



Norwegian University of
Science and Technology

Challenges to Sustainable Development

An Investigation of Sustainable Practices in
Small-Scale Business and Local Government
in England

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Globalization

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Problem Description

The thesis is centred on uncovering obstacles and challenges that obstruct the uptake of sustainable practice in two case studies. To attend to this primary research question, qualitative methods are used to analyse and evaluate the two case studies from England: a local authority, and a Brewery. The analysis is conducted utilising a sSWOT framework through which the obstacles and challenges should become apparent in the ‘Weaknesses’ and ‘Threats’.

A secondary, resultant question relates to how now acquainted with the challenges, can practice be made more sustainable. This is made possible through the analysis using the other elements of the sSWOT. While benefitting from the knowledge of the identified challenges, the ‘Strengths’ and ‘Opportunities’ of the sSWOT aid in making recommendations for improved sustainable practice.

Contextually, the thesis is grounded in the theoretical literature of: sustainability and sustainable development, eco-innovation, environmental discourses, and stakeholder theory.

Preface

The master thesis is written at the Department of Industrial Economics and Technology Management (IØT) at the Norwegian University of Science and Technology. The thesis also marks the summation of a two-year Master programme in Globalization: Transnationalism and Culture.

I would like to acknowledge and thank the people and institutions who inspired the research for this thesis. Firstly, to Mike Ebbs and Adrian Fox at Dover District Council for finding a position for me during the internship period. To my internship supervisor, Emma-Jane, who supported my work whilst at Dover Council and being a participant to subsequent research.

Secondly, a big thank you to Emma Hall, who made it possible to contribute to the eco-practices on the Welbeck Estate. Also, to Clair Roe for giving me the opportunity to work on improving the Brewery's water practices and participating in my thesis research.

Finally, thank you to John Eilif Hermansen for his understanding, his support in the development of this thesis, and also for sharing his extensive knowledge.

Abstract

Humanity's ever increasing consumptive practices can no longer be sustained in the manner it has become accustomed to without resulting in severe repercussions. Decades of multidisciplinary research has produced extensive evidence of the destructive consequences of the path we are walking, and where it will lead. Nonetheless, we have witnessed limited and inept reformations to a system that requires a robust and effective response in order to alter course. While alterations are primarily directed and steered from top levels, practically, these alterations are executed at ground level.

This thesis will endeavour to explore the challenges and translation of sustainable development from within the contexts of small-scale business and local government in England. The exploration and analysis should reveal the challenges obstructing and impeding sustainable development at the ground level. From which point, recommendations for increasing efficacy in approaches to sustainability will be made possible.

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List of Abbreviations

APA	American Psychological Association
CSD	Commission on Sustainable Development
DDC	Dover District Council
ES	Earth Systems
GI	Green Infrastructure
GHG	Greenhouse Gases
IPCC	Intergovernmental Panel on Climate Change
KW	Kilowatt
MDG	Millennium Development Goal
MNC	Multinational Corporation
NPPF	National Planning Policy Framework
NSD	Norsk Senter for Forskningsdata
PB	Planetary Boundaries
PESTLE	Political, Environmental, Social, Technological, Legal, Economic
PV	Photovoltaic (Panelling)
RES	Renewable Energy Resource
SDG	Sustainable Development Goal
SWOT	Strengths, Weaknesses, Opportunities, Threats
UK	United Kingdom
UN	United Nations
UNCED	United Nations Conference on Environment and Development
WSSD	World Summit on Sustainable Development

1 Introduction

“Anthropogenic pressures on the Earth System have reached a scale where abrupt global environmental change can no longer be excluded” (Rockström et al., 2009, p. 1).

As the quotation indicates, human influence on the Earth has detrimentally evolved to such a degree it has extended to a planetary level. What is more, impacts at this level will, and have had, tangible environmental consequences to human and natural systems. Understandably, there are those who are trying to remedy the rapidly declining condition of the planet through an assortment of ‘sustainable’ solutions. Yet the remedies, systemic modifications, and resolutions appear to be limited and ineffective. This has given rise to the thesis subject matter which considers:

What are the challenges inhibiting the transition to a sustainable world?

This research subject matter in and of itself, is both mammoth and complex, and so it is constructive to consider the elements of this grand question. To realise a sustainable world, three institutional components have been recognised as fundamental to its attainment: business, government and civil society. This thesis considers the business and government components in regard to sustainability. More specifically, it examines these components from a micro-level using qualitative case studies of a local government and small-scale business. In analysing the challenges they face when adopting sustainable practice, it will potentially provide relatable and more generalisable answers for business and government, and also offer insights into the larger grand question.

As the components to a sustainable world, one needs to clear the obstacles business and government face in adopting sustainable practice. Therefore, the thesis question posited is:

What are the challenges that small-scale business and local government in England face when adopting sustainable practice?

1.1 Background

By and large, concern for the environment has surfaced and grown since the 1960s alongside forewarnings of global ecological collapses and shortages (Dryzek, 2013). ‘Environmental anxiety’ has persisted up to the current day going hand in hand with an expanding body of research from the scientific community. This has helped to develop our knowledge of natural systems and the environment. What could be argued to have been societal panic, caused by apocalyptic predictions for the future under the limits and survivalism

discourse, have increasingly grown into scientifically grounded concerns for the environment as human-driven changes in the environment have materialised.

For the past 10,000 years, the Earth has maintained an unusually stable environment in a period recognised as the Holocene (Dryzek, 2013; Griggs, 2013; Rockström et al., 2009). It is one of which has enabled humanity to evolve and thrive and, without human pressures, expected to last for several thousands of years. However, with the onset of the Industrial Revolution and ferocious drive for ‘development’, humanity’s activities threaten this stability, and could result in “...irreversible and, in some cases, abrupt environmental change, leading to a state less conducive to human development” (Rockström et al., 2009, p. 472). Figure 1.1 represents a visual illustration of the markedly intensified energy consumption resulting in the epochal shift.

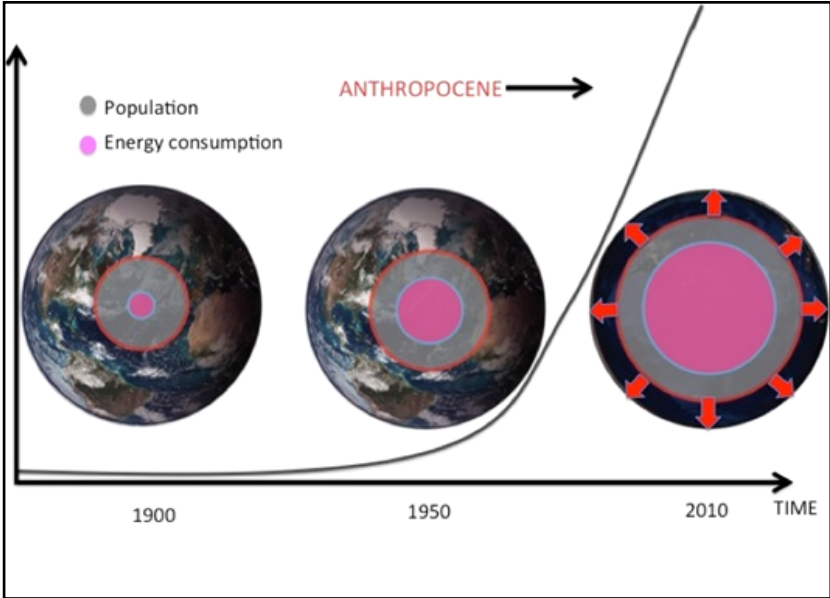


Figure 1.1 Illustration of the Holocene to Anthropocene Transition
Source: (Griggs et al., 2014, p. 2)

The findings of the Intergovernmental Panel on Climate Change (IPCC) provide further substantiation to the position of the incompatibility between dominant human systems and the Earth Systems (ES) (Intergovernmental Panel on Climate Change, 2015). Shockingly, the IPCC is 95% certain that humans are the main cause of current global warming where recent anthropogenic emissions of greenhouse gases (GHG) are the highest they have ever been in history (Intergovernmental Panel on Climate Change, 2015, p. v & 2). Two main factors that contribute to the GHG emissions are the economic and population growths since the pre-industrial era (Intergovernmental Panel on Climate Change, 2015, p. 4). Thus, the IPCC have

unequivocally stated that human influence on the climate system is clear and growing, with widespread impacts on human and natural systems (2015).

