provisions, materiel, munitions and gunpowder (Fig. 6.1). A large working bakery was installed in the north-eastern corner. The medieval buildings in the west wing were also modified to act as storehouses for weapons, gunpowder, money and provisions. The only authoritative individual accommodated in this modified monumental complex was a comparatively low ranking state official - the provisioning manager - who lived in a modest dwelling house located in the precinct's courtyard.¹³⁰⁶

Representations of space: historical maps and drawings of Kongsgården

We know something of the physical nature of these changes through documentary, architectural and archaeological evidence. Maps drawn during the early 1700s provide us with only graphically simple, and in some instances ambiguous, representations of Kongsgården. However, the depot as a whole, including the manager's residential enclosure, was represented in precisely surveyed architectural detail on Captain J.N. Eckleff's detailed plans and elevations of 1758, drawn up as part of a national survey of military properties at this time (Fig. 6.1; Appendices L and M).

Eckleff's drawings employed a standard of draughtsmanship designed to convey the nature of the building complex as faithfully as possible, providing the authorities in Copenhagen with accurate documentation of how it was organised to fulfil its function as an instrument of centralised military power and bureaucratic organisation. The qualitative difference between this and previous cartographic representations of the complex is significant. These drawings are themselves material representations of the matrix of knowledge and conceptions underpinning this abstract space, faithfully and precisely conveying the materialities produced through the bureaucratic organisation of space. Furthermore, they typify the emerging rational and bureaucratic spirit of the times, entangled as they are with the aspirations of the military authorities to systematise and inventorise their material assets. They are of course also material artefacts subject to varying and perhaps contentious interpretations in the present, including my own!

6.4.3. The precinct and the managers' residences: conceptions of domestic and institutional space and their material outcomes

The depot's main storage buildings are not a subject of this analysis, other than in terms of their role in forming the material and institutional context for the chief subjects of study; namely, the successive residences of the provisioning managers that occupied parts of the depot's precinct, or courtyard. Of central concern here are questions regarding the concepts, practices and material outcomes associated with the planning, organisation and use of the precinct. What do changes in buildings, spatial organisation and material arrangements suggest regarding the nature of the ongoing, emergent processes involved in the co-constitution of space and practice at this particular place and time? What do the forms and spatial organisation of the two very different residences suggest regarding prevailing architectural practices and notions of how spaces of work and domesticity should be organised? What do their respective practice-material assemblages - the buildings and objects that constitute them - convey about the work-related and domestic practices of a serving official of the Danish-Norwegian state during the 18th century?

6.4.3.1. The old and the new: changing architectural practices

The plans for many of the lodgings that were provided for senior officers and officials at the new fortresses were drawn up by the army's own architectural draughtsmen, some of whom came from Europe. In some instances they were influenced by fashionable European baroque architectural ideals

¹³⁰⁶ Lysaker 1989: 44-48.

of symmetry from the late 17th century on, although pre-existing architectural forms were still utilised well into the 18th century.¹³⁰⁷

As outlined above, the first dwelling house to be built in the new Kongsgården depot was a *svalgangshus* constructed at the turn of the 18th century, replaced subsequently by a *midtkammershus* sometime between 1716 and 1730. I have not been able to establish whether military draughtsmen were responsible for their design. Nonetheless, this contrast in chosen forms of building provides an example in microcosm of contemporary developments in architectural ideals and domestic arrangements within a particular social context.

The *svalgangshus* originated in a European Renaissance-influenced building tradition which

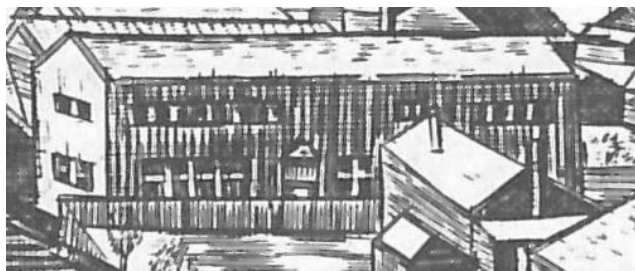


Figure 6.21. A *svalgangshus* in the mercantile district of Trondheim. Detail: Maschius's Prospect.

emerged in Norwegian elite contexts during the 16th century, initially among the nobility. It became popular amongst urban elites, who, as we have seen, built two-storeyed timber dwelling houses equipped with external galleries, chimneys, windows, and in some cases stone cellars which replaced vernacular medieval urban housing forms.¹³⁰⁸

Features from medieval two-storeyed *loft* buildings were incorporated in the new *svalgangshus*, including the

gallery itself and privies built into their ends. Variants incorporating differing building materials, room plans, types of ovens and uses of rooms emerged in different parts of the country and in differing social contexts during the 17th and 18th centuries.¹³⁰⁹ By the end of the 17th century, the *svalgangshus* was well established as a form of dwelling among the wealthier segments of the Norwegian population, particularly in urban contexts such as Trondheim, where examples are shown on Maschius's Prospect of 1674, particularly in the area nearest the river occupied by wealthier merchants (Fig. 6.21; Appendix C).

The first dwelling house constructed in Kongsgården was one such variant of this established form, and its builders would have utilised familiar and customary knowledge, techniques and materials in its design and construction. We shall look at it more closely below with regard to form and function. In the present context, however, it should be noted that the building was constructed at a time when newer international influences in the form of baroque-influenced building fashions were circulating in elite contexts nationally. The new symmetrical Baroque-influenced style was utilised by army planners and architects in the decades around the turn of the 18th century in connection with the dwellings of its commanding officers, also locally in Trondheim.¹³¹⁰ Indeed, the general commanding the Nordenfjeldske regiment, General Johan Wibe, was an active proponent of the new building fashion, and drew up plans for his own residence, urban housing and a residence for the Fortress commander.¹³¹¹

An analysis of the introduction of baroque-inspired architecture into Norway by the architectural historian Lars Jacob Hvinden-Haug allows us to contextualise the transition we have documented in Kongsgården in terms of architectural discourse and practices nationally.¹³¹² He asserts that the earliest

¹³⁰⁷ Kavli 1970: 52-56; Eliassen 2006: 201. The Danish-Norwegian army's engineering officers were chiefly architects, responsible both for the design of the fortifications and the buildings and structures within them (*Architectura civilis*). During the 17th century these men were predominantly from the Low Countries, while from the late 17th century more Norwegians educated abroad entered this profession (Egede-Nissen 2015).

¹³⁰⁸ 5.4.4.3 and 5.6.2.

¹³⁰⁹ Ekroll 1991; Christensen 1995: 122-132; Roede 2001: 52-53, 253.

¹³¹⁰ Kavli 1970. A local example is the commandant's residence at Munkholmen Fortress which dates from 1695 and comprises one of the earliest *midtgangshus* in Norway (Kavli 1966: 65; Hvinden-Haug 2008: 132).

¹³¹¹ Kavli 1966: 72-73; Kavli 1970; Hvinden-Haug 2008: 483-484. For an early attempt to standardise urban housing in Trondheim, at least for the burghers, see plan types drawn by General Wibe following the city fire of 1708 (Kavli 1966: 82-83).

¹³¹² Hvinden-Haug 2008.

Norwegian houses built utilising European baroque architectural ideas were constructed by a small group comprising the nobility and the highest-ranking officials of the Danish-Norwegian Absolutist State after 1660. This exclusive, classicist ‘modern’ architectural fashion was adopted as a vehicle for the material expression of their newly established status. Strict adherence to classical baroque ideals of symmetry in plan, façade and structural layout seem to have been consciously reserved for this small elite’s large houses well into the 18th century. Symmetry seems to have been regarded as an unofficial privilege of rank, at least up to the mid-18th century.¹³¹³ Wealthier individuals of lower social rank utilised less rigorously symmetrical arrangements (termed ‘slightly asymmetrical’ by Hvinden-Haug).¹³¹⁴ Furthermore, late 17th-century burghers continued to erect buildings - principally *svalgangshus* - without any particular architectural ambitions, due perhaps in part to the areal restrictions of their properties, but also to avoid accusations of harbouring pretensions above their station (Fig. 6.21; Appendix C). Instead, they invested increasingly in more ostentatious and luxurious interiors.¹³¹⁵

Architecture was closely entwined with the hierarchical ranking system of the time. From the mid-17th century on, the symmetrical interiors of the residences of the Norwegian nobility and upper elite were divided between public and private areas placed to either side of a central hall (*midtgang*), emphasising the importance placed on separating public or official receptions and entertaining from the functions and privacy of the household. The more important the status or office of the owner, the more space was devoted to his public role.¹³¹⁶

Hvinden-Haug suggests that the contemporary concept of *decorum*¹³¹⁷ played a central role in determining and regulating distinctions in the use of particular architectural styles and building plan types within the hierarchy, their use being closely proportionate to the specific social rank and requirements of the individual. This also extended to the way in which the household was run. In other words, it was important that lower ranks did not build and live in a manner that would have been regarded by others as inappropriate to their rank. Symmetry and a greater proportion of space devoted to public and official functions were consequently the architectural preserve of the upper elite.¹³¹⁸

From the turn of the 18th century on, the untitled elite and city burghers increasingly adopted ‘slightly asymmetrical’ solutions for both private and public buildings built predominantly of timber, but occasionally also in brick or stone. Trondheim’s urban elite erected a number of particularly impressive, large panelled timber-built mansions during the latter half the 18th century.¹³¹⁹

Although earlier examples exist, it was also at this time that the ‘near-symmetrical’ style of architecture became more generally adopted by lower ranking state officials, military officers and the like. Their smaller houses in urban and rural contexts included examples of the *midtgangshus* and its formal relation, the *midtkammershus*, many variations of which were built by wealthier urban citizens, landowners and farmers as a mark of prestige. At the time the second managers’ *midtkammershus* was built in Kongsgården,¹³²⁰ however, there was still no nationally adopted building tradition outside the wealthy titled elite, particularly in urban contexts. This is evident in the variety of ways in which the baroque-inspired architectural ideals were adopted and adapted, both in terms of form and use of materials, as well as in the persistent popularity of the *svalgangshus*.¹³²¹

¹³¹³ Hvinden-Haug 2008: 132, 569, 573-574. Hvinden-Haug suggests the exclusive use of classical architecture and symmetry by the nobility and ranked elite should be equated with the contemporary social regulations and sumptuary laws which reserved particular practices, goods and clothing for them, even though no such formal regulations existed for architecture (ibid. 68).

¹³¹⁴ The nobility almost exclusively employed the *midtsalplan* (Formal Plan) (Hvinden-Haug 2008: 133, 573-574).

¹³¹⁵ Hvinden-Haug 2008: 70-71.

¹³¹⁶ Hvinden-Haug 2008: 130.

¹³¹⁷ From the Latin, denoting that which is appropriate or seemly (Hvinden-Haug 2008: 50).

¹³¹⁸ The notion of *decorum* was used as a guiding principle in 17th- and 18th-century poetry, rhetoric, and the formulation and regulation of household economy and architecture in strict accordance with social standing (Hvinden-Haug 2008: 50-54).

¹³¹⁹ Kavli 1966: 132ff.

¹³²⁰ By 1730 at the latest.

¹³²¹ Hvinden-Haug 2008: 74-75, 570; Christensen 1995: 132-138; Eliassen 2006: 198-201; Roede 2001.

In the wider context of the adoption of baroque-style architecture in Norway, therefore, it can be suggested that the army's choice of the long-established and locally familiar *svalgangshus* for the first managers' residence at the turn of the 18th century is consistent with the narrow exclusivity of symmetrical forms that persisted prior to the middle of that century. Interestingly, however, its replacement by a near-symmetrical *midtkammershus* between 1716 and 1730 may constitute a comparatively early example of new building practices adopted by the lower-ranking elite, both locally and nationally.

It is suggested that this is a manifestation of changing practices with regard to the organisation and use of domestic space within contemporary society; namely, the emergence of an 'ordinary modernity' whereby material arrangements in the sphere of domestic comfort that were previously the exclusive preserve of the noblest and wealthiest few gradually became more widely adopted.¹³²² This must nonetheless have been determined and regulated by contemporary norms of decorum within the ranking system, whereby only architectural forms and arrangements considered appropriate to an individual's social position were sanctioned. So, in contrast to the larger symmetrical houses of the higher-ranking titled elites which accommodated space appropriate to their public role and official practices as representatives of the state, a proportionately smaller amount of such space was allocated in the smaller near-symmetrical houses of lower ranks and officials with less important public roles. The residences of the provisioning managers are cases in point.

These aspects will be addressed in more detail below when the two residences are discussed with regard to the materialities of practice observable in their differing configurations of space and associated material culture. Prior to that, some observations should be made regarding the organisation of this institutional space, and the place and role of the residences within it, paying particular regard to arrangements which may denote changes in institutional or domestic practices.

6.4.3.2. Boundaries of mind, body and space: control, surveillance and relations of power and discipline

Domestic space, in common with space generally (whether landscapes or urban space) is permeated by material and immaterial boundaries and bounded 'territories' – be they political, ideological, social, cultural or personal. These may relate to the assertion or contestation of forms of power at differing levels, ranging from the power of the state to that of the patriarch in the domestic household, for example, or the desire for control, segregation and privacy in public or domestic life. A number of developments regarding the changing location of the managers' residence within the precinct can be noted in this regard, exemplifying the interweaving of the dimensions of conceived, perceived and lived space outlined above.

Having initially occupied part of the east wing of the precinct, the residence was relocated to the south wing. As such it was placed at the furthest possible distance from the storage buildings in the northern and western wings, as well as the presumably busy and noisy bakery in the north-east corner. Factors such as noise, and perhaps even an acknowledgement of the risk to the family of living so close to the arsenal of gunpowder and munitions placed in the stone vaults of the northern buildings, may have played a role in initiating this move.

The new residence occupied a fenced enclosure which also contained a number of ancillary buildings and structures central to the running of the household and associated farm. Our lack of insight into how the first residential complex was bounded (if at all), or the location and number of buildings associated with it, impedes direct comparison between the two residences in this regard. However, it is suggested that the second residential complex displays a more self-contained and rationally conceived spatial organisation, perhaps motivated by a desire for greater order, comfort and privacy.

Among other things, this takes material form in the differentiated character of the fencing which surrounded the second residential complex. The boundary around the yard to the east of the dwelling house comprised a robust, functional plank-built fence of a type suited to demarcating farmyards and the physical containment of animals. It contrasts with the less robust and more aesthetically decorative picket fence placed around the northern and western sides of the dwelling house. This constituted a

¹³²² 4.3.5.

more symbolic than functional form of demarcation, essentially marking the limits between the manager's bounded private space and the more permeable public space of the precinct.

The precinct as a whole was nonetheless a bounded space of authority and control. As a military institution, Kongsgården comprised a bureaucratic-political territory or enclave within the city. Nested within this were the managers' residences which, as just observed, also comprised self-contained social enclaves within the military depot. The storage buildings, precinct courtyard and the residences within it formed differentiated bounded spaces which required control and enforcement of boundaries.

The manager, his family and servants, were the only people allowed to reside in the precinct. In other words, the manager lived on the job, and was provided with lodgings in close proximity to the stores of provisions and materiel that he supervised. This suggests that his role also encompassed the control and surveillance of the movements of people and materiel within the precinct, and the siting of the first residence in close proximity to the northern storage wing containing munitions- and gunpowder stores and the bakery may have facilitated this. In contrast, the second residence occupied a bounded space tucked away in the south-east corner of the precinct at some distance from the northern arsenal and bakery (Fig. 6.1; Appendix L). The dwelling house was now located beside the southern gate, and its western façade faced the main north-south path linking that gate with the main northern gate.

We know that the manager worked from home at this time. His office probably occupied a west-

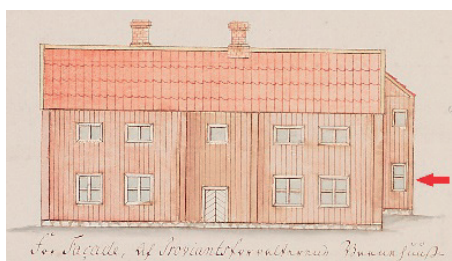


Figure 6.22. The second residence showing the north-facing window (arrowed) in the manager's office in the projecting rear extension. Detail: Eckleff 1758.

facing ground-floor room in the building's southern extension (Fig. 6.22; Appendix L). Interestingly, Eckleff's drawings show that this room had two windows. One faced west and overlooked the path linking the gates as well as the western wing which contained munitions- and materiel stores, as well as a secure vault for the Royal Treasury in *Magasin huuset* in which money chests were kept. A smaller window in the office's north wall provided a view towards the northern wing and main gate (though not the arsenal and bakery). Consequently, despite being located in the south-east corner, the manager could monitor activity within much of the precinct from his office while he went about his daily

tasks, and particularly movements between the two entrances and near the entrance to the Treasury vault.

Although I have emphasised the 'conceived' aspects of space in the foregoing, these are entangled with the 'perceived' and 'lived' dimensions in Lefebvre's model of the production of space. In other words, spatial planning, everyday practice and individual and collective experience of space and its meanings are interwoven. As we have seen, the depot was an institutional space whose production and organisation were the outcome of particular forms of discourse, practice and knowledge prevalent at the time, including those connected with architectural design, military organisation and bureaucracy. Control and surveillance were integral to its management, and space was organised with that in mind. Although the institutional requirement - or practice - of control was implemented principally through its embodiment in human actors, principally its manager, a spatial arrangement was needed to allow him to enact his professional authority through overt surveillance. In the second residence, this was done by providing the manager with an office whose windows afforded a view of much of the precinct. In this way, the practice of surveillance could also be incorporated within the rhythm of his everyday life.

Relations of power and discipline are enmeshed in this spatially-embedded practice. The effectuation of surveillance in this subtly visible way would have reinforced the institutional identity and authority of the manager, from both his own perspective as 'observer' and that of others as 'the observed'. The creation in this institutional setting of a centralised point of surveillance recalls Foucault's notion of panopticism, which links rationalised spatial organisation with the exertion of disciplinary power.¹³²³ Utilising this notion, it can be suggested that the strategic siting of the manager's office

¹³²³ Foucault 1977: 200-203. He proposed that all hierarchical institutions, such as prisons, the army, asylums, schools, hospitals and factories, exert discipline in a manner resembling the English Utilitarian Jeremy Bentham's

created a 'consciousness of permanent visibility' in Kongsgården. In other words, the precinct was experienced as a 'lived' space of disciplined control by those who lived and worked here, evoking in them contrasting feelings of authority and subordination, belonging or exclusion.

To conclude, we can note that the practice of surveillance here necessarily combined particular materials, competences and meanings. I suggest that the desire to provide a vantage point for surveillance by the manager explains the unusual way in which the second residence's southern extension projects beyond the gable wall of the main building. Only by designing and building the extension in this way could a north-facing window be placed in the office wall. In other words, competences of architectural design and building practice enabled the everyday spatial practice of authoritarian disciplinary power embodied in the manager. This exemplifies the ways in which abstract, concrete and lived dimensions of space are entangled in practice-material arrangements, and how space is itself a 'carrier' of practice.

6.4.4. The two residences: materialities of the household and the emergence of an 'ordinary modernity'

Having concentrated chiefly on aspects of space and practice relating to Kongsgården as a military-bureaucratic institution, I would now like to examine the material evidence for practices enacted within the households that occupied the two residential complexes. The practices discernible in the residual practice-material arrangements here fall broadly within the earlier-defined themes: namely, dwelling, sustenance and sociability, personal appearance, and health, as well as other spheres of practice connected with work, for example. However, in this particular place and time, materialities of dwelling also encompass materialities of the other spheres of practice, with which they interleave and overlap (for example, the dwellings were also places of work). We might therefore better regard these collectively as *materialities of the household*, which we can regard as a physically, ideologically and humanly constituted unit of social practice, production and consumption.

The buildings, spaces and objects associated with each residence comprise unique combinations of practice-material arrangements. Their contrasting architectural and spatial arrangements have been discussed within the context of prevailing and changing concepts, discourses and practices of architectural design and institutional organisation. As already contended, the central conclusion to be drawn is that the two residences' differing structural character are illustrative of a transition from established to new practices relating to the organisation of domestic space and the household within the lower ranks of the social elite during the mid-18th century; namely, the assimilation of previously exclusively aristocratic elite practices by other groups.

In Chapter 4, I introduced the notion of the home as an essential 'locus of ordinary modernity'.¹³²⁴ Certain practices, ideas, and notions that were initially the preserve of the privileged few became more commonplace during our period. The essence of this 'ordinary modernity' is comfort, and particularly domestic comfort. It involves a range of attributes, including order, convenience, efficiency, leisure, ease, pleasure, domesticity, intimacy, and privacy. The archetypal comfortable 'modern place' is the home. Its constitutive practices occur within defined and segregated ordered spaces, in contrast to medieval housing with its multiple-use spaces which were essentially public in nature. At the core of this are notions of privacy, comfort and order, and an increasing division between work and domestic life, as well as between gendered practices. Modern homes are bounded spaces of practice defined by controlled access both within and from without, the boundary between public and private spaces and between public and private worlds creating domesticity.¹³²⁵

Panopticon, an 18th-century prison designed to allow prisoners to be controlled by the gaze of one strategically situated warder. Control is exerted through 'disciplinary power', a form of top-down power that is constant, unnoticeable and internalised. As subjects are constantly visible but not sure whether they are being watched at any one time, they always act in accordance with the rules. A 'consciousness of permanent visibility' is created, and control is achieved through self-surveillance and self-regulation resulting from the fear of being caught breaking rules or norms.

¹³²⁴ Taylor 1999: 53. See 4.3.5.

¹³²⁵ Taylor 1999: 52-54; Rybczynski 1986: 66, 231.

The desire to segregate or hide certain practices and people from each other within the domestic sphere might be construed as a feature of what Norbert Elias identified as a pan-European civilising process that sprang from the Renaissance.¹³²⁶ As social classes, family members, servants and labourers increasingly became dependent on each other, it was important to establish boundaries between them. This manifested itself in, among other things, heightened sensitivities and notions of personal restraint and cleanliness, and a distancing from unclean things, people and practices. Personal and intimate practices deemed primitive or shameful, such as the excretion of bodily waste, undressing, or sex, were shunned or hidden from general view, and relegated to their own secluded spaces, as were 'unclean' forms of housework or work conducted by servants or others. Beds were moved out of parlours and into private bedchambers. In this way social, professional, personal and gender-related practices could be differentiated and stabilised. These notions of separateness and discrete spheres of practice were increasingly accommodated through the subdivision of houses into separate, differentiated functional spaces.¹³²⁷

In Norway, differentiation of domestic space emerged in aristocratic elite circles during the 16th and 17th centuries, and gradually became a more widespread feature of society from the mid-18th century on, taking on a variety of forms in urban and rural contexts.¹³²⁸ The two contrasting managers' residences in Kongsgården exemplify how this transition transpired in one particular social context. In terms of spatial organisation, the second managers' residence demonstrably provided these lower-ranking officials and their households with a more overtly bounded, efficiently ordered and intricately differentiated domestic space than had been conceived of and materialised in the first residence. Within differentiated domestic space of the type exemplified in the second residence, domestic practices could be performed in ways that approximated to the refinement, comfort, efficiency and privacy previously reserved for the upper echelons of the elite.

Consequently, it is suggested that the second residence constitutes a nascent 'ordinary modernity'. We might also view these practices, and the differentiation of space with which they were entangled, within the context of the emerging European Enlightenment of the 18th century, a social ethos which aspired towards order, reason, individualism, refinement and an immersion in a material, empirical discourse that tied these qualities to moral discipline, virtue, social status, wealth and influence.¹³²⁹

The Enlightenment ethic of 'Improvement' in particular was a rationally-inspired process of moral imperatives which engendered wide-ranging practical improvements in many spheres and practices of social and economic life during the latter half of the 18th century in particular. These included, for example, commerce, manufacturing, technology, agriculture, personal and public hygiene, sanitation and health, urban planning and housing, institutions, material goods, and the improvement of the self.¹³³⁰ In Norway, the principal promoters of Enlightenment ideals were the educated classes, particularly the clergy, who established intellectual networks both at home and abroad. A group of intellectuals living in mid 18th-century Trondheim was particularly active in promoting Enlightenment ideas and practices, establishing Norway's first academic scientific society here in 1760.¹³³¹

The extent to which such ideas impacted upon the daily lives of ordinary people is open to question and requires wider research. However, in the context of this study, the materialities of these characteristic processes of modernity as they were enacted in this particular locality is a central area of inquiry. In particular, the nature of practices associated with domestic organisation and housekeeping, human sustenance and sociability, the expression of personhood and personal identity, and material provisions for sanitation, health and work will be characterised more closely by examining the spatial configurations of the two residential complexes and the assemblages of objects associated with them.

¹³²⁶ Elias 1994.

¹³²⁷ Christensen 1995: 202; Roede 2001: 326; Eliassen 2006: 227.

¹³²⁸ Christensen 1995: 20, 202, 212-218; Hutchison 2012: 145-148.

¹³²⁹ Deetz 1996.

¹³³⁰ Tarlow 2007: 10-13.

¹³³¹ Originally *Det Thronhjemske Selskab*, and from 1767 *Det Kongelige Norske Videnskabers Selskab*.

The residences' differing spatialities will be examined first, followed by a discussion of their associated assemblages of practice-related objects.

6.4.4.1. The dwelling houses: the organisation and use of domestic space

During our period, the patriarchal household family of master, mistress and children, with (in households that could afford them) one or more servants, was the universally recognised ideal across northern Europe, including Norway. As the historian Amanda Vickery observes, the home was seen as a sacred refuge from the world, the haven of married couples for whom the independence of residing in a house and keeping a household was a decisive achievement in terms of personal prestige. For both men and women, keeping a flourishing household was proof of adulthood and creditworthiness, and represented a successful life. Although patriarchal in structure, households were cooperative in practice, and control of the domestic economy was often entrusted to women, who possessed skills, knowledge and practical power as consumers. The household was a collective actor, a production unit dependent on access to knowledge, material resources and labour to survive, and it was the pre-eminent modus of living that provided shelter, sustenance and safety for its members.¹³³²

We may reasonably assume that this also formed the existential framework for the domestic lives of the nine managers and their families who lived in Kongsgården during the 18th century. Although biographical details are few (Appendix I), we have enough to say that all the managers were married and that some had children: indeed, as many as twelve in the case of Rasmus Hansen Fyhn! Given the managers' professional and social status, these families probably employed several household servants, as well as farmhands and a gardener, and may have housed relatives, lodgers and a private tutor, for example.¹³³³ Historical information about the buildings and their contents is also limited: in no instance do we have an overview of household goods provided by a probate inventory, and we have only a very concise and partial fire-insurance survey of the second residence. An alliance of historical and archaeological evidence has therefore been crucial to gaining insight into developments here.

The *first residence* was occupied for the first twenty or thirty years of the depot's existence, and provided lodgings for the families and (presumably) servants of six or seven of the depot's nine provisioning managers. It has not been possible to connect the associated artefacts to specific families or chronological junctures within this period. The *second residence* was built between 1716 and 1730 and stood to 1783, during which time it was home to two or perhaps three managers. Again, it is difficult to securely associate objects with a specific household, although it is suggested that the material from the privy's latrine pits originated in the household of War Councillor Arve Gudmansen, who lived here between 1748 and 1765. Despite these and other problems of representativity, the material evidence associated with both residences provides us with an informative basis for characterising aspects of the lives and experiences of the people who lived and worked here during much of the 18th century.

A two-storeyed *svalgangshus* and a smaller single-storeyed building beside it in the east wing formed the residential complex occupied by the first six or seven families (Fig. 6.9). The ambivalent nature of the evidence impedes categorical identification of one or other as the dwelling house proper. The smaller building may have been the dwelling, while the larger may have been an associated combined storehouse and guest accommodation, for example. My own reading of the evidence suggests that the larger *svalgangshus* (K334) was the dwelling house, while the smaller building may have functioned as a separate *eldhus*, used for the preparation of the household's food, and possibly also for practices associated with the running of the managers' farm and as accommodation for servants. One or two archaeologically undocumented farm buildings (a barn and a byre/stable?) and a well probably stood just to the west of these buildings.

¹³³² Vickery 2009: 107, 291-292; Sogner 2003: 12-14; Dybdahl & Bull 2005: 347-348. The historian Ida Bull has demonstrated how women were involved in the running of 18th-century mercantile family businesses in Trondheim (Bull 1998).

¹³³³ The first manager, Paul Steen, had a household of fifteen: namely, himself, his wife, sister, four children, a private tutor, three (indoor?) servants, two maids (milkmaids?), and two male outdoor servants (farmhands?). Vigerust 2000: 20 and Appendix I.

If my interpretation is correct, the first residence exemplifies a spatial separation of domestic functions which has roots in the traditional structure of rural farms and urban tenements where the preparation of food was assigned to a separate building.¹³³⁴ Although this arrangement was antiquated by the turn of the 18th century, the division of household functions between separate buildings was still known in urban households of the day.¹³³⁵ This stands in contrast to the second residence, built during the early 18th century, in which the kitchen was integrated within the rear of the building. This change in spatial organisation is one of a number of indicators of a conceptual and material transformation in the organisation and practice of domestic life for the managers. As such, it can be associated with fundamental processes of social change at work within the lower ranks of the social elite during the first half of the 18th century.

Other documented contrasts between the two radically different dwelling houses extend to their respective sizes, ground plans, number of rooms, spatial organisation, and the use of building materials and techniques.

Taking the latter first: Direct comparison is inhibited by limited documentation about how the first residence was constructed, with the exception of its turf roof. As the Maschius Prospect indicates, houses in Trondheim during the late 17th century could be roofed with turf or tiles.¹³³⁶ Brick-built chimneys appeared here during the 16th century. Although both buildings were constructed using the traditional *laft* technique of interlocking corner-notched logs, the way in which the two units that make up the second residence - the main building and its southern projecting extension - were physically joined represents an unusual, accomplished and more costly technical application of this technique.¹³³⁷ We do not know whether the first residence was also equipped with external weatherboarding in similar fashion to the second residence.

With regard to available living space, there is no great difference between the residences in terms of total floor areas (both ground and first floors), although the second dwelling house is slightly larger (respectively 338m² and 384m²).¹³³⁸ However, the second dwelling contains a much greater *number* of rooms (twenty as opposed to at least six), which also show a greater diversity in size than those in the first residence. This greater number and diversity of rooms may potentially have accommodated a wider variety of functions and practices than the first residence, although of course, the rooms in the first residence may have accommodated multiple activities.

As contended, the contrasting character of the two residences marks a change in terms of personal and social comfort for people occupying a 'middling' social rank. Although it had an unprepossessing exterior, the second residence would have conveyed a familiarity with current architectural forms to those who experienced it; namely, the coding and details inherent to the baroque-inspired ideals of symmetry so beloved of the patrician elite, although importantly, reproduced here only in an appropriately modest and restrained form in keeping with the managers' comparatively low-ranking status. The building also stood within its own private fenced-off enclosure, physically emphasising its separateness from the public, institutional domain of the military depot.

However, it is the building's complex and intricately conceived internal spatial organisation that distinguishes it as a radical departure from the spatial restrictions and limitations of dwellings of the type exemplified by the first residence. For the time and social context, this was a novel kind of domestic interior of the near-symmetrical type noted above, in which many of the attributes connected with personal and social comfort and the emergence of an 'ordinary modernity' could be enacted through practice.¹³³⁹

This can be seen in a number of distinguishing features, many of them calling to mind Elias's notions of separateness and discrete spheres of practice outlined above. For example: the provisions made for comprehensive and efficient lighting and heating which facilitated a more differentiated use

¹³³⁴ Christensen 1995: 91-94.

¹³³⁵ Berg 1951: 96-99; Roede 2001: 307-308.

¹³³⁶ Appendix C.

¹³³⁷ Jo Sellæg pers.comm.

¹³³⁸ Although the difference would be insignificant if one also includes the first residence's neighbouring *eldhus*.

¹³³⁹ I.e., order, convenience, efficiency, leisure, ease, pleasure, domesticity, intimacy, and privacy, for example.

of space; the incorporation of the kitchen within the heart of the building; the provision of a front hall that formed a filter between the outside world and the private domestic interior, and the installation of a central staircase that allowed internal communication with the upper storey; the numerous strategically placed doorways that facilitated permeability and ease of communication between rooms within the main building, as well as the control of access to front and rear parts of the house from outside; the greater number and variety of rooms in terms of size, ranging from small chambers to larger living rooms in which differentiated practices, some possibly gender-related and some of a private, intimate nature could be conducted; the provision of two functionally differentiated parlours, or living rooms, one for daily domestic use and the other reserved for formal receptions and entertaining; the location of offices in the rear extension separated and differentially accessed from the domestic rooms of the main building and the exterior; the segregation, or screening, of certain rooms in the rear of the building that may have been used by servants, access to which could be restricted without needing to enter the rest of the house; and, finally, the provision of three differentiated privies in their own separate building placed at a short distance from the house. These aspects will be examined more closely below.

A contemporary fire-insurance survey, combined with map and archaeological evidence facilitates a detailed reconstruction of the functions of the second residence's ground-floor rooms and the house's internal spatial organisation (see 6.3.2.1 and Figs 6.14 - 6.16). The main building's ground floor comprised the family's main living area, containing two front living rooms/parlours (for daily living and entertaining respectively), a bedchamber over a small cellar, a kitchen with attached pantry, and a small chamber, possibly for sleeping or seclusion. In addition, the ground floor in the southern rear extension contained two rooms interpreted as the manager's partitioned office and a possible servant's or lodger's room. The upstairs rooms in the main building and extension could be accessed internally via a staircase in the front hall, or via a spiral staircase, gallery and corridor at the rear. These rooms were not included in the survey, but may have been used for occasional entertaining, sleeping, and storage.

The building's interior was organised in a sophisticated manner, its ground floor divided near-symmetrically between the domestic sphere to the east and the more public, official sphere to the west, with the kitchen at the rear strategically placed centrally to both. The grand parlour (*storstue*) is, however, the smaller of the two parlours, proportioned appropriately to the managers' comparatively limited demands for official receptions and entertaining compared to higher-ranking officials of the day.

In addition, there is a discernible differentiation in the degree and regulation of access and permeability between rooms at the front and rear, and evident screening of the interior from the communal and public domains (Fig. 6.16).¹³⁴⁰ Access via the front door could be strictly controlled. All rooms on the ground floor, with the exception of the southernmost room in the rear wing, or extension, were interconnected by communicating doors, as were a number of rooms upstairs which could be reached directly via the main stairs. However, parts of the building were not fully integrated in this circuit, and could be sealed off from the rest of the building; namely, the southernmost room on the ground floor, as well as most of the upstairs rooms at the rear of the main building and extension. This differentiation in access may denote a desire to control and restrict movement, to the extent of separating the family's space as much as possible from others who used the house; for example, from servants and others (a clerk or tutor, for example) whose movements were restricted to the rear of the house where they worked (the kitchen, office, yard and farm) or slept (in the kitchen and segregated ground-floor and upstairs rooms, for example).