As aforementioned, Rockström et al. (2009) identify how human activity is increasingly being carried out to the detriment of the environment. So much so, that it is inducing the transition from the stable Holocene and into the Anthropocene. Griggs (2013) later reiterate the alarming fact that an epoch that has lasted for over 10,000 years is coming to an end, and is chiefly attributable to humanity's intense impact on the earth. Steffen et al. (2015) further document how the Holocene is the only known state in which humans can thrive, and so, humanity's unaltered impact on the Earth's resilience is unwise, if not reckless, as the trajectory drives us further from known stability.

Rockström et al. (2009) originally identified nine planetary boundaries (PBs) which encapsulated a 'safe operating space for humanity' to exist within. In this framework, the analysis found that humanity has already transgressed three of the nine planetary boundaries known to sustain life as we know it within the Holocene. To elucidate their disturbing scientific discoveries, Rockström et al. (2009) presented a planetary diagram that illustrated the planetary stressors, boundaries and thresholds (see *Figure 1.2* for illustration). The boundaries of three of the systems, shaded red in the illustration, are identified as: loss of biodiversity, climate change, and human perturbation of the Earth's nitrogen cycle (Rockström et al., 2009).

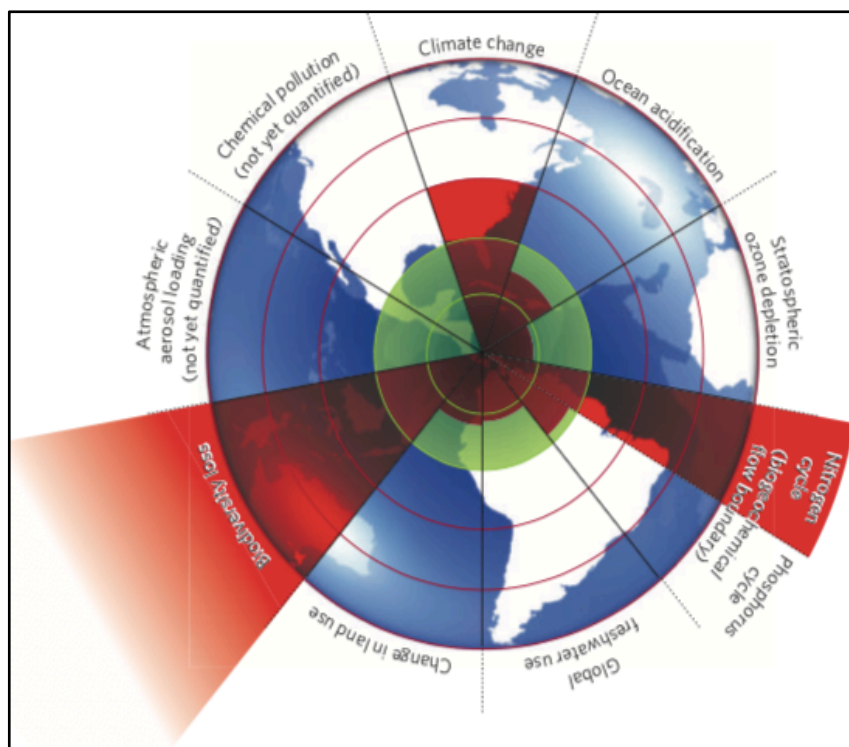


Figure 1.2 Illustration of the Planetary Boundaries
Source: (J. Rockström et al., 2009)

Steffen et al. (2015) have since reviewed and updated the original framework, by way of increasing the number of boundaries that interrelate. In addition to the boundary revisions, it was discovered that “*Anthropogenic perturbation levels of four of the ES processes/features...exceed the proposed PB...*” (Steffen et al., 2015, p. 736). Thus, revealing how continued scientific inquiry is uncovering the previously unknown extent to which human activity is detrimental to Earth Systems (ES). Furthermore, it demonstrates the scientific understanding of what a sustainable world requires, and how society is functioning in a disparate way to these requirements.

With intensifying pronouncements being articulated from the global scientific community, coupled with tangible environmental changes and disasters, urgent calls to address the multitude of environmental problems, and to act upon them, have been voiced from a vast range of arenas.

To answer the call, from a top level, the United Nations have come together on numerous occasions to address global challenges and deliberate over how to shape the future in a sustainable way. Notably, the United Nations met at a conference on the environment and development (UNCED) in Rio de Janeiro, 1992. As one of the more progressive and fruitful assemblies, Agenda 21 was endorsed by a substantial number of heads of states and governments accounting to over 178 (Dryzek, 2013; United Nations Conference on Environment and Development & Johnson, 1992). Agenda 21 was conceived as an action plan for sustainable development, and so validated the environmental discourse on a global level (Dryzek, 2013). It acknowledged that human consumption and production were intensifying global environmental problems, whilst also calling for economic growth to finance the solutions needed to solve it (Dryzek, 2013, p. 151). Subsequent to the conference, the Commission on Sustainable Development (CSD) was established in the December of 2002 to oversee, monitor, and report on the effective uptake of Agenda 21 (Dryzek, 2013; United Nations Department of Economic and Social Affairs, 2017). Later in Johannesburg, South Africa, the World Summit on Sustainable Development (WSSD), 2002, reaffirmed the commitments made ten years earlier at the UNCED (Dryzek, 2013; United Nations Department of Economic and Social Affairs, 2017). In more recent times, the United Nations assembled at the Sustainable Development Conference in Rio de Janeiro, 2012, otherwise known as the Rio 20+, to draft up the Sustainable Development Goals (SDGs) intended to supersede the Millennium Development Goals (MDGs) that were introduced in 2000 (Griggs et al., 2014). The SDGs evolved into 17 goals and 169 targets aimed at achieving sustainable development which came into force in 2015 (United Nations, 2015).

The summarised events of the most notable United Nations assemblies serve to demonstrate the prolonged prominence of the sustainable development discourse. What is more, it illustrates the top-level attention and commitment to creating a sustainable present and future.

The Paris Agreement displayed yet another global show of commitment to tackling environmental issues with 175 parties signing the Agreement during the Opening for Signature of the Paris Agreement (United Nations / Framework Convention on Climate Change, 2016). The Agreement came into force on 4th November 2016, and demonstrated a concerted, global, governmental effort in addressing climate change. This was seen in their commitment to limiting a global temperature rise to a two degree increase above pre-industrial levels within the Agreement (United Nations / Framework Convention on Climate Change, 2015). Further still, an ambitious target was set to limiting the temperature rise to 1.5 degree Celsius. Yet despite unfolding scientific evidence and top-level commitments, environmental problems appear to be snowballing with perceptibly limited effective action taken to addressing them.

The globally-affecting, environmental phenomena are transpiring despite a host of mitigation policies and strategies being published and ‘enacted’. One can assume the affirmative action being taken by governments and governing bodies is insufficient to counter the global impacts. Scathingly, Horton (2014) blasts the development and implementation of the SDGs by the UN. It is stated *“The SDGs are fairy tales, dressed in the bureaucratise of intergovernmental narcissism, adorned with the robes of multilateral paralysis, and poisoned by the acid of nation-state failure”* (Horton, 2014, p. 2196). Unmistakably one can presume that for Horton at least, the SDGs are categorically deficient, and an unsatisfactory means for propelling sustainable development. The details he discerns are thought-provoking as they indicate the failings of a top-down approach, and the difficulties in multiparty engagement. However by and large, the crux of his contention is with the inadequate conception of the full meaning of sustainability. This deficient conception is then heavily reflected in the SDGs and *“Unless we embrace and measure the full meaning of sustainability, the SDGs will fail”* (Horton, 2014, p. 2196). In sum, and drawing on Horton’s statements as illustrative, there is not a singular, unified perspective on how best to proceed towards a sustainable world.

Human-centred action has been confirmed as the drivers of environmental change, yet societal alterations have been inadequate. When the detrimental effects of the global environmental changes are not resigned to the theoretical, but a lived experience for millions, still there continues to be a sense of apathy towards change. Why has it not resulted in

immediate, drastic transformation? What will it take to change? Can the alterations be implemented in time before there is no longer a window to do so?

The 1. Introduction demonstrates ‘top-level’ reactions and approaches to tackling the problems facing a sustainable world. However, it is insufficient to only be directed from a macro, top-end level addressed by government and international bodies. It also needs to be tackled from the ground up, too. Essentially, a concerted effort at all levels is necessary if changes are to be effectively made. As the Introduction suggests, the environmental problems humanity faces are wide-reaching, and far too multifaceted for a singular body to comprehend, address or to solve. Likewise, the questions broached are far too complex for a thesis to address. In light of this, the research undertaken for this thesis centres on analysing and examining these issues from a lower ground level. It is based upon understanding the questions from a position of locality. From a micro level, “*What are the challenges that small-scale business and local government in England face when adopting sustainable practice?*”. This question summarises the primary aim of the research, thus, the research question posited. A wider aim, is to contribute to the discourse and literature of sustainability through exposing the challenges in its uptake from ground level contexts. Lastly, by way of analysing the challenges and providing recommendations, the third aim is to aid the case studies in adopting sustainable practice.

1.2 Thesis Structure

To reassert the purpose of this study, it is to uncover the ‘sustainability’ challenges and obstacles that face local government and small-scale business. These are exemplified through two case studies in England. To explore the study question, the thesis is structured in the following form:

Initially, it will explain the Methodological Framework that has been chosen to bring the study into fruition. As such, it covers the methods that ground the research, and the rationality for their use. For this reason, the methodology section also considers the strengths and weaknesses of the methods to demonstrate their suitability to the research topic, and then discusses the issues that surfaced when conducting the research. The methodology section also presents the analytical tools that underpin the research analysis, and then verifies the soundness of research. Lastly, the section details how literature was located and selected.

The ensuing chapter is the Theoretical Framework that builds the literary scaffolding of the thesis. Included in this chapter, are subchapters comprised of discussions and explorations pertaining to the theories and concepts regarding: sustainable development, eco-innovation and

green technology, significant environmental discourses, and stakeholder theory. This sees the summation of the contextual grounding for the research.

As such, the thesis moves forward into the empirical research conducted for this thesis under the Cases and Analysis chapter. The two cases are analysed separately, beginning with an analysis of the Welbeck Brewery, and then onto Dover District Council. The analysis for both cases is comprised of qualitative data collected from primary and secondary sources: participant observations, interview analysis, and lastly, textual analysis.

To visually illustrate and outline the findings of the analysis, the Results chapter displays the analysis in succinct, sSWOT-style tables. At which point a discussion of the cases and their results is made possible in the chapter titled Discussions and Recommendations. This chapter assesses the results in connection with the theory discussed in the Theoretical Framework and evaluates them. The chapter culminates with recommendations for each case that could aid in maximising potentials for sustainable practice and overcoming challenges.

The final segment of the thesis is found in the Conclusion chapter. The chapter recapitulates the purpose of the study and synopsis the focal ideas and challenges to sustainable development from the contexts of local government and small-scale business in England.

2 Methodology

This chapter explores and explains how the research was conducted in order to form the empirical basis to the thesis. In the following *Figure 2.1*, a visual aid has been created which illustrates the Methodological Framework of this thesis. The various arrows demonstrate the systematic linkages between the stages of research progression as shown in each box, e.g. observations. All the arrows and boxes lead to the Conclusions as the end result.

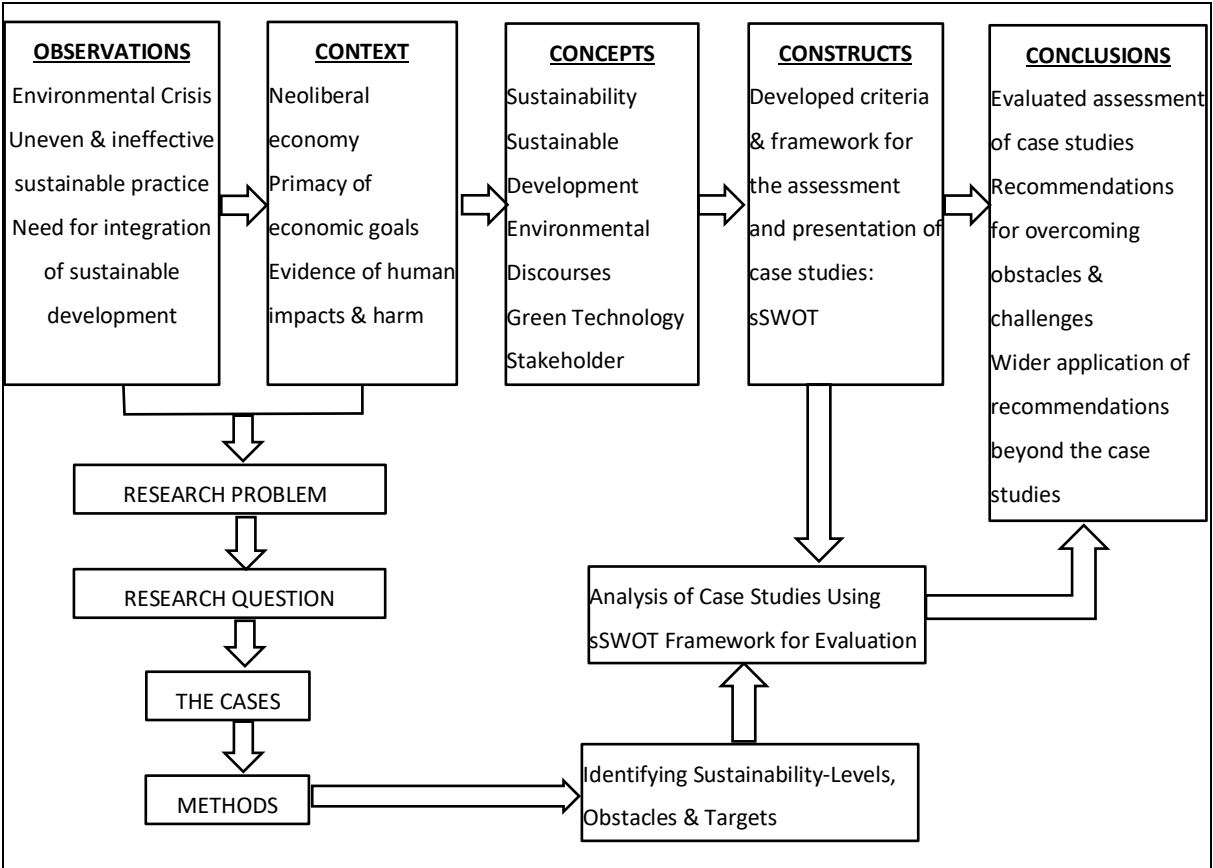


Figure 2.1 Methodological Framework
Source: modified from (Davis, 1996, p. 27)

To explore the research subject matter and question at hand; ‘*what are the challenges local government and small-scale business face in adopting sustainable practice*’, multiple methods of research were selected and employed based on their appropriateness to the topic. A method could be understood as a mechanism to gather data (Baxter, 2010, p. 82). In this study, the methods chosen enabled the gathering of mostly ‘primary data’, but also supported by ‘secondary data’. Hox and Boeijs (2005) define both data types, illustrating their differences. Primary data is recognised as original data that is collected for a specific research goal, whereas,

secondary data is gathered for a *different* purpose and is then reused for the purposes of another research question (Hox & Boeijs, 2005, pp. 593, emphasis added).