It is likely that the first family to live in the second residence was that of Rasmus Hansen Fyhn (period of tenure 1720-1748) and his wife Maren. Maren gave birth to twelve children between 1723 and 1743, seven boys and five girls, six of whom were born before 1730, the estimated latest date by which the new residence was built. Accommodating and nurturing such a large family would have been easier in the comparatively more comfortable second residence. Might Rasmus and Maren's fecundity have been a contributory factor underlying the choice of the new type of building to replace the original residence?

If the *svalgangshus* K334 was indeed the first dwelling house, the limitations on movement and communication between floors and rooms imposed by its cellular floor plan, external gallery access

¹³⁴⁰ See 6.3.2.1 for analysis.

system, and the absence of internal stairs stands in stark contrast to the second residence's intricately differentiated and regulated permeable internal structure (compare Fig. 6.16 and Appendix O). There was no direct internal communication between the first building's floors, the rooms on its upper floor being accessed by the gallery at the rear. It is suggested that the rooms on the ground floor may have been accessed via a door placed on the courtyard side of the narrow middle room, although this is highly speculative. Doors may have provided internal communication between rooms on each floor.

In the absence of a contemporary survey for the first residence, interpretation of the rooms' functions is conjectural. However, we might assume that the three rooms on its ground floor were used as the family's main living area. Indeed, this may be implicit in the events following the fire of 1708, when the manager in residence - Johan Hartvig Henrich Weber - and his family were forced to move to the 'loft' (the upper floor) to make way for the Fortress Commandant who had been made homeless by the fire.¹³⁴¹ The ground floor probably contained the daily living room (*dagligstue*/common parlour), the most likely candidate for which is the large northern room situated above the stone cellar and next to the neighbouring building K332 which may have housed the kitchen. This room may have been where the family gathered to eat and socialise, and where some family members might have slept. The narrow middle room may have been an entrance hall or a bedchamber, for example, while the large southern room possibly functioned as a second family living room, a room for entertaining or formal receptions (*storstue*/grand parlour), or perhaps the manager's office. The upper floor, or *loft*, may have contained a room used for entertaining, storage and/or accommodating guests (a *sal* or 'great chamber'), with others possibly used for sleeping, storing clothing and other items, or even an office, for example. The privy situated at the end of the upper passage would have provided a conveniently placed toilet for the occupants of such rooms.

The provision of good heating and lighting was essential to the promotion of material comfort and diversity of practice in dwellings. The two residences had contrasting provisions in these areas. Explanations offered above for the absence of clear evidence for hearth and chimney foundations in the first residence's *svalgangshus* include the possibility that its heating arrangements took the form of cast-iron or ceramic stoves which did not require deep-set foundations. These may have been attached to a chimney placed at the east end of the central room, although this is uncertain. Discarded fragments of ceramic stoves were found in external deposits. The absence of a large kitchen hearth foundation is explained by its proposed location in the neighbouring *eldhus*. This contrasts with the second residence, where a large kitchen hearth and chimney were integrated within the core of the building. This and two other chimneys served four cast-iron stoves distributed among an equivalent number of rooms on the ground floor, and one iron stove on the floor above, as depicted by Eckleff in 1758 (Fig. 6.12). This arrangement ensured heating was provided for all downstairs rooms as well as one upstairs room. The building's weatherboarding would have contributed to improved insulation.

The provision of comprehensive and appropriate types of heat sources was a material precondition that prefigured the spatial differentiation that characterises the second residence.¹³⁴² Not only were there practical advantages in that the members of the household could utilise a large number of rooms during the day and at night, but tall, cast-iron stoves were both fuel-efficient forms of heating and expensive, ornamental items of furnishing which could be displayed in rooms used for receiving or entertaining guests.

Indeed, iron stoves were among the most expensive items of furniture in 18th-century homes,¹³⁴³ and as we have seen, this building contained five. Among them were at least two *etasjeovner* (multi-storeyed cast-iron stoves), one in each of the ground-floor living rooms (*stuer*), including a triple-storeyed *etasjeovn* in the north-western living room, which we can presume was the room used for official receptions and entertaining guests (Fig. 6.23).

A further means of differentiating this room and its special status as a reception room may have been to install a decorative tiled firewall behind the stove, a simultaneously practical and decorative

¹³⁴¹ Lysaker 1989: 48. Alternatively, if K332 was the dwelling, Weber's family may have moved into the 'loft' in the *svalgangshus* K334.

¹³⁴² Christensen 1995: 20.

¹³⁴³ Christensen 1995: 169; Roede 2001: 313.

arrangement used in elite households of the day. That this may have been the case here is given some support by the fact that six Delft tiles bearing biblical scenes were found discarded in the residence's privy, possibly surplus from a batch used to construct a firewall behind the tall stove in the front reception room (Fig. 6.23).¹³⁴⁴

Apart from their practical and decorative function, these tiles may have been associated with practices of domestic piety. With its array of lively biblical scenes, the tiled wall would have provided a locus for religious contemplation and debate regarding their depictions and meanings. Their display in this particular room would also have served as a prominent instrument and marker of domestic piety, demonstrating to visitors the family's proper adherence to, and observance of, religious doctrine in the home.

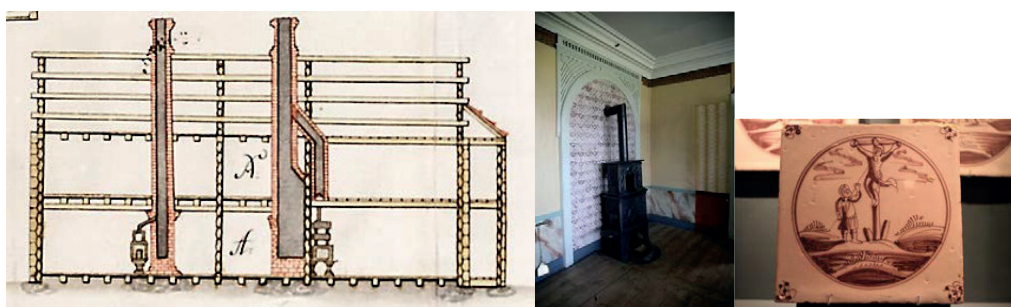


Figure 6.23. **Left:** Section through the second residence drawn by Eckleff in 1758 showing the cast-iron ovens.

Middle: a tall cast-iron *etasjeovn* in front of a Delft-tiled firewall at Damsgård hovedgård, Bergen.¹³⁴⁵

Right: A Delft tile with biblical scene from the second residence, similar to those at Damsgård.

Good structural provision was also made for natural lighting, each room being provided with at least one window, while, significantly, the large front rooms and the office had two each. The extent and quality of natural lighting provided in the first residence is not known, although it is likely that the gallery and the precinct wall to the east would have restricted lighting to the interior along that side. Good natural lighting better facilitated domestic practices such as needlework or reading, as well as the aesthetic appreciation of finer furnishings and interior decorations, which, in contemporary elite households, took the form of diverse forms of moveable furniture (chairs, tables, dressers, cupboards, chests etc.), paintings, carvings and tapestries, and, as we have seen, decoratively tiled firewalls.¹³⁴⁶ Decorative objects, such as sets of colourful expensive tablewares, for example, could be prominently displayed on dressers or even in glass-fronted display cabinets.¹³⁴⁷ The provision of good lighting in the manager's office would have aided his desk-based accounting and reporting work.

A further contrast between the two residences that should be highlighted lies in provisions made for the disposal of human waste; namely, the household privies. The first residence's single privy was built into the end of the upper gallery, an arrangement that has roots in similar arrangements in two-storeyed medieval buildings.¹³⁴⁸ While convenient for the occupants, the latrine pit below with its accumulated waste lay close to the house wall. Apart from the smell, it would have attracted vermin.

In contrast, the second residence's privy was placed externally to the building, in a separate shed located at a short distance from it. In fact, this shed contained *three* separate privies entered by individual doors. This deliberate subdivision may indicate that the privy shed was designed for differentiated use by the members of the household. For example, if the privy shed was used by the entire household, one or two of its rooms may have been reserved for the manager and his family, while one or two others were used by the manager's assistant, servants and farmhands. The question arises

¹³⁴⁴ See 5.5.2.18. Category 18.

¹³⁴⁵ <http://www.kunsthistorie.com/galleri/index.php?action=view&album=Norge%2FDamsgaard%20hovedgaard&image=150&sortby=name&order=asc> (11.05.2018).

¹³⁴⁶ Dybdahl & Bull 2005: 385; Hutchison 2012: 154.

¹³⁴⁷ Roede 2001: 327; Telste 2014: 9-10.

¹³⁴⁸ Christensen 1995: 130.

as to whether the family used the larger room with its own separate latrine pit, or one or both of the smaller ones which shared a latrine pit? Might this arrangement also be linked to gender division, for example?

Whatever the case, the privy's location facilitated ease of access for members of the household, while ensuring its use would cause a minimum of disturbance to the household. On the one hand, this physical distancing from the house may reflect an intent to relegate such a personal and intimate practice as the excretion of bodily waste to its own secluded space, and its subdivision into separate rooms may signify a desire for privacy and separation of groupings within the household. However, it might paradoxically also indicate a degree of social inclusiveness in its use if it extended to the servants. Finally, in the light of the contemporary social constraints regarding bodily functions mentioned above, it is interesting to note that the privy is referred to anonymously as a 'shed, etc.' on Eckleff's plans.

It was within these differently organised domestic spaces that routines, rituals and practices of daily life were enacted within the two residences. However, the residences also encompassed other built spaces in the forms of farm buildings and gardens. These will be examined before introducing other material evidence for local practices to the discussion.

6.4.4.2. The farm buildings

In both instances, the dwelling house was accompanied by farm buildings. Two buildings are recorded historically in association with the first residence. The excavated building K332, interpreted as a smokehouse, or *eldhus*, which lay just to the north of the dwelling house may have been one of these, since, in addition to acting as a kitchen building it may have housed farm-related activities. With this possible exception, no farm buildings are recorded archaeologically, although it has been suggested that at least one - a stable/byre in which hay was stored - may have stood (with a well) to the west of the first dwelling house.

This situation would have been consistent with the organisation of contemporary Norwegian farms and larger urban properties, which contained a variety of separate outbuildings, each with its own specialised function. This was still the case in the mid-1700s when the second residence was in use. The two earliest outbuildings excavated in the second residence's enclosure were small structures, one of which (K362) has an unknown function (Fig. 6.10). The other (K356=358) has been interpreted as either a combined stable or byre, or a combined stable/byre and wagon-shed. This may have been a simpler predecessor to the larger barn building built by about 1752 just to the east of it, as depicted on Eckleff's plans of 1758 (Figs 6.5, 6.24; Appendices L and M).

This building represents a departure from customary practice, containing as it did a diverse range of functions under one roof: namely, a threshing barn, a stable, a byre and a wagon-shed. The gathering of usually separated functions in one barn building is a phenomenon which was initially experimented with by the wealthy and educated classes during the late 18th century, but which first became more widespread among farmers during the change from a subsistence to a money economy during the mid-19th century.¹³⁴⁹ In common with the second dwelling house, this building's integrated and rational design suggests that its builder possessed the knowledge, means and desire to erect what must at the time have been an unusual farm building, whose equivalents were presumably only found in upper elite circles.

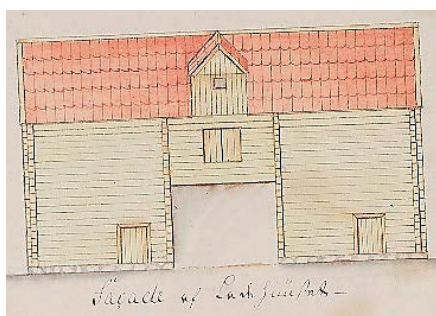


Figure 6.24. The barn building attached to the second residence. Detail: Eckleff 1758.

The barn's unusual character, and what it represents in terms of the application of rational ideas in agricultural practice, is underlined by the fact that the wider promotion of Enlightenment ideals of improvement within the field of agriculture both locally and nationally first gained wider dissemination during the late 18th century. It was first from the 1770s on that the local educated elite's interest in agricultural

¹³⁴⁹ Christensen 1995: 291; Røyane 2014: 19-23.

improvement took the form of practical steps to introduce improved agricultural technologies and practices in the region. Regarding farm buildings in particular, Gerhard Schønning, a leading light of Trondheim's Academy of Sciences, proclaimed the advantages of combining the functions of separate outhouses under one roof during the 1770s.¹³⁵⁰ Perhaps this very building had caught his eye?

With the residence, this multipurpose barn building from c. 1750 provides an early material indication of the transition to an 'ordinary modernity' within the middling elites of the mid-18th century, in this instance indicating its extension into the sphere of farming practices. Furthermore, as we will see, yet another sphere of practice associated with the managers in Kongsgården reveals a similar degree of refinement: namely, gardening.

6.4.4.3. The gardens

The gardens associated with the two residences also show a marked differentiation. Cartographic and archaeological evidence indicates that the first residence's garden was a fenced-in rectangular plot in the south-east corner of the precinct (Fig. 6.25). Another garden occupied the bastion to the south of the precinct; this may have been the managers' orchard, or given its proximity to the guardhouse (*corps de garde*), a garden used by members of the depot's guardsmen. A horizon of well-turned, humus-rich soil was partly excavated in the precinct, without traces of garden features in the form of distinct beds or paths. It seems reasonable to interpret this as a simple kitchen garden plot, frequently turned over and possibly used to grow vegetables.

Kitchen gardens in which herbs, fruit and vegetables were cultivated were a rarity in rural areas, but they seem to have been a feature of urban life during the 17th century.¹³⁵¹ In Trondheim, 17th-century documents describe plots of land (*løkker*) used for cultivation of fruit and hops that were predominantly the preserve of the wealthier urban citizenry. During the period 1640-1687, some 100 properties are recorded as having small gardens, occasionally specified as herb or fruit gardens. A document of 1694 mentions 38 gardens within the city, including the bishop's garden and two apothecaries' gardens.¹³⁵²



Figure 6.25. **Left:** The gardens ('*hage*') associated with the first residence (1716).¹³⁵³ **Middle and right:** The garden associated with the second residence as depicted on maps of 1761 (middle) and 1775.¹³⁵⁴

The precise physical and horticultural character of Trondheim's 17th-century urban garden plots is uncertain, as is the extent to which formal ornamental gardens were present within the city itself prior to the late 17th and early 18th centuries. Known in Norway from the 16th century, the earliest Renaissance-style gardens were the preserve of prelates, aristocrats, wealthy landowners, army officers, state officials and burghers, many of whose urban and country houses sported large and elaborate geometrically laid-out ornamental gardens (*parterres*).

¹³⁵⁰ Dybdahl & Bull 2005: 384. The local Academy of Sciences (*Det Kongelige Norske Videnskabers Selskab*), established in Trondheim in 1767, was an early and active campaigner and sponsor in the field of agricultural improvement. Dybdahl & Bull 2005: 303-305; Aase 1996.

¹³⁵¹ Dybdahl & Bull 2005: 302; Bruun 2007: 46-47.

¹³⁵² Balvoll & Weisæth 1994: 14; Bruun 2005: 159.

¹³⁵³ Carta som presenterer den ubebyggede og mestendeil oppløyede land Kalvskindet kaldet. A. Lillie, 1716 (Riksarkivet).

¹³⁵⁴ Søndre Trondhjems amt nr 47: Situations Cart over Trondhjem By og Fæstninger. J.N. Eckleff, 1761 (Kartverket) & Plan Over Fastningens Grunde udi Tronhiem. J. D. Berlin, 1755 (NTNU UB).

A *primus motor* in the development and popularisation of horticulture in Norway was Christian Gartner, a peripatetic gardener from Flensburg who had worked in elite gardens in Denmark, Germany and France, including the royal gardens at Versailles. He came to Trondheim in 1670 at the behest of Royal Commissioner Peder Tønder, for whom (and other members of the local elite) he laid out private formal gardens. In 1694, Gartner published *Horticultura*, a cheap and accessible book on practical gardening that provided basic guidance on how to establish small fenced-in gardens with quadratically divided beds and crossing paths in which to cultivate flowers, fruit, vegetables and herbs suited to the local climate.¹³⁵⁵ The gardening theory and practice it promulgated was already outdated. However, Gartner's straightforward practical advice remained popular well into the 18th century, his book being reissued in 1754.¹³⁵⁶

Maps of Trondheim dating to the mid-1700s indicate that fenced-off garden plots with geometrically divided plant beds and small garden pavilions or summerhouses were an established feature of the urban landscape, principally associated with houses situated on the urban periphery and in the newly-established, sparsely built-up suburb of Ila to the west. These include the private garden attached to the second residence, one of at least 15 small gardens - all exhibiting differing *parterre* designs - shown on Eckleff's 1761 map of Trondheim, for example (Appendix N), and Berlin's plan of 1775 which shows the gardens to the south and west of the urban area (Fig. 6.26).¹³⁵⁷

The earliest, and perhaps originally the most elaborate, of these was the garden of Gartner's wealthy patron Peder Tønder, located beside the road leading to the main city gate (beside the building marked 'G' in the figure below). Established in the 1670s, it was originally a large *parterre* garden divided into 12 beds, but by the mid-1700s it comprised only four beds laid out in quadratic form.

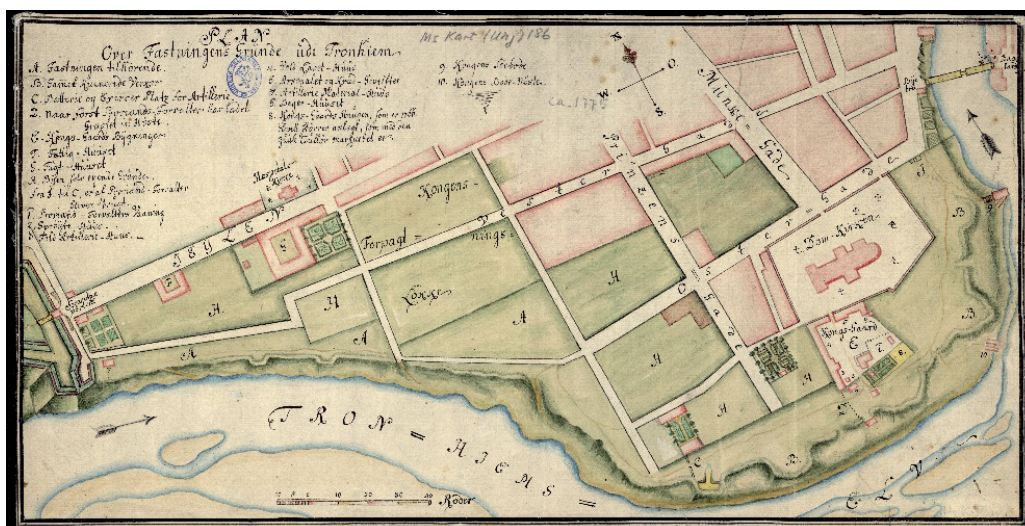


Figure 6.26. J.D. Berlin's map of 1775 showing Kalvskinnet and the Cathedral area.¹³⁵⁸

It is uncertain when the other gardens were established. However, it is clear that by the mid-to-late 18th century a fashion for comparatively small ornamental urban gardens was popular among Trondheim's wealthier citizenry. These gardens, in common with counterparts elsewhere on the European periphery, exemplify a dilution of the original Renaissance compositional concept and a prevailing eclecticism. Only individual elements of the earlier Italian and French Renaissance *parterre*

¹³⁵⁵ Hage 2011: 12-14; Bruun 2007: 31-46; Sørensen 2013b: 167.

¹³⁵⁶ Sørensen 2013b: 165.

¹³⁵⁷ The earliest fire insurance survey of 1766 includes descriptions of some of these gardens, including one fenced-in garden owned by Captain Friderich Møllerup, which had a summerhouse built on a stone ground wall, equipped with 6 windows and a tiled roof, and valued at 20 riksdaler (property 320) (Lein 1998).

¹³⁵⁸ Plan Over Fastningens Grunde udi Tronhiem. J.D. Berlin, 1775 (NTNU UB).

garden designs and architecture survived in combination with local garden traditions, adapted to local conditions and constructed using local materials.¹³⁵⁹

In the absence of archaeological excavation and analysis of pollen and macrofossils (seeds etc.), we do not know what was grown in the manager's garden, nor the precise material nature of its construction and composition. From contemporary maps and documents, we can surmise that it was a rectangular plot, probably enclosed by a high, solid plank fence (Fig. 6.25). In addition to preventing access to animals and intruders and providing protection from wind and weather, this would have raised the ambient temperature within the garden to create a microclimate conducive to plant growth. Its only point of access was from the residence via a gap in the precinct wall. It was initially just over half a decaire in area (500m²), but expanded to about a decaire in 1766 (although the area covered by cultivated beds seems to have remained the same). It contained a free-standing pavilion, or summerhouse, at its western end and a comparatively unsophisticated arrangement, initially divided symmetrically and axially into two rows of three beds separated by paths, probably made of gravel (Fig. 6.25). These beds were subsequently combined to form two parallel elongated rectangular beds, as seen on the map of 1775. The diagonal lines drawn within the beds presumably denote the way in which whatever was grown there was laid out.

In its design, this garden betrays a rudimentary baroque influence, with two elongated rectangular beds with maximum axial accentuation, and a pavilion placed prominently at one end of the long central axis.¹³⁶⁰

Although significantly smaller and more modest, it is suggested that this enclosed garden's comparatively unsophisticated formal arrangement within a rectangular plot is possibly reminiscent of ornamental kitchen gardens of the French *potager* type. These were a feature of the Baroque Garden de la Françoise period, where the humble *potager* was reproduced alongside elaborate parterres. Flowering annuals, herbs and medicinal perennials were mixed amongst vegetables and fruits in beds laid out in geometric grids, allowing for maximum use of a small space, and constituting a domestic utility garden on a modest scale. Flowers were consciously combined with vegetables to enhance the garden's beauty, the aim being to make the practice of providing food aesthetically pleasurable.¹³⁶¹

Books by French theorists promoting French garden design were published widely in English and German during the late 17th and early 18th centuries, and clearly inspired the design of many Norwegian elite gardens of the period, including smaller kitchen gardens. These scientific writers promoted more restrained ideals with regard to size and design; namely, that gardens should be designed in such a way that they appeared larger than they were, and their entirety and details could be appreciated at a glance. This reduction in elaborateness and size was eminently suited to those Norwegian landowners and gardeners for whom natural and financial resources were more constrained.¹³⁶²

The urban gardens shown on the Trondheim maps are diminutive in size, even in comparison to smaller rural elite gardens of the period, although this may reflect constraints of space and property size in an urban environment. Most are associated with larger houses owned by the upper echelons of the elite, and they may have been established earlier than the garden at Kongsgården. As stated, Tønder's garden was reduced in size by the mid-18th century, and this may have been the case for others.

In comparison to these, the second residence's garden is unusual in that, as already remarked, its layout recalls that of an ideal *potager* kitchen garden, though on a much smaller and less elaborate scale. Consequently, it is suggested that its simple rectangular beds contained a mix of flowers, herbs and vegetables. In its design and content, this *potager* in microcosm would have provided the family with recreational and aesthetic pleasures as well as valuable nutritional supplies. Examples of vegetables grown in contemporary kitchen gardens include cabbage, red cabbage, turnips and carrots, while examples of fruit include redcurrants, apples and cherries. In some instances hops were grown. However, Gartner's book and contemporary documents relating to gardens elsewhere list a large and

¹³⁵⁹ Hage 2011: 29.

¹³⁶⁰ Lars Jacob Hvinden-Haug pers. comm.

¹³⁶¹ https://en.wikipedia.org/wiki/Kitchen_garden#Potager_garden (15.06.2018).

¹³⁶² Sørensen 2013a: 35-37; Sørensen 2013c: 312-316.

varied range of flowers, shrubs, fruits and vegetables that could be grown in Norwegian kitchen gardens of the day.¹³⁶³

Although modest in comparison to the more elaborate formal gardens of the elite, we can presume that this small ornamental kitchen garden constituted a comparatively rare appendage to an urban property of the day. Its unique entanglement of nature, materials, competences and knowledge engendered a further range of practices that constituted the distinctive lives of this middle-ranking official and his family.

Applying our Lefebvrian lens of interdependent spatial dimensions, we might suggest that the distinctive spatialities of this garden, and others like it in Trondheim, were associated with practices that carried within them specialist knowledges of garden design and horticulture, albeit in this instance somewhat modest in terms of contemporary European fashion. Despite lacking much of the architecture, design and symbolism of the original Renaissance gardens and subsequent Baroque gardens, even modest enclosed gardens like this one comprised strictly ordered and regulated approximations of the natural world. As such, they were places that materially constituted Enlightenment aspirations to scrutinise, harness and control nature. Wildness was anathema to the humanist perspective and its sense of order, and garden designers attempted to prune, beautify and frame nature in ways that emphasised the capacity of humans to control it. Enlightenment principles also promoted the combination of ornamentation and utility.¹³⁶⁴

Furthermore, Christian Gartner's simplified gardening principles, proportioned to local circumstances, conformed to current household management instructions (so-called *oeconomia* tracts) whose guiding ethical maxim for sustainable housekeeping was that it was better to cultivate something of good quality in small quantities rather than large amounts of inferior quality. His gardens were essentially kitchen gardens, designed to provide a household with supplies of vegetables, herbs for food and medicinal purposes, fruit and flowers, as well as a sense of contentment in the practice of gardening and the pleasures of the outdoor life.¹³⁶⁵

These ordered spaces produced sustenance for mind, body and soul, and were maintained through the application of horticultural knowledge and the performance of seasonal and rhythmically interdependent gardening practices, in the form of digging, fertilising, planting, sowing, grafting, weeding, pruning, harvesting and the like. They also comprised affective spaces, imbued with complex emotions and feelings inspired through sensual, intellectual and aesthetic experience, the healthy exertions of physical work, the satisfaction of seeing one's planning and labours literally bearing fruit, and the existential relief of a successful harvest. For the scientific mind, a garden could be a botanical laboratory, and for the deeply religious, it was a place for communing with both God and Nature, since, to the Enlightenment mind, the Deity was to be seen everywhere in the natural world.¹³⁶⁶

By virtue of their shared formal nature and cultural associations, these enclosed gardens also made a statement in the context of the local community, prompting as they did differentiated perceptions of social cohesion, distinction, difference and identity among their owners and their fellow urban dwellers. The manager's garden constituted a publicly demarcated private space, a bounded inner sanctum within the residential complex to which he and his family could retreat in the summer months, and from which others were excluded.

Of course, we can only speculate as to how they arranged, cultivated and experienced their garden, or the degree to which they may have mused upon their garden's associations or meanings over and beyond its modest aesthetic, recreational and nutritional functions and values. However, together with their well-appointed, modern dwelling house, it might be reasonable to assume that they regarded their physically bounded, rationally ordered, and scientifically cultivated garden domain as a peaceful

¹³⁶³ Sørensen 2013b: 167; Sørensen 2013c; Von Essen 2013: 325-327.

¹³⁶⁴ Von Essen 2013: 328.

¹³⁶⁵ Sørensen 2013: 167.

¹³⁶⁶ Von Essen 2013: 327.

haven of 'otherness' and difference within a more chaotic and dangerous world that lay outside its well-demarcated boundaries.¹³⁶⁷

Furthermore, the possession of this garden affirms again the importance at this place and time of the appropriate material demarcation of social distinction; in this instance, the particular dignity, authority and status of the manager and his office. Although a comparatively modest garden compared to those of the patrician elite, it would nonetheless have held importance as an appropriately modulated material expression of rank, particularly for someone such as Arve Gudmansen, the occupant of the residence between 1748 and 1765, and who, from 1757, held the rank of Real War Councillor.

6.4.4.4. Practices and their materialities in time and space

Having examined the organisation of the various spaces used by the managers' households, an attempt will now be made to address the nature of practices performed within them through an examination of the objects found in association with the two residential complexes. This will be done by framing the discussion according to the remaining themes introduced above: notably, the materialities of practices associated with sustenance and sociability, personal appearance, health, hygiene and sanitation, as well as touching on other aspects such as work and other relevant practices conducted within the households and the military depot that have left traces in the archaeological assemblage.

As outlined in the theoretical framework above, people and things are jointly implicated in routinised processes of 'doing' and should equally be regarded as the 'carriers' of the skills, purposes and significances of practices. A practice essentially combines the materialities and affordances of objects and spaces, the mental and bodily competences of the practitioner, rules and norms that define the practice, and the meanings attributed to it by the practitioner and others. Given that we only have residues of the material 'carriers' of practices at hand, what insights into practices performed in the two residences might be gained from surviving objects which, combined with the spatial configurations detailed above, comprise the residual remains of their practice-material arrangements?

Practices of domestic sustenance and sociability

Food preparation

The material presentation revealed that the vast majority of objects are, unsurprisingly perhaps, associated with domestic, or housekeeping, practices, principally those associated with food preparation and the consumption of food and beverages.¹³⁶⁸ We have some insight into the range of foodstuffs and prepared dishes served in both wealthier 18th-century households and those who had to make the best of fewer resources from contemporary cookery books and other food-related literature.¹³⁶⁹ Trondheim's wealthier elite was particularly renowned for its culinary extravagance which was on a par with the finest European standards of dining.¹³⁷⁰

Standards of cookery and dining in the managers' households would not have reached these dizzying heights. Apart from the expense involved, the strict observance of, and adherence to, the notion of *decorum* noted above,¹³⁷¹ whereby people should not be seen to have pretensions above their rank and station in life, would have determined the range of foodstuffs considered 'appropriate' to the managers' households. This would presumably also have determined the standard of tablewares and drinking glasses they possessed.

¹³⁶⁷ For Foucault, a garden may represent a form of heterotopia; that is, a real place which is an approximation or representation of a utopia, but simultaneously also a space of difference or otherness containing contradictory, multiple or hidden layers of meaning. By combining and arranging exotic forms of vegetation and objects in one place, ancient formal gardens could juxtapose several other spaces or sites that existed elsewhere in the world, thereby creating a space with complex, superimposed meanings. Such a garden could thus become simultaneously 'the smallest parcel of the world' and the 'totality of the world' in all its perfection, a kind of universalising microcosm. Furthermore, heterotopias could 'create a space that is other, another real space, as perfect, as meticulous, as well arranged as ours is messy, ill constructed, and jumbled.' Foucault 1984.

¹³⁶⁸ 5.5.2.1 - 4; Appendices J & K.

¹³⁶⁹ Notaker 1993; Opstad 2003; Skogseth 2009.

¹³⁷⁰ Opstad 2003.

¹³⁷¹ Hvinden-Haug 2008: 50-54.

Nonetheless, the managers had access to a variety of foodstuffs, including items which would have been considered luxurious. Their households, with access to their own farm and kitchen garden, would have also needed to have routinely and systematically prepared, processed and conserved a variety of foodstuffs. One particular contemporary publication - *Norsk husholdningskalendar*¹³⁷² (The Norwegian housekeeping calendar) - published in two editions in 1772-3 by Christopher Hammer, an 'enlightened', scientifically-minded member of the elite, reveals the range and complexity of domestic food preparation practices and the promotion of a rational, scientific approach to housekeeping that was emerging when the second residence was occupied. Hammer's book presents the '36 sciences necessary to keep a good house', including brewing, baking, drying, churning butter, cheese-making, butchery, distilling, smoking, cookery and pickling. In addition, he describes the varieties of bread available at the time, and provides botanical information, including the medicinal qualities of herbs and roots. Interestingly, Hammer urges the need for the writing of a specifically Norwegian cookery book, with Norwegian recipes, preferably by a woman.¹³⁷³

Indeed, cookery was generally the responsibility of the wife or housekeeper rather than the servants, and women were expected to be able to cook even if they did not always do so. It was not a low-status household activity, unlike washing and cleaning, which were carried out by servants. Although not a public or status-orientated practice, cookery's importance in maintaining health and comfort was recognised, and poor standards of cookery by a housewife were frowned upon. It confirmed women's role as carers and nurturers of the family members, and as such was as important in cementing the household's cohesion as it was in supplying bodily sustenance. Furthermore, since the household was the most important workplace for women, this inevitably profoundly influenced the nature of the family, as well as pre-industrial society generally. The household comprised the central unit for economic production and consumption, and for the transmission of norms and values between generations.¹³⁷⁴

Not all households undertook all the forms of food preparation listed by Hammer, for example. That the preparation of food in our two residences involved at least some food preparation practices in addition to cooking is likely, a possibility already raised in connection with building K332's interpretation as a possible *eldhus* in which a range of housekeeping- and farm-related practices may have taken place, including those listed by Hammer. In the case of both residences, the vessels used for food preparation, storage and processing are represented almost exclusively by fragments of ceramic kitchenwares. Other vessels in metal, wood and stone would have been used, but, with the exception of one iron bowl or cauldron and a few fragments of stone vessels, these have not survived due to recycling or destruction. Metal spits would have been used for roasting, stone pots and metal cauldrons or kettles would have been suspended over the fire for boiling and stewing, for example, and metal griddle pans would have been used for baking flat bread and other flour-based foods.¹³⁷⁵ Varieties of tripod cooking pots and skillets were used to heat food directly on the residences' kitchen hearths: the former for preparing porridge, pottages and stews, for example, the latter for frying meat and fish. Varieties of ceramic bowls were probably used for mixing ingredients, and some may have been used for dairying and cheese-making processes (e.g. separating dishes), while ceramic colanders were used to strain foodstuffs. Ceramic storage jars presumably contained fresh and preserved foodstuffs, as did the glass canning or pickling jars found in association with the second residence. Fragments of quernstone may indicate that both households milled their own flour, though the managers would presumably have had access to the products of the nearby army bakery. Remarkably few kitchen utensils survive, probably due to their manufacture in wood or metal. Wooden buckets, of which a few remains survived, would have been used for carrying water from the wells, and other purposes.

¹³⁷² Norsk Huusholdnings-Kalender, *forøget og forbedret*, del 1-2, 1772-73. This falls within an increasing stream of scientific literature designed to 'improve' (*forbedre*) life. The second edition was dedicated to Det Kongelige Norsk Videnskabers Selskab (Academy of Sciences) in Trondheim.