Predominantly conventional, qualitative methods were used because they better uncover the complexity of sustainability and the obstacles barring its effective uptake. Primarily, the methods implemented were participant observation, interviewing techniques, and text analysis. In drawing from these techniques, it permitted me to oversee how things functioned on the ground and see the realities of implementing sustainable practices. Additionally, it was important to communicate with those who are engaged in the day-to-day realities to understand how the goal of sustainability features and glean what impediments it faces.

To attend to the quality controls of the ensuing research, ethical issues are addressed in the proceeding methods sections as they can be discussed with contextual illustrations. However for the purpose of clarity, they are bullet pointed below and cross-referenced to the relevant section under footnotes:

- Confirmation of the Anonymity of Respondents: **2.6**
- Privacy & Confidentiality: **2.6**
- Consent Verified: **2.3.1 & 2.4**
- Validity¹ of Information: **2.3.1 & 2.4**
- Ethical Queries & Dilemmas: **2.2 , 2.3.1 & 2.6**
- Recognition of Limitations: **2.1, 2.3.2 & 2.3.3**
- Reliability² Checks: **2.3 & 2.4**

2.1 Qualitative Case Studies

The research for the thesis centred on two illustrations: the Welbeck Brewery, and Dover District Council. For that reason, the research is predominantly based on qualitative case studies. Gerring (2004, p. 341) argues a case study “...is best defined as an intensive study of a single unit with an aim to generalize across a larger set of units”. At a foundational level this definition is useful as it is succinct and gives clarity to the denotation of the method. In addition, the case studies may indicate trends or challenges common beyond the cases in point. However, within idiographic research (depth-oriented), “...a case is viewed as neither entirely unique nor

¹ “An account is valid or true if it represents accurately those features of the phenomena that it is intended to describe, explain or theorise” (Hammersley, 1992, p. 69)

² Reliability “refers to the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions” (Hammersley, 1992, p. 67)

entirely representative of a phenomenon...” (Baxter, 2010, p. 86). Therefore, it is important to stress that within this research, care is taken in limiting³ the findings’ generalisability, and is not presumed to be representative of all small-scale business or local government. A balance has to be achieved between the exclusivity of the case, and also what can be generalised somewhat with the intention of contributing to the sustainability discourse.

Baxter (2010) notes a range of valuable characteristics of the case study. Namely, within qualitative research, the case study can be used to better understand, and potentially solve problems. If applied to the thesis topic, then the utilisation of case studies could help to qualitatively uncover the challenges and obstacles that are hindering progress to a sustainable world. Moreover, the characteristics of the case study are well-matched for enhancing existing theory, or else, falsifying them owing to its in-depth nature. Most pertinent to this research, is how the case study can provide a detailed analysis of why theory or explanations do (not) apply to the context of the case, and furthermore, facilitate the development of new explanatory concepts (Baxter, 2010, p. 82). In sum, *“Case study methodology is a powerful means by which to both (1) understand the concrete and practical aspects of a phenomenon or place and (2) develop theory”* (Baxter, 2010, p. 95). To this end, utilising case studies as the foundation to this thesis is well-suited given the complexity of the research question and subject matter.

2.2 Participant Observation

Participant observation as a method is based upon a researcher immersing themselves in a research setting and systematically observing interactions and events (Hox & Boeije, 2005, p. 595). In its simplest form, participant observation can be condensed into a three-part process whereby the researcher contacts a specific group or community, they then live or work amongst those people in order to gain an understanding of worldviews or how systems work. Finally, the researcher returns to the academic world to write an account of the findings from the experience (Crang & Cook, 2007, p. 37). Similarly, this simplified and contracted summary of the participant observation process encapsulates how the research was conducted for both of the cases in this thesis. Contact was made with the Brewery and local council through networking and email with regards to work experience through internship placements. Following on, the observations took place during internship periods at the respective workplaces. The placements varied in timescale. Three months were spent in the offices of the

³ Recognition of Limitations

local government as a planning intern, and six weeks at the Brewery analysing the brewing process, its water usage, and efficiency. Participant observation was a favourable choice of method as it created a less artificial environment in which to observe and research the realities of achieving sustainability in a low-level government setting and small-scale business. As such, participants behaved in more natural ways going about their jobs and daily responsibilities. Moreover, due to the length of the internships, my presence became commonplace, thus enabling participants to feel comfortable going about their activities without the conscious thought of being under scrutiny.

Work experience through an internship provided a gateway into physical spaces of potential research. This is significant as issues of access can be a primary difficulty in conducting research (Crang & Cook, 2007; Kearns, 2010; Miller & Bell, 2002). Through placements in legitimate and established roles as an intern, the benefits were twofold allowing myself, the researcher, to be both simultaneously an ‘outsider’ and ‘insider’ (Kearns, 2010; Winchester & Rofe, 2010). Firstly, I was given the opportunity to participate in the activities of the workplace through my position, and secondly, to observe the realities on the ground (Crang & Cook, 2007). What is more, having such a role can give the researcher “...*the chance to give something back to the community under study*” (Ley, 1988, cited in Crang & Cook, 2007, p.39). It is important to emphasize this aspect because the issue of reciprocity⁴ is integral to conducting ethical research, whereby, the researcher does not merely ‘take’ from the study, and thus, “...*a ‘good’, honest and reciprocal relationship*” can be formed (Birch & Miller, 2002, p. 92). In this instance, I was able to offer recommendations for more efficient resource use at the Brewery and provide supporting documentation to green strategies at the council.

2.3 Interviews

Participant observation provides a means to witness and experience the ‘on-the-ground’ realities first hand, and so serves as complementary evidence for other more structured forms of data gathering (Kearns, 2010). As such, participant observation in this research was coupled with multiple interviewing methods which formed a fundamental part to the overall methodology. This served to form a rounded construction of the research.

An interview is defined as: “*a means of data collection involving an oral exchange of information between the researcher and one or more other people*” (Hay, 2010, p. 378). This

⁴ Ethical Queries & Dilemmas

method is important as it offers an explanation to what you observe; to fill in gaps in knowledge left unanswered by methods like observation (Dunn, 2010). Conjoining participant observation with various interview techniques is a strong and effective combination because it constructs a framework to compare what is being said, with what is being done.

The interviews were designed to be semi-structured and content-focused, whereby I had prepared a set of questions. The semi-structured style meant that it followed a degree of predetermined order, but also allowed some freedom and flexibility in heading down other relevant lines of conversation (Dunn, 2010, p. 102). Moreover, the semi-structured and conversational style allowed participants to discuss topics or issues they felt were relevant or important (Dunn, 2010). In this way, I was privy to information I would otherwise have been unaware of, or else, unaware it was of significance had it been a structured ‘question by question’ interview.

Each interview was aided by an interview guide to ensure each discussion maintained a level of focus and key topics would not be forgotten. The interview guide⁵ comprised a combination of both primary questions to initiate discussion, and secondary questions to prompt the participant to expand upon the topic (Dunn, 2010). Moreover, the questions were designed so as to avoid leading participants to answer in a ‘correct’ way, perceived by Dunn (2010) as a vital characteristic in interviewing. In addition, the phrasing of each question was designed to encourage participants to expand on their answers beyond confirmation or refutation (Dunn, 2010). This also helped in developing the flow of conversation and so consolidated the complexity of the answers. The questions were further devised to be unambiguous, so participants could answer in a straight-forward way that would limit misunderstandings and confusion.