¹³⁷³ Skogseth 2009: 42.

¹³⁷⁴ Weatherill 1996: 146; Sogner 2003: 34, 73, 76, 186.

¹³⁷⁵ Weatherill 1996: 147-150.

The survey of ceramic material¹³⁷⁶ suggests that the vast majority of ceramic kitchenwares used by households in both residences were imported, principally in the form of Dutch and German redwares which seem to have been the standard utilitarian ceramic kitchenwares of the period. Small amounts of local Trønder ware cooking pots were found in connection with the second residence. However, Trønder wares seem to have been mainly utilised as tablewares (although, some bowls may have been used in preparation processes).

What foods were being prepared using these items of equipment? The next section will present evidence regarding the diet and culinary practices of the managers' households.

Foodstuffs: material evidence at the site

Some insight into the types and range of foodstuffs prepared in both residences is provided by analyses of organic food remains from archaeological contexts. This includes animal bone sampled from the open area in the northern part of the east wing which may have been discarded from both the first and second residences; unfortunately no bone from the 'closed' context provided by the second residence's privy K376 was analysed.

The bone material was examined with regard to species determination, size, morphology and age.¹³⁷⁷ The analysis indicates that bones from cattle, sheep and goats were equally represented numerically, though cattle dominated in terms of meat weight. While bones from meat-rich parts such as haunches and shoulder were present, ribs and vertebra were best represented, as were hooves and heads. This suggests that either complete carcasses were brought in, or that cattle were slaughtered and butchered on site. Given that the managers raised cattle on their farm, the latter would not be surprising. There was an even distribution of calves, young adults and older cattle in the material. Sheep and goats were not slaughtered on site, but were brought in as butchered carcasses. Pig was relatively poorly represented, confined principally to meat from young animals (possibly force-fed porkers) brought to the site ready-butchered in the form of hams, shoulders, heads and trotters. Since pigs had to be fed on food waste, as well as grains to fatten them up immediately prior to slaughter, they were not widely farmed at the time, though their meat fetched a good price in the urban centres.¹³⁷⁸ Bones from other mammals included small amounts from hare and red deer, both of which would have been hunted.

Eel was the only freshwater fish to be registered, the vast majority of fish bones deriving from cod, with other varieties of saltwater fish, including coalfish, haddock and flounder. Only a small amount of salmon was registered. Rather than being fresh, much of the cod may have been brought here as dried stockfish or salted fish. Numerous oyster shells were recovered.

Fowl displayed the most interesting variety in terms of commonplace and rarer species. In addition to domesticated chickens and geese, a small amount of bone from rarer domesticated fowl was found: namely, pheasant, peacock, rock dove and turkey.¹³⁷⁹ The presence of exotic fowl may suggest that they were bred and raised locally, although pheasant may have been imported from Europe as salted meat. Contemporary accounts suggest that turkey, duck and dove were only to be found on the table of elite households. While chickens and geese were also kept on farms, they were raised chiefly for their eggs and meat which could be sold.¹³⁸⁰ Local wildfowl were also eaten, notably grouse, capercaillie, swan and songthrush, the latter considered a particular delicacy up until the last century. Chicken eggs were recovered from both privies, and a complete, preserved chicken was recovered from the second residence's cess pit. We might reasonably assume that both residences had their own chicken coops which supplied eggs and fowl for the table.

Pollen, seeds and pips from a variety of cereals, fruits and herbs were found in excrement in the first and second residences' privies.¹³⁸¹ Traces of a wide variety of cereals were found in the first residence's privy, including barley, oats, wheat and rye. The second residence's privy produced traces of barley and much corn cockle, a weed common in cornfields. Some of these cereals may have been

¹³⁷⁶ Appendices J & K.

¹³⁷⁷ Hufthammer 1999.

¹³⁷⁸ Notaker 1993: 99-100.

¹³⁷⁹ At the time of analysis, the earliest registered turkey and pheasant in a Norwegian archaeological context.

¹³⁸⁰ Notaker 1993: 123.

¹³⁸¹ Sandvik 2000: 46, 48.

cultivated by the manager, and the second residence certainly possessed a threshing barn. Local seasonal fruits in both privies included chiefly raspberry, strawberry, cloudberry, crowberry, and blueberry. Both privies produced seeds from exotic imported fruits: fig seeds were found in both, and grape seeds (i.e., from raisins) in the first residence's privy. Coriander was registered in the second residence's privy, a herb which may have been grown in the manager's garden, for example.

All this organic evidence suggests that the households utilised a wide variety of foodstuffs, both in terms of meat, fish, grains, fruits, herbs and plants, the ranges of which included local produce and occasional exotic imports. Vegetables have left no trace in the record, however, though we can reasonably assume that the managers' kitchen gardens would have yielded seasonal vegetables and herbs. That both households had a diet with a high protein content (meat and fish), as well as poorly washed vegetables (with adhering earth), may also be attested by the presence of human parasite eggs in the form of whipworm (*Trichuris sp.*) and small intestinal roundworms (*Ascaris sp.*) in samples of excrement from both latrine pits in the second residence's privy.¹³⁸²

This evidence is testament to the flow of nature in all its material variety and forms through this locality, including organisms that affected human health. These diverse and shifting constellations of tended and harvested crops and plants, husbanded and slaughtered animals, were all forms of materiality that underpinned and sustained the unfolding configurations and rhythms of existential practices here.

The spaces established here were important in carrying and stabilising the daily routines and practices by which these flows were channelled and harnessed. Practices of animal husbandry, agriculture and gardening employed technologies dependent on arrangements such as pens, barns, paths, fields, and fences. The hay and cereal crops grown in the manager's fields were harvested and processed using wagons, horses, and diverse tools for planting, reaping, and threshing. The manager's cattle were slaughtered for meat or used to supply milk, nutritional sources that were consumed fresh, processed or conserved.

The households' food-related practices were also dependent on an array of technologies, equipment and spaces. In the case of the second residence, the households' reserves of foodstuffs (including grain, milled flour, flatbread, dried, salted and smoked meat and fish, dried herbs and pickled vegetables, for example) were presumably stored on site in the *stabbur* storehouse. Raised on posts to inhibit rodent activity, this was conveniently situated in the yard just behind the kitchen, which itself had a food pantry attached to it. One might expect that a similar building would have been associated with the first residence, while some foodstuffs and beverages (such as beer, wine and spirits) may have been stored in the *svalganghus's* large stone cellar. The small cellar in the second residence may have had a similar cool- and safe-storage function.

Food and drink consumption and sociability

That alcoholic beverages were stored and consumed in both residences is attested by the remains of a range of bottles that would have held wine and spirits. No remains of wooden beer barrels were recovered, although a metal beer tap attests their probable presence. Beer of both weak and strong strengths was a staple drink given the unreliable quality of drinking water. Brewing was often done in the home, though we have no direct evidence for its practice here.¹³⁸³ Wine would have been bought from dealers in the city, tapped into bottles from barrels there, and served at table using glass decanters. Square case bottles found at the site would have held imported spirits, such as brandy, rum and gin, for example. Non-alcoholic beverages were also consumed here, though the evidence for them consists principally in the form of vessels used to serve and consume them (teawares), which form part of a wide variety of vessels and equipment used for the consumption of food and drink in these households, which we shall now examine more closely.

¹³⁸² Hartvigsen 1997: 14.

¹³⁸³ Contemporary fire-insurance surveys of properties in Trondheim frequently list brewing pans in separate buildings or annexes. That none was mentioned in the 1766 survey of the second residence may suggest that brewing was not practiced here.

Equipment for consuming food and drink was utilised in connection with practices of sustenance that were central to securing and providing a comfortable and qualitatively good existence in terms of the nourishment and health of these households. Also of great importance are the roles these items had in practices of sociability that underpinned each household, both as a domestic family unit, and as the home of a man in possession of a certain social rank and authority. Married men of rank were expected to entertain at home.¹³⁸⁴ The manager would have been required to participate in customary, socially-sanctioned rituals of genteel hospitality and entertaining appropriate to his professional position and social rank; practices which were intrinsic to the consolidation of his social position. To this end, he had to maintain particular standards of refinement and decorum regarding sociability. In terms of dining, for example, this determined *what* he served at table and *how* he served it.

It is in the sphere of what Bourdieu calls 'doxic practices', among them the standards governing practices of taste and social distinction, that we may perceive the embodied, material outcomes of tacit knowledge, or habitus.¹³⁸⁵ By examining the material arrangements implicated in these practices we may discern the nature and mediation of prevailing tastes; namely, the enacted, culturally and materially embedded preferences that characterised life in these households.

The managers and their families reproduced their cultural 'selves' by making active, creative choices within a range of acknowledged and unacknowledged possibilities, both material and immaterial. However, consumers were stimulated as much by desire and imagination, as by economics, convention and necessity. The residual material arrangements of food- and drink-related practices may reveal the possibilities and creative choices open to these individuals. The food and drink they consumed, and the equipment with which they consumed it, were entangled in standards of decorum (social appropriateness), genteel consumer choices, material negotiations of identities and status, and new and exciting practices of tasteful consumption.¹³⁸⁶ The use of forks in addition to knives at table is often cited as a classic example of a shift to the practice of 'civilised' and refined manners, both at table and by extension in society generally, in post-Renaissance Europe. By eating with a fork, families and guests kept their hands clean, separating the body from food, and thereby showing their refinement, bodily discipline and good taste.¹³⁸⁷

Differentiated gendered practices may also be discernible in this sphere, exemplified by the female-centred ritual of serving tea to guests (see further below). However, we must also be aware that the standards, nature and outcome of 'tasteful practices' can be localised, individualised and idiosyncratic. They were shaped and informed by both acknowledged and sublimated norms and values, as well as numerous variables, such as personal identity, priorities and values, economic means, and the types and affordances of material resources at hand. Such factors may also be apparent in the character and make-up of the material assemblages associated with eating and drinking under review here.

Writing in the mid-18th century, the Danish bishop of Bergen, Erik Pontoppidan, observed that the populations of Norwegian towns and cities comprised a good deal of Danish, German, Dutch and English people, who prepared their bread and all forms of food in the 'Danish manner'. Although Danish cookery books were popular, he was probably referring to a shared set of North-European practices rather than a specifically Danish form of cookery.¹³⁸⁸ Given the strong trading connections with Holland, Dutch influence on ways of life, including food-related customs, was particularly marked in urban contexts, while French cuisine was appreciated by the wealthy elite.¹³⁸⁹ In Trondheim, families who originally emigrated from Flensburg in Schleswig-Holstein in the 17th century were strongly represented in the mercantile elite.¹³⁹⁰ As already observed, Trondheim's internationally orientated and culturally sophisticated elite was renowned for its extravagant dining and entertaining, where formal dinners with

¹³⁸⁴ Vickery 2009: 275.

¹³⁸⁵ The set of acquired 'dispositions' or patterns of thought, bodily habits, assumed values, behaviour and tastes acquired by socialised individuals (see 4.3.3.).

¹³⁸⁶ Hodge 2006: 248; Hodge: 2009; Vickery 2009: 292.

¹³⁸⁷ Elias 1994; Hodge 2009: 195.

¹³⁸⁸ Notaker 1993: 114, 117. The citation is from Pontoppidans *Det første Forsøg til Norges Naturlige Historie*, published in 1752-3, a work of natural history, geology, history and social anthropology.

¹³⁸⁹ Notaker 1993: 115.

¹³⁹⁰ In 1702, 25 of Trondheim's 63 merchants are described as being Flensburgian in origin (Teige 2008: 116).

servings of up to 30 courses accompanied by the very best imported French, Portuguese and German wines and spirits were not unusual. Interestingly, in Trondheim elite circles, courses were served in the Russian manner, which in contrast to the French, required the serving of individual courses one after the other, much as we do today.¹³⁹¹

Already from the early 17th century, Norwegian toll lists attest the import of wide varieties of foodstuffs, including exotic and luxurious items, a trade sustained and extended during the 18th century as wider segments of society participated in the expanding consumer economy. By the mid-18th century, the importation of wines, spices and the like was on such a scale that Bishop Pontoppidan opined piously that their consumption was far beyond what necessity or good housekeeping required.¹³⁹²

While exotic foods, expensive wines and spirits, sophisticated cuisine, extravagant dining etiquette and luxurious and exclusive table settings were confined chiefly to the wealthiest among the elite, the middling ranks aspired to refined standards and practices of dining appropriate to their means and station, and which could set them apart from their social inferiors. However, few middling households such as those of the managers had sufficient time, resources, facilities or servants to produce the elaborate sauces, pies or confections found in contemporary cookery books, and most daily meals would have probably consisted of food cooked well, but simply.¹³⁹³

Two daily meals were usually served: dinner at midday and supper in the evening. Each comprised two courses, usually soup or porridge or gruel followed by some form of cooked meat or fish served with vegetables and bread (made of rye or wheat), and accompanied with beer.¹³⁹⁴ More elaborate meals served on occasion in middling households could encompass combinations of soups, appetisers, meat, fowl and fish, small side dishes and desserts, while imported citrus fruits, for example, were much sought after, lemons in particular being used in baking, cooking and punch-making.¹³⁹⁵

During the 18th century, the Enlightenment ethos inspired a widening international dissemination of discourses of order, individuality, discreteness, refinement and specialisation; qualities associated with moral discipline, virtue, social status, wealth and influence. These discourses were also entangled with embodied practices of food preparation, presentation and dining. Appropriate ingredients, equipment, skills and knowledge were required to cook, serve, eat and drink in culturally appropriate ways. Middling households increasingly adopted individualised food portions and place settings, served separate meat- and side-dishes, explored and cultivated individual and distinctive flavours, and acquired specialised forms of tablewares and drinking equipment.¹³⁹⁶

Dining facilitated sociability and social contact, and the value placed on this is shown in the amount of time and resources expended on food preparation and consumption, the acquisition of fine tablewares, drinking vessels and cutlery, and, in wealthier households, the provision of separate rooms for eating and entertaining. Formal meals for invited guests were occasions where people presented themselves to others, and the surroundings in which the meal was served and the equipment used were influenced by a desire to convey an appropriate image of the household and its resources. However, even ordinary family meals were an important part of domestic life, providing a daily ritual of measured gentility and ordered relations which maintained the household as a distinct social and psychological entity. These were occasions where family members met to share food and conversation in an intimate way, regulating their behaviour in accordance with accepted norms.¹³⁹⁷

¹³⁹¹ The 18th century has been described as Trondheim's 'Golden Age' with regard to the renowned fashionable culture of luxurious dining and entertaining practiced by a quasi-aristocratic urban elite. The richer mercantile families and higher royal officials were enthusiastic entertainers, whose formal dinners were cornucopias of sophisticated courses compiled from local and imported produce and accompanied by the most expensive European wines and spirits (Opstad 2003; Notaker 1993: 122).

¹³⁹² Notaker 1993: 120-121.

¹³⁹³ Weatherill 1996: 146-147.

¹³⁹⁴ Based on a weekly menu made for the pupils at the Cathedral school in Oslo in 1735 which probably represents the types of ordinary daily meals served up in middling urban households (Notaker 1993: 132-134).

¹³⁹⁵ Notaker 1993: 118, 125.

¹³⁹⁶ Hodge 2009: 194.

¹³⁹⁷ Weatherill 1996: 137, 155-156.

So, what did the provisioning managers and their families eat and drink at table, and what particular material arrangements were involved? It is not possible to reconstruct menus or dishes, of course, but the review of the organic remains associated with both residences presented above provides insight into some of their ingredients. These encompassed a variety of foodstuffs, much of which would have been restricted to elite households.

Meat was clearly an important part of their diet, varieties of which were probably served for each of the two main meals of the day. This included beef produced locally, perhaps on the farm itself, and veal, a more expensive commodity favoured on high status tables.¹³⁹⁸ Dishes using meat from sheep and goats also formed a significant part of the diet. A proportionately smaller amount of pork was consumed, mainly hams, heads and trotters, the cuts most favoured by wealthier consumers who could afford this comparatively expensive form of meat.¹³⁹⁹ Red deer was eaten in small amounts, the only hunted mammal eaten here, and undoubtedly considered exclusive on that account. The eating of fowl was an exclusively elite practice, and in addition to chicken and goose, these households appear to have occasionally served dishes which included more exotic domesticated fowl which may have been bred locally; namely pheasant, peacock, turkey, and rock dove. Wildfowl hunted by farmers were also much sought after by the elite,¹⁴⁰⁰ and grouse, capercaillie, swan and songthrush reached the managers' tables. Eggs, either bought in or gathered from the farm's own hencoop, would have been essential in a variety of cooked and baked dishes.

Being a coastal city, it is unsurprising to find fish well represented at table, chiefly in the form of cod (possibly both fresh and dried) and other saltwater fish. Oysters were also popular. Local fruits may have been used in exclusive products, such as punch, liqueurs, jams, or desserts (strawberries and cream, for example).¹⁴⁰¹ Imported figs and raisins could be added to varieties of cooked or baked dishes and desserts. Although we have little evidence for them, the households presumably utilised imported herbs and spices, as well as herbs and vegetables from the garden. Locally-milled flour of wheat,¹⁴⁰² barley, oats or rye may have been used for baking various forms of bread in the house. Alternatively, the manager may have acquired bread from the depot bakery.

Meals were invariably accompanied by alcoholic beverages. Indeed, the drinking of varieties of both alcoholic and non-alcoholic beverages was an intrinsic part of life in 18th-century elite households, and as Bishop Pontoppidan's comments cited above convey, a perceived overindulgence in alcohol (as well as other areas of luxurious consumption) was a cause of increasing concern among clerics and intellectuals.¹⁴⁰³ Alcohol was drunk on a daily basis in the form of locally-brewed weak beer, utilised as a substitute for water, the quality of which in urban contexts was unreliable. Fine beers from Germany, for example, were imported for those with more refined tastes. Spirits were regarded as having medicinal benefits, and were often mixed with two other 'medicines' - sugar and herbs - to maximise their beneficial effects, although increasing alcohol consumption and abuse over the course of the 18th century raised awareness that this created more harm than good.¹⁴⁰⁴

The drinking of wine and spirits was linked chiefly with sociability, both in public and in private. While public drinking, often excessive, was predominantly a male activity, women also participated in sociable alcohol consumption in the home. Drinking with acquaintances, friends and relatives was of great importance, usually in the contexts of visits, small informal gatherings or formal dinners. Visiting was an important social practice, which involved a close association with the serving of both alcoholic and non-alcoholic drinks.¹⁴⁰⁵

Social gatherings in the home were synonymous with the refined practice of formal visits which cemented social standing among the members of the elite community. Elite domestic sociability

¹³⁹⁸ Notaker 1993: 123, 145.

¹³⁹⁹ Notaker 1993: 100.

¹⁴⁰⁰ Notaker 1993: 102.

¹⁴⁰¹ Notaker 1993: 105, 122.

¹⁴⁰² An exclusive toll-regulated cereal. Notaker 1993: 146.

¹⁴⁰³ Notaker 1993: 121, 126.

¹⁴⁰⁴ Notaker 1993: 91-92, 120.

¹⁴⁰⁵ Weatherill 1996: 157.

originated in the cosmopolitan and courtly ideal of politeness which promoted the elegant entertainment of select groups of social equals, a formalised practice which by the 18th century was also enthusiastically embraced by the middling ranks. By providing common guidelines for action and reaction, genteel practices of this type regulated social interactions and eased interpersonal relations between individuals of different genders and social status. They bestowed an aura of legitimacy and respectability, reinforced group affiliations, and promoted confidence in self and others. Their significance and dissemination did not spring from a slavish mimetic emulation of idealised, rarefied or elite cultural practices, however. Instead, their popularity rose from the fact that they were adaptable and increasingly accessible, in the form of various performative and material arrangements, to different kinds of people who employed them creatively, selectively and strategically within differing contexts of social practice and discourse.¹⁴⁰⁶

Refinements of people, manners, spaces and objects were closely entangled in multiple and shifting configurations. Domestic sociability and its implicated material choices and strategies had a profound impact on middling households. This took the form of changes in the spatial organisation of domestic interiors and the increasingly diverse array of refined equipment needed to enact its rituals, which was increasingly accessible within an expanding consumer market. In addition, practices of domestic sociability placed stresses on the traditional authority of domestic patriarchy by its redefinition of the core meanings and functions of the home.¹⁴⁰⁷

Domestic sociability was coloured by gendered practices and materialities. Visits by men to discuss politics or business could take the form of short formal calls or extended domestic receptions. Dinners could be exclusive and ceremonious, either mixed or exclusively male, and were followed by toasting and heavy drinking, from which a well-mannered wife would have withdrawn to escape drunkenness, lewd talk and tobacco smoke. Such occasions required assortments of appropriate eating, drinking and smoking paraphernalia, such as sets of cutlery, plates, bowls and serving dishes, dessert glasses and glass drinking vessels, ceremonial goblets, punch bowls, decanting vessels, clay pipes, tobacco jars and the like. The costs of acquiring these accessories, together with the required array of furnishings and decorative items for display that created appropriate spaces for entertaining, would have constituted a large part of household expenditure.¹⁴⁰⁸

However, as tea became more accessible during the first half of the 18th century, it increasingly became the beverage of choice for entertaining visitors. As an exotic commodity and mild stimulant, it lent itself to a more sober, attractively subtle and adaptable ritualistic enactment of sociability that was less expensive than formal dining, and more amenable to all members of a genteel household, and to females in particular, who could participate without risking their virtue or respectability. From early on, the serving of afternoon tea to family or guests was a gendered ritual practice, normally enacted by women as an appropriately feminine, intimate and personal way in which to provide and display a virtuous and refined form of hospitality in the home.¹⁴⁰⁹ It provided elite women with a setting in which their femininity and social skills were placed centre stage in an otherwise patriarchal domain, and was enacted using an array of refined, specialised items of equipment often owned by the women themselves. Importantly, the delicate and refined material nature of the items used for serving and drinking tea ensured it was an aesthetically pleasing ceremony, utilising as it did an assemblage of items that, in its character and affordances, engendered a graceful embodied performance while displaying the owner's refined taste. Although ranging in quality, the equipment used was standardised, and the physical acts of preparation, serving, drinking, and conversing constituted a formalised secular ritual - a form of social reproduction.¹⁴¹⁰ This embodied act of sociability was intricately entangled with the material and aesthetic qualities of the tea and the equipment used to prepare and serve it; the competence of the woman in assembling and presenting socially appropriate forms of equipment and

¹⁴⁰⁶ Hodge 2006: 49, 420-421; Hodge 2009: 200-201.

¹⁴⁰⁷ Hodge 2006: 49, 420-421; Hodge 2009: 200-201; Vickery 2009: 292.

¹⁴⁰⁸ Vickery 2009: 274.

¹⁴⁰⁹ Vickery 2009: 271-275; Hutchison 2012: 212; Telste 2014.

¹⁴¹⁰ Hodge 2006: 466-467; Telste 2014: 5-6, 9, 14.

ingredients; her physical and intellectual dexterity in serving and conversing; and the complex meanings of taste, distinction and decorum encoded within the practice and its associated array of things.

Essential material accoutrements included a table, chairs, a tea chest or canister, a teapot, milk jug, sugar bowl and tongues, teaspoons, cups and saucers. Many of these could be among the household's most expensive possessions, and in wealthier households, a tea service could include items made of silver. Ceramic teawares (teapots, cups, saucers and bowls) of Chinese export porcelain were used widely in elite circles. Although a cheaper and more affordable refined ware than silverwares, their ubiquity may possibly also have been due to their delicate, fragile, feminine qualities and colourful and exotic decoration which differentiated them from much of the other ceramic wares used in the household. Norwegian probate inventories from the early 18th century on show an increasing registration of equipment used for the drinking of tea and other exotic drinks amongst the upper classes, including porcelain.¹⁴¹¹ The earliest archaeological find of Chinese export porcelain in Trondheim is from a late 17th-century context in Kongsgården that pre-dates the military depot. However, it is not until the early decades of the 18th century that more significant numbers begin to be registered here and in the city's rubbish pits.¹⁴¹²

Tea-drinking was a refined practice more suited to the intimate domestic sphere than were formal dinners, for example, and by serving tea (or other warm, mildly stimulating drinks such as coffee or chocolate as they became popular) using a comparatively restricted range of equipment, one could make even the most modest household seem refined and hospitable. The ritual serving of warm beverages contributed to significant changes in the use of domestic space, and women's visibility in the home and within their social community. The tea table was a material mediator of female gentility, functioning as an important locus of leisured social contact where women could exchange opinions and gossip without male participation and outside the sphere of the dominating patriarchal authority. The tea ceremony was, however, versatile and adaptable, and men were also entertained by women at the tea table, extending the contexts for respectable male-female interaction. In the light of this development, it is perhaps unsurprising that this female-centred form of domestic sociability attracted male disapproval, some criticising it as a socially disruptive practice that made women neglect their natural duties of housekeeping and family care, and which displaced more 'appropriate' practices of solitary production, such as spinning, sewing and knitting.¹⁴¹³ That said, an increasing discourse among the educated elite who adhered to ideals of refinement, cleanliness and sobriety criticising the widening use and abuse of alcohol and other stimulants, such as tobacco, contributed to the popularity of non-alcoholic beverages in elite Norwegian households, creating another form of social distinction.¹⁴¹⁴

As Amanda Vickery points out, increasingly routine practices of formal visiting and domestic sociability, and in particular the serving of tea to guests, opened the domestic interior - and women - to public gaze. Many middling houses had a front parlour reserved for receiving visitors, and this space, with its ornamental furnishings and accoutrements for hospitality, had to be well kept and capable of withstanding the critical scrutiny of guests. Even modest homes were expected to organise their domestic space to facilitate the public display of taste, manners and marriage. The person responsible for presenting the household's creditable, genteel public face was the resourceful and well-mannered female hostess, an essential asset for any ambitious man pursuing strategies of social climbing.¹⁴¹⁵

In Europe and North America, tea's strong association with a restricted gentility and refinement persisted until the middle of the 18th century, its exclusivity declining rapidly during the century's latter half as the practice was adopted in more and more households of modest means, using equipment of humbler character.¹⁴¹⁶ In the case of Denmark-Norway, tea was introduced to the wealthiest elite circles during the second half of the 17th century. Its first mention in Oslo toll lists was not until 1691, heavily

¹⁴¹¹ Fløystad 2007: 123-124; Hutchison 2012: 202-203; Telste 2014.

¹⁴¹² 5.5.2.2, 5.5.2.3.

¹⁴¹³ Hodge 2006: 473-474; Vickery 2009: 273-275.

¹⁴¹⁴ Hutchison 2012: 214.

¹⁴¹⁵ Vickery 2009: 275, 292-295; Telste 2014.

¹⁴¹⁶ Weatherill 1996: 158-159; Hodge 2009: 196-199; Vickery 2009: 271-275.

taxed at 48 skillings per pound.¹⁴¹⁷ In Trondheim tiny amounts of tea, coffee and chocolate were sporadically imported at the very end of the 17th century by its wealthiest citizens. By 1741 toll lists record the importation of just over 1000 kilos, by no means a large amount, priced at a costly 1 riksdaler per pound.¹⁴¹⁸ Increasing amounts of tea were registered in Norwegian toll lists through the latter half of the 18th century, although as a relatively costly refined commodity, its consumption (and that of coffee and chocolate) largely remained the preserve of the urban upper and middling classes, and to some extent the rural elite, well into second half of the 18th century.¹⁴¹⁹ By mid-century, tea was considered an indispensable part of life for many middling households in recognition of its increasingly accessible strategic role as a mediator of sociability, refined taste and genteel sensibility. By the end of the century, however, although still drunk in elite circles, tea- and coffee-drinking were losing their exclusivity, increasingly enjoyed as they now were by the wider populace.¹⁴²⁰

These new formalised practices of sociability engendered, and were themselves engendered by, distinctive specialised domestic material commodities and spatial arrangements, some of which are recorded in 18th-century probate inventories and fire-insurance surveys. Middling Norwegian elite households reserved comfortably furnished space for entertaining visitors at either the dinner table or tea table, and were invariably in possession of stocks of vessels for serving and consuming food, and alcoholic and non-alcoholic beverages. These varied in quality, type and material, from fine silverware and pewter vessels to various types and qualities of ceramic and glass vessels and even wooden cups, drinking bowls and beakers. Equipment for consuming tea, coffee or chocolate became an essential and increasingly ubiquitous Norwegian household commodity during the course of the 18th century.¹⁴²¹

Given the managers' social standing, it is likely that they also partook in rituals of domestic sociability, although distinguishing this in the material residues left to us is not straightforward. However, it has already been suggested that the second residence's large front parlour room, equipped with a tall, expensive ornamental iron stove, was probably the space reserved for receiving visitors and entertaining guests. Of the two parlours, this room occupies a more 'screened' or 'secluded' frontal location appropriate to more restricted public access and use, with no direct connection to the rear of the house with its more interlinked private and practical functions. The other large front parlour also contained an iron stove, but its direct access to the kitchen and a small chamber (possibly used for sleeping or secluded gendered practices) is arguably more consistent with a use as the family's daily living room.

These rooms were the differentiated locations for the consumption of family meals, formal dinners and tea receptions in the second residence. It is not possible to be quite as categorical about the identification of differentiated spaces of consumption and sociability in the case of the first residence. However, it has been suggested that the northern room on the ground floor of the *svalgangshus* may have been the daily living room, since it was located conveniently close to the kitchen building, while a chamber (*sal*) reserved for entertaining guests may have been located on the floor above (Appendix O).

The surviving traces of equipment used to consume food and drink in both residences predominantly comprise varieties of ceramic tablewares (plates, serving dishes and bowls) and ceramic and glass drinking and dispensing vessels. As noted, evidence indicates that the occupants of the Kongsgården residences consumed a wide variety of local foodstuffs, including quantities of meat, fowl, fish, shellfish and fruits, and occasional exotic items.

They also drank wines, spirits, and beer, the testimony of bottles supplemented by the remains of serving and drinking vessels in the form of varieties of glass decanters, wine glasses (including sets) and beakers, some of which may have been suited for use at formal dinners (see below).¹⁴²² Likewise,

¹⁴¹⁷ Johannessen 1985; Telste 2014: 6.

¹⁴¹⁸ Berg 1981: 154-155. Coffee was imported in modest amounts at 1 riksdaler for 2-3 pounds.

¹⁴¹⁹ Johannessen 1985; Notaker 1993: 120; Hutchison 2012: 199-203. Coffee evidently became more widespread during the second half of the 18th century since its sale and use in rural communities was banned by a sumptuary law of 1783. It did not become common until well into the 19th century judging from per capita estimates for its consumption.

¹⁴²⁰ Dybdahl & Bull 2005: 387; Telste 2014.

¹⁴²¹ Roede 1998; Telste 2014.

¹⁴²² Punch was a particularly popular drink in elite circles at this time (Notaker 1993: 127-128), but we have no direct evidence for its use here. Evidence for the consumption of bottled Pyrmont spa water has been found in

specialised ceramic teawares attest the consumption of hot non-alcoholic beverages in both residences, presumably primarily tea. The differentiation in numbers and range of teawares between the two residences may be consistent with the increasing availability of tea as the 18th century progressed, as noted above. Although coffee and chocolate may also have been consumed, the only direct material evidence for coffee is a handle for a coffee mill found in connection with the second residence (Fig. 5.106).

Again, items in metal and wood are poorly, if at all, represented archaeologically. Pewter plates and mugs may have been used, and the families might have possessed valuable silver items, such as teapots, spoons and sugar bowls, for example, as documented in the case of contemporaries of their class.¹⁴²³ These and other fine items with monetary and emotional value would have been carefully curated. However, in the absence of evidence for such goods in the form of listings in probate inventories, we must fall back on the archaeological evidence which provides partial insight into the households' original stocks of eating and drinking equipment.¹⁴²⁴

Decorated ceramic tablewares dominate the archaeological material from both residences in terms of numbers and varieties of wares, significantly outnumbering kitchenwares in terms of percentages of sherds. Items associated with the *first residence* chiefly took the form of imported Dutch blue tin-glazed plates, supplemented by various other Continental and English imports, with a much smaller amount of locally produced Trønder wares. A fragment of a very fine *façon de venise* glass comfit or salt bowl was also found in close association (Fig. J.4). This would have been something of an antique by the time it was broken, possibly a curated family heirloom. Other items associated with food consumption comprised a few table knives and a two-pronged fork. The use of forks in Norway is known among the wealthier elite during the second half of the 17th century, though their use was still confined to elite circles throughout the 18th century.¹⁴²⁵

Drinking equipment found in association with the first residence attests the consumption of tea and alcohol using comparatively refined vessels. These included small amounts of Chinese porcelain teacups and saucers and imported glass drinking and serving vessels. The glass material consisted of a range of imported wine glasses and beakers that included both long-established types (*roemer* wine glasses, *passglass* beakers, and *façon de venise* filigree beakers and stemwares) and newer types in the form of English-style lead-crystal stemwares. These were accompanied by fragments of fine *façon de venise* decanter jugs, or carafes (Figs 5.75 - 5.77, J.5 and J.6).

The typologically mixed nature of the glassware assemblage is consistent with the transitional nature of the glassware market during the early decades of the 18th century, when older forms in soda-lime glass were being replaced by the newer Bohemian/Silesian potash-lime and English potash-lead (crystal) glass varieties. That both wine and spirits were consumed is confirmed by the presence of fragments of both globular wine bottles and square case bottles. Interestingly, the privy pit produced a small assemblage of tablewares, glass vessels and food waste which is likely to have derived from consumption practices in the *svalgangshus*, adding weight to its interpretation as the residence.

Imported ceramic tablewares similarly dominated the material dumped in the *second residence's* privy, chiefly in the form of Dutch tin-glazed wares and slipwares. Plates predominated, including sherds from matching sets in Dutch tin-glaze, as well as fragments of Rhenish slipware plates (Figs 5.58 and K.7). Bowls and serving dishes also included examples in locally produced Trønder wares.

Teawares were also found in the privy pit, predominantly in the form of Chinese porcelain cups and saucers, the only other tea ware item being a fragment of an English refined redware teapot. Ceramic jugs and mugs/tankards with wider areas of usage included one of each in Staffordshire stoneware and Dutch blue tin-glazed ware respectively. The range and proportions of tablewares and teawares in the external deposits broadly match those in the privy. These wares occur in greater amounts and variety than their equivalents found in connection with the first residence.

contemporary contexts elsewhere in the town (E-site, TA1972/2), a popular elite non-alcoholic beverage that may also have been consumed here. See 5.5.2.4.

¹⁴²³ Roede 1998: 46.

¹⁴²⁴ See Appendices J & K for detailed overviews.

¹⁴²⁵ Fossberg 1974: 26.

The glass drinking vessels and serving vessels which entered the same privy have a distinctive typological profile in that, with a few exceptions, almost all are products of the Nøstetangen glass factory in southern Norway (Figs 5.89, K.11 and K.13). Production started in earnest there in 1748, and in 1760 its owners were granted a monopoly on the sale of glasswares in Norway. Consumer choices would consequently have been limited to the ranges on offer in the factory's catalogues or those which local dealers stocked. The range of glasswares in the privy comprise principally a limited variety of crystal stemwares (wine goblets), including one or more sets each of the *Nøgne jomfru* and *Viin Glas Formed Knap* goblets, which are among the cheaper and more utilitarian of Nøstetangen's products. A few other Nøstetangen varieties were represented by single items, including a dram- or firing-glass, and only two fragmentary lids for ceremonial goblets were found, items usually used in connection with formal dining. A few Nøstetangen beakers and tumblers, including beer glasses, were also identified, as were fragments from two decanters or serving bottles, one of which was a type produced at Nøstetangen, the other a possible earlier import. Only a few earlier (pre-Nøstetangen) stemwares were represented, including engraved fragments, one of which bore the monogram of Fredrik IV (1699-1730).

If, as has been suggested, most of the material originated in the household of Real War Councillor Arve Gudmansen (possibly dumped during a clear out following his retirement in 1765), these may represent curated survivals. The external deposits produced a more mixed assemblage, including Nøstetangen products and earlier varieties normally associated with the 17th century. These may have derived from the building's earliest residents, or are residual from the first residence or pre-military phases of occupation.

Assessing these residences' assemblages of eating and drinking equipment as a whole, one is struck by the comparatively modest quality of the majority of the ceramic tablewares and glass vessels that were discarded. The first residence's privy produced fragments of fine glass carafes and a fragment of a particularly fine *façon de venise* bowl, while fragments of matching sets of Dutch tin-glazed plates, including one fine example with Imari decoration, a serving bowl in porcelain, and fragments of ceremonial glass goblets lay in the second residence's privy. However, with their exception, much of the range of plates, bowls, dishes and glass vessels found in connection with the residences does not match the quality of the luxurious sets that would have graced the tables of the wealthiest members of the elite.

That said, this may perhaps indicate that the tablewares discarded in both instances were principally those used for everyday family meals, while their more carefully curated and less frequently used finer display wares were not disposed of here. This may also explain the similarly modest quality of the bulk of the glasswares that were discarded from both residences, although occasional finer examples testify to formal drinking. The number, range and quality of glasswares from the second residence contrasts with the glassware that was deposited *en masse* in a contemporary rubbish pit at E-site,¹⁴²⁶ a clearance dump possibly deriving from an upper elite urban household. Nonetheless, it can be noted that the E-site assemblage was also dominated by Nøstetangen products, many of which were directly comparable with those found in the second residence's privy. However, it clearly constituted a more comprehensive dump in which that household's entire range of glassware was discarded, perhaps following a death, whereas the material dumped in the second residence's privy is, for whatever reason, less comprehensive.

To conclude we must recognise that the contingent nature of the material evidence deprives us of full insight into the range and quality of equipment used in connection with practices of domestic sustenance and sociability. With a few exceptions, the households' higher quality possessions are in all likelihood absent from the assemblages. However, one might contend that the evidence from both residences, and particularly that associated with the second residence (and the household of War Councillor Arve Gudmansen in particular), provides us with an illuminating sample of the varieties of material goods deemed appropriate for use in connection with everyday practices and rituals of consumption in an 18th-century middling household.

¹⁴²⁶ TA1972/2.

Practices associated with personal appearance: the fashioning, adornment and grooming of the body

As we have seen, items of eating and drinking equipment could be involved in practices of self-fashioning, self-presentation and self-expression for both men and women. Their personal possessions in the form of clothing, personal ornaments and accoutrements were also essential components in these embodied practices. Men and women chose and assembled objects to convey attributes and meanings about themselves and others, ranging from individual or group notions of fashion, taste and style, to the family's wealth and status, history and lineage, and political and religious allegiance, for example. Materialities of the body, public and private spaces, objects and accoutrements were entangled in overt or subtle presentations of individual personality, personal, familial and social relationships, mortality and memory, for example.¹⁴²⁷

Certain objects may embody individual or collective experience, be it related to gender, class, or age, for example. Many of these material possessions - usually the most valuable in monetary terms - are listed in contemporary probate inventories: diverse items and equipment in gold and silver, copper, brass and tin, linens and other textiles, books, furniture, clocks and the like. Few of these enter the archaeological archive, and this is also the case in Kongsgården. Archaeology produces a more contingent, arbitrary array of items, which may nonetheless provide insight into mundane practices of self-fashioning and identity construction.

There are disappointingly few items which can be linked with the self-presentation or grooming of the people who lived in these residences. This is particularly so in the case of the first residence, where only a few mundane clothing items and accessories (a buckle, clothes fasteners, and a semi-precious stone) were found. Toiletry equipment included a bone comb and combined ear spoon and manicure tool, and a few fragments of possible *Eau de Cologne* bottles. The second residence produced a slightly greater range and number of items of clothing, dress accessories and toiletry equipment, including a number of metal buttons, buckles, clothes fasteners, a stay, women's leather shoes, a gold finger ring, a folding fan, bone combs, a toothbrush, tweezers, and possible *Eau de Cologne* bottles.

Clay pipes may also be regarded as items of personal equipment, carried about the person and used to aid the ingestion of an addictive stimulant drug in private or in social gatherings. A variety of Dutch and Norwegian types were found in connection with both residences, as well as one unusual exotic socketed decorated form (Fig. 5.118).

A number of these items (the ear spoon, buttons, shoes, fan, toothbrush, stay and socketed clay pipe) feature in my previous thematic discussion on materialities of practices associated with personal appearance.¹⁴²⁸ As suggested there, we can regard many of these humble items as essential 'technologies of the body', entangled with time- and place-specific ideas and beliefs about the body, mind, soul and so on, and central to enactments of self-fashioning and presentation in accordance with notions of social decorum, for example. During the course of the 18th century, the body became a place where new ideals and practices of self-control, polite conduct, deportment and demeanour could be mediated, emphasising neatness and elegance. The negotiation of social status and relations through practices of self-fashioning and personal grooming that employed an increasing variety of objects was central to the practices of taste, fashion and social distinction within the hierarchical, elitist and rank-conscious society of the period.

The woman's stay found in the second residence's privy (Fig. 5.121), used to mould a female body to a desired normative shape, is an eloquent example of a 'technology of the body', amalgamating as it did a distinctive set of material qualities and affordances, competences of manufacture, and contemporary cultural norms and meanings relating to improvement, refinement and elegance. The folding fan (Fig. 5.129) is another item of female dress from the second residence, though in this instance a fashionable accessory, inscribed with Chinoiserie motifs, used in the course of the household's social practices of display and distinction. Male dress is represented chiefly by buttons, some of very fine quality, and these were considered strong markers of masculine identity, to be worn prominently on coats, waistcoats and shirt sleeves (Fig. 5.125). Some might have belonged to the managers, or were perhaps lost from uniforms worn or stored in the vicinity.

¹⁴²⁷ Vickery 2009: 107.

¹⁴²⁸ 5.6.4.

Although women are known to have smoked clay pipes, they are predominantly associated with males, and particularly with male practices of sociability. They could also provide a material means of promoting personal and collective identity. One particular pipe from the second residence's privy can be tentatively associated with one of the managers (Arve Gudmansen) for whom it would have constituted an especially valued possession with which he could visibly communicate his particular rank, affiliations and status (Figs 5.117 and 5.118). The pipe - an exotic and unusual socketed type - bears upon it the coat-of-arms of Denmark-Norway, the manager's nation of allegiance and his employer. By virtue of its form and decoration, it would have carried a particular emotional, ideological and professional significance for its owner.

As mentioned, neatness, elegance and harmony of appearance were important ideals that were central to conveying inner character and sensibility in 18th-century polite society, and efforts were made to keep the body clean and presentable, and to create a body that was socially pleasing. Hairstyles were maintained and lice removed with combs, and eyebrows and facial hair were plucked using tweezers. Ears were cleaned with earscoops, teeth with purpose-made brushes, and fingernails with manicure sets, while infrequently washed bodies were anointed with perfumes and fragrances. These practices of self-fashioning utilised items of which we have examples from the Kongsgården residences (Figs 5.136, 5.137 and K.18).

Practices associated with hygiene, sanitation and health care

As I set out in my previous discussion regarding challenges in the spheres of public and private hygiene, health and sanitation in historic Trondheim, these were confronted through individual and collective initiatives and strategies regarding waste and water management, improved access to medicines and medical care, and the ways bodies were nourished, cared for and healed, for example.¹⁴²⁹

The impact of flows of bacteria, viruses, parasites, and pests that passed through the Kongsgård residences during the 18th century were also mediated and regulated by active alliances of ideas, people and things. New technologies and constellations of ideas, competences and material resources and goods created and transformed the environmental and corporeal conditions experienced by the managers, their families and servants. For example, the material improvements in lighting, heating, insulation and cooking facilities that were incorporated within the second residence would have created not only a more comfortable living environment than was offered by its predecessor, but would surely have impacted positively on the health of the inhabitants.

Furthermore, as we have seen, both residences had access to diversified dietary resources in the form of varieties of meat, cereals, dairy produce, vegetables and herbs produced on the attached farm and garden. However, there are indications that the second residence's farm and garden may both have been organised and managed in a more efficient and rationalised manner, which may have improved the quality of the produce reaching the managers' table. However, a diet which seems to have contained a fair proportion of meat and poorly washed vegetables may have resulted in negative health side-effects, including malnutrition, as indicated by the presence of parasitic intestinal worms in the second privy.

The contrasting character and locations of each residence's household privy has already been identified, the siting of the second residence's privy at a distance from the house possibly indicating a conscious desire to segregate the act of defecation and the storage of its results from the immediate household sphere. This may be a manifestation of heightened sensibilities and notions of personal restraint and cleanliness, and a distancing from unclean things and practices. Personal and intimate practices, such as the excretion of bodily waste, undressing, sexual intercourse or sleeping were increasingly hidden from public view and relegated to their own secluded spaces. Furthermore, the privy's subdivision into three compartmentalised rooms may suggest that it served the entire household, both family and servants, but that they were allocated separate rooms within the privy. The use of chamber pots within the house seems to have been customary in the second residence.

Intimate practices of personal hygiene are represented by a number of the toiletry items mentioned above, and the use of louse combs, earscoops, tweezers and toothbrushes was probably

¹⁴²⁹ 5.6.5.

common practice within the households. Textile strips in the second residence's privy were probably discarded sanitary rags.

We have little evidence of medicinal practices. However, we might expect that the garden provided the households with varieties of medicinal herbs, although from the mid-17th century on Trondheim had a number of licensed apothecaries, and broken pharmaceutical bottles which would have contained their medicinal preparations have been found in association with both residences.

Evidence for other practices associated with work, leisure and children

Apart from the knowledge that the manager had two offices in the second residence, one for himself and probably one for a clerical assistant, few material remains can be directly connected with the practice of his profession. It has been suggested that his office was located in the ground-floor room on the western side of the residence's rear extension, and that it was equipped with two windows from which he could observe movement of people and materiel in the area between the two gates and in front of the secure treasury vault. The only objects which might have passed through his office comprised a few wax seal fragments which would have been attached to letters he received, writing equipment in the form of a slate and slate pencil stubs, a metal clasp from a book, and a fragment of a magnifying glass that a poorly-sighted manager may have used to aid reading. It is unknown whether there was an equivalent office in the first residence. Four jettons found outside it may have been used by one of the first managers in the course of his accounting work, as might a slate pencil (Figs 5.140 – 5.143).

Textile working - usually though not exclusively associated with women - is also poorly represented. Needlework skills were an essential part of a well-bred young woman's upbringing, necessary for decorating clothing and household furnishings as well as household maintenance tasks such as marking and mending linens. Pins were a necessity for sewing and for the fastening of female clothing and the arrangement of dress accessories.

Sewing equipment from the site comprised only a handful of needles, pins, a needle house, thimbles, a sewing ring and a spindle whorl distributed between deposits associated with both residences. A single laceworking bobbin was found in association with the first residence. Weaving was represented by a possible weaving comb used to push down weft threads between warp threads on a warp-weighted loom from the second residence's privy (Figs 5.145 - 5.147).

Tools and equipment used for other crafts or maintenance work were few and far between, though there is some evidence that metalworking - iron smithing and occasional casting - was conducted somewhere in the vicinity, which would not be surprising given the requirements of the depot. The only item of equipment that might be connected specifically with the farm was a single sickle blade (Fig. 5.111). Indeed, given the close proximity of farm buildings and animals to both residences, the paucity of equipment associated with agricultural practices or animal husbandry is puzzling. Even horses - needed for farm work and pulling the manager's carriage which was kept in the central section of the second residence's barn - are represented by only a few horseshoes, nails and a possible harness brass (Fig. 5.174). This absence may be due to machine removal of the foundations of the second residence's barn and deposits associated with its use during excavation, and the likelihood that the barn associated with the first residence lay outside the area of excavation.

Practices related to the depot's military functions are also surprisingly poorly represented, although the excavated area lies peripherally to the main stores. However, a fair number of iron trigger mechanisms, many found in the east wing, suggest that musket parts were stored in the timber buildings that stood here during the mid-1700s, presumably for repair and maintenance purposes. Other parts of flintlock muskets were found, notably a flintlock mechanism, gunflints, lead pads for holding flints in place, and a straploop. A small screwdriver may have been used to adjust screws on flintlock mechanisms, for example. Lead musket balls and fragments of iron cannonballs or grenades were found (Figs 5.111, 5.160).

The wooden powder containers (so-called 'Apostles') which were found in the second residence's privy would have hung from a musketeer's bandolier and stored powder for charging a matchlock or snaplock musket (Fig. 5.161). This form of weaponry was long out of date by the time the containers entered the privy, and it is suggested that they were curated items, consciously kept by one

of the managers as a curio or heirloom, possibly part of a bandolier handed down from father to son, for example.

Although we know that most of the managers had children, material traces of them are almost absent, although the wooden child's doll from the second residence's privy is a touching and eloquent reminder of their presence here (Fig. 5.151). A few stone marbles are the only other secure tokens of their presence. The small pipeclay figurines found here may have been used as toys, but they may equally have been curios, placed in prominent places for display. This is arguably likely to have been the case for the small polychrome Chinese porcelain figurine from the second residence (Fig. 5.152). Originally made as a Chinese calligrapher's accoutrement, its colourful and exotic qualities would have caught both children's and adults' eyes and imagination, and may well have stood on the manager's desk or on display in his main living room as a curiosity, and a marker of interest in things Eastern and exotic. As such, it would have joined other exotica that entered the households, most notably the Chinese porcelain teawares, the Imari-decorated Dutch tin-glazed plate, and the folding fan with chinoiserie decoration (Figs 5.58, 5.72., 5.129).

In common with children's toys, items used by adults in connection with gaming and other leisured practices are few, restricted to a chess piece and a possible backgammon piece, both from boardgames that would have been known in the managers' social circles (Fig. 5.156).

6.5. Concluding summary

This chapter has offered a 'practice-material history' of a particular place and time: Kongsgården during the 18th century. It has explored the changing spatialities and materialities of the military depot and the two residences of the provisioning managers, and has attempted to relate these to contemporary discourses and practices utilising historical information and the structural and artefactual evidence associated with the residences and their occupants.

The managers' residences were an integral part of a military-bureaucratic institutional space conceived and experienced in terms of discourses and networks of power and authority. On the other hand, in the changing character of the buildings and the assemblages of objects used in connection with a variety of practices in and around them, we can trace the emergence of an 'ordinary modernity' in the wider social and domestic sphere. This was a process whereby material arrangements, including those essential to the sensory and symbolic experiences of personal and social comfort that were previously the exclusive preserve of a socially and economically privileged few gradually permeated social boundaries of decorum and became more widely disseminated and adopted. This process involved a range of attributes, including order, convenience, efficiency, leisure, ease, pleasure, domesticity, intimacy, and privacy, for example.

These attributes are interwoven in everyday practices and their integrated arrangements of materials, competences and meanings. Utilising the available historical and material remains, emphasis has been placed on investigating materialities of practice in the managers' households; the household being a physically, ideologically and humanly constituted unit of social practice, production and consumption.

Importantly, a household only exists as 'performed'. Through their enrolment in the enactment of domestic practices, a household's material and cognitive elements become greater than the sum of these parts. In the course of any analysis of past domestic lives, therefore, one must aim to examine as much textual and material evidence relating to a house, family, and their possessions as one can. The evidence I have assembled in this instance, while fragmentary, has provided insight into a range of practices associated with sustenance and sociability, personal appearance, health, hygiene and sanitation, as well other aspects such as work and other practices associated with everyday life in this particular place.

In essence, the two contrasting managers' residences in Kongsgården provide us with an early example of how the transition to an 'ordinary modernity' unfolded in one particular social context. In terms of spatial organisation, the second managers' residence demonstrably provided these middle-ranking officials and their households with a more overtly bounded, efficiently ordered and intricately differentiated domestic space than had been conceived of and materialised in the first residence. This

process of transformation extends also to the barn building and gardens attached to the second residence, where we can also detect the spirit and practices of Enlightenment, rationalisation and improvement that characterise the period.

Although this process is more explicit in the architectural and spatial spheres, there are equivalent tendencies observable in the assorted assemblages of objects entangled in the daily lives and practices of the families who lived here. The households attached to both residences had access to a range of mundane, practical and more luxurious consumer goods which were intricately involved in the households' chosen practices of cooking, eating, drinking and sociability, as well as their practices and routines of self-fashioning, self-presentation and personal hygiene.

Their choice of goods of refined yet modest quality suggests that they participated in practices of distinction and taste appropriate to their social rank and professional position, which was of middling status, below the more exclusive patrician elite. That said, much of the material found here may have been used for less formal, everyday domestic practices, since their finer possessions are unlikely to have entered the archaeological deposits. Nonetheless, we can confidently surmise that they entertained at home, utilising a range of eating and drinking equipment for both male-centred gatherings, fuelled with wines, spirits and tobacco, and female-centred receptions of male and female company at the tea table for the ritual of tea-drinking, which was performed using an array of appropriate teawares.

Although detectable in connection with the first residence, these practice-material arrangements are most emphatically represented materially in the second residence, as evidenced by both the combined testimony of the associated assemblage of dining and drinking equipment and the differentiated spatial organisation of the residence itself. The managers' households were entangled in the expanding world of internationally-sourced goods that characterised the period, with the dominant Dutch trading connection clearly manifesting itself in their material acquisitions. Occasional exotic items linked to the Chinese export trade and Chinese influence on European manufacture also reached these homes, and particularly the second residence, in the form of Chinese and European porcelain, a fine Imari-decorated dinner plate (possibly part of a larger fine dining set), a small Chinese porcelain figurine and a folding fan with chinoiserie motifs. However, we can also detect the impact of import restrictions asserted by mercantilist monopolies, seen particularly in the predominance of drinking glass and bottles from Nøstetangen and clay pipes from Drammen in the material associated with the second residence. Although ceramic imports were not subject to similar embargoes, the products of local potters were clearly becoming increasingly popular from the late 17th century on.

The materialities of practice presented above suggest that the managers and their households - particularly those who resided in the second residence - lived comparatively comfortable lives, in terms of both personal and social comfort. They lived in a sheltered, bounded and ordered environment, and in the case of the second residence, in what we might recognise as a home with 'modern' attributes: namely, spacious, differentiated, well-heated and well-lit. Although a modest timber building externally, its interior was particularly sophisticated in terms of spatial organisation, designed to segment and differentiate areas of domestic and work-related practice and social interaction within the household, and to either display or hide certain aspects of domestic life from the gaze of outsiders. The house contained a range of small rooms which could be closed off from others, where one could eat, sleep, dress and undress, converse, read or sew more privately. In this, it embodies an emergent desire among an increasing swath of self-conscious elites to live separate public and private lives rooted in modest respectability, comfort and propriety.¹⁴³⁰

Furthermore, it was integrated closely with a 'modern' multipurpose farm building and small formal kitchen garden, and was provided with a large compartmentalised privy placed at a short distance from the main building. In terms of its particular combination of materials, competences and meanings, this residential complex must have constituted a comparatively novel manner of dwelling for a member of Trondheim's middling classes during the early to middle part of the 18th century. However, the extent to which this was indeed the case must await future comparative work by architectural historians and (hopefully) archaeologists.

¹⁴³⁰ Roede 2001: 328.

The managers' households appear to have enjoyed a varied diet, rich in protein, and with access to locally or home-grown cereals and vegetables, conserved, prepared and cooked using a range of ceramic and glass vessels. The managers and their families dined and drank in a refined and genteel manner using knives and forks, sets of decorated plates, drinking glasses and decanters. They dressed themselves in accordance with normative social dress codes, the women moulding their bodies with stays, and using fashionable dress accessories, such as folding fans.

Our insight into the character and range of their material possessions and material surroundings is admittedly limited, and comparative studies from other urban properties are required to estimate and calibrate the qualitative nature and profile of this practice-material assemblage within the social range of Trondheim households of the period. However, we might conclude that the picture we have obtained indicates that these men and their families lived within a social field of genteel practices and associated materialities that were accessible in various configurations to different sorts of people. Some configurations were determined by the social parameters of decorum, whereby material choices were restricted to those appropriate to an individual's station, while others might be chosen in accordance with personal 'imaginative desires' regarding luxury, leisure, pleasure, personal display, sociability, novelty, amusement, work, utility, respectability, convenience, and social well-being, for example.

Each manager's identity and life experiences unfolded as a consequence of how he fitted into a network of relationships which characterised all the socio-material arrangements of which he was a part, and which were carried and sustained in the configurations of actions, materials and understandings involved in social practice. We must, however, neither underestimate nor trivialise the managers' choices of things as attempts to comply slavishly with a universal set of social norms. As individuals, they made creative and active choices, and the things they surrounded themselves with were involved in complex contingent practices connected with both personal expression and social reproduction. Of central importance, however, was the manager's professional identity and role, and his dwelling house, farm, garden and possessions were essentially interwoven with the negotiation of his role and rank, and strategic practices associated with an idealised, elitist gentility. The material remains of the managers' lives would suggest - perhaps unsurprisingly - that they and their families were highly conscious of their role and place in the social hierarchy of the day, with little or no surviving sign of contradictory or idiosyncratic material choices or practices.

To conclude, we must acknowledge that these individuals were neither completely autonomous agents of rationalised choices nor subservient slaves to convention, but rather carriers of the attributes of various social practices *in alliance with* other non-human 'carriers'. The 'social' is brought into being through multiple material affordances, arrangements, embodied routines and habits through which things and people hang together and transform one another. The phenomenon of social hierarchy and the managers' position within their social field was not simply carried within individuals and generated through habitus, for example: it was performed into being through particular alliances of heterogeneous actors, materials, spaces, and knowledges, some aspects of which we have observed during the course of this study.

PART 5

The Value of Post-Medieval Archaeology: Concluding Remarks

Chapter 7

The contents of the sieve: residues of the past and their value in the present

Concluding thoughts

*'Evidence is always partial. Facts are not truth, though they are part of it - information is not knowledge. And history is not the past - it is the method we have evolved of organising our ignorance of the past. It's the record of what's left on the record. It's the plan of the positions taken, when we stop the dance to note them down. It's what's left in the sieve when the centuries have run through it - a few stones, scraps of writing, scraps of cloth. It is no more 'the past' than a birth certificate is a birth, or a script is a performance, or a map is a journey. It is the multiplication of the evidence of fallible and biased witnesses, combined with incomplete accounts of actions not fully understood by the people who performed them. It's no more than the best we can do, and often it falls short of that.'*¹⁴³¹

The historical novelist Hilary Mantel's cogent characterisation of the dilemmas and limitations inherent to historical sources, method and knowledge might also speak to the current predicament I have tried to address in this study. In Norway, as we have seen, the dilemmas attached to the production of historical knowledge are further compounded by the institutionalised negligence and exclusion of an array of material 'scraps' found in the archaeological sieve. These scraps - or 'things' - have the capacity to diminish our 'ignorance' of the recent past by imparting a better evidential and ontological balance to our inquiries.

In the wake of the current cross-disciplinary 'material turn', no historian or heritage manager worth their salt could today deny the centrality of materiality to any understanding of past society, or dispute that history can also be told or reimagined through things. That, however, is precisely what existing heritage legislation denies with regard to the history of Norway during the past 500 years. It does so implicitly on the long-debunked premise that the ephemeral, mundane and incomplete material contents of the archaeological sieve have relatively insignificant 'value' when weighed in the scales with written texts and socio-economic costs and benefits. This is a veritable Catch 22 situation, since that perceived limited value is the result of the long-existing neglect of this resource by both management and academia. That the degradation and oversight of a diminishing source of knowledge is perpetuated by authorities cognisant of Norway's international obligations to conserve a representative proportion of its past *regardless of age* merely adds a Kafkaesque twist to this predicament. We might characterise the current dichotomy as something of a 'grand anomaly' that has paradoxically become the established bureaucratic norm.

It can be conceded that the contents of the archaeological sieve would, even in an ideal conservation world, often be limited to Mantel's scanty 'scraps', since much has already fallen through its mesh, leaving us with only a fortuitous fraction of the diversity of things known, touched and experienced by past generations. It is an incomplete archive, prone to ambiguity, but no more so than

¹⁴³¹ Hilary Mantel: The Day is for the Living. The BBC Reith Lectures Nr. 1. Broadcast BBC Radio 4 13.06.2017. <https://www.bbc.co.uk/programmes/b08tcbrp> (15.04.2018). Mantel is best known for her novels *Wolf Hall* and *Bring Up the Bodies* which reimagine life, death and politics at the court of King Henry VIII.

surviving texts written by people in the past and interpreted by people in the present. Furthermore, unrecorded speech, which constitutes a principal medium of human interaction, is not available to us. As is the case for all history writing, we must openly acknowledge the limits to what we can know with certainty, and our need to rely on informed imaginative interpretation of a variety of source materials. As one form of surviving source material, things can also in some ways provide voices in the present for the silent inhabitants of the past. As I have argued above, human life and sociality can only transpire in intricate alliance with materials, and since all humans engage with things and leave material traces of their lives, even a partial record contributes to a more inclusive and equitable account of those lives.

Consequently, it is my hope that my review of some buried material residues of past lives and practices retrieved in Trondheim and elsewhere in Norway will serve to demonstrate that this archive, although incomplete, is a valuable resource which can contribute to a more symmetrical engagement with, and knowledge of, the recent past. By engaging with things, we can redress the artificial imbalance between literate and non-literate history created and perpetuated by the current legislative bias in conservation practice. These retrieved lost objects and spaces make manifest that which connects us with, or separates us from, forgotten people and their practices in the past. They help us chart the often contingent and non-linear processes which have brought us to where we are, and which have made us



who we are. Even the most mundane things have the capacity to inspire present generations' curiosity regarding the lives led by their recent forebears, and to engender wonderment at the similarities and differences of those lives to their own. For example, the objects from the provisioning managers' residences in 18th-century Kongsgården have now entered upon a new phase in their existential biographies as central exhibits in the Archbishop's Palace Museum in Trondheim (pictured opposite). History transpires through unfolding relationships

between people and objects, both in the past and in the present.

As I have tried to argue, this material's potential for the creation of knowledge and its professional and public dissemination can be harnessed effectively by uniting the study of things with other available strands of evidence to create a productive multidisciplinary, something which is the hallmark of the study of the recent past elsewhere than in Norway. Furthermore, it should be our ambition to establish a truly 'historical archaeology' which seeks the erosion of boundaries, both disciplinary and historical, that are rooted in redundant notions of the past and how it should be studied. Unfortunately, there is still an adherence to compartmentalised and sectoral thinking in Norwegian academia and heritage management. There is for example currently no university department dedicated to teaching 'historical archaeology', let alone a seamless historical archaeology as taught at Lund University in Sweden, and medieval and prehistoric archaeological sites are managed and investigated by a spectrum of autonomous sectors and institutions which could arguably benefit from a greater degree of professional collaboration and knowledge exchange.

The question of archaeology's 'value' is an enduring subject for professional and political debate, and notions of value have shifted with differing managerial regimes. Currently, heritage authorities and research funding organisations, are, in their ceaseless, one-eyed search for prioritisation, 'relevance' and cost-effectiveness, placing particular emphasis on determining the 'social benefits' of archaeology as a

criterion for its protection, curation and research.¹⁴³² Viewed in this context, to my mind the ‘post-medieval’ archaeological resource’s value lies not only in its mere existence as an inclusive material archive of human lives and practices in the past, as important as that is in itself. As I discussed above, the social relevance of archaeology lies in its role as a creative act of intervention in the present, and its contribution to a wider, interdisciplinary project of ‘re-materialising’ the social by rematerialising the past in the present.¹⁴³³

The value of any archaeological material, and particularly that from the recent and contemporary past, lies in its potential as an agent or medium for alerting us to aspects and complexities of life linking or separating past and present of which we may not have been aware, and for prompting questions which may not otherwise have been asked. It has the capacity to stimulate memory, historical consciousness and contemplative imagination, and can draw our attention to things and ways of being that resist change, and which endure and persist into the present. Such factors are arguably in danger of being undervalued and overlooked in our frenetic, social media-driven, and present- and future-orientated contemporary world, in which our gaze is captivated by fast-evolving things and technologies. As a socially engaged modern science of humanity, archaeology can participate in the creative process of writing and mediating the multiple and overlapping histories of change and continuity in a contested past in ways which can capture the attention of a varied audience in the present.

As I have sought to demonstrate through my presentation of the materialities of practice in post-Reformation Trondheim and the residences of the provisioning managers at Kongsgården, and as is increasingly being demonstrated elsewhere in Norway, the tangibility of things can facilitate engagement with different pasts at many levels. These range from the individual to the collective, from the local to the global, as well as an array of multiple pasts, voices, temporalities and histories. Rediscovered objects and spaces can materialise and evoke that which is forgotten or concealed, even if it is uncomfortable and runs counter to received interpretation, accepted assumptions and conventional wisdom. Sweeping grand narratives or complex historical discourses can be confronted and challenged with the ambiguities and contingencies observable in material configurations of everyday practices at particular times and places.

A main preoccupation of this study has been the materialities of past practices, the identification, characterisation and analysis of which I see as the essential contribution of archaeology to historical discourse. I have devoted a good deal of text to outlining a theoretical basis for studying practices and their enactment in the past from a material perspective because I see this as being a rich methodological and ontological vein that *all* archaeologists – not just ‘historical’ archaeologists – can set about mining in the future.¹⁴³⁴

Human sociality unfolds through ongoing performative entanglements and disentanglements of people, things, and ideas. As archaeologists, we are uniquely placed to capture some of their past material configurations in time and space, and to present them for professional scrutiny and public engagement. My hope is that this focus on the intricate entanglements of materiality and practice and their centrality to illustrating and understanding the dynamics and complexities of the past will resonate within the archaeological community in general. Placing emphasis on alliances of materiality and practice can contribute to strengthening our discipline’s legitimacy and sense of self-worth as an equal partner

¹⁴³² This was a theme debated at the national conference for the Association of Norwegian Archaeologists (NAM) in Oslo in 2017: https://www.arkeologiinorge.no/wp-content/uploads/2018/02/Nyhendebrev_nr_1_NAM2017_.pdf. (05.06.2018). At the time of writing, Norwegian heritage management is undergoing a process of reform, whereby some responsibilities for archaeology will be delegated to regional elected assemblies and council administrations. This may result in a greater emphasis on local or regional political and socio-economic criteria in the management of archaeological sites and monuments, and place demands on archaeologists to more closely ‘justify’ their material’s social benefits and relevance. See also Magnussen et al 2016 for a Riksantikvaren-sponsored analysis of indicators of social benefits of cultural heritage in general. The Norwegian Research Council is placing greater emphasis on social relevance in its assessment of the humanities in general: <http://fpol.no/humanioras-utfordringer/> (05.06.2018).

¹⁴³³ 2.6.1, 2.6.4 and 2.9.

¹⁴³⁴ For other Scandinavian studies promoting archaeologies of practice and performativity see Christophersen 2015a; Christophersen 2015b; Linaa 2016; McLees 2016; and Larsson 2017.

in the competitive and creative practice of generating knowledge and writing history, as well as equipping us to assert ourselves confidently in the face of political demands to become more socially engaged and relevant.

There are currently no indications that the conservation status of post-medieval archaeology in Norway is likely to change radically beyond the eventual implementation of Riksantikvaren's current national conservation strategy. As I have already remarked, while welcome in some respects, this limited measure is unlikely to contribute significantly to the activation or long-term protection of the knowledge potential of the post-medieval resource, much of which will remain unprotected.¹⁴³⁵ For political and socio-economic reasons, buried post-medieval archaeology is unlikely to achieve automatic legal protection on the lines enjoyed by pre-Reformation archaeological remains, Sámi sites, marine archaeology and some post-medieval standing buildings.

However, as noted, a situation may arise whereby Norway's political and heritage authorities will insist on a more 'cost-effective' allocation of society's resources, and require archaeologists to justify and weigh up the economic expense and social 'value' of archaeology, even that which currently enjoys automatic protection. Should this transpire, prehistoric and medieval archaeologists in the not-too-distant future may no longer be able to blithely excavate and curate as much as they might wish simply on the premise that their material enjoys legal protection. If we arrive at a situation where archaeologists are forced to prioritise to a greater degree on the basis of 'knowledge-value' or 'social-value' criteria, for example, and are required to propose well-grounded research questions, then I would suggest that also the archaeology of the post-medieval period should be allowed to participate actively and equally in such a process. As my study hopefully shows, if the playing field is levelled, and the centrality of materiality to past human practices is recognised, there is no reason why the relevance of the archaeology of the recent past should not be valued as much as archaeologies of the more distant past.

¹⁴³⁵ 2.5, 2.9.