2.3.1 Face-to-Face Interviews

Having established relationships and built a rapport with the participants as a result of the prior internship periods, I was able to conduct multiple ‘traditional’ interviews (face-to-face) that typically lasted anywhere between forty-five minutes to ninety minutes. The length of the interviews was roughly intended to be sufficiently long to explore deeper into the questions, and thus, go beyond ‘surface level’ discussions and avoid reductionist superficiality. Concurrently, the interviews were short enough to avoid becoming overly time-consuming for

⁵ Reliability Checks

participants. Echoing my own findings, Crang and Cook (2007) found an hour sufficiently long for a single interview; to establish rapport and be ‘user-friendly’ for interviewees.

A result that came from the length and depth of the interviews was how it would be extremely difficult to take verbatim records while listening and interacting sufficiently with participants. This could lead to many misunderstandings and confused note-taking when drawing on the records for analysis (Crang & Cook, 2007). Critically, a primary concern with being engrossed in transcribing during interviews is how it could undermine rapport building. An intensity and focus on note-taking could come at the expense of developing the interactions, and disrupt the flow of conversation (Crang & Cook, 2007; Dunn, 2010). To avoid problems such as these, one can consider the use of a recorder⁶. Dunn notes that the advantages of using a recorder are manifold; if the interviewer is no longer preoccupied with note-taking, they can focus on the discussion, thus being an “*attentive and critical listener*” (Dunn, 2010, p. 119). Moreover, it would enable the interview to take a natural conversational style and allow the interviewer time to prepare for the next prompt or question, thereby maintaining the conversational style (Dunn, 2010, p. 119). As such, before the commencement of each face-to-face interview, I asked whether it would be acceptable to record the interviews so that I could transcribe the recordings later on. All participants for this research consented⁷ to the use of a recorder prior to the beginning of each interview. The benefit of not having to focus on note-taking during each interview allowed me to be ‘present’ and alert to new lines of questioning. Additionally, an advantage to being ‘present’ in the interview gave me time to consider whether I fully understood what was being said so I could question the meaning of answers, and conclusions could be verified⁸ (Dunn, 2010). What is more, I found it possible to have an awareness of whether certain questions required prompts, as opposed to being busily occupied with writing participants’ responses.

Ahead of the interviews, I had reservations about inhibiting the discussions due to the presence of the recorder; either through participants’ withholding information, their uneasiness, or resultant disjointed conversation. As noted by Dunn, the recorder could have affected participants’ willingness and openness out of vulnerability, or else, as it stood as a formal reminder of the situation (2010). However, I found once consent was given and the interview began, concern over the recorder dissipated.

⁶ Ethical Queries & Dilemmas

⁷ Consent Verified

⁸ Validity of Information

2.3.2 Telephone Interviews

Traditionally, interviewing was understood as a verbal face-to-face exchange of information for data-gathering purposes (Dunn, 2010). However, the speed and development of technologies has led to the emergence of a variety of alternatives including interviews by telephone, email, instant messaging and videocalls (Dunn, 2010). Data-collection for this thesis has benefitted from these developments, largely, due to its merits of practicality and convenience. For example, instigating the opening contact and positions for the internships with both the Brewery and council materialised through email and phone calls. Similarly, the process of asking for interviews, arranging available dates and times etc. were discussed via email as I was no longer in the vicinity to arrange face-to-face contact time. This demonstrates how the developments in technology have meant that distance and time restraints do not have to pose as a barrier to conducting research. Two interviews were conducted over the phone because of the geographical difficulty in managing them in person. One phone interview from the Welbeck Estate was conducted over a forty-five minute commute to work, therefore, illustrating a strength in conducting the interviews over the phone. It meant that the interview could be done at the convenience of the participant where they were able to fit the interview around their schedules, and so, did not impede too much on their time. In sum, the advantages of being able to use different interviewing methods interchangeably permitted additional exchanges of information, at the convenience of both interviewer and participant.

A possible weakness⁹ of the ‘over-the-phone’ interviewing style was that perhaps to an extent, the conversation felt forced resulting from the need to fill any silences. The absence of physical presence meant there was a certain confusion in misunderstanding whether the silences in conversation needed communicative cues, or alternatively, if they were pauses for thought, or else, were concluded responses. As such, the interviews may have profited from the face-to-face contact; where in person you can better comprehend the situation and interpret the participants’ silences. On the other hand, as it was as a purely verbal exchange and not face-to-face, I was able to transcribe the interview at the time and did not have to be concerned about causing offence or damaging the rapport by appearing engrossed in note-taking. A second difficulty discovered during the phone interviews was disturbances on the side of participants. One participant, who at the time was in their office, had visitors interrupt the interview which

⁹ Recognition of Limitations

disrupted the flow of questioning. However ultimately, the interviews would have been far more difficult, if not impossible, had telephone interviewing not been an option.

2.3.3 Electronic Interviews

Face-to-face interviews and telephone interviews formed the central interviewing methods. Additionally, they were supplemented by further electronic interviews sent through email that consisted of the same questions posed in the other interviews, however, they were modified to suit the form of technology and the respondents. The emailed interviews were sent to formal bodies such as, NGOs and governmental bodies (e.g. Natural England, RSPB) where earlier contact had been established during internships. These were sent so as to obtain perspectives on the key themes of the research. They helped in providing further insights into the aims of sustainability and its obstacles. It is recognised that their utility is limited¹⁰ due to a certain level of superficiality on account of the more so ‘on the surface’ responses that official bodies would present. On the other hand, they do illustrate the positions and perspectives of larger organisations which are useful contextually, and when aligning with the responses and interviews from the Welbeck Estate and Dover District Council.

2.4 Transcription and Text Analysis

On completing the interviews, all of the notes and recordings were assembled and transcribed. Minichiello et al. (1994), define a transcript as a written “*reproduction of the formal interview which took place between researcher and informant*” (p. 220, cited in Dunn, 2010, p. 120). This stage was time-consuming owing to the length of the interviews and also, because of the verbatim transcriptions that were necessary to ensure the content was “*methodologically vigorous*” (Crang & Cook, 2007, p. 86). Once a record of the transcription was completed it was sent to the informants for ‘participant checking’ or otherwise known as ‘member checks’ (Baxter, 2010; Crang & Cook, 2007). This stage had multiple benefits. The consultation of participants over the records reiterates the participatory and reciprocal nature of their inclusion in the research; where they are not reduced to ‘informant’ and simply an information source. Their inclusion in this stage means that the data collected and assembled can be vetted¹¹ by a person who was present at the interview besides the interviewer (Dunn, 2010). In this way the verbatim transcriptions can be verified for meaning and serves to increase

¹⁰ Recognition of Limitations

¹¹ Reliability Checks

the validity¹² and credibility of the research as the content is endorsed (Crang & Cook, 2007). It also affords the participant with the opportunity to blacklist responses they later felt inappropriate or misrepresented¹³. The occurrence of this was rare, however, there were occasions where on review some participants felt uncomfortable over comments they had made and requested their omission. For that reason, the comments in question have been omitted from the transcriptions. Lastly, a final advantage of the participant checks is how it is another opportunity to confirm their participation and reiterate their consent¹⁴ to the research. Thus, it provides further ethical validation to the study at hand.

Once the interviews were transcribed, sent to participants and finally returned, a second stage of analysis began beyond the initial scoping of content. The scanning of each transcription was mostly a case of searching and identifying key concepts and phrases, and then taking note of the term's frequency. Multiple interviews and their analysis can be compared and contrasted for divergences in opinion and understanding, or else, concurrence over affairs and topics. These help to build up a construction of what is deemed important to the participants. The analysis of the transcribed interviews enables patterns to emerge, and for one to discern surfacing themes.