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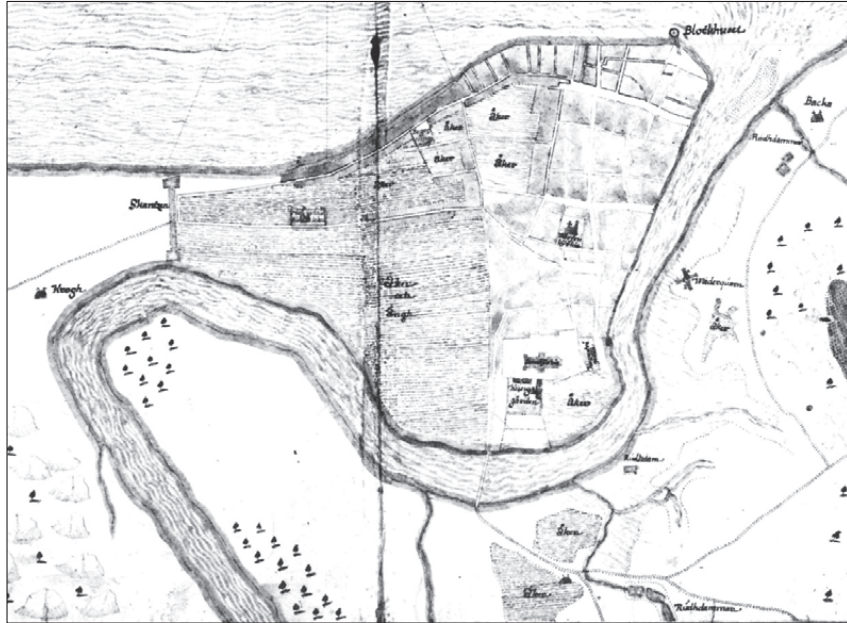
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APPENDICES

Appendix A

Olof Naucner's map of Trondheim 1658

Top: Detail of the original (photo: Valtionarkisto/Riksarkivet, Helsingfors). Bottom: Detail of print of coloured copy (R. Haavin 1899)



Appendix B

Cicignon's urban plan of Trondheim (smaller version) dated 1681 (Statsarkivet i Trondheim)



Appendix C

Urban Prospect of Trondheim 1674 by J.M. Maschius / *Urbs Norrigiæ celeberrima Nidrosia*
(Statsarkivet i Trondheim)



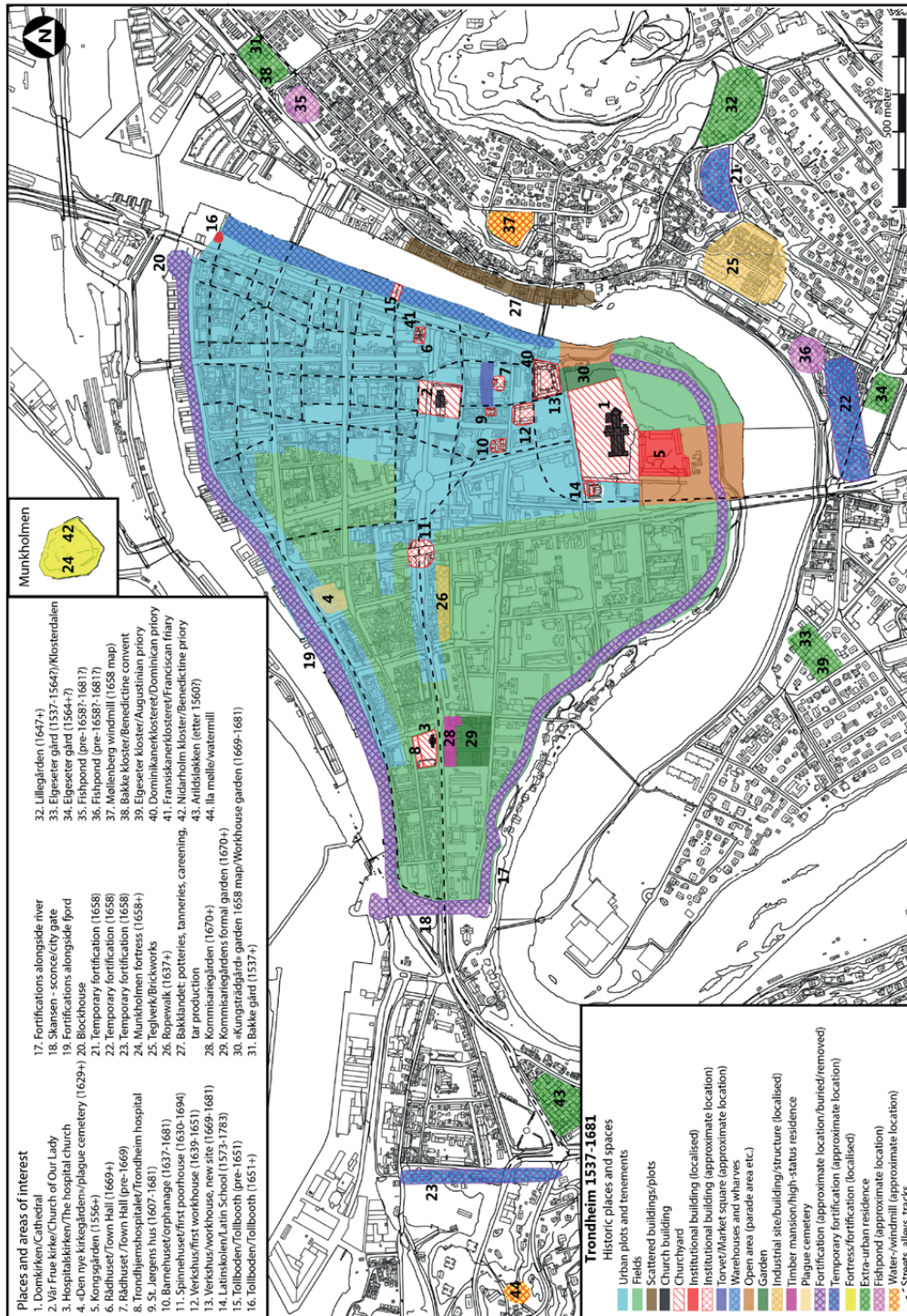
Appendix D

Principal archaeological sites mentioned in the text

Site code	Address	Dating	C16	C17	C18	C19	Socio-cultural context
TA1971/1 'S-site'	Søndre gate 4		*	*	*		Urban households, possible tavern?
TA1971/2 'B-site'	Søndre gate 10			*	*		High-status household?
TA1972/2 'E-site'	Erling Skakkes gate 1				*		Elite household/General von Krogh?
FF	Part of Folkebiblioteks- tomta (FBT)/Library Site			*	*		Mercantile households?
FH	Part of FBT		*	*			Mercantile households?
FK	Part of FBT				*		Mercantile households?
FP	Part of FBT				*		Mercantile households?
FR	Part of FBT		*	*			Mercantile households?
FO	Part of FBT		*	*			Mercantile households?
TA1977/3 'V-site'	Apotekerveita			*	*		Mercantile/middling households?
TA1980/5	Royal Garden			*	*		Waterfront/warehouse foundations
TA1987/3-J	Mellagertomta - privy				*		Privy - mercantile household?
TA1988/3	Nedre Bakklundet			*	*		Pottery manufacture (waste)
TA1988/7	Brattørveita 7-9		*	*	*		Mercantile/seafarer (Nordlandsfarer) household
TA1988/8	Munkegata 3			*	*		Middling household?
TA1991/1	Archbishop's Palace/ Kongsgården periods 6-12		*	*	*	*	Successive phases of elite and military occupation
TA1993/2	Bryggegata		*	*	*		Waterfront/wharf foundations/ mercantile households
TA1995/25	Bersvendsveita			*	*		Urban periphery – uncertain
TA1996/5; TA1996/11	Kongens gate		*	*			Pre-1681 buildings
TA1996/8	Vestfront				*	*	Post-medieval graveyard
TA1998/16	Statens Hus				*	*	Urban periphery/crafts
TA2000/14	Prinsens gate 49			*			Urban periphery – uncertain
TA2003/16	Brattørveita 19-21		*?	*	*		Seafarer (Nordlandsfarer) household?
TA2004/13	Dronningensgate 14			*	*		Mercantile/middling household?
TA2004/15	Nordre gate 11			*	*		Mercantile/middling household?
TA2004/18	Ravelsveita 4-6			*	*	*	Urban periphery/lower status households?
TA2004/21	Servicebygg				*	*	Post-medieval graveyard
TA2006/9; TA2008/20	Prinsens gate 65/Olav Tryggvasonsgata 45-51			*	*		Urban periphery – uncertain
TA2007/11	Søndre gate 24		*	*			Urban periphery, metalworking, households
TA2007/17	Bispegata/Kjøpmannsgata			*	*		Pleasure house shown on Maschius?
TA2009/6	Hotell Residens/Munkegt 26						Urban periphery - backyards
TA2009/11	Olav Tryggvasonsgt 47-49			*	*		Urban periphery – uncertain
TA2014/25	Kjøpmannsgata 33		*	*	*		Waterfront, warehouse foundations
TA2015/18; TA2016/13; TA2017/11	Torvet/City Square		*	*	*	*	Multi-phase: cultivation, urban periphery, metalworking, households, market square
TA2016/21; TA2017/3	Søndre gate 7-11		*	*	*		Mercantile household

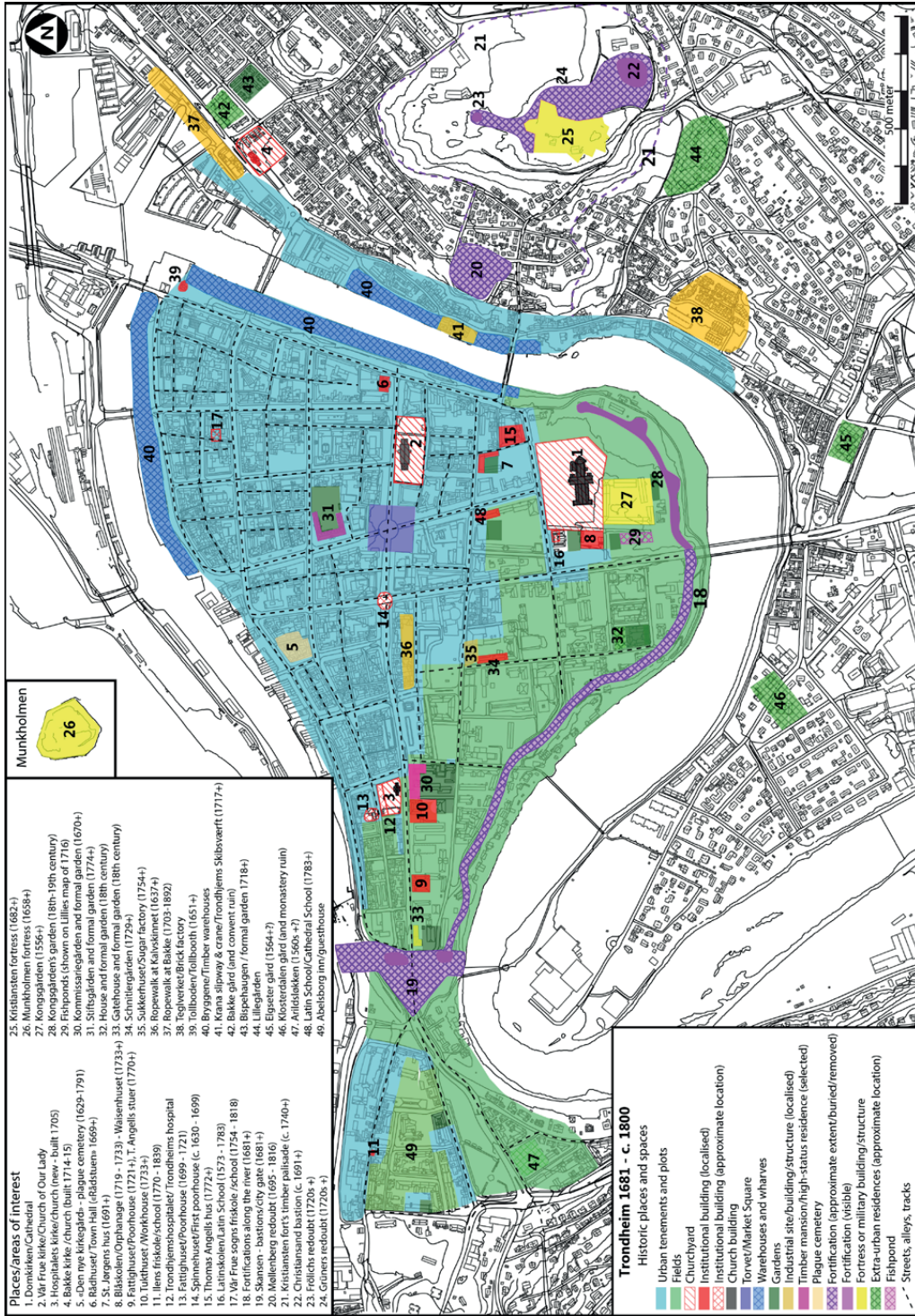
Appendix E

Composite historic urban characterisation map of Trondheim 1537-1681



Appendix F

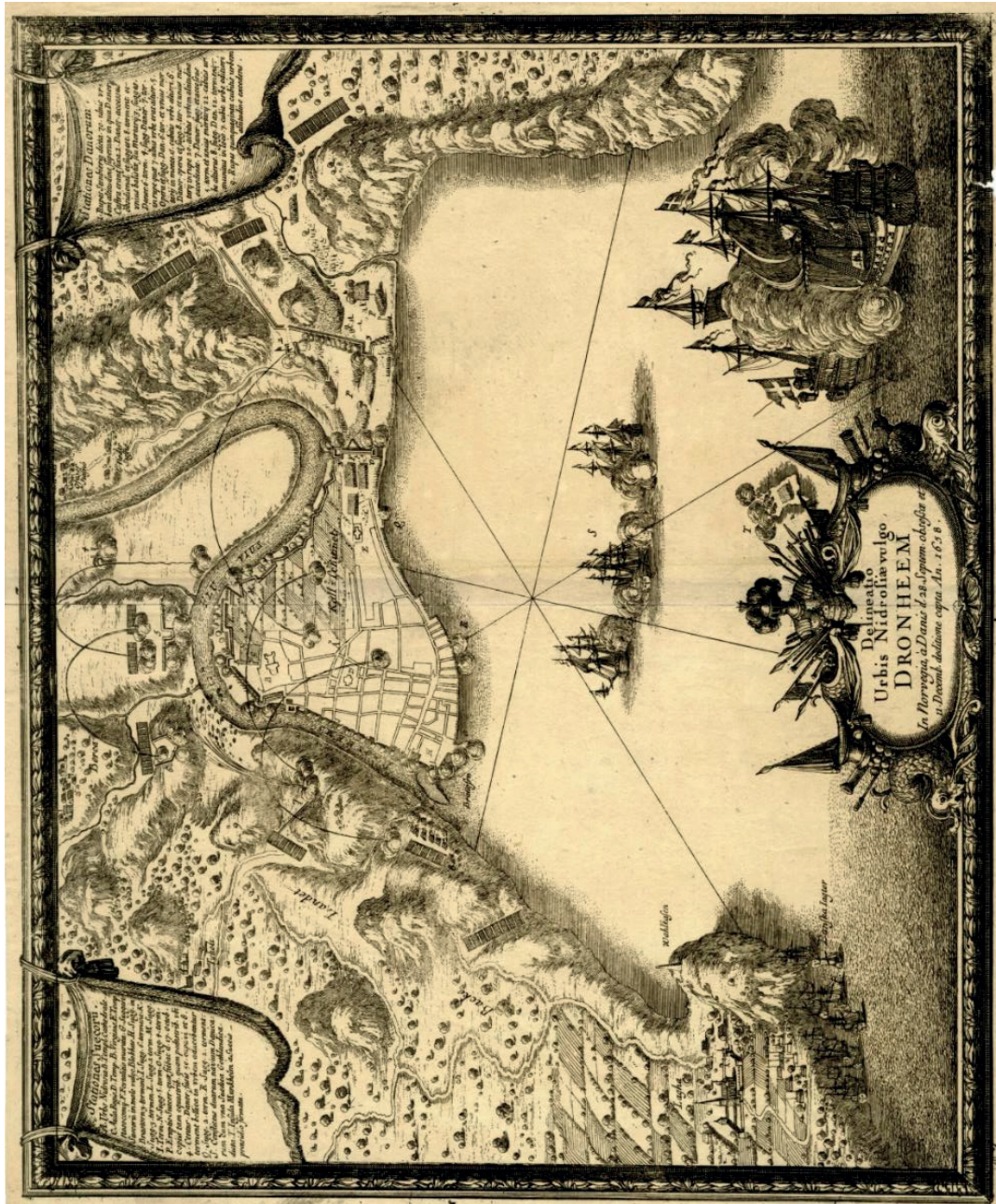
Composite historic urban characterisation map of Trondheim 1681 - c. 1800



Appendix G

Map of Trondheim and environs, showing the disposition of the Swedish and Danish-Norwegian forces during the siege by the latter in 1658

Engraving titled *Delineatio urbis Nidrosiæ vulgo Dronheem*. Count Erik Dahlbergh. Published in S. Pufendorf, *De rebus a Carolo Gustavo*, 1696 (©Trustees of the British Museum, Mus. Nr. 1880, 0710.530)



Appendix H

Map of Trondheim dated 1777 showing piped water system and buildings housing fire-fighting equipment

Cart Som viser Anlægget til Vandledning i Tronhiems Bye. J.D. Berlin (Statens kartverk)



Appendix I

Biographical details and sources for the Provisions-, ammunition- and materiel managers at Trondheim Fortress and Munkholmen 1685-1783/ *Proviant-, ammunisjons- og materialforvaltere ved Trondhjemsfestning og Munkholmen 1685-1783*

The following presents historical references to the named individuals found in primary and secondary sources. These are cited in the original, and my additions and comments to them are in Norwegian. This information provides the basis for the extracted biographical details provided in the main text. The nine provisioning managers and their periods of tenure (in brackets) are listed in chronological succession.

Secondary sources

- Finne-Grønn, S. H. 1932. *Rentekammerets norske bestallinger. Særtrykk av Norsk Slektshistorisk Tidsskrift Bind II og III*. Cammermeyers Boghandel. Oslo. Digitalised at: <http://www.genealogi.no/rentekammerets-norske-bestallinger-1660-1814/> (accessed 11.05.2018).
- Oman, R. 1928. *Et bidrag til Holbergs brevveksling. Nordisk tidskrift för bok- och biblioteksväsen. Årgång XV*. Oslo.
- Ovenstad, O. 1948. *Militærbiografier: den norske hærs officerer fra 18. januar 1628 til 17. mai 1814, bind 1*. Norsk slektshistorisk forening. Oslo.
- Ovenstad, O. 1949. *Militærbiografier: den norske hærs officerer fra 18. januar 1628 til 17. mai 1814, bind 2*. Norsk slektshistorisk forening. Oslo.
- Vigerust, T.H. (ed.) 2000. *Hvem var Hvem 2: Trondhjems borgerskap 1680-1730*. Tøyen Trykk AS. Oslo.
- Weidling, T. 2000. *Eneveldets menn i Norge: Sivile sentralorganer og embetsmenn 1660-1814*. Riksarkivarens skriftserie 7. Messel Forlag. Oslo.

Primary sources

Information from primary sources archived at Statens Arkiv i Trondheim (SAT) is included, most notably relevant contemporary mortgage registers (*pantebøker*) and censuses of 1687 and 1801. Sources cited below were accessed via the digital portal <https://media.digitalarkivet.no>.

The managers

Paul Steen¹⁴³⁶ (1685-1692/3)

Ovenstad 1949: 'Skibsmåler i Trondhjem 6/6 1680. Proviant-, amm.-, og matr. forvalter i Trondhjem og landkommissariefullmektig N. fjelds 1685. Døde plutselig, før 15/3 1693. Gift - etterlot sig 2 sønner og 1 datter.' (3 barn)

Manntall over Trondhjems bys familier og håndkverner, 5 mars 1687.¹⁴³⁷

'Tredie Rode. 137. Amonition oc proviant forualter Pouel Sten med hans kierreste, fire børnen, Sr. Stens kiereste søster, 1 præceptor,¹⁴³⁸ 3 tiener, 2 piger, 2 gaardsdrenge. 14 personer.'

Ikke nevnt som proviantforvalter i *Rentekammerets Norske Bestallinger 1660-1814*.¹⁴³⁹

Cornelius Griflow¹⁴⁴⁰ (1692/3-1700)

Ovenstad 1948: 'Søkte 4/11 1692 stillingen som prov.-, amm.-, og matr. forvalter i Trondhjem. Blev ansatt som sådan fra 20/12 s. å., men overtagelsen begynte dog først den 3/7/1693, og forretningen

¹⁴³⁶ Også skrevet som Poffuel.

¹⁴³⁷ Vigerust 2000: 20.

¹⁴³⁸ Privat lærer.

¹⁴³⁹ Finne-Grønn 1932.

¹⁴⁴⁰ Også skrevet som Griffflow.

blev undertegnet 25/10 1693. Bokholder ved drag. regt. ene. Fikk 27/1 1703 ordre om å avlegge regnskap for kassen og overlevere nøkkelen til oberst Fölckersam. Krigsbokholder. Ansøkte i aug. 1717 om krigskomm.s charge ved sjøarmaturen, d.v.s. admiralitetsrådet. Krigsråd 1/12 1719. Død 1721, begr. i Kr.ania 29/12 s. å. Gift med Kirsten Sørensdtr.'

Rentekammerets Norske Bestallinger 1660-1814: 'Griflow, Cornelius, Ammunitions- og proviantforvalter i Trondhjem; bokholder ved de i Norge staaende 2 nat. reg. av kavaleri og dragoner 27 jan. 1700.'

Medlem Overhoffretten 1714 - ca. 1715.¹⁴⁴¹

Anna Maria Griffow født ca. 1700 Trondheim, datter av krigsbokholder Cornelius Griffow og Kirsten Sørensdatter.¹⁴⁴²

Jacob Hersleb¹⁴⁴³ (1700/1703?-1707)

Ovenstad 1948: 'Prov.-, amm.-, og matr. forvalter i Trondhjem fra 30/1/1700. Var ved siden derav krigs. komm. i det Trondhjemske fra 30/08 1706. Avgikk 5/11 1717.'

Rentekammerets Norske Bestallinger 1660-1814: 'Hersleb, Jacob, proviant-, ammunitions- og materialforvalter ved fæstningerne Trondhjem, Munkholmen og Skougens skanse 30 jan. 1700.

- Jacob, proviant-, material- og tøihusforvalter; tillike bergamtsskriver i Bergamtsretten Nordenfjelds istedenfor Albert Angel 23 okt. 1701.'

Bergamtsskriver ved Bergamtet Nordafjells 1701-1717.¹⁴⁴⁴

Født 04.04.1664, død 1719. Gift 13.05.1700 med Anne Margrethe Lorentsdatter Angell, født 02.07.1678, død 1755, datter av kjøpmann i Trondheim Lorentz Mortensen Angell (1626-1697)¹⁴⁴⁵ og Abel Jesperdatter (1651-1683). Proviant-, ammunisjon- og materialforvalter ved Trondheims festninger 1700-. Bergamtsskriver nordafjells 1701-1717. Krigskommissær Trondheimske 1706-. Assessor nordafjellske bergamt.¹⁴⁴⁶

Nevnt som proviantforvalter i følgende dokumenter:

SAT, Byfogden i Trondheim, Pantebok nr. 2a, 1700-1709:

17/12/1705: 383 Andreas Schiøller, Christian Schiøller og William Hamans caution for proviantforvalteren Jacob Hersleb s. 192 <https://media.digitalarkivet.no/tl20080328650996>; 384 Holger Biercks caution for proviantforvalteren Jacob Hersleb s. 193 <https://media.digitalarkivet.no/tl20080328650996>.

9/12/1706: 446 Andreas Tønders obligasjon til proviantforvalteren Jacob Hersleb s. 216 <https://media.digitalarkivet.no/tl20080328651019>

Johan Hartvig Henrich Weber (1707-1709)

Ovenstad 1949: 'Prov.-, amm.-, og matr. Forvalter ved Trondhjems festn. 26/2/1707. Blev ille behandlet av obl. von der Osten og ansøkte i okt. 1708 om reisetillatelse til Kj.havn for å klage. Blev suspendert i 1709, da hans kausjonist opsa kausjonen. 15/2 1709 blev det i saken mellem ham og v.d. Osten beordret nedsatt en overkrigsrett. Dømtes der til å gjøre v.d. Osten en kristelig avbigt, betale 20 rdl. til Enkekassen og 100 rdl. til overkrigsretten. Avskjed 28/7 1709 (eller i sept s.å). Døde «en hastig Død under

¹⁴⁴¹ Weidling 2000: 179.

¹⁴⁴² Weidling 2000: 245.

¹⁴⁴³ Også skrevet som Herslew.

¹⁴⁴⁴ Weidling 2000: 89.

¹⁴⁴⁵ Et fremtredende medlem av en av Trondheims mektige og velbemidlede merkantifamilier fra Flensburg. I en fortegnelse fra omkring 1702 karakteriseres 25 av Trondheims 63 kjøpmenn som flensborgere. Teige 2008: 116.

¹⁴⁴⁶ Weidling 2000: 197.

Kontagionen». (Vel under pesten i Kj.havn 1711/12.) Gift med Barbara Margrethe. Som enke søkte hun 14/10 1714 om pens til seg og sitt barn.'

Rentekammerets Norske Bestallinger 1660-1814: 'Weber, Hartvig Henrik, proviant-, ammunitions- og materialforvalter ved vore fæstninger Trondhjem, Munkholmen og Skaanes skanse 26 febr. 1707.'

Christian Kortholt¹⁴⁴⁷ (1709-1716)

Ovenstad 1949: 'Prov.-, amm.-, og matr. forvalter i Trondhjem (i H. H. Webers sted) 29/7 1709. Tillike bokholder ved krigskassen N.fjelds 25/2 1710. Død 20/11 1716 i Kj.havn. Gift med Apolene Dorothea Holst.'

Rentekammerets Norske Bestallinger 1660-1814: 'Kortholt, Christian, instruksjon som proviant-, ammunitions- og materialforvalter i Trondhjem dat. 28 juni 1709.

- Christian, proviant-, ammunitions- og materialforvalter ved fæstningene i Trondhjem, Munkholmen og Skougens skanse i Hartvig Henrik Webers sted 29 juli 1709.

- Christian, proviant-, ammunitions- og materialforvalter i Trondhjem; tillike bokholder ved krigskassen Nordenfjelds 25 febr. 1710.'

Manntall over kongelige sivile og militære betjenter samt borgere og innvånere i Trondhjem ca 1714-1715:¹⁴⁴⁸ 'Militære betjenter. Guarnisonens. Christian Kortholt, Amunition, Material og Proviant forvalter samt Krigs Bogholder.'

Aage Rasmusen Hagen (1717-1720)

Ovenstad 1948: 'Prov.-, amm.-, og matr. forvalter ved Trondhjems festn. og Munkholmen fra 1717 til 1720. Krigsbokholder ved de N.fjeldske regt.ers «Lægs Cassa» fra 1720 til 1743. Var fra 1721 også direktør for matrikulering i Trondhjems stift. Krigsråd 17/12 1725. Justisråd 1740.'

Rentekammerets Norske Bestallinger 1660-1814: 'Hagen, Aage Rasmusen, bokholder ved dragonkassen Nordenfjelds samt proviant-, ammunitions- og materialforvalter ved fæstningerne Trondhjem, Christiansten, Munkholmen og Skognes skanse i avg. Christian Korthalts sted 15 febr. 1717.

- Aage Rasmusen, best. av 15 febr: 1717 som bokholder ved dragonkassen Nordenfjelds konf. 30 aug. 1731.

- Aage Rasmusen, justisraad, er i naade dimittert fra krigsbokholdertjenesten ved den Nordenfjeldske dragonkasse; kommitteret i dragonsessionen Nordenfjelds og med de øvrige kommitterte ha sæte og votum, 9 dec. 1745.

- Aage Rasmusen, justisraad; best. av 9 dec. 1745 som deputeret i dragonsessionen Nordenfjelds og der like med de øvrige deputerte at ha sæte og votum konf. 21 mars 1747.'

Hagen var venn av, og kommisjonær for Ludvig Holberg som han vekslet brev med:

'Hagen var bondegutt fra gården Hage i Værdalen, men nedstammet ifølge tradisjonen fra en adelig norsk familie. I de år han korresponderte med Ludvig Holberg bekledd han stillingen som krigsbokholder ved nordenfjeldske dragonregiments legdskasse og beholdt dessuten 1725 titelen krigsråd. Han inntok sannsynligvis en meget aktet stilling i Trondhjem og etterlot seg ved sin død 1763 en formue, som delvis, på tross av at han hadde livsarvinger, kom Trondhjems og hans hjembygds fattige tilgode.

Inntrykket av Aage Hagen som den godhjertede og velmenende mann bekreftes ved hva vi vet om hans forhold til Ludvig Holberg. Hagen var sin landsmanns kommisjonær i Trondhjem, han hvervet "prænumeranter" på

¹⁴⁴⁷ Også skrevet som Kortholtz eller Korthalt.

¹⁴⁴⁸ Vigerust 2000: 63.

Holbergs skrifter, besørget eksemplarerne fordelt og inkasserte betalingen. Den gode krigsbokholder var dog ingen betalt agent. Han mottok frieksemplarer av verkerne samt forsikringer om Holbergs gode vilje til å "betale noget af paa de mange obligationer" han var skyldig, men forøvrig ingen godtgjørelse. Holberg tilskriver ham i vendinger som "Hoitærede kiære ven" og kaller ham "en Patron af Peder Paars", ja antyder at han var en særlig ynder av det komiske eller satiriske. Slike uttalelser og antydninger er vel først og fremst å forstå som courtoisie. Holbergs henvendelser skjedde så ofte og hadde en så påtrengende karakter, at de nok kunne trenge unnskyldende omsvøp. På en eller annen måte må dog Holberg og Hagen — før Holbergs første henvendelse — ha gjort hverandres bekjentskap. Men derom gir brevene ingen nærmere data. Sikkert er det at Hagen — på et tidspunkt da den norske bokhandel stod på et yderst primitivt standpunkt — gjorde Holberg adskillige tjenester og i sannhet viste sig som hans gode venn og patron.¹⁴⁴⁹

Rasmus Hansen Fyhn (1720-1748)

Ovenstad 1948: 'F. S.fjelds i Norge. Prov.-, ammunisjons- og materialforvalter ved Trondhjems festn. fra 30/8 1720. Død 23/4 1748. Gift. Hans enke blev 24/5 1749 bevilget 60 rdl. årl. pens. Hans sønn Hans Fyhn blev ved farens død konstituert i dennes stilling som proviantforvalter og søkte også stilling fast, men fikk den nok ikke. A. Gudmansen overtok den i oktober 1748.'

Rentekammerets Norske Bestallinger 1660-1814: 'Fyhn, Rasmus Hansen, proviant-, ammunitions- og materialforvalter ved Trondhjems, Munkholmens samt andre derunder sorterende forteresser i Aage Rasmusen Hagens sted, som er dimittert, 30 aug. 1720.'

- Rasmus Hansen, best. av 30 aug. 1720 som., ammunitions- og materialforvalter ved Trondhjems, Munkholmens samt andre derunder sorterende forteresser, konf. 28 mai 1731. —n Konf. paany 25 april 1747.'

Født 1682 Eiker, død 23.03.1748 Trondheim. Ektemann til Maren Christiansdatter Hoff, født 1703 Orkdal, død 1770 Orkdal. Far til 12 barn: Kristian Rasmussen Fyhn; Hans Rasmussen Fyhn; Jørgen Andreas Fyhn; Karen Rasmusdatter Fyhn; Maren Rasmusdatter Fyhn og 7 andre (til sammen 7 gutter og 5 jenter, samtlige født mellom 1723 og 1743). Hentet fra <http://leskjerv.seria.no/aner/0002/1416.htm> (slektundersøkelse av Leiv Skjerve) (11.05.18).

Ikke registrert i 1722 manntall.

Gravlagt Trondheim Domkirken: Fhyn, Proviantforvalter Rasmus 30/3 1748 (<http://slektshistorie.blogspot.no/2007/11/dde-trondheim-domkirke-1729.html>)(11.05.18).

Nevnt i følgende dokumenter:

*Ligning for Kjøbenhavns brannstyr 8 mai 1730.*¹⁴⁵⁰

Pantebøker arkivert i Statens arkiv Trondheim (SAT):

Trondhjem Pantebok 1720: KAUSJON 30. 9.1720 Trondhjem Pantebok 4, 27a. TIL :T1:H.M. FRA :F1:Maren :T3:salig :F2:Christian :E2:Hoff. FOR :T1:"Proviant, Ammunition og Material forvalter udj Trundhiem og Muncheholmen" :F1:Rasmus :E1:Fyhn. :T3:Kausjonen er på 1200rd. Andre Impliserte: :T1:Laugverge: :F1:Peder :E1:Aalum.Dok nr: 40 Registrert av: H. J. Jensen

Trondhjem Pantebok 1723: REVERSE 24. 3.1723 Trondhjem Pantebok 4, 105b TIL :T1:H.M. FRA :T1:"Proviant Ammunition og Material Forvalter":F1:Rasmus :E1:Fyhn.Dok nr: 357 Registrert av: H. J. Jensen

Trondhjem Pantebok 1730: PANTEFORSIKRING OG KAUSJON 27. 6.1730 Trondhjem Pantebok 4, 311b. TIL :T1:H.M. FRA :T1:proviantforvalter :F1:Rasmus :E1:Fyhn. PÅ :T1:1200rd MED :T1:pant i "min Eiendoms gaard og grund". 1.

¹⁴⁴⁹ Utdrag fra: Omang, R. 1928. Et bidrag til Holbergs brevveksling. *Nordisk tidskrift för bok- och biblioteksväsen. Årgång XV.* Oslo. Brevene er digitalisert: <https://ntnu.tind.io/record/107431#?c=0&m=0&s=0&cv=30&z=-0.3932%2C0%2C2.7865%2C1.2576>

¹⁴⁵⁰ Vigerust 2000: 81

eiendom: Grunn med påstående bebyggelse. Tidligere referanse(r): :T1:Tidl. eier og beboer: R. Fyhns svigermor, salig :F1:Maren :T3:salig:F2:Christian :E2:Hoffes. :T5:Eiendommen er allerede pantsatt for 350rd til Sr. :F1:Hans :E1:Hornemand. :T3:Tidl. eier Maren salig Hoffes fikk eiendommen taksert til 2500rd, mens :T4:nåværende takst var 1400rd. Dok nr: 1195 Registrert av: H. J. Jensen

Trondhjem Pantebok 1732: SKJØTE 28.11.1732 Trondhjem Pantebok 4, 333b. TIL :T1:Sr. :F1:Rogert :P1:Larsen FRA :T1:proviantforvalter her i byen:F1:Rasmus :E1:Fyhn PÅ :T1:en gård og grunn. 1. eiendom: Grunn med påstående bebyggelse Pris: 140rd. Vor Frues sogn. Naboer: :T1:Eiendommen ligger "Jmell. dend af mine Sl. Svigerforældre tilsidst beboede :T2:gaard paa østre og een af Mad. Sl. Raadmand :E1:Wessels:T3:nutilhørende gaard paa vestre side".Tidligere referanse(r)::T1:Forrige eier: Selgers avg. svigermor :F1:Maren :T3:salig :F2:Christian:E2:Hoffes. :T5:Tidligere eier og beboer: :F1:Axel :E1:Høfding.