In addition to transcribing and analysing the recorded interview texts, documentation related to the case studies was also examined. These largely revolved around the various environmental initiatives and strategies the institutions had published. The Welbeck Brewery itself, lacked any official environmental papers, and so, examination of documentation pertaining to the environment of the Welbeck Estate was conducted in its entirety. Material was found on the Welbeck Estate's website and also included a two page '*Environmental Objectives*' document (Welbeck).

DDC on the other hand, had copious amounts of documents. This may reflect governmental aims of openness and transparency to the public, and also indicate the overall size of the government as an institution. The material examined chiefly focused on the council's environmental strategies and commitments, in addition to wider national guidelines and officially released papers (See, Department for Communities and Local Government, 2012; Department for Environment Food & Rural Affairs, 2013; Dover District Council, 2011, 2014; Lawton et al., 2010).

¹² Validity of Information

¹³ Reliability Checks

¹⁴ Consent Verified

2.5 Analytical Tools

SWOT analyses are a crucial analytical tool used by companies in order to assess the health of the business. However, the basic analytical framework can easily be adapted to suit a variety of purposes. For this reason, a SWOT analysis would be a useful tool for examining the results of the study and facilitating the conclusions of the research question.

SWOT refers to the Strengths, Weaknesses, Opportunities, and Threats. These four categories are used to classify both the internal and external stimuli that impact on the health of a company. SWOT stands as a rudimentary analysis, however, there are a variety of alternatives that can offer more specialised or comprehensive inquiries into the condition of a company. The PESTLE analysis for example, pinpoints particularities to be investigated involving: the Political, Economic, Social, Legal, Technological, and Environmental aspects (PESTLE Analysis, 2018). In highlighting explicit aspects, a company is guided towards considering the spectrum of influences. Similarly, a sSWOT analysis includes a sustainability aspect and draws focus towards environmental sustainability; it considers a longer term perspective of opportunities and threats external to an organisation (Metzger, Putt Del Pino, Prowitt, Goodward, & Perera, 2012). Furthermore, it broadens the analysis beyond the initial scope of the organisation, and so, considers a wider range of stakeholders. These two features, amounting to a more holistic approach, facilitate the possibility of collaborative opportunities. The sSWOT identifies the strengths an organisation has, and could build, through collaborating with others. Likewise, it draws attention to an organisation's weaknesses that can be addressed with the assistance of other stakeholders (Metzger et al., 2012). As such, the sSWOT analysis makes it possible to pursue some of the central traits within 'sustainability', i.e., collaboration.

These analytical SWOT tools are developed foremost to aid business; however, their utility can be adopted into other settings and for other purposes. As such, the use of SWOT, or more specifically, the sSWOT, has been adapted into this thesis to form an element of the overall methodology. Through the structured format of sSWOT an analysis of both the cases can be categorised and assessed. Moreover, an analysis in this form should greatly aid in unearthing the obstacles and challenges that the research questions have postulated.

2.6 External Verification

To ensure the ensuing research would be ethically sound¹⁵, an outline of the proposed study was sent to the Norsk Senter For Forskningsdata, NSD (Norwegian Centre for Research Data). The outline illustrated how the study would be conducted including: the methods employed, the participant groups, privacy assurances, and the transparency of research purpose. Once the application was sent, any ethical queries or concerns were highlighted by NSD and subsequently dealt with, thus, confirming soundness of the research.

NSD verified research demands the privacy and anonymity¹⁶ of participants is observed and respected. In light of this, all records of the interviews have been anonymised, and following the completion of the research will be deleted. In addition, some respondents requested the retraction of statements, and distanced themselves from opinions they voiced. In light of this, it appeared appropriate to reconfirm that as much as possible, their identities would be hidden and the information they provided would not be attributable to them¹⁷. For this reason, respondents have not been named directly in the thesis, and interviews from Dover District Council and Welbeck Brewery have been coded.

2.7 Literature Search

To situate the research, and to understand its findings, it has to be placed within a body of academic literature. This gives it grounding and comprehension. Primarily, the literature that shaped this thesis was found through Oria, NTNU's online search engine, and Google Scholar. Numerous results appeared when searching for literature on the search engines and so keywords had to be applied to limit the results which were bound by their relevancy. Keywords were limited to the core concepts and terms used in the thesis, such as, 'sustainability', 'sustainable development', 'stakeholder', and 'environmental discourse'. Further filters were needed to continue to limit the results found in the search engines due to the umbrella terminology like sustainability. Simply, searching the term 'sustainability' in Oria produces 1,647,844 results. This is because sustainability covers a vast array of subject areas, and in order to sort through such an extensive list it was essential filters based on key phrases, authors, and language were applied. It is worthy to note, that just as filters were needed to search for the most relevant literature, 'filters', or limitations, were essential to curtail the subject matter and theory that

¹⁵ Ethical Queries & Dilemmas

¹⁶ Privacy & Confidentiality

¹⁷ Confirmation of the Anonymity of Respondents

would inform the thesis. In consequence to the size of the research paper, as well as the time constraints, the delimitations allowed for a heavier focus on the selected literature determined to be most important to the research.

Literature that formed the contextual background for the research questions also came from prior modules from the Globalisation degree programme, namely the Green Values and Ethical Behaviour course, and Qualitative Methods. The reading lists for the courses were used and have been referred to in this thesis because of their relevancy to the topics and the research design.

Key websites also formed a part of the literature search, such as, the United Nations, and the internships' websites to search for key documentation, policies and documentation. For example, DDC's website contained a multitude of its policies and strategies stretching many years prior to the current day. Conversely, the Welbeck Estate had only a single document based on its overall environmental policy.

The thesis is written with APA 6th referencing as it is a common style used in the social sciences and a widely used standard of referencing.

3 Theoretical Framework

To construct the analysis and examination of the research, the thesis is built from core concepts and theory that ground and contextualise it. Foremost, concepts such as sustainable development, found within the body of environmental discourses, and theory surrounding stakeholders are central to the contextualisation and construction of this thesis. As such, the following sections will review and recapitulate the key debates and various positions within the respective theoretical fields.

This thesis is informed primarily by the proliferated discussion and conceptualisation of sustainability. It utilises previous sustainability thinking to better ground and contextualise the research. The developments and discussion on the discourse, and definitions of sustainable development are foundational to the thesis. It is critical that there is a clear understanding of the concept, and a position held on it in order to explore and examine the research question: *what are the obstacles facing the implementation of sustainable development in the context of small-scale business and local government*. Without a clear understanding or position, the investigation of the research question will become confused and unfocussed.

3.1 Sustainable Development

Sustainability has been interpreted for this thesis as the goal or ideal state for humanity to optimally and stably thrive in, while sustainable development is more so the processes of reaching it. As a significant moment in the history of environmental thinking, 1987 marks a striking moment with the publishing of the Brundtland Report cementing the sustainable development concept on a global scale (Boutilier, 2009; Brundtland, 1987). Within the report, sustainable development was defined as *“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”* (Brundtland, 1987, p. 41). As such, sustainable development sets out to address an array of concerns comprising of ecological strains, social pressures, and economic interests. What is more, its focus is not only restricted to the present day but has an intergenerational quality in its concern for the future, encompassing a further dimension of what it means to be sustainable.