Trondhjems pantebøker fra okt/nov 1747 (siste leveår): KAUSJON 24.10.1747 Trondhjem Pantebok 6, 68. FRA :F1:Henrich :E1:Drejer FOR :T1:Proviant-forvalter :F1:Rasmus :E1:Fyhn. Dok nr: 269 Registrert av: B. Gundersen. KAUSJON 20.10.1747 Trondhjem Pantebok 6, 68. FRA :F1:Hans :E1:Femmer FOR :T1:Proviant-forvalter :F1:Rasmus :E1:Fyhn. Dok nr: 270 Registrert av: B. Gundersen. KAUSJON 30.10.1747 Trondhjem Pantebok 6, 68. FRA :F1:Christian :E1:Aalum FOR :T1:Proviant-forvalter :F1:Rasmus:E1:Fyhn. Dok nr: 271 Registrert av: B. Gundersen. KAUSJON 2.11.1747 Trondhjem Pantebok 6, 68. FRA :F1:Rasmus :E1:Banch FOR :T1:Proviant-forvalter :F1:Rasmus :E1:Fyhn.Dok nr: 272 Registrert av: B. Gundersen. KAUSJON 30.10.1747 Trondhjem Pantebok 6, 68.FRA :F1:Salomon :P1:Olsen FOR :T1:Proviant-forvalter :F1:Rasmus :E1:Fyhn. Dok nr: 273 Registrert av: B. Gundersen. KAUSJON 30.10.1747 Trondhjem Pantebok 6, 68. FRA :F1:Friderich :P1:Christophersen FOR :T1:Proviant-forvalter :F1:Rasmus :E1:Fyhn. Dok nr: 274 Registrert av: B. Gundersen.

Arve Gudmandsen¹⁴⁵¹ (1748-1765)

Ovenstad 1948: 'Prov.-, amm.-, og matr. forvalter ved Trondhjems festning fra 1748. Ankom dit 26/10 1748. Fikk 8/6 1757 gasjeforbedring 100 rdl. Virk. krigsråd 22/6 1757. Avskjed 1765, blev satt på vartpenger, 200 rdl. årlig. Død 1775.'

Rentekammerets Norske Bestallinger 1660-1814: 'Gudmandsen, Arve, proviant-, ammunitions- og materialforvalter ved Trondhjems fæstning 13 juni 1748.'

Nevnt i følgende dokumenter (SAT):

Trondhjem Pantebok 1756: KAUSJON 5. 2.1756 Trondhjem Pantebok 6, 354b FOR :T1:proviantforvalter :F1:Arve :P1:Gudmandsen FRA :F1:Otto :E1:Beyer. Dok nr: 2205 Registrert av: B. Gundersen.

Trondhjem Pantebok 1760: SKJØTE 25. 2.1760 Trondhjem Pantebok 6, 515b TIL :T1:hr. oberstløytnant :F1:Andreas Bendix :E1:Hejde, :T3:sjef for det trondhjemske garnisonskompani, FRA :T2:Frue :F1:Anna Maria :E1:Ausig :T3:avg. brannmajor :F2:Søfren :E2:Wissing PÅ :T1:halvdelen av hennesgrunn og hus. 1. eiendom: Grunn med påstående bebyggelse Pris: 255 rd Område: Kalvskindet Tidligere referanse(r): :T1:Foregående eiere var enkens mann og kjøperen. Andre Impliserte: :T1:Som enkens verge underskriver :T2:krigsråd og proviantforvalter :F1:Arve :P1:Gudmundsen. Dok nr: 3190 Registrert av: B. Gundersen

Peter (von) Sønnech¹⁴⁵² (1765-1783)

Ovenstad 1949: 'Sersj. ved 2. Vesterl. nasj. inf. regt. til 3/7 1762, da han – tross dårlig hørsel – blev vaktm.Int. ved Kr.sands festn. Fortsatt til Trondhjems festn. 5/6 1765. Kpt.s kar. 25/4 1776. Kom. dant på Munkholmen 24/11 1786. Maj.s kar. s. d. Maj. av inf. 24/4 1789. Obl. av inf. 28/5 1801. Død 5/12 1805. Gift. Fikk 30/3 1805 tillatelse til å sitte i uskifte efter sin avdøde hustru.'

Ikke nevnt i Rentekammerets Norske Bestallinger 1660-1814.

1801 folketelling (census): 'Gift med Gunvor Christiana Søyning, 3 døtre, 1 tjenestepike.'

¹⁴⁵¹ Også skrevet som Gudmandsen.

¹⁴⁵² Også skrevet som Sønneck/ Sonick.

Appendix J

The first residence: descriptions and quantifications of the archaeological material

The excavated buildings

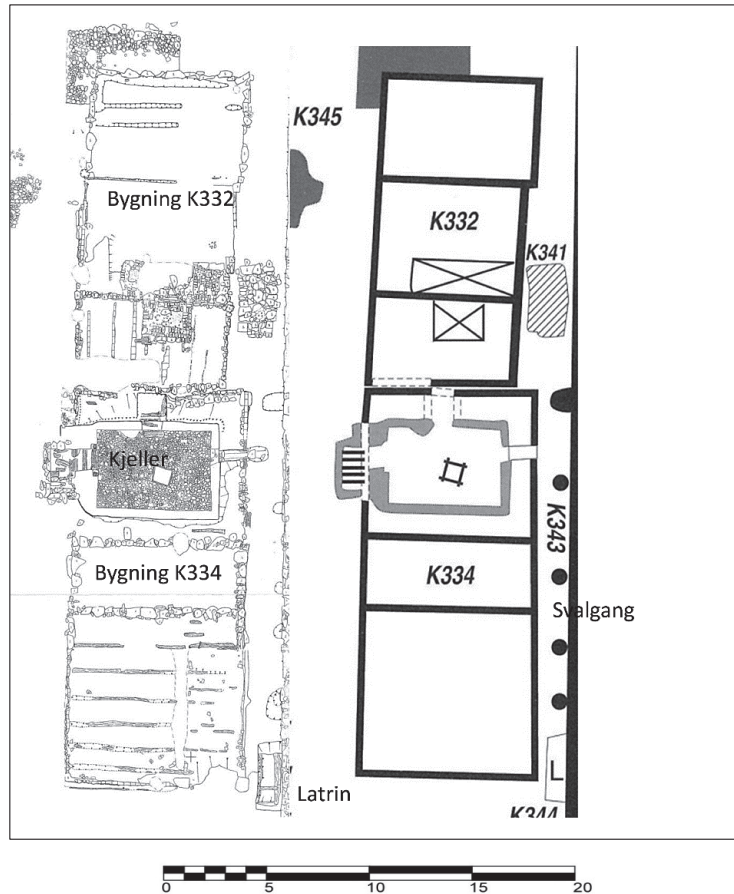


Figure J.1. Composite figure showing excavation plan of buildings K332 and K334 (left) with explanatory key.¹⁴⁵³
North to top.

Building K332

The northernmost building K332 was the smaller of the two, its ground plan measuring 15m x 7.5-8m (c. 120 m²). It was founded on low, poorly-consolidated dry-stone ground walls which originally supported timber walls, presumably of corner-jointed (*laft*) log construction, though only occasional scant traces of timber sill-beams survived. The ground-floor interior was divided into three differently-sized rooms by partition walls; the northern room was slightly broader than the others, and was the largest, measuring 37.5m². The room's greater width may suggest that it was added as an extension to an originally two-roomed structure.¹⁴⁵⁴ Traces of joists suggest that this room was plank-floored, as was the southern room, the smallest of the three, measuring 26m². The middle room was floored with cobblestones (mostly robbed-out) bedded in sand. It measured 36m², and about a quarter of its floor area was occupied by the brick-built base for what was either a large, elongated single hearth (*peis/grue?*) or two

¹⁴⁵³ Nordeide 2000a. Detail of Plan 25, Period 11 phase 1.

¹⁴⁵⁴ Lars Roede pers. comm.

smaller hearths placed to either side of a robbed-out stone foundation for a chimney along its southern wall. These backed onto a single brick-built hearth foundation in the small southern room which shared the same chimney foundation.

It is uncertain whether this building had a floor above the ground floor. A stone foundation (K341) was located in the gap between K332 and the precinct wall to the east. This may have been a foundation for an external staircase serving an upper floor. Alternatively, this foundation might have served as a footing for a staircase leading to an upper-floor external gallery or passage (*svalgang*) placed along the neighbouring building K334's eastern side (see below). Given the absence of evidence for pillar supports for such a gallery along K332's eastern wall, and the relatively insubstantial nature of its ground wall, K332 is provisionally interpreted as a single-storey building. Traces of a partly robbed-out external cobbled surface (K345) were found to the north and west.

Building K334

Building K334's ground floor measured 18.75m x 9m (c. 169m²); c. 40m² larger than its neighbour (see Fig. 2.3 for a photo of the building being excavated). It was both broader and longer than K332, and was placed closer to the precinct wall. It was also timber-built, presumably of *laft*/corner-jointed log construction. Traces of wooden sill-beams lay on low, poorly-consolidated, though intermittently two- or three-coursed dry-stone ground walls. Larger pad-stones were placed at the corners, a feature absent in K332, possibly to support the weight at the corners of a two-storeyed structure. It was similarly divided into three differently-sized ground-floor rooms, though in this instance two large rooms lay to the north and south of a smaller middle room. The internal partition walls were provided with sturdy foundation walls, indicating solid internal walling, possibly also providing a load-bearing function for an upper storey. The northern room contained a stone-built cellar with 0.4m-thick mortared stone walls and a cobbled floor which incorporated drains leading to a centrally-placed wood-lined sump. The cellar floor area measured 5.4m x 3.8m (20.5m²). It was accessed from outside the building by a narrow projecting stairway built into the western wall, while a narrower recess in the northern wall marked the position of an entrance from the room above, presumably via a trapdoor in its floor. A narrow sunken recess for a sloping window well was built into the eastern wall. Slight traces of the otherwise absent plank flooring in the overlying room lay on the top of the cellar walls. The original height between the cellar's floor and the floor of the room above is estimated at 2 metres.

The northern room had a floor area of 44m². Only joists survived from the plank floor in the southern room, the largest of the three rooms, measuring 68m². No clear traces of flooring survived in the narrow middle room, which measured 24m². Although they did not lie *in situ*, it might be possible that the presence of a fair amount of stones with flattish sides here may indicate that the floor was originally stone-paved.

A row of five large, regularly spaced post-holes (K343) located in the gap between the building and the precinct wall provides evidence that building K334 was two-storeyed. These holes are interpreted as having held the bases of posts which supported a projecting gallery or communicating passage (*svalgang*) running along the exterior of the building's upper floor level here. Access to this gallery from ground level may have been provided by a stairway to the north, the base of which was supported on the stone foundation K341 between building K332 and the precinct wall. A small wood-lined pit (K344) lay at the southern end of this line of posts. This is interpreted as a latrine pit for a privy (*lokum*) placed immediately above it at the southern end of the external passage. Rough, trampled stone and gravel surfaces lay along the western, southern and eastern sides of the building.

The garden, fence-line and drain

Lillie's 1716 maps (Fig. 6.3.) depict a demarcated area for a garden ('*hage*') in the south-east corner of the precinct south of the first residence, presumably a fenced-off area. A thick humic-rich cultivated soil horizon (site group 335) was identified archaeologically extending west across much of the southern wing to the west of a north-south aligned fence-line (K350) and a plank-lined drain (K338) here (see Period 11 phase 1 plan, Fig. 6.9). The archaeological evidence strongly suggests that the garden marked on the maps may not have extended into the very south-east corner, which seems to have been reserved for the dumping of building debris and assorted refuse.

Objects and other finds from associated contexts

The buildings were dismantled down to their foundations, and their floors largely removed. No objects were found in secure primary association with the interiors. The material from the context most closely connected with the use of building K334, privy pit K344, is presented first, followed by the material from external deposits to north and south of the buildings. The material has been sorted according to the functional categories defined in 5.5. Some of the items listed here are illustrated under their relevant categories in 5.5.

The bulk of ceramic and non-ceramic items comprise fragments and are listed accordingly in the table below as it is unknown how many originally complete items they represent. Due to the volume of material, constraints of time, and restricted access to the museum storerooms during a prolonged period of reorganisation, most of the ceramic material associated with both residences has not been examined visually with a view to determining and enumerating vessel types. An exception was made in the case of the second residence's privy K376, however (see Appendix K). The survey of ceramic material from other contexts associated with both residences is limited to a listing of ware types and their respective sherd numbers based on descriptive data compiled and stored in the Archbishop's Palace excavation database. Non-ceramic material was visually examined, however. Where complete or near-complete ceramic and non-ceramic items are distinguishable or can be estimated, these are enumerated under 'Number' in the tables.

Privy pit K344

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
1. Food preparation & storage						
Kitchenwares & storage vessels	Ceramic cooking/serving vessels	Cooking pots		5	C17/C18	Local & imported
2. Food consumption (eating/serving)						
Table- & servingwares	Ceramic eating-/serving vessels	Plates, bowls		64	C17/C18	Local & imported
	Glass serving vessel	Handle of comfit/salt bowl?	1	1	Early C17?	Imported
3. Beverage consumption						
Serving/pouring vessels	Glass serving/pouring vessels	Façon de Venise soda-glass decanter jugs/carafes	2	75	Late C17?	Imported
	Ceramic pouring vessel	Bellarmino bottle	1	1		Imported
Drinking vessels	Glass stemwares (goblets)	Baluster goblets	3	8	Early C18	Imported
4. Beverage storage/dispensing						
Storage/dispensing vessels	Glass bottle	Flat-sided globular wine bottle	1	8	C17/C18	Imported
5. Food remains/refuse						
Zoological	Animal bone	Diverse mammals & fish		2.4 kilos		
	Other	Hen's egg	1	1		
Botanical	Seeds	Figs, grapes, wild berries				Local & imported
7. Tobacco consumption						
Smoking equipment	Clay pipes	Dutch basis type 2 pipe bowls	2		Early C18	Imported
		Stem fragments (unid)		16		Imported
8. Clothing & footwear						
Footwear	Leather shoe	Shoe w/ raised wooden heel	1	1		
17. Heating & lighting						
Lighting-related equipment	Window glass	Green clear glass		76		Imported

Figure J.2. Material associated with functional categories 1 to 17 from the primary fill of privy pit K344

The wood-lined latrine pit's primary fill (173) comprised human excrement with a small assemblage of domestic refuse probably associated with the occupation of building K334.

Items associated with the preparation and storage of food (cat. 1) were poorly represented numerically. The primary fill contained 70 sherds of pottery, of which only a few sherds of Dutch and German redwares can be classified as *kitchenwares* (7% of the ceramic assemblage).

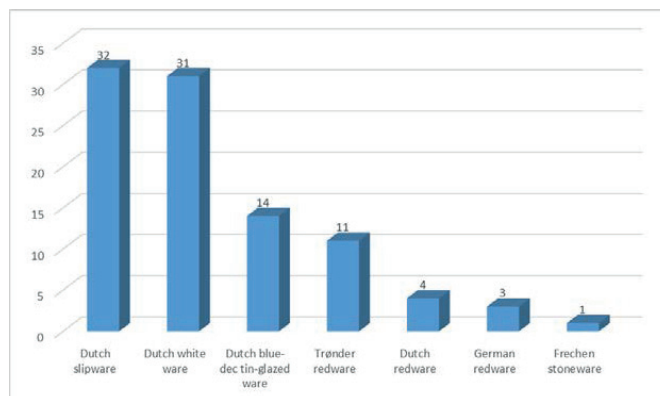


Figure J.3. Relative percentages of ceramic ware types present in privy K344 (total 70 sherds).

Items utilised in connection with the consumption and serving of food (cat. 2) were more numerous. *Tablewares* were in the vast majority (93% of the pit's ceramic assemblage), most of which comprised imported wares, including fragments of plates and bowls in Dutch blue-decorated tin-glazed ware, Dutch slipware and whiteware (77%), with a small amount of local Trønder redware (11%). The dating profile is consistent with a late 17th- early 18th century date for the assemblage.¹⁴⁵⁵ The only non-ceramic serving dish was represented by a twisted clear-glass handle, possibly from a 17th-century Dutch *façon de Venise* comfit or salt bowl similar to the type illustrated below.

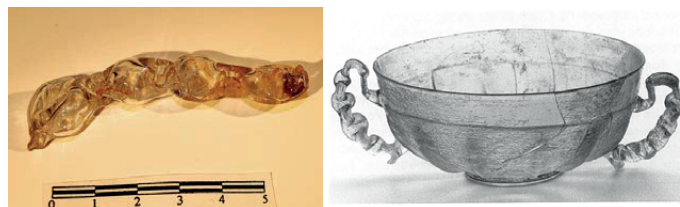


Figure J.4. A handle from a *façon de Venise* glass bowl (N131863), and a 17th-century *façon de Venise* bowl with similar handles.¹⁴⁵⁶

A small number of glass items associated with the consumption, storage and dispensing of beverages (cats. 3 and 4) was found. Of particular interest were some 75 fragments deriving from two *façon de Venise* decanter jugs/carafes (see below). Of these, N132113 resembles a curated 17th-century Dutch or German *façon de Venise* soda-glass decanter jug/carafe,¹⁴⁵⁷ while N131865/131866 has a moulded pinched ribbing design (*nip diamond waies*) employed by glassblowers from the second half of the 17th century on (illustrated below). A fragment of a Bellarmine stoneware bottle also lay in the assemblage.

¹⁴⁵⁵ I. Reed pers. comm.

¹⁴⁵⁶ Early 17th-century Dutch *façon de Venise* comfit/salt bowl illustrated in Henkes 1994: 236, 50.16.

¹⁴⁵⁷ Museum Boymans-van Beuningen 1991:189 (inv. nr. F5043). Fragments from another decanter of this type (N129683-5, 129774) were found in a deposit beneath the floor of the next building above this on the same site (K374), presumably redeposited (see Appendix K).



Figure J.5. Fragments of two *façon de Venise* decanter jugs/carafes. **Left:** example with ridged applied trails N132113. **Middle:** fragments of decanter jug with mould-blown *nipt diamond waives* decoration N131865/131866. **Right:** a comparable late 17th-century Dutch decanter jug.¹⁴⁵⁸

Other drinking-related equipment comprised three lead crystal goblets, either English or German imports, and a flat-sided globular wine bottle. The two heavy balusters are possibly dateable to 1680-1710 while the light baluster is later, possibly 1725-1760.



Figure J.6. **Left:** two heavy baluster goblets N131868, N132101 flanking a light baluster/balustroid goblet N131859. **Middle:** flat-sided globular wine bottle N131858. **Right:** Two Dutch basis type 2 clay pipe bowls N131873. The example to the right had a crowned 'R' heel stamp placing manufacture between 1696 and 1749.

Food refuse in the form of 2.4 kilograms of animal bones and a hen's egg was found (cat. 5). The primary fill of the privy pit was rich in both plant and insect remains, and botanical analysis revealed seeds of fig and grape, as well as wild local berries such as strawberry, raspberry and cloudberry.¹⁴⁵⁹

The fill contained a small assemblage of eighteen Dutch clay pipe fragments (cat. 7), including two basis type 2 funnel-shaped bowls dateable to the first half of the 1700s prior to c. 1730 (illustrated above).¹⁴⁶⁰ The only item of clothing and footwear (cat. 8) was part of a raised wooden shoe heel with leather attached. Some 76 fragments of flat clear green window glass, many with grozed edges and traces of leading lay in the pit (cat. 17).

External deposits to the north and south of buildings K332 and K334

An open area to the north of building K332 separated it from the garrison bakery to the north. Rubbish-filled deposits accumulated over a gravel surface here. The deposits contained amounts of charcoal, possibly dumped rake-out from hearths in building K332 and/or the bakery building to the north. Metalled surfaces and overlying deposits lay to the west, south and east of building K334, while more extensive rubbish and debris-filled deposits lay between the building and the precinct's south-eastern corner.¹⁴⁶¹ The following table shows the material which lay in these deposits sorted into functional categories. Due to the constraints of time and access mentioned above, it has not been possible to provide a list of *proven* vessel types. The broad kitchenware and tableware attributions presented below are based on the ware types recorded in the site database.

¹⁴⁵⁸ Henkes 1994: 272, cat. nr. 56.1.

¹⁴⁵⁹ Sandvik 2000: 46.

¹⁴⁶⁰ Duco 1987: 27, 141.

¹⁴⁶¹ Finds from the garden soil (group 335) were not included due to potential for residuality.

Functional category	Artefact category	Type description	Number	Fragments	Date	Source	
1. Food preparation & storage							
Kitchenwares & storage vessels	Ceramic cooking/storage vessels	Cooking pots, skillets, storage jars?		551	C17/C18	Local & imported	
2. Food consumption (eating/serving)							
Table- & servingwares	Ceramic eating/serving vessels	Plates, bowls?		1206	C17/C18	Local & imported	
Eating utensils & equipment	Cutlery	Table knives	6	6	C17?		
		Two-pronged fork	1	1	C17?		
3. Beverage consumption							
Serving/pouring vessels	Glass serving vessel	Façon de Venise decanter/ carafe	1	2	Late C17	Imported	
Drinking vessels	Ceramic vessels	Chinese porcelain teawares		23	C18	Imported	
		Glass stemwares (goblets)	Heavy baluster goblets	1	1	Late C17/early C18	Imported
		Light baluster/balustroid goblets	1	1	Late C17/early C18	Imported	
		Moulded pedestal/Silesian goblets	1	1	Early C17 (1710+)	Imported	
		Façon de Venise goblets	3	11	Late C17/early C18	Imported	
		Unidentified			6		
Glass beakers	Passglass			31	Late C17?	Imported	
			Roemer	1 +	13	Late C17/early C18?	Imported
			Façon de Venise filigree	1 +	6	Late C17	Imported
	Unidentified			2			
4. Beverage storage/dispensing							
Storage/dispensing vessels	Glass bottles	Globular wine bottles		65	C17/C18	Imported	
		Square/case bottles (spirits)		22	C17/C18	Imported	
		Kuttrolf bottle	1	2	C17/C18	Imported	
		Hexagonal bottle	1	1	C17/C18	Imported	
		Ceramic bottle	Martincamp bottle	1	1	C15/C17	Imported
		Unidentified			60		
5. Food remains/refuse							
Zoological	Animal bone	Fish and mammal		53 kg			

Figure J.7. Material associated with functional categories 1 to 5 in deposits external to K332 and K334

The best represented functional categories numerically were those associated with the preparation, storage and consumption of food (cats. 1 and 2). The most numerous artefact category comprised potsherds, principally deriving from kitchenwares and tablewares. The assemblage total comprised 1757 sherds. The main ware types and their respective percentages of the total assemblage are as follows:

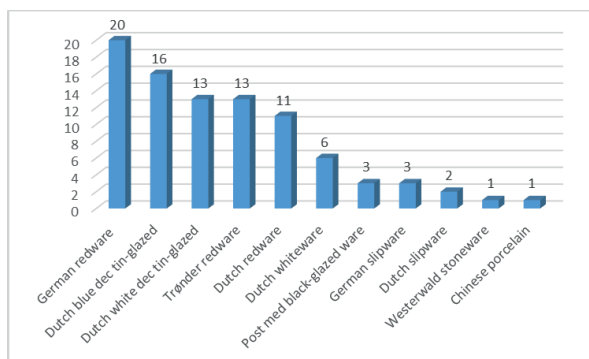


Figure J.8. Relative percentages of ceramic ware types present in deposits external to the first provisioning managers' residence (total 1757 sherds).

Items associated with food preparation and storage (cat. 1) consisted exclusively of ceramic *kitchenwares* (34% of the ceramic assemblage), chiefly in the form of Dutch and German redware cooking pots (31%) and a smaller amount of Post-medieval black-glazed ware. The Trønder redwares may have included a small amount of cooking pots, though most are likely to have been tablewares in common with the majority of sherds in the ceramic assemblage.¹⁴⁶² Consequently, the vast majority of kitchenwares are imported wares.

Ceramic *tablewares* formed the most numerous artefact type in category 2 (food consumption), and the largest ceramic category in terms of sherd numbers (51% of the assemblage). They were dominated by Dutch blue- and white-decorated tin-glazed wares (29%) and Trønder wares (13%), with significantly smaller amounts of Dutch whiteware (6%), German slipware (2%), and Westerwald stoneware (1%). Tiny amounts of Frechen, and Raeren stonewares, English brown-glazed stoneware and Jutish ware were found. The only other items associated with category 2 were fragmentary eating utensils in the form of six table knives and one two-pronged fork (see below).



Figure J.9. L-r: Table knife N116322; table knife N146758; two-pronged fork N146053.

Items associated with the consumption, storage and dispensing of beverages (cats. 3 and 4) comprised a small amount of fragments deriving from glass drinking vessels, decanters and bottles. A variety of drinking vessels was represented: *Roemer*, *passglass* and *façon de Venise* beakers, and *façon de Venise* and lead-crystal (baluster and moulded pedestal/Silesian) stemwares (illustrated below). Fragments of one or more fine *façon de Venise* glass decanter jugs of the same pinch-moulded type as one found in privy pit K344 (ie. N131865/131866) were also found.

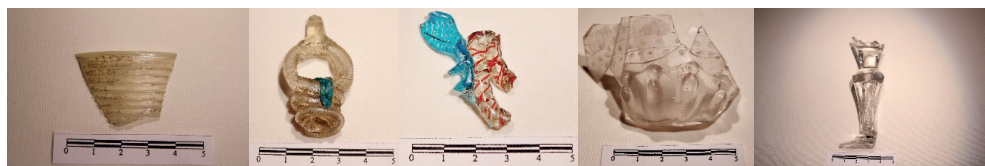


Figure J.10. L-r: *Façon de Venise* vessel fragments: rim from filigree beaker N125314; serpentine stem from a goblet N115976; winged stem from a goblet N146236; bowl from an engraved goblet (Bohemian/Silesian potash-lime glass?) N146585. Also, a stem for moulded pedestal/Silesian lead-crystal(?) goblet N146557.

¹⁴⁶² I. Reed pers. comm.

A total of 90 identifiable glass bottle fragments derived from globular and hexagonal wine bottles, square/case bottles (usually for spirits), and at least one Kuttrolf-type bottle. A fragment of a Martincamp ceramic bottle was also found. In addition, a small amount of ceramic drinking vessels in imported Chinese porcelain occur in the form of fragments of teawares (cups and saucers) (1% of the ceramic assemblage). Food refuse in the form of 53 kilograms of animal bone was retrieved from the northern area (cat. 5).

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
6. Diverse equipment & tools						
Cutting tools	Knives		7			
Masonry tools	Mason's trowel	Brick trowel	1			
Agricultural tools	Sickle		1			
Other	Chisel		1			
	Screwdriver		1			
	Whetstone		1			
	Brushes		2			
7. Tobacco consumption						
Smoking equipment	Clay pipes	Dutch basis type 1 & 2 bowls	17		C17/early C18	Imported
		Stems (unidentified)		887		Imported
8. Clothing & footwear						
Clothing-related equipment	Shoe buckle	Copper alloy buckle	1		C17/C18	
	Clothes fasteners	Copper alloy fasteners	3		C17/C18	
	Aiglet	Copper alloy aiglet	1		C17/C18	
9. Jewellery, personal ornaments & accessories						
Jewellery	Semi-precious stone (agate)	From finger-ring?	1			
10. Health, hygiene & toiletry						
Hygiene/toiletry equipment	Glass bottles	Eau de Cologne bottle?		1	C18	Imported
		Pharmaceutical bottles		7		Imported
	Bone comb	Double-sided comb	1			
	Earspoon/manicure tool	Copper alloy tool	1			
11. Literacy & numeracy						
Writing equipment	Slate pencil	Pencil stub	1			
Accounting equipment	Jettons	3 x Laufer; 1 x Schulte	4		C17 (pre-1660)	Imported
12. Textile working						
Sewing equipment	Pins	Round-headed pins	17			
	Needle	Iron needle	1			
Spinning equipment	Spindle whorl	Stone whorl	1			
13. Metalworking						
Metalworking equipment	Crucibles			3		
Metalworking waste	Slags			15		

Figure J.11. Material associated with functional categories 6 to 13 in deposits external to K332 and K334

A small range of miscellaneous tools (cat. 6) includes seven fragmentary knives (blades/handles), a large mason's trowel (brick trowel), a sickle, a chisel, one whetstone, two coarse brushes, and a screwdriver made from the handle of a copper-alloy spoon.



Figure J.12. L-r: mason's trowel (brick trowel) N131738; sickle N148700; screwdriver(?) (reworked spoon handle) N149162/145210.

Smoking equipment (cat. 7) took the form of 904 clay pipe fragments, of which seventeen comprised identifiable bowls. These included three residual biconical Dutch basis type 1 bowls of early-mid 17th-century date, but also eleven funnel-shaped Dutch basis type 2 bowls, including two (N121939, N122049) which bore heel marks with triple crowns placing them after 1679, one (N145682) with the maker's stamp of Isak de Mol (1692 -), and another with a fleur-de-lys heel mark (N131579) which post-dates 1705.



Figure J.13. **Top row:** three biconical clay pipe bowls (Dutch basis type 1) N131364, N136111, N152477. **Bottom row:** two funnel-shaped clay pipe bowls (Dutch basis type 2) N121941, N131543.

A few items relating to the clothing, adornment and care of the human body were recovered: namely, a shoe buckle, three clothes fasteners and a possible aiglet, all in copper alloy (cat. 8); a semi-precious stone (agate?) which may originally have been mounted in an item of jewellery, possibly a finger-ring? (cat. 9); a bone comb, a copper-alloy combined earspoon/manicure tool (Fig. 5.137), and a few fragments of blue eau-de-Cologne(?) bottles and green pharmaceutical bottles/phials (cat. 10). Similarly, only a few items associated with literacy and numeracy (cat. 11) were found: namely, a slate pencil and accounting equipment in the form of four copper alloy jettons manufactured in Nuremberg (3 x Master Wolf Laufer c. 1618-1660, 1 x Master Hans Schulte) (Fig. 5.143). Textile-working and sewing equipment was confined to 17 round-headed copper-alloy pins, an iron needle and a stone spindle whorl (cat. 12). Three crucible fragments and a few smithing slags derived from metalworking (cat. 13).

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
14. Children's toys & curios						
Figurines	Pipeclay figurine	Human figure	1	1	C17?	Imported
15. Leisure & pastimes						
Gaming equipment	Gaming piece	Bone tables/ backgammon piece?	1		C18?	
16. Weapons						
Firearms & related items	Gunflints		6		C18?	
	Lead 'flint pad'		1		C18?	
	Musket triggers		6		C18	
	Musket balls	Lead	3		C18?	

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
Cannon & related items	Cannon balls	Iron	2		C18?	
17. Heating & lighting						
Lighting-related equipment	Window glass			910	C17-18	Imported?
	Lead cames			8		
	Iron hinge-plate for window		1		C17-18	
Heating-related equipment	Ceramic stove tile fragments			17	C17	Imported
18. Furniture, fixtures and fittings						
Furniture-related?	Decorative mounts	Copper alloy mounts with Tudor/Trondheim roses	2		C17-18	
		Engraved/decorated bone mount	1		C17-18	
19. Security						
Locking equipment	Keys	Rotary keys	3		C17-18	
	Locks	Padlock	3		C17-18	
22. Horse furniture & equipment						
Equipment & harness fittings	Horseshoes		2		C17-18	
	Horseshoe nails		2			
23. Bone-, leather- & woodworking						
Tools & equipment	Woodworking tool	Auger	1			
	Leatherworking tool	Awl (bolstered)	1			
Waste	Boneworking waste	Antler/bone offcuts		5		
24. Trade- or commerce-related items						
Money	Coins	Chr. IV 2 shilling; Fred. III 2 x 2 shillings; Chr. V 2 x 2 shilling; 4 shilling; Christian IV Glückstadt	7		1588-1699	Imported
Cloth seals	Leaden cloth seals		3		C17?	Imported

Figure J.14. Material associated with functional categories 14 to 24 in deposits external to K332 and K334

A fragment of a small pipeclay figurine in draperied clothing may have been a child's toy or curio (cat. 14) (Fig. 5.153). The only gaming-related item was a fragment of a round bone disc with concentric compass-drawn circles interpreted as a possible tables or backgammon piece (cat. 15) (illustrated below).

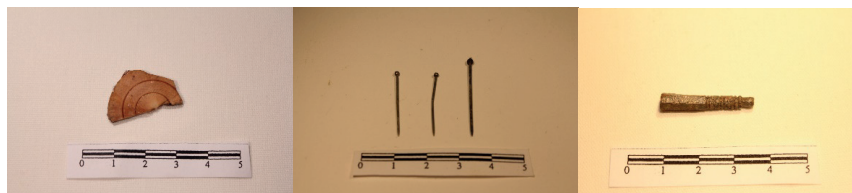


Figure J.15. L-r: possible tables/backgammon gaming piece N115227/124810; round-headed pins N122942; copper alloy aiglet? (N147002).

Firearm- and cannon-related equipment (cat. 16) included assorted gunflints, a lead 'flint pad' for a musket flintlock, six iron triggers for muskets (including one in a flintlock mechanism), three lead musket balls (18mm diam., two fired) (illustrated below and Fig. 5.160), and one complete (50 mm diam./385g) and one fragmentary iron cannon ball.



Figure J.16. L-r: fragment of finely-made gunflint N130163; two fired lead musket balls N148200; two iron musket triggers N148699.

Items associated with heating and lighting (cat. 17) included a large amount of broken window glass and some lead comes, an iron hinge-plate for a casement window, and 17 fragments of ceramic stove tiles, with green, brown or black glaze. Decorative mounts in copper-alloy and bone may derive from items of furniture (cat. 18) (illustrated below).



Figure J.17. L-r: two cast copper alloy mounts with Tudor roses/Olav's roses (from same object?) N145211 & N131179; bone mount N131287.