The enormity of the concept ‘sustainable development’ has led to a certain amount of confusion (Boutilier, 2009). It is such a large, overarching, umbrella term that discussions on the subject are prolific, they are politically-contested, and have continued to burgeon since its solidified introduction. Brundtland’s conceptualisation of sustainable development continues to be widely used, although, that is not to say that the definition satisfies all parties. The

definition, and more generally the concept, is very much human-centred as “*it is sustainability of human populations and their wellbeing which is at issue, rather than that of nature*”, thus, could be considered anthropocentric (Dryzek, 2013, p. 158). To further convolute the concept, what is deemed as ‘sustainable’ differs depending on the interest party, and so sustainable development is often “*...cast in terms favourable to them*” (Dryzek, 2013, p. 148). Central debates have entangled assemblies of environmentalists and economists who have been drawn into ‘turf wars’ over the concept (Boutilier, 2009). Consequently, environmentalists, for example, may centralise the intrinsic value and protection of nature as focal to sustainable development which is conspicuously missing from the report’s definition (Dryzek, 2013). Whereas, business or economic institutions may entertain economic growth as central to sustainability, thereby, principally valuing human wellbeing (social dimension) (Dryzek, 2013). What can be gleaned from this is how ‘sustainable development’ can be revised and re-shaped to meet the needs of the vested interest. Nevertheless, despite the contestations over the definition of sustainable development, the Brundtland conceptualisation generally serves as a foundational baseline.

Equal to the proliferation of definitions, there have been multiple conceptualisations, visualisations and illustrations of what sustainable development denotes. Dryzek recognises sustainable development as a discourse as opposed to a set of structures and measures to achieve collective outcomes (2013, p. 147). Typically, sustainable development consists of three central dimensions: the economic, environmental, and social. The three dimensions are mutually reinforcing whereby the pursuit of economic growth is in harmony with distributive justice (social element), whilst simultaneously maintaining environmental protection (Dryzek, 2013, p. 157). At times, the dimensions have been conceived of as the pillars of sustainability, and the balance of the three drive sustainable development (see *Figure 3.1*). In a perfect world, the three dimensions should be evenly balanced, and given equal attention. However, as has been established, often certain dimensions are favoured over others depending on the interest group (Boutilier, 2009).

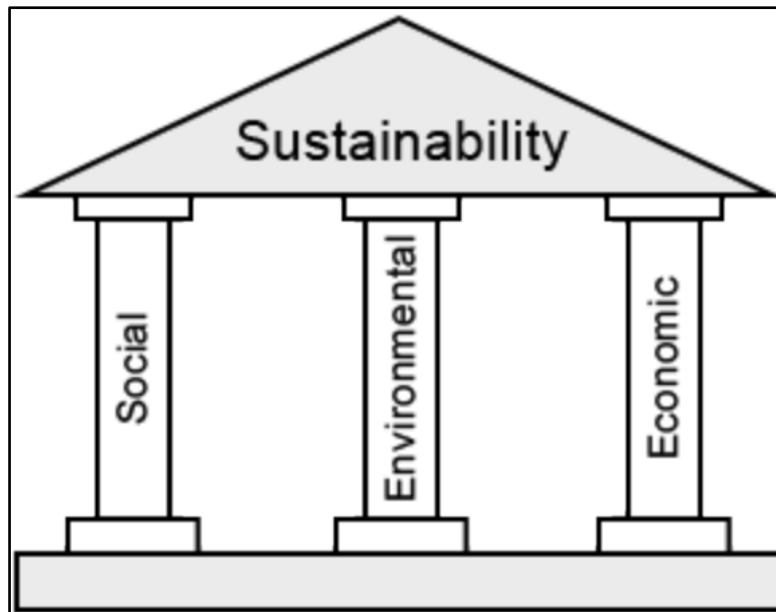


Figure 3.1 The Three Pillars of Sustainability
Source: (Thwink.org, 2014)

Figure 3.2 further demonstrates an alternate visual interpretation of what it means to be sustainable. In this visualisation each of the circles overlap with one another, and in the centre where all of the dimensional circles converge, sustainability transpires. In this way, the sustainability dimensions are not treated as independent of each other as the pillars illustrate. Instead, they reveal the interconnectivity of each aspect and how they interrelate.

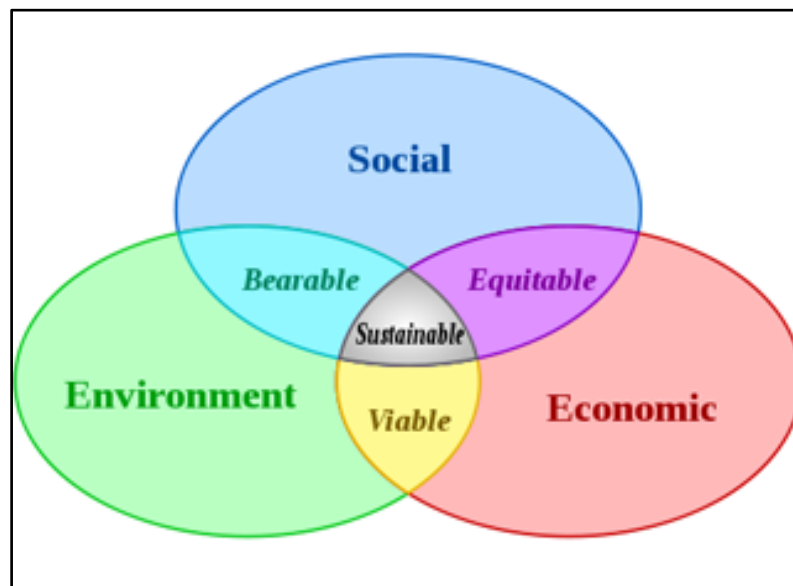


Figure 3.2 Venn Diagram of the Sustainability Dimensions
Source: (Dreo, 2006)

The background to the study (1.1.) provided in the 1. Introduction summarises some prominent top-level engagement with the sustainable development discourse. Furthermore, as

highlighted in the 1.1 Study Background, the extensive engagement with sustainable development at higher levels demonstrates the dominance of the discourse, and its reassuring appeal that ‘one can have it all’; combining economic pursuit, social justice, and environmental conservation (Dryzek, 2013, p. 159).

The meeting of the United Nations at the Rio +20 conference, 2012, culminated in the SDG goals, thereby, succeeding the MDGs, and which also set out to accomplish what the MDGs could not (United Nations, 2015). The SDGs included both ambitious and practical targets for each sustainability dimension, and so, could be seen as a concerted effort in turning sustainable development from an idealistic concept into an action plan.

Griggs (2013) developed a framework that unified the scientific thinking of Earth Systems and Planetary Boundaries, with the institutional proposals for the SDGs developed by the UN. A set of six SDGs were proposed by Griggs (2013) reflecting a core of updated MDGs and ‘Planetary Must-Haves’. In this way, the unified framework advanced the discourse on sustainable development by shifting away from a conceptualisation of pillars of sustainability to a more nested concept (see *Figure 3.3*) (Griggs, 2013, p. 307). In doing so, it better reflected the interconnectedness of each dimension which has often been treated as independent of one another (Griggs, 2013).

In recognition of the transition into the Anthropocene and unified framework, a new definition of sustainable development was put forward: “*development that meets the needs of the present while safeguarding Earth’s life support system, on which the welfare of current and future generations depends*” (Griggs, 2013, p. 306). The definition clearly builds on themes from Brundtland, such as, the centrality of human welfare for both now, and in the future. However, it also reflects advances in the understanding of the Earth, its systems, its challenges, and its complexity. Thus, it demonstrates a forward-thinking perspective where the environment is given an increased prominence alongside human-centred development; a paradigmatic shift.