Security-related items (cat. 19) comprise three rotary keys and three padlocks. Two horseshoes and two horseshoe nails were the only items of horse equipment (cat. 22). Leatherworking and woodworking tools took the form of an awl and an auger, and a few antler offcuts from boneworking (cat. 23). Items related to trade and commerce (cat. 24) comprised seven coins (Christian IV, Fredrik III and Christian V) and three lead cloth seals.



Figure J.18. L-r: Rotary key N145214; auger N146248; bolstered awl N148691.

Appendix K

The second residence: descriptions and quantifications of the archaeological material

The excavated buildings

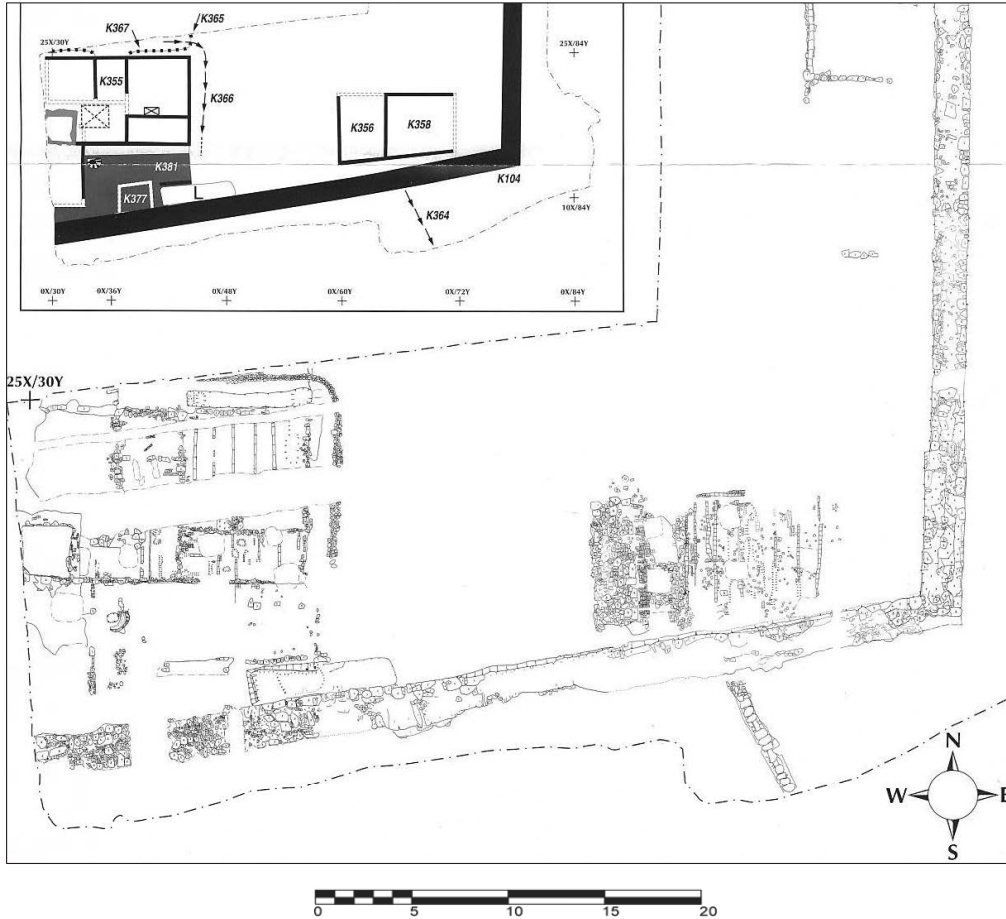


Figure K.1. Detail of plan showing excavated building K355 and K356=358 (below) with explanatory key (above) ('L' on key marks location of privy K376).¹⁴⁶³

The dwelling house K355

This timber building was built in two integrated sections: a larger rectangular east-west aligned northern section which forms the main building, and a smaller north-south aligned southern section – in effect a side-building or wing. The surviving portions of foundations comprised crudely-set low stone ground walls bearing fragmentary traces of wooden beams. Similar low ground walls for internal partitions were uncovered inside the northern section, the surviving portions subdividing the interior into at least 5 rooms. The remains of wooden flooring in the form of north-south aligned, evenly-spaced wooden joists sat on soil make-up in the eastern rooms. Also revealed were the badly truncated remains of one large and one smaller stone- and brick-built hearth and chimney foundations, as well as a small, shallow stone-built cellar in the south-west corner. Outside the building, just to the south of the main section lay a spaced row of flat stones, possibly pad stone supports for pillars supporting an external gallery which

¹⁴⁶³ Nordeide 2000a. Detail of Plan 27, Period 11 Phase 3.

ran alongside the main building's upper floor, and the foundation for an external spiral staircase that led up to it. To the north lay cut features interpreted as traces of the bases of fences (K365, K367), and to the east and south lay traces of external cobbling and an integrated stone-lined drain (K366). This cobbled surface was replaced by two new levels of cobbling (K381, K387) during the lifetime of the building, and the drain was subsequently modified in its eastern extension. The building was not fully uncovered by excavation, but its full areal dimensions can be reconstructed using archaeological and historical evidence. The main building measured ca. 16m by 9m (144m²), while the south wing measured ca. 8m x 6m (48m²). The two sections' combined ground-floor area was therefore ca. 192m², and the combined area of the building's ground- and first floors was ca. 384m².

The privy K376

This is marked as a 'shed, etc' on Eckleff's plan (Appendix L). Only a 4-metre long part of this small timber building's low northern ground wall survived. Between this and the southern precinct wall lay a rectangular pit measuring c. 8 m x 2 m, subdivided into two smaller neighbouring pits at a lower level. These were timber-lined, and contained two fills: lower primary deposits filled with human excrement and domestic rubbish, sealed by upper fills also containing domestic rubbish but also a higher proportion of building debris. The character of the upper fills suggests the latrine pits were deliberately and rapidly backfilled, and the privy fell into disuse at the end of phase 3. Scant traces of a new, very small outhouse lay just to the east of it, K377.

Building K362

This small timber building consisted of a main section to the west with a low stone ground wall, and a narrow section or extension to the east whose timber wall elements were not placed on a ground wall, but seem to have been supported by corner posts, suggesting it may have been stave-built (see period 11 phase 2 plan, Fig. 6.10). These sections measured c. 6m x 5m (30m²) and c. 2m x 5m (10m²) respectively. No flooring survived in the east, but the main building contained the remains of joists for a plank floor. It also contained a small rectangular pit measuring 3.5m x 2.3m, the base of which was lined with horizontally-laid planks. Its function is uncertain, but it may have served as a foundation supporting something heavy. Amounts of slag and charcoal were found in associated layers. This building does not appear on any contemporary plan or map.

Building K356=K358

This building comprised two integrated sections. The rectangular western section (K356) measured 5m x 6.5m (32.5m²). It had a solid western ground wall with rather less consolidated walls to east, north and south. It was presumably originally timber-walled, though the northern side may have stood open. The flooring comprised rough stone paving with a 0.6m wide strip of edge-set bricks aligned north-south mid-way. The eastern section (K358) measured 6.5 m x c. 7 m (45.5m²) with low brick-built wall foundations which presumably supported timber walling. Internally there were remains of joists and planks for plank flooring. No traces of a hearth foundation were found. These two sections or rooms presumably had associated functions, though their flooring media suggest these were differentiated. The western section presumably accommodated a function which required well-consolidated flooring. A stone-lined drain K364 which lay to the south of the building outside the precinct wall may have been built to carry away effluents/slurry from this building. This is probably the anonymous building to the east of the L-shaped dwelling house marked on maps of 1730 (Fig. 6.4), and was demolished prior to the construction of the large farm building shown on Eckleff's drawings which occupied this part of the precinct from 1752.

New buildings in the east wing – K373 and K374

These timber buildings were poorly preserved (see period 11 phase 3 plan, Fig. 6.10). Only the stone foundations for southern building K373's northern room survived with scrappy remains of a plank floor, as well as a portion of its southern wall. It measured c. 14m x 6.5 m (91m²). Its location and dimensions match a building shown on the same site on the Eckleff plan, where it is depicted as a three-roomed structure. To the north lay the scrappy foundations for another, broader timber building, K374. This was also possibly a three-roomed structure, with traces of what might be a long covered external

gallery/*svalgang* or integrated passage situated between its eastern wall and the precinct wall. Its dimensions with and without the gallery/passageway are c. 15 x 9.5 m (142.5m²) and c. 15 m x 7.5m (112.5m²) respectively. A line of posts may have marked its western wall, while poorly preserved traces of stone ground walls and timber beams marked its eastern and southern limits. The southern room may have had a gravel or stone floor. The passage to the east was plank floored. These two buildings equate with those marked on maps of 1730 (Fig. 6.4). The northern building was presumably demolished by 1758 since Eckleff's plan (Appendix L) only shows the southern building, described there as an old, dilapidated storehouse. With its demolished northern neighbour it presumably formed part of the military depot's storage facilities.

Other features

A two metre-wide gap existed in the southern precinct wall south of the dwelling house. This is also shown on contemporary maps, where it clearly provides access to a formal garden outside the precinct (Appendix L).

No traces of cobbling survived beyond the immediate environs of the dwelling house K355. During phase 2, a compacted, rough-surfaced path ran diagonally NE-SW across the open area to the east of building K362. This presumably marks a well-trodden line of communication between the buildings in the west and a well shown on Eckleff's plan (just outside the area of excavation). Otherwise, the area to the east contained deposits characterised by a content of charcoal, ash, slag, building debris and domestic rubbish.

Objects and other finds from associated contexts

The artefacts will be presented according to their locations, and sorted between the functional categories defined in Chapter 5. Secure *primary* contexts were rare, although the latrine pits in the privy shed K376 produced a varied assortment of objects which could be closely associated with the household. A fair amount of material also lay strewn among *secondary* contexts in the open areas within the enclosed yard and in deposits to the north of it in the east wing, much of which we can reasonably assume to have originated locally. The material from the privy and the external deposits are presented separately.¹⁴⁶⁴

Privy K376

The categorised range of objects is presented in tabulated form below. The majority were fragmentary, notably the pottery, glass and clay pipes. The totals presented ('Number') are estimates of the numbers of single items which these numerous fragments represent.

In contrast to the other contexts associated with this building and the first residence, the pottery from the privy was sorted and quantified manually with a view to estimating the maximum amount of vessels present.¹⁴⁶⁵ Sherds were assumed to belong to different vessels unless they could be shown to belong to the same one. Consequently, two or more fitting sherds were counted as a single vessel, as were individual sherds which could not be fitted with others. This method does not provide an accurate estimate of the amount of vessels represented by the sherds, and the true number is likely to be lower. However, it provides a satisfactory basis for a broad overview of the range of wares and vessel types present (see tables below). Glasswares and bottles have also been quantified with a view to estimating maximum numbers (see further below for methodologies, tables and graphs).

Functional category	Artefact category	Type description	Number	Date	Source
1. Food preparation & storage					
Kitchenwares & storage vessels	Ceramic cooking/ storage vessels	Cooking pots	8	C18	Imported & local
		Skillets	4	C18	Imported & local
		Storage jars	7	C18	Imported & local
		Colanders	3	C18	Imported

¹⁴⁶⁴ Some examples are illustrated in the following text, but also in 5.5. under the relevant categories.

¹⁴⁶⁵ By ceramic specialist Ian Reed, NIKU.

Functional category	Artefact category	Type description	Number	Date	Source
<i>Subtotal 22</i>					
	Glass storage vessels	Canning jars	4	Mid-C18	Nøstetangen
	Metal cooking vessel	Cauldron	1		
Food preparation utensils & equipment	Milling equipment	Quernstone	1		
	Kitchen utensils	Wooden carving board?	1		
		Wooden spatula	1		
2. Food consumption (eating/serving)					
Table- & serving wares	Ceramic eating/serving vessels	Plates	36	C18	Imported
		Bowls	48	C18	Imported & local
		Serving dishes?	11	C18	Imported
<i>Subtotal 95</i>					
Eating utensils & equipment	Cutlery	Wooden spoon	1		
3. Beverage consumption					
Serving/pouring vessels	Ceramic serving/pouring vessels	Jugs	2	C18	Imported
		Teapots	1	C18	Imported
	Glass serving/pouring vessels	Decanters	2	Early-mid C18	Nøstetangen & imported
Drinking vessels	Ceramic vessels	Porcelain cups	9	C18	Imported
		Porcelain saucers	12	C18	Imported
		Mugs/tankards	2	C18	Imported
<i>Subtotal 28</i>					
	Glass stemwares	Baluster goblets ('Kongelig Mund', 'Knopf Kelchen')	2	1741/48-1777	Nøstetangen
		Balustroid? Silurian variant?	1	Early C18	Imported?
		Silurian/moulded pedestal goblets ('Viin Glas Formed Knap')	10	1741/48-1777	Nøstetangen
		Plain drawn stem goblets with tear ('Nøgne jomfru')	10	1741/48-1777	Nøstetangen
		Air-twist stemmed goblets	3	1741/48-1777	Nøstetangen
		Dram glass/firing glass ('Frimurer glass')	1	1741/48-1777	Nøstetangen
		Goblet ('Perlekelchen')	1	1741/48-1777	Nøstetangen
		Ceremonial goblet lids?	1	1741/48-1777	Nøstetangen
		Unidentified wall/base fragments	17		
		Engraved goblet - unknown type - with monogram	1	Early C18	Imported?
		Engraved goblet - unknown type	2	Early C18?	Imported?
<i>Subtotal 49</i>					
	Glass beakers/tumblers	Passglasses	3	C17/e. C18	Imported
		Faceted tumbler	1	C17-18?	?

Functional category	Artefact category	Type description	Number	Date	Source
		Smooth tumblers ('Øll Glass Knap or Spaniol God')	2	1741/48-1777	Nøstetangen
		Smooth tumblers – unknown type	2		?
		Moulded beer glasses ('Formede Øll Glas')	2	1741/48-1777	Nøstetangen
		Handles for beer glasses?	2	1741/48-1777	Nøstetangen?
			<i>Subtotal 12</i>		
	Wooden drinking vessel	Beaker/cup	1		
4. Beverage storage					
Glass beverage storage vessels	Wine bottles	Globular bottles - 'Ronde Boutellier'	8	1741/48-1777	Nøstetangen/Aas
		Flat-sided round bottles - 'Mörke Ronde Boutellier'	7	1741/48-1777	Nøstetangen/Aas
		Mallet bottles - 'Mörke Firkantede Boutellier'	19	1741/48-1777	Nøstetangen/Aas
		Hexagonal-sided bottle	1	C18	?
	Spirits bottles	Case bottles - 'Cantin Flasker'	17	1741/48-1777	Nøstetangen/Aas
			<i>Subtotal 52</i>		
5. Food remains					
Zoological	Animal carcase	Hen carcase	1		
	Other	Eggshells	21 fragments		
Botanical	Seeds etc	Seeds of figs & local wild berries, coriander, barley			Local & imported

Figure K.2. Material associated with functional categories 1 to 5 from privy K376

Items associated with the preparation, storage and consumption of food (cats. 1 and 2) were best represented in terms of numbers, potsherds comprising the vast majority. The privy produced a total of 1474 potsherds. The table below presents the ceramic ware types and their respective percentages of the total estimated on the basis of a simple sherd count.

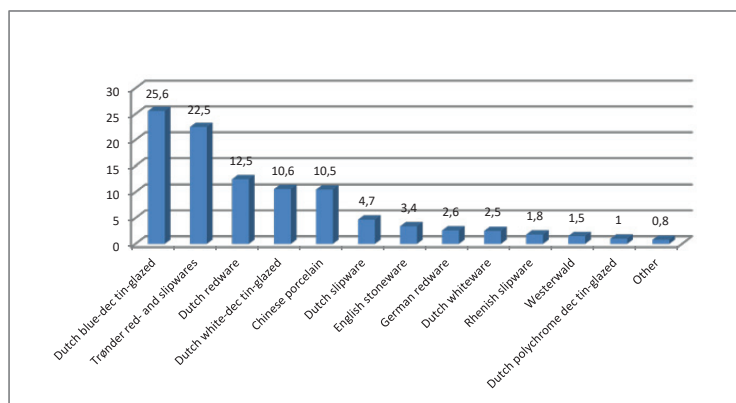


Figure K.3. Relative percentages of ceramic ware types present (total 1474 sherds)

The table indicates that the greatest numbers of sherds derived from imported wares (76.5%), principally Dutch tin-glazed wares, redwares, slipwares and whitewares (57%), with smaller proportions of German redwares, slipwares and stonewares, English stoneware (9%) and Chinese porcelain (10.5%)

present (the latter are classified as *teawares*, see cat. 3). Local Trønder redwares and slipwares are nonetheless the second best represented individual ware type in the assemblage (22.5%).¹⁴⁶⁶

In the ceramic assemblage as a whole, *kitchenwares* comprise 14-15% of the total. With the exception of a few fragments of Trønder redware cooking pots and skillets, kitchenwares consist predominantly of imports, namely Dutch and German redwares. The majority of Trønder wares are otherwise categorised as tablewares (see below). The vast majority of the assemblage (61%) consists of *tablewares*, of which 44% comprise imports (Dutch tin-glazed wares, Dutch slipwares and whitewares, Rhenish slipwares) and 27% local Trønder redwares and slipwares. The remainder of the assemblage consists of a small number of beverage-related ceramic items and chamber pots (see below, cats. 3 and 10).

The following table presents an estimate of the maximum amounts of vessels identified for each ware type in the assemblage.

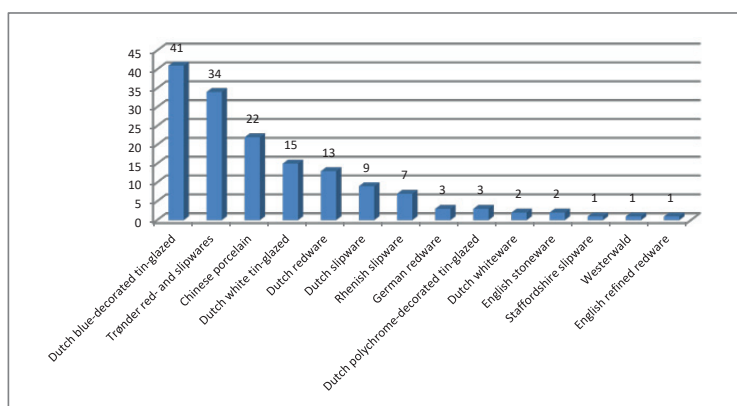


Figure K.4. The estimated maximum numbers of vessels for each ware category (total 154 vessels)

The relative distributions of proportions broadly correlate with those presented in the first table. Of the 154 vessels estimated, imported wares are in the majority (78%), of which Dutch imports comprise 83 vessels (54%), Chinese 22 (14%), and German and English 15 (10%). The remaining 22% consists of 34 vessels in local Trønder redwares and slipwares. The range of vessel types in these wares is presented in the following table.

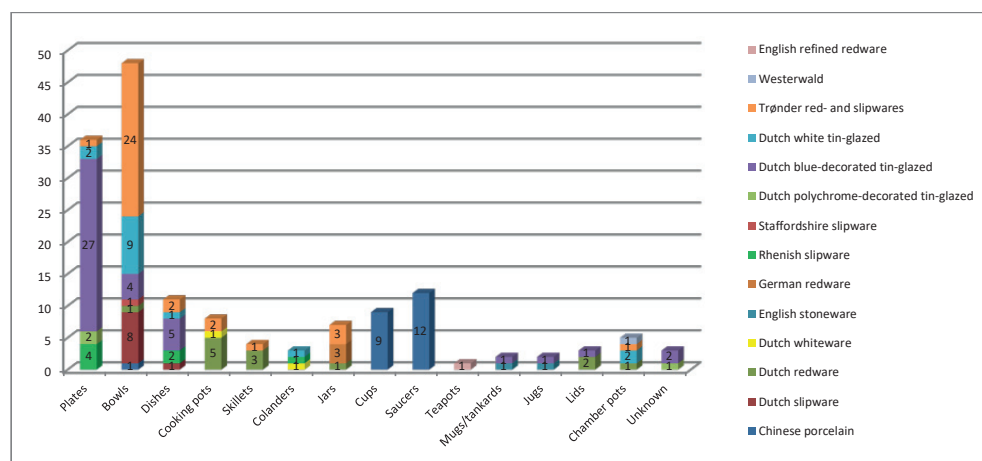


Figure K.5. The range and numbers of ceramic vessel types in relation to ware type (total 154 vessels)

¹⁴⁶⁶ 'Other' consists of sherds of English refined redware (teapot), Staffordshire slipware and unidentified sherds.

Comparatively few vessels can be securely categorised as *kitchenwares* (cat. 1) (22/14.2%); namely, a handful of Dutch and Trønder redware cooking pots (8) and skillets (4), Dutch and German redware colanders (3)¹⁴⁶⁷ and Dutch, German and Trønder redware storage jars (7) (examples illustrated below). Only a few other items associated with the preparation and storage of food (cat. 1) were found, including: part of an iron pot or cauldron (N153340), a possible wooden cutting board (N145898), a wooden spatula (N145908), a fragment of quernstone (N143911) (Fig. 5.53), and fragments of four canning jars (*sylteglass*) of clear- and green glass types manufactured at Nøstetangen or Aas (N143407-09, 146294) (illustrated below).



Figure K.6. L-r: Dutch redware colander N147403; Trønderware storage jar N147869; fragments of glass canning jars N143407, 143408, 143409.

The majority of the ceramic material (61%) consists of items associated with food consumption (cat. 2), classified here collectively as *tablewares* (though see below). The most numerous vessel types comprise plates (36/23%) and bowls (48/31%). The vast majority of the former are Dutch tin-glazed wares (29/19%), particularly blue tin-glazed plates (27/17.5%), including examples from sets (illustrated below).



Figure K.7. L-r: Dutch blue tin-glazed plates N147382, 147381;¹⁴⁶⁸ Dutch tin-glazed plate with Imari decoration N147402; Rhenish slipware plates N147346, 147402.

The bowls are less securely attributable as tablewares, since some may have been used in the course of food preparation (cat. 1). Exactly half (24) are imported wares, predominantly Dutch slipwares and white tin-glazed or blue-decorated tin-glazed wares, the other half being Trønder wares. For the purposes of this analysis, the various imported tin-glazed and slipware bowls are classified as probable tablewares. The majority of Trønder wares were also slipwares, with only a small number of redware bowls. The Trønder bowls are also categorised as tablewares, though with the strong proviso that some or all may have been used for food preparation (e.g. separating bowls in a dairy). The same may be said of the dishes (11/7%), although most are likely to be serving dishes (cat. 2). Most are Dutch tin-glazed wares, with one underglaze blue decorated Chinese porcelain example.

Some 26 ceramic items can be associated with the consumption and dispensing of beverages (cat. 3) (17% of the ceramic assemblage). These comprised predominantly Chinese porcelain cups (9) and saucers (12) with underglaze blue decoration used for drinking warm beverages, principally tea (illustrated below). One fragment of an English refined redware teapot was found. Jugs and mugs/tankards included one of each in Staffordshire stoneware and Dutch blue tin-glazed ware respectively (illustrated below).

¹⁴⁶⁷ For straining food. Possibly also used for draining and serving fish.

¹⁴⁶⁸ Photo: Per E. Fredriksen/Nidaros Domkirkes Restaureringsarbeider.



Figure K.8. **Left:** Staffordshire slipware bowl N147880. **Middle:** matching jug and mug in Staffordshire stoneware N146328, 147881. **Right:** Chinese porcelain cups and saucers N146968, 147375, 1437370, 147372, 145507.

A significant number and variety of glasswares were associated with the consumption, storage and dispensing of beverages (cats. 3 and 4): 460 fragments from a variety of glass vessels.

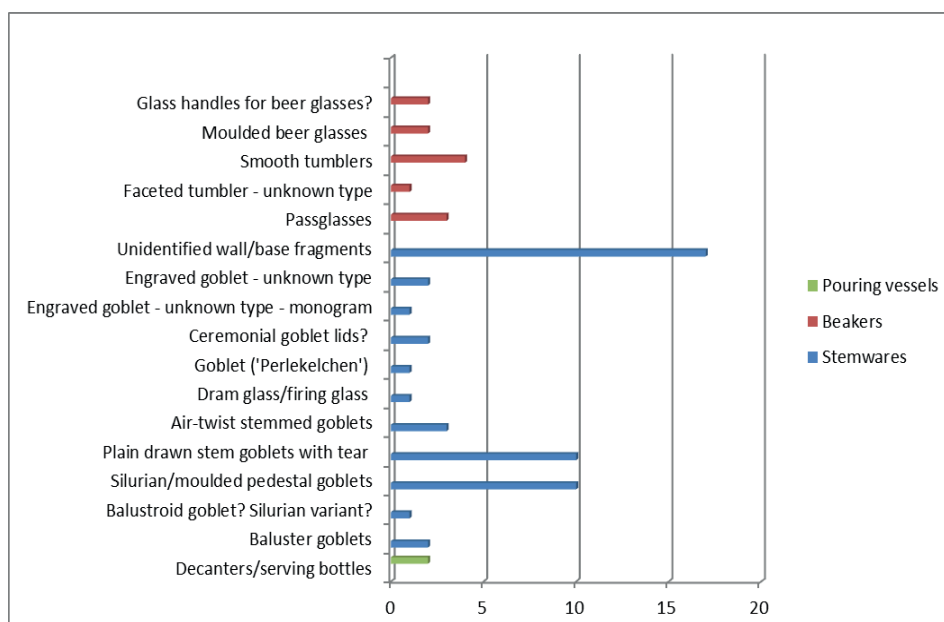


Figure K.9. Types and estimated numbers of glass drinking and serving vessels (category 3) (total=64)

The majority (308) were found in the privy's abandonment deposits, while half as much came from the primary deposits (152 fragments), although as in the case of the ceramics, it is clear that items from the former have infiltrated the latter. An estimate of vessel numbers and types represented by these fragments has been undertaken.¹⁴⁶⁹ Of the 104 fragments of serving and drinking vessels, fragments of a minimum of 64 glass serving and drinking vessels were identified. Their types and numbers are listed in Fig. K.9 above (see also the main overview table K.2).

As can be seen, stemwares comprise the greatest range and number of estimated vessels (33/51.5%), with only 12 beakers (19%). Fragments of two decanters/serving bottles were found: the engraved base and wall fragments of one probably imported glass decanter, and a spout fragment from a decanter or serving bottle/carafe (illustrated below). The latter may be from a type produced in Norway at Nøstetangen (production period 1741/48-1777).

¹⁴⁶⁹ Only closely identifiable stems, body/bowl and base fragments have been included in the type-determinations, providing a minimum estimate of the amount of vessels in the assemblage.

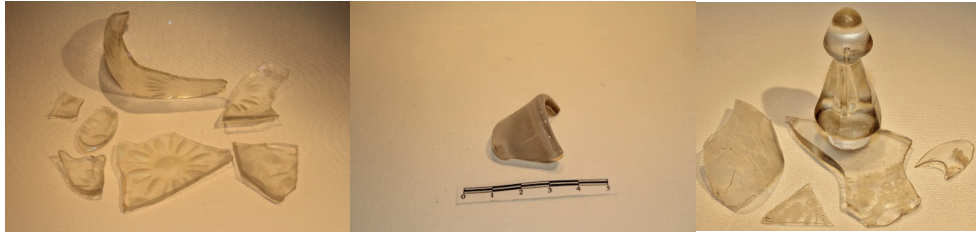


Figure K.10. L-r: Engraved decanter N146686; decanter spout 146681; engraved lid for ceremonial goblet N146836/146837.

The stemwares encompassed a limited range of types, most of which are likely to have been produced at Nøstetangen.¹⁴⁷⁰ They include: two lids which may derive from large ceremonial goblets, including an engraved example (N146836/146837; N146683) (Fig. K.10).



Figure K.11. **Left:** Base of bowl for magenta-coloured 'Perlekelchen' goblet with characteristic air bubbles (N146301)(with Weyse catalogue equivalent).¹⁴⁷¹ **Right:** Goblets with drawn stems and tear/'Nøgne Jomfru' (N146634-37).

In addition, goblets with drawn stems with tear (*Nøgne Jomfru*) which may form parts of one or more sets (10);¹⁴⁷² goblets with moulded pedestal/Silurian stem (*Viin Glas Formed Knap*) again from one or more sets (10);¹⁴⁷³ baluster goblets (2) - a *Kongelig Mund Glas* and a possible *Knopf Kelchen Glas* (N146646, 146647); goblets with air-twist stems (3) (N143399, 143400, 143404); a *Perlekelchen* goblet (1)(N146301); and a dram- or firing-glass (*Frimurerglass*) (N146648) (Figs K.11 and 5.89).



Figure K.12. **Left:** wall of soda-lime glass goblet engraved with monogram of Fredrik IV (1699-1730) N146307, 146835. **Right:** goblet with balustroid or moulded pedestal /Silurian stem N146643.

Only a few examples of stemwares of types pre-dating Nøstetangen were found: fragments of two engraved soda-lime glass goblets, including one engraved with a Fredrik IV (1699-1730) monogram (N146307, 146835, 146308-11); and a possible balustroid stem, faceted with bulbous knop (N146643),

¹⁴⁷⁰ Many types produced at Nøstetangen were modelled on types produced abroad, particularly in England and Germany (see 5.5.2.3.). However, the relevant items are here interpreted as Nøstetangen products on the basis of their forms and a holistic dating of the privy assemblage and the occupation of the residence.

¹⁴⁷¹ Johansen 2011: 166.

¹⁴⁷² N146838 143320 143401 143402 143403 146634 146636 146637 146638 146639 146644 146645 (engraved 'VIVAT') 146649 (engraved).

¹⁴⁷³ N146687 143318 143319 145419 146631 146632 146633.

although this may be a moulded pedestal/Silurian variant (illustrated above). 17 fragments of indeterminable stemwares were also found.

Of the 12 glass beakers, most were Nøstetangen products, with the exception of three fragments of passglass (N146684, N146676, N146682). The rest included fragments of a faceted tumbler of unknown type (N143406); fragments of a smooth tumbler, possibly an *Øll Glass Knap* or *Spaniol God* (N145845 & 145846);¹⁴⁷⁴ the base of a plain smooth tumbler of unknown type (N146302); a pair of mould-blown, engraved *Formede Øll Glas* (N146303, N146304), presumably from a set; one unidentified smooth tumbler (N146305); and two handles - possibly from beer glasses of the type *Øll Glas med Hank* or a similar vessel (N143321; N146300) (see below and Fig. 5.91 for illustrated examples). In addition to the ceramic mugs/tankards mentioned above, the only other non-glass drinking vessel found was a small turned wooden cup or beaker N145770 (see below).



Figure K.13. **Left:** base and wall of a smooth beaker - *Øll Glass Knap* or *Spaniol God*? N145845, N145846. **Middle:** two mould-blown, engraved *Formede Øll Glas* N146303, N146304. **Right:** Small turned wooden beaker or cup N145770.

Glass storage vessels (cat. 4) were represented by 356 fragments of glass bottles. Of these, a minimum of 52 bottles of various types could be identified.¹⁴⁷⁵ These are listed in the table below (see also main overview table above).

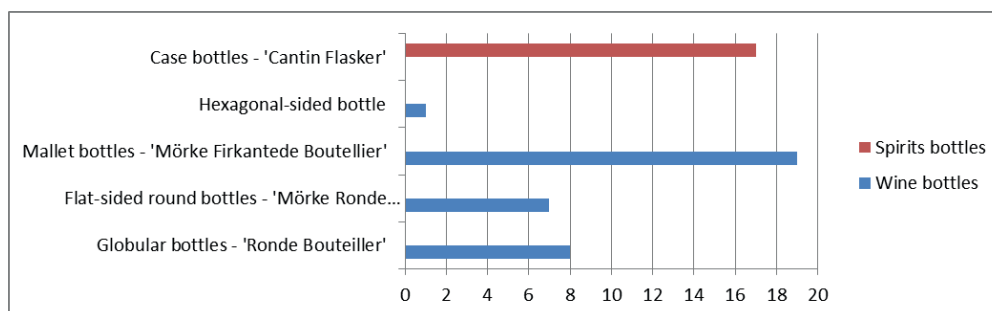


Figure K.14. Types and estimated numbers of bottles

All bottles are of types likely to have been produced at Nøstetangen or Aas. Bottles probably used for wine predominate (35/67%): globular bottles ('Ronde Boutellier') (8);¹⁴⁷⁶ flat-sided round bottles ('Mörke Ronde Boutellier') (7);¹⁴⁷⁷ mallet bottles ('Mörke Firkantede Boutellier') (19);¹⁴⁷⁸ and one

¹⁴⁷⁴ Johansen 2011: 234 and the Nøstetangen catalogue (*Weyses Modellbok*): Weyse 1763.

¹⁴⁷⁵ This approximate minimum estimate of individual items was based on a count of diagnostic bases, necks, spouts, and occasional complete items. Wall fragments of various types were not included in the count unless they could be matched to bases or spouts. Of course, an unconnected base and a spout might derive from a single bottle, but they have been counted as two bottles in this analysis.

¹⁴⁷⁶ N143322, 143411, 143412, 146316, 146532, 146688, 146828, 146663, 146831.

¹⁴⁷⁷ 143413, 146515, 146827, 146830, 146665.

¹⁴⁷⁸ N146531, 146667, 146673, 143390, 146516-31.

hexagonal-sided bottle (N146535) (some illustrated below). The assemblage also contained case bottles ('Cantin Flasker') probably used for spirits (17).¹⁴⁷⁹



Figure K.15. L-r: 'Mörk Firkantede Boutellie' N146531; hexagonal-sided bottle N146535; 'Mörke Firkantede Boutellie' with seal 'PMH' N146667; 'Ronde Boutellie'.

No animal bones were collected. Food remains (cat. 5) were represented by a hen's carcass and eggshells. Samples from the primary deposits contained macrofossils of a variety of plants: fig, raspberry, strawberry, crowberry, cloudberry, blueberry, coriander, and barley (grain and husks).¹⁴⁸⁰

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
6. Diverse equipment & tools						
Containers	Wooden buckets	Staves, bases	16			
		Complete bucket	1			
7. Tobacco consumption						
Smoking equipment	Clay pipes	Dutch basis type 3 bowls	2		1730/40+	Imported
		Jacob Boy Dutch type 4 bowls	6		1752-1770	Drammen
		Socketed pipe	1		Mid C18?	Imported
		Gouda-inscribed stems	2			Imported
		Boy-inscribed stems		4	1752-1770	Drammen
		Unattributed stems		57		
		<i>Subtotal</i>	<i>11</i>	<i>61</i>		
8. Clothing & footwear						
Footwear	Leather shoes		14+	111		
Items of clothing	Stay	Bone & textile parts of stay	1		Mid C18	Imported?
Clothing-related equipment	Buttons	Copper alloy buttons	2		C18	
10. Health, hygiene & toiletry						
Hygiene/toiletry/ grooming equipment	Bone combs	Double-sided & single-sided	2		C18	
	Chamber pots		5		C18	Imported & local
	Eau de Cologne bottle?			2	C18	Imported?
Pharmaceutical equipment	Textile rags (sanitary napkins?)		5			
	Glass medicine bottles			60	C18	Nøstetangen?
	German stoneware ointment jars		3		C18	Imported
Human biological-related	Human parasite eggs	Whipworm & roundworm				
11. Literacy & numeracy						

¹⁴⁷⁹ N143203, 143387-8, 143392, 143414, 143416, 145753, 146312-14, 145612-13, 146829, 146661-62, 146664, 146666, 149032-33.

¹⁴⁸⁰ Sandvik 2000: 48.

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
Writing equipment	Wax seals		3+		C18	
12. Textile working						
Weaving equipment	Weaving comb?		1			
13. Metalworking						
Metalworking waste	Slag			6		

Figure K.16. Material associated with functional categories 6 to 13 from privy K376

The privy contained a few staves and bases for buckets, and one complete bucket (cat. 6). A small assemblage of smoking equipment in the form of 72 clay pipe fragments was found (cat. 7). Of these, 63 were stems, of which 57 have not been specified here. Two stem fragments were Dutch, mould-impressed 'In Gouda', while four bore the impressed name of the Norwegian pipe manufacturer Jacob Boy (N143218, 143304, 144298). Eight identifiable bowls were recovered, all from the abandonment deposits (some illustrated below): six resembling Dutch basis type 4 pipes are probably copies produced by Boy, identified as his so-called 'English' types.¹⁴⁸¹ These are also poorly finished, providing more evidence for their Norwegian origin. Boy also produced models resembling Dutch basis type 3 pipes, but the two well-finished type 3 bowls found here bear Gouda makers' marks, and are likely imports (N145832, 145834). The Dutch pipes are types which were produced after c. 1730/40, while Boy's factory at Drammen operated between 1752 and c. 1770. A rarer form of pipe was also found; namely, a highly decorated bowl from a socketed pipe (N146137) (illustrated below bottom right and Fig. 5.118).



Figure K.17. **Top row.** Left: Jacob Boy 'English' pipe ('hand' mark under heel) N143216.¹⁴⁸² Middle: Jacob Boy 'English' pipe (Gouda shield with 'S' on side of heel) N148059.¹⁴⁸³ Right: Jacob Boy 'English' pipe (Gouda shield on side of heel),¹⁴⁸⁴ and an imported Dutch basis type 3 bowl (crowned 'P' Gouda mark under heel) N145832.

Bottom row. Left: Probable Jacob Boy 'English' pipe with impressed cartouche in form of crowned double-headed eagle¹⁴⁸⁵ pictured with an imported Dutch basis type 3 with Gouda mark (basket/basket arch/book cage) (both N145834). Middle: The former and detail of cartouche. Right: socketed pipe N146137.

A small amount of items of clothing (cat. 8) includes two copper alloy buttons and bone and textile parts of a complete female stay (illustrated below and Fig. 5.121). Some 111 leather shoe parts comprising the remains of *at least* 14 complete or near-complete shoes plus fragmentary soles, uppers

¹⁴⁸¹ Pettersen 1944: 35. N143216, 143217, 148059, 145755, 145832, 145834.

¹⁴⁸² Resembles a Dutch basis type 4. The hand stamp (also present on N145755) was used on both Gouda products and pipes produced by Boy at Drammen. Alsvik 1944: 51.

¹⁴⁸³ Resembles a Dutch basis type 4. S = 'slegte'/ordinary: introduced by Dutch guilds c. 1640 (Atkinson & Oswald 1969: 177). Stamp also used on pipes produced by Boy at Drammen. Pettersen 1944: 31; Alsvik 1944: 51.

¹⁴⁸⁴ Resembles a Dutch basis type 4.

¹⁴⁸⁵ Resembles a Dutch basis type 4. The cartouche resembles both the Russian coat-of-arms and the Groningen city coat-of-arms.

and wooden heels were found (Fig. 5.126). Items relating to personal hygiene and toiletry (cat. 10) comprised fragments of at least five chamber pots, a double-sided bone comb, single-sided bone comb fragments, woollen rags possibly used as sanitary napkins, fragments of possible glass eau de cologne bottles (Fig. K.18) and medicine bottles, and three ointment jars (Fig. 5.131). Whipworm and roundworm parasite eggs were found in analysed excrement samples.¹⁴⁸⁶

The only items associated with literacy (cat. 11) were fragments of at least three wax letter seals (Fig. 5.142). Crafts were represented by a possible weaving comb (cat. 12) (illustrated below) and four slags from metalworking (cat. 13).



Figure K.18. L-r: Base and spout of blue-glass perfume/pharmaceutical bottle N146660; possible weaving comb/comb beater N145605; parts of a stay N145706-7, 145729-30.¹⁴⁸⁷

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
14. Children's toys & curios						
Dolls	Wooden doll		1		C18	
Figurines	Pipeclay figurine		1		C18?	Imported
16. Weapons						
Firearms & related items	Gunflint		1			
	Gunpowder container	Wooden 'Apostles'	3		C17	
		Stopper for 'Apostle'	1			
17. Heating & lighting						
Lighting-related equipment	Window glass			207		
Heating-related equipment	Ceramic stove tile			1		Imported
18. Furniture, fixtures & fittings						
Fixtures & fittings	Ceramic wall tile	Delft decorated wall tiles	6			Imported
Moveable furniture	Furniture component	Wooden chair/stool leg?	1			

Figure K.19. Material associated with functional categories 14 to 18 from privy K376

The privy produced a fragmentary pipeclay figurine (base for an animal figurine?) which may have been a toy or curio, and a child's wooden doll (cat. 14) (Figs 5.151 and 5.153). The only items associated with weapons (cat. 16) comprised three wooden powder containers (so-called 'Apostles'), an associated wooden stopper and a gunflint (Fig. 5.161). Items associated with heating and lighting (cat. 17) comprised mainly window glass fragments, and one ceramic stove tile fragment. Furniture, fixtures and fittings (cat. 18) was represented by 6 complete ceramic (Delft) decorated wall tiles and one turned wooden leg for a chair or stool (or a spinning wheel?) (Fig. 5.166).

External deposits in yard and open area in east wing to the north

These deposits accumulated in the open areas within the provisioning manager's enclosure and in the area outside it to the north.¹⁴⁸⁸ The objects from these deposits are likely to have been used, lost or discarded by people living and working in the precinct, most notably members of manager's households,

¹⁴⁸⁶ Hartvigsen 1997: 14.

¹⁴⁸⁷ Photo: Per E. Fredriksen/Nidaros Domkirkes Restaureringsarbeider.

¹⁴⁸⁸ From site stratigraphic groups 359, 362, 363, 366, 367, 378, 381, 382, 383, 387, 388, 389, 392, 393, 398.

the sole residents. Some may also derive from military related activities. As in the case of the ceramic material from external deposits associated with the first residence (Appendix J) it has not been possible to visually sort this material into vessel types, and the presentation is based on information in the site database. The bulk of ceramic and other items comprise fragments and are listed accordingly in the table below as it is unknown how many originally complete items they represent. Where complete or near-complete items are distinguishable or can be estimated, these are enumerated under 'Number'.

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
1. Food preparation & storage						
Kitchenwares & storage vessels	Ceramic cooking/storage vessels	Cooking pots, skillets, storage jars?		1870	C18	Imported & local
	Stone cooking vessels			17	C17-18	Norwegian
	Metal cooking vessel	Cauldron		3	C18?	
Food preparation utensils & equipment	Milling equipment	Quernstones		2		
2. Food consumption (eating/serving)						
Table- & serving wares	Ceramic eating/serving vessels	Plates, bowls, serving dishes		3528	C18	Imported & local
	Glass serving bowl			1		
Eating utensils & equipment	Cutlery	Table knives		7	C18	
		Two-pronged fork		1	C18	
	Spoons	Silver spoons		3	C18	
3. Beverage consumption						
Serving/pouring vessels	Glass serving/pouring vessels	Façon de Venise decanter jug/ carafe	1+?	17	C17	Imported
		Other decanters		24	1741/48-1777	Nøstetangen?
Drinking vessels	Ceramic vessels	Porcelain teawares		197	C18	Imported
	Glass stemwares	Façon de Venise goblets		9	C17	Imported
		Plain drawn stem goblets with tear ('Nøgne jomfru')		1	1741/48-1777	Nøstetangen
		Air-twist goblets		1	1741/48-1777	Nøstetangen
		Unidentified wall/base fragments		84		
	Glass beakers/tumblers	Passglass		2	C17/early C18	Imported
		Façon de Venise beakers (filigree; applied-thread)		6	C17	Imported
		Roemer		52	C17/early C18	
		Bohemian crystal (engraved)		1	1	Early C18
		Bohemian crystal (enamelled)		1+?	4	Early C18
	Faceted crystal tumblers (unidentified)		2+?	12	1741/48-1777	Nøstetangen?
	Smooth tumblers (unidentified)		7	1741/48-1777	Nøstetangen?	
Drinking-related equipment	Coffee mill	Handle		1	C18	
4. Beverage storage/dispensing						
Glass beverage storage/dispensing vessels	Wine bottles	Globular, flat-sided, mallet		192	1741/48-1777	Nøstetangen/Aas
	Spirits bottles	Case bottles		135	1741/48-1777	Nøstetangen/Aas
	Unidentified			201		
Beverage dispensing equipment	Barrel tap	Copper alloy tap		1	C18?	

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
5. Food remains/refuse						
Zoological	Animal bone	Fish & mammal	640 kilos			

Figure K.20. Material associated with functional categories 1 to 5 from external deposits

As in the case of the privy, pottery sherds constituted the most numerous artefact type, and again, most are associated with categories 1 and 2. The total number of sherds recovered was 5785. The main ware types and their respective percentages of the total ceramic assemblage are as follows:

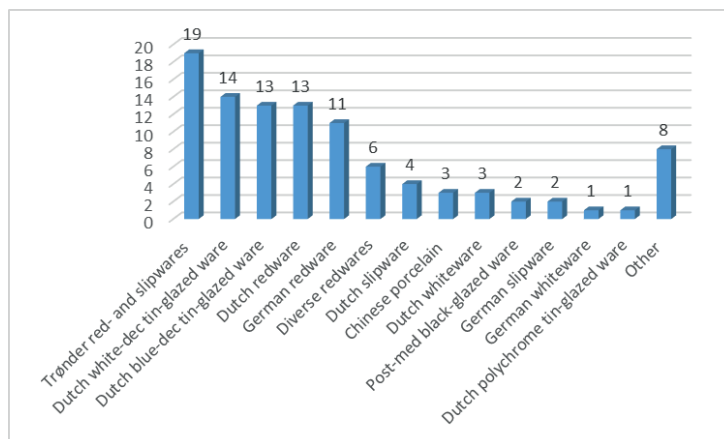


Figure K.21. Relative percentages of ceramic ware types present in deposits external to the first provisioning managers' residence (total 5785 sherds)

Some 32% of the ceramic assemblage in the external deposits comprised securely identified *kitchenwares* used for the preparation and storage of food (cat. 1). These were exclusively imported wares, consisting for the most part of Dutch and German redwares (24%), with smaller amounts of diverse redwares and Post-medieval black-glazed ware. Some of the diverse redwares and local Trønder-type wares may have included kitchenwares, but these have been classified here as tablewares. Tiny amounts of fragments of stone cooking vessels (steatite) and metal cauldrons were also found, as well as two fragments of quernstone.

The majority of ceramic sherds (57%) derived from *tablewares* used for the serving and consumption of food (cat. 2). These were dominated by Dutch blue- and white-decorated tin-glazed vessels (27%), Trønder redware and slipware (19%), Dutch and German slipwares (6%), Dutch and German whitewares (4%), and Dutch polychrome slipware (1%). The wares categorised as 'other' (8%) comprised occasional fragments of various tablewares, kitchenwares, drinking-related vessels (unidentified) and chamber pots (cat. 10) in extremely small amounts each of Creamware, Dutch slip-coated redware, English brown salt-glazed stoneware, European porcelain, Frechen stoneware, Jutish ware, Pearlware, Rhenish slipware, Staffordshire slipware, Staffordshire white salt-glazed stoneware and Westerwald stoneware. These have not been differentiated and sorted between individual functional categories here. Seven table knives (handles and blades), a two-pronged fork and three silver spoons are also associated with category 2 (Figs 5.66 and 5.67). Food refuse (cat. 5) was represented by some 640 kilos of animal and fish bone.

Beverage consumption (cat. 3) was represented by a comparatively small amount of glass vessel fragments, many of which could not be securely identified. However fragments from 17th-century beakers and stemwares (*façon de Venise*, *passglass*, *roemer*, Bohemian crystal), at least one *façon de Venise* decanter, and 18th-century stemwares, tumblers and decanters, including examples from Nøstetangen, were identified (examples illustrated below). A fair number of sherds of Chinese porcelain teawares (cups and saucers) was found (3% of the ceramic assemblage). Some 528 bottle fragments were recovered, of which 201 could not be securely attributed (cat. 4). Of the remainder, 192 fragments

derived from wine bottles of globular, faceted or mallet form (resembling types produced at Nøstetangen/Aas, while 135 derived from case bottles (for spirits). Included in this assemblage was a very small number of bottle seals (Fig. K.23). Other items of equipment used in connection with beverage consumption and dispensing include a handle for a coffee mill and a fragment of a metal barrel tap with a salamander stamp (Fig. 5.106).



Figure K.22. Glass drinking and serving vessels. L-r: *Façon de venise* goblet N114682; *Façon de venise* decanter N129683-5; an air-twist stem fragment from one of Nøstetangen's more expensive fine-quality crystal wine glasses known as '*Viin Glas Chrystal No. 21*' N144794 (with Weyse catalogue illustration); a faceted crystal tumbler N115295.



Figure K.23. Bottle seals: case bottle with 'Londen' seal N143743; bottle seal with letters 'OK' and date 1710 N145125.

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
6. Diverse equipment & tools						
Cutting tools	Knives		7			
	Scissors		2			
Other	Whetstones		5			
7. Tobacco consumption						
Smoking equipment	Clay pipes	Dutch basis type 2 bowls	19		C17/e.C18	Imported
		Dutch basis type 3 bowls	4		1730/40+	Imported
		Dutch basis type 4 bowls	1		1730/40+	Imported
		Jacob Boy Dutch type 3 bowls	6		1752-70	Drammen
		Jacob Boy Dutch type 4 bowls	18		1752-70	Drammen
		Jacob Boy spurred English type	5		1752-70	Drammen
		Unattributed stems & fragments	1298			
<i>Subtotal</i>			1351			
8. Clothing & footwear						
Footwear	Leather shoes		4			
Clothing-related equipment	Buttons	Copper alloy buttons	16		C18	
		Iron buckles	3		C18	
	Buckles	Copper alloy buckles	4		C18	
		Clothes fasteners	Copper alloy fasteners	3		C18
9. Jewellery, personal ornaments & accessories						
Jewellery	Finger ring	Gold ring	1			
Accessories	Folding fan	Fan sticks	8		C18	Imported

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
10. Health, hygiene & toiletry						
Hygiene/toiletry/grooming equipment	Toothbrush	Bone toothbrush	1		C18	Imported?
	Tweezers	Copper alloy tweezers	2			
Pharmaceutical equipment	Glass medicine bottles		66		C18	Nøstetangen
11. Literacy & numeracy						
Writing equipment	Slate pencils	Used stubs	5		C18	Imported?
	Writing slate	Slate	1			
Reading equipment	Book clasp	Copper alloy clasp	1		C17/18	Imported
	Magnifying glass	Glass lens	1		C18?	Imported?
12. Textile working						
Sewing equipment	Needle	Copper alloy needle	1			
	Pins	Round-headed pins c/a	2			
	Thimbles	Copper alloy thimbles	3		C18	Imported
	Sewing ring	Copper alloy sewing ring	1		C18	Imported
	Needle house	Bone needle house	1			
Laceworking equipment	Bone	Decorated bone bobbin	1		C17/18	
13. Metalworking						
Metalworking equipment	Crucibles		12			
	Mould	Stone casting mould	1			
	Punch	Iron punch	1			
Metalworking waste	Slag		28			

Figure K.24. Material associated with functional categories 6 to 13 from external deposits

A few knives, scissors and whetstones (cat. 6) and some 1351 clay pipe fragments were recovered (cat. 7). Only pipe bowls (total 53) have been examined with a view to determining types. Of these just over half (54%) comprise definite or probable products of Jacob Boy's factory, mostly his so-called 'English' pipes which resemble both Dutch type 3 and 4 bowls, and a smaller number of elongated spurred types of bowl.¹⁴⁸⁹ Boy's factory at Drammen operated between 1752 and c. 1770. The rest are Dutch imports, the majority being basis type 2 types with smaller amounts of types 3 and 4. The type 2 forms can be broadly dated to the period c. 1675 - c. 1730, while the others date from c. 1730/40 on.

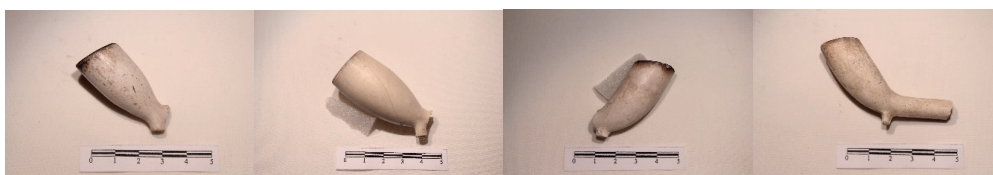


Figure K.25. L-r: Dutch basis type 2 N129146; imported/Boy(?) Dutch basis type 3 N128939 ('LS' heel stamp & Gouda shield); Jacob Boy Dutch basis type 4 'English' pipe N114821 (heart on side of heel); Jacob Boy spurred type of 'English' pipe N146482.

With the exception of a few shoe fragments, the only clothing-related items were varieties of buttons (metal and bone), metal buckles and metal clothes fasteners (cat. 8) (Figs 5.122, 5.124 and 5.125). Clothing accessories and jewellery (cat. 9) were confined to a gold finger ring and bone sticks for a decorated folding fan (Fig. 5.129).

¹⁴⁸⁹ Pettersen 1944.

Items relating to health, hygiene & toiletry (cat.10) consisted of a bone toothbrush, copper alloy tweezers and fragments of bottles used for pharmaceutical liquids and possibly also perfume (Figs 5.136 and 5.137).

Equipment used in connection with reading and writing (cat. 11) included a slate and slate pencil stubs, a metal book clasp and a fragment of a magnifying glass (Figs 5.138, 5.140 and 5.141).

Craft-related practices are poorly represented generally: textile working (cat. 12) by sewing equipment in the form of a needle and needle house, a few pins, thimbles and a sewing ring, and a single laceworking bobbin (Figs 5.146 and 5.147); metalworking (cat. 13) by a few crucible sherds, a mould, a possible punch and slags; and boneworking (cat. 23) by a few bone/antler offcuts.

Functional category	Artefact category	Type description	Number	Fragments	Date	Source
14. Children's toys & curios						
Figurines	Chinese porcelain figurine	Water-dropper/brush-washer	1		C18	Imported
Other	Marbles	Stone marbles	2			
15. Leisure & pastimes						
Gaming pieces	Chess piece	Bone chess king/queen	1		C18	Imported?
16. Weapons						
Firearms & related items	Gunflints		24		C18?	Imported?
	Musket triggers	Iron triggers	10		C18	Imported?
Cannon & related items	Cannon balls	Iron cannonballs/grenades		4	C18?	Imported?
17. Heating & lighting						
Lighting-related equipment	Window glass			1332	C18?	Aas?
	Window comes	Lead comes		7		
Heating-related equipment	Ceramic stove tile	Glazed stove tile	4		C17/18	Imported
18. Furniture, fixtures & fittings						
Fixtures & fittings	Ceramic wall tile	Delft decorated wall tile		2	C18	Imported
Moveable furniture	Chest parts	Mounts?		4		
		Handle		1		
19. Security						
Security equipment	Locks	Barrel locks		5	C18?	
21. Fishing & hunting						
Fishing equipment	Net-sinker	Stone net-sinker	1		C17/18	
22. Horse furniture & equipment						
Equipment & harness fittings	Horseshoe		1		C17/18	
	Horseshoe nails			4		
	Horse brass/mount			1		
23. Bone-, leather-, & woodworking						
Boneworking waste	Bone/antler offcuts			5		
24. Trade- or commerce-related items						
Money	Coins (silver alloy)		15		1588-1730	Imported
Leaden cloth seals	Lead seals			4	C18	Imported

Figure K.26. Material associated with functional categories 14 to 24 from external deposits

A small imported polychrome Chinese porcelain figurine, made as an accoutrement for calligraphy, was possibly acquired as a curio or used as a children's toy (Fig. 5.152). Two stone marbles are the only certain toys (cat. 14). A tower-like turned bone chess piece is the only gaming item found (cat. 15) (Fig. 5.156). Regarding weapons (cat. 16), some 24 gunflints and 10 iron triggers for muskets are associated with firearms (Fig. 5.160), while one complete and three fragments of iron

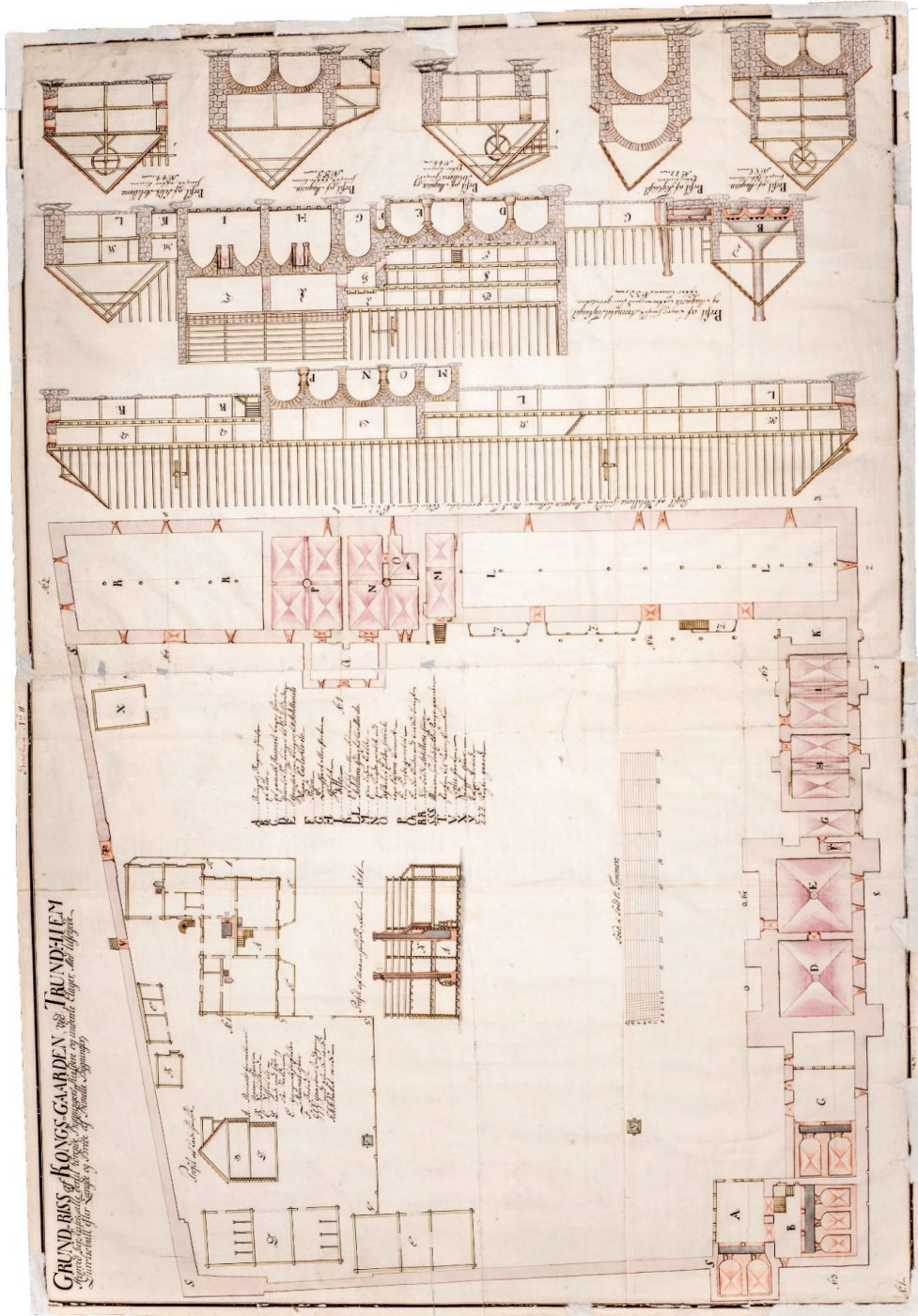
cannonballs/grenades were found. Heating and lighting equipment (cat. 17) was represented by a large amount of broken window fragments and a smaller number of lead comes and ceramic stove tiles, while a few decorated Delft wall tiles and possible chest mounts were all that can be associated with furniture and fixtures and fittings (cat. 18). A few barrel locks also lay in these deposits (cat. 19) (Fig. 5.168).

Fishing was represented by a single net-sinker (cat. 21), and horses by a horseshoe, nails and a possible harness mount (cat. 22). Some 15 silver-alloy coins including shillings and other coins from the reigns of Christian IV and V, Frederick III and IV (1588-1730), and four leaden cloth seals are associated with trade and commerce (cat. 24).

Appendix L

Plan of Kongsgården at Trondheim I / 'Grund-Riss af Kongsgaarden ved Trundhiem'

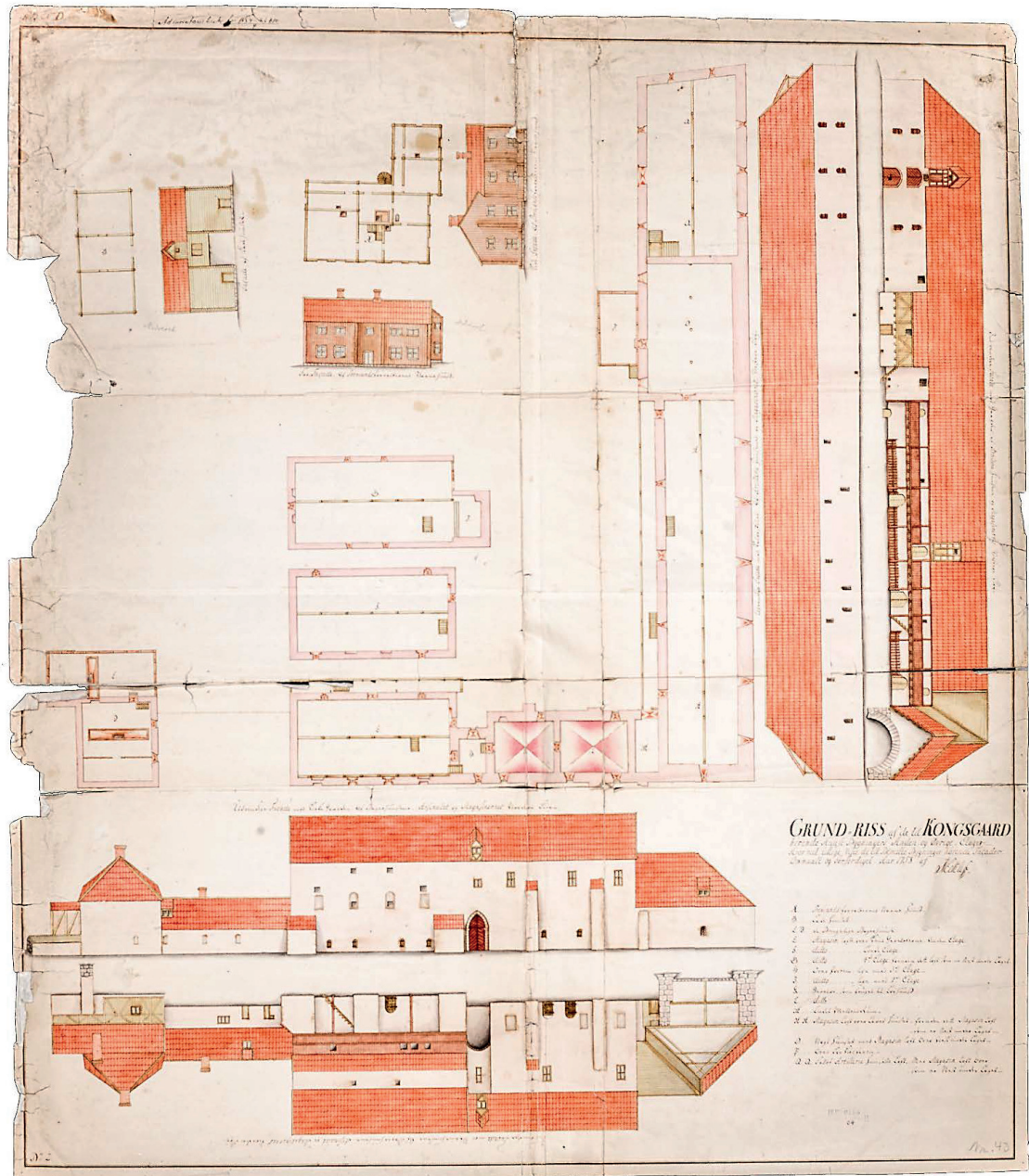
J. N. Eckleff 1758 (KBK XVIII-1 56b. EA-5930, serie T041-KBK Riksarkivet)



Appendix M

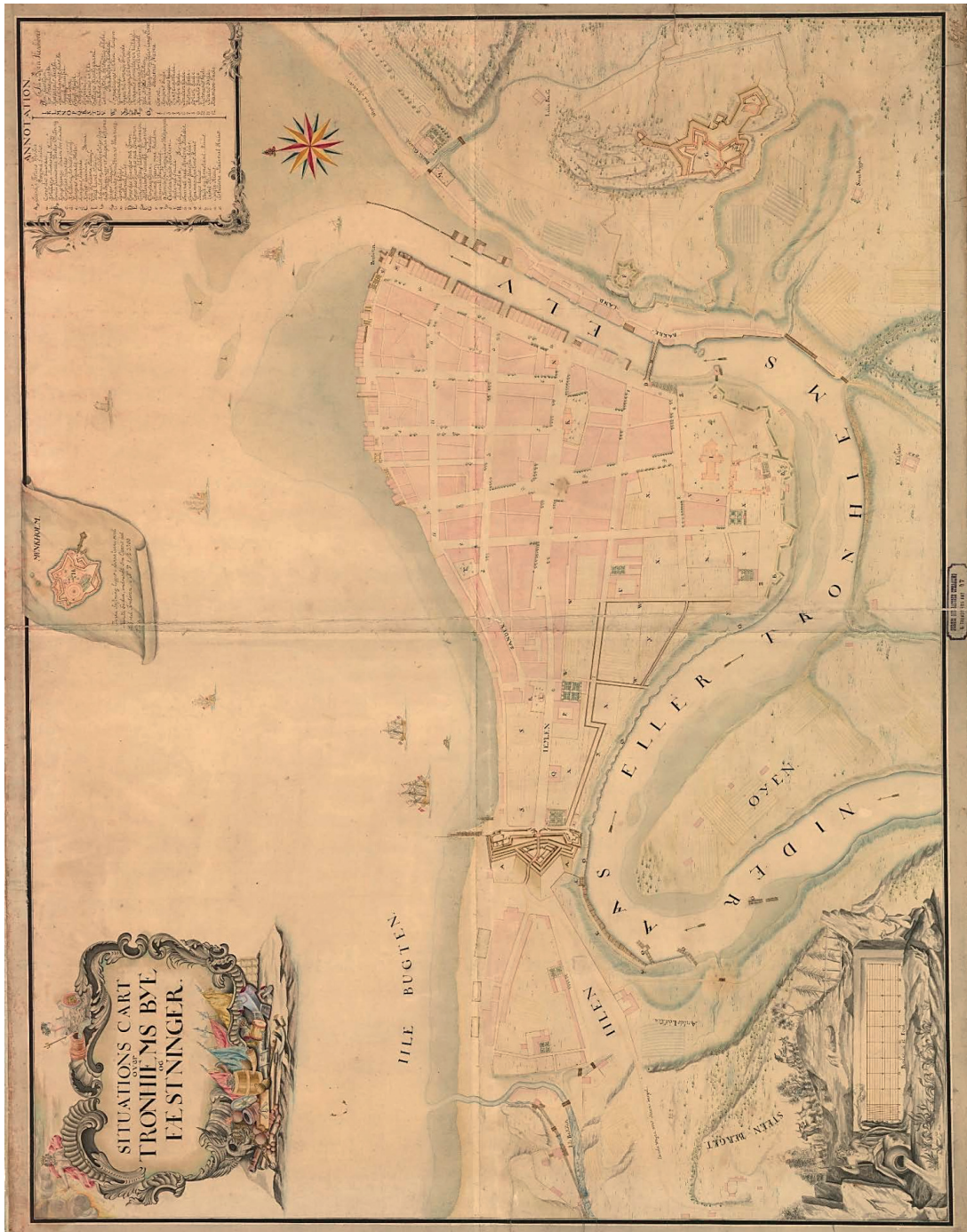
Plan of Kongsgården at Trondheim II / 'Grund-Riss af Kongsgaarden ved Trundhiem'

J. N. Eckleff 1758 (IB1719. T034-IB Riksarkivet)



Appendix N

Map of Trondheim city and fortifications 1761 / 'Situasjons Cart over Tronhiems bye og fæstninger' J. N. Eckleff 1761 (Statens Kartverk)



Appendix O

‘Justified access diagram’ of buildings K332 and K334

This diagram presents a tentative reconstruction of the internal organisation, permeability and room functions of buildings K332 and K334 (first managers’ residence). It shows a combined schematic representation of their excavated ground floors (compare with Fig. J.1.), a suggested plan for the first floor of building K334, and a justified access diagram showing possible room functions and their routes of access and depth of permeability. North to top. (NB. The blue lines on the access diagram present an alternative arrangement with independent access to each room in K332).