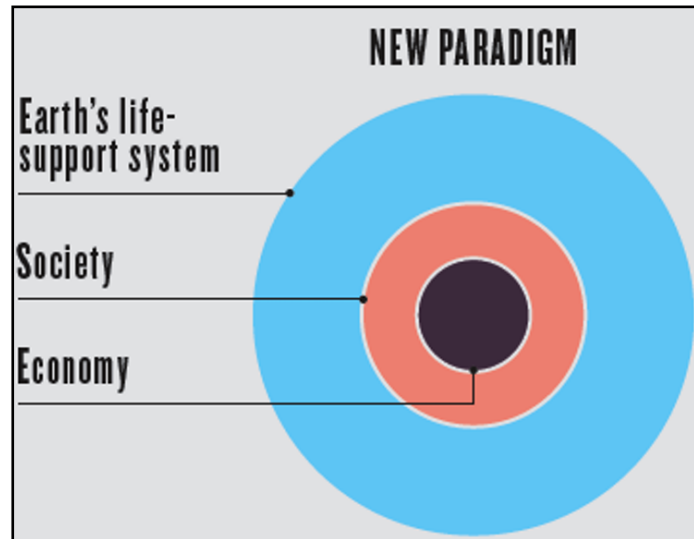


Figure 3.3 A Nested Conception of Sustainability
Source: (Griggs, 2013)

What one can take from the discussion is how ‘sustainable development’ has become the leading trigger phrase uttered by governments, intergovernmental organisations and business alike, and at all levels. It is an attractive concept to cling to as it insinuates one is progressive, environmentally-conscious, and concerned for societal welfare, all the while free to pursue potentially limitless economic growth. This positive sum relationship is appealing as it implies the possibility of ‘having it all’ without being forced to make radical changes to a system and avoids apocalyptic doomsday rhetoric. Thus, as noted by Lafferty and Meadowcraft (2000), the phrase ‘sustainable development’ has received at least lip service from most governments in the developed world (cited in, Dryzek, 2013, p. 153). Yet much that is done in the name of ‘sustainability’, is in fact, the mere reduction of environmental harm (Ehrenfeld, 2005). Thereby signifying that “*Reducing unsustainability is not the same as creating sustainability*”; the two are not identical, and to assume so is a fallacy (Ehrenfeld, 2005, p. 25).

3.2 Eco-Innovation

This section considers the centrality of innovation as a distinguishing characteristic within sustainable development. Innovation has been identified as a significant way to develop sustainable solutions (Machiba, 2011, p. 391). Eco-innovation more specifically, is an overarching concept that encompasses a multitude of offshoots such as, green technologies, manufacturing practices and design, and also, organisational or institutional processes (Machiba, 2011). This channel of developing sustainable solutions can involve both systemic

and incremental changes. Systemic innovation would have a major effect on progressing sustainable development, however, “...there are many barriers to enabling systemic innovation. Policy makers and industry are increasingly facing difficulties in investing in long-term future due to short political cycles and pressure from shareholders”(Machiba, 2011, p. 391). Conversely, incremental changes to eco-efficiency have made substantial environmental progress (Machiba, 2011, p. 392). Though, it is essential to note that in spite of the tremendous environmental gains, quite often the progress has been counterbalanced as a result of ever increasing consumption (Machiba, 2011). *Figure 3.4* visually illustrates a representation of the distinctions between incremental and systemic innovation within the context of manufacturing processes and services. It is useful to see where the separation lies between reformist alterations and then in contrast to systemic.

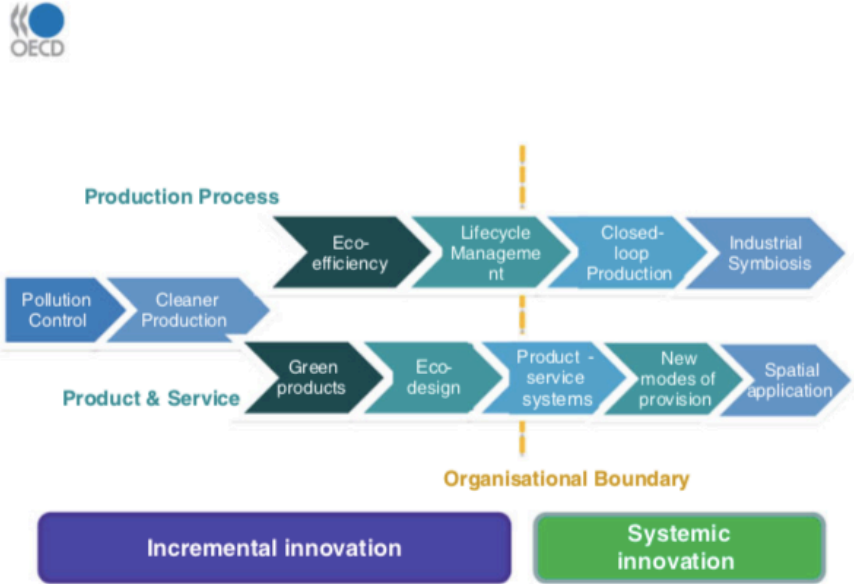


Figure 3.4 Incremental and Systemic Innovation
 Source: (Machiba, 2011, p. 391)

Green technology constitutes a significant element within eco-innovation. Quite simply, “Green technology focuses on how to achieve sustainability through science and technology” (Singh & Kaur, 2013, p. 30). For this reason, green technologies are applied for the purposes of conservation, and the mitigation of negative human impacts (Vigneshkumar, Dineshkumar, Bhuvaneshwaran, & Mitra, 2010). Green technologies surfaced in the 1970s when environmental movements drew attention to possible alternative energy sources (Vigneshkumar et al., 2010, p. 23). Singh and Kaur (2013) identify ten methodological principles that designers and producers should adopt to achieve green design and sustainability. Noticeably, the principles’ characteristics centralise on resource maximisation, waste

prevention or at least its minimisation, durability, and synergy (Singh & Kaur, 2013). Although not in the same format of the ten principles, Vigneshkumar et al. (2010) recognise similar characteristics of green technologies focusing on waste reduction, the prevention of pollution, product enhancement and the management of materials. These traits need to be inherent in the design of new technologies as they are fundamental to sustainability as a whole (Vigneshkumar et al., 2010).

Since the emergence of green technologies in the 1970s, and its subsequent developments have gotten underway, the field has flourished into an innovative and lucrative market. Notably, many of the technologies have been inspired by nature itself. For example, often many of the green technologies harness energies found in the natural world such as solar, wind, and hydropower. What is striking about this is their renewable quality which differentiates them from the classical energy sources known as fossil fuels. To alter the trajectory of thoroughly depleting all known energy sources whilst also maintaining the ‘status quo’, the conversion to renewable energies is a central focus of ‘green’ research.

3.2.1 Solar Power

Harnessing solar energy has surfaced as a prominent renewable energy in this thesis. Moreover, solar power is recognised as “...*the source of most renewable energy power, either directly or indirectly*” (Vigneshkumar et al., 2010, p. 24). As such, it is a major element that green technologies utilise. A significant solar technology that has flourished is solar panelling and photovoltaic panelling (PV). The size of the panelling varies and can be found on anything from roofs to gardens or even fields. The solar energy that is harnessed from these panels can be converted and then used as electricity for heating and cooling, or lighting (Vigneshkumar et al., 2010, p. 24). Needless to say, the ability to generate heating or lighting is an invaluable necessity for humanity. For this reason, investigation into finding accessible and limitless energy sources to meet these needs is imperative.

3.2.2 Biomass Energy

The depletion of conventional fuel sources has led to an increased attention given to alternative sources. A particularly prominent renewable energy resource (RES) is found in biomass. Biomass refers to any organic matter derived from plants, it is a general term that “...*includes phytomass or plant biomass and zoomass or animal biomass*” (Saidur, Abdelaziz, Demirbas, Hossain, & Mekhilef, 2011, p. 2263). This RES creates fuel that derives from a

variety of organic materials ranging from “...wood and wood wastes, agricultural crops and their waste byproducts, municipal solid waste, animal wastes, waste from food processing, and aquatic plants and algae” (Demirbas, Balat, & Balat, 2009, p. 1746). The constant supply of this assortment of waste, along with humanity’s ability to grow crops and trees mean that biomass can be considered a renewable source of fuel (ReEnergy Holdings LLC, 2011; Saidur et al., 2011). It is argued that the electrical energy that it produces is carbon neutral, which is a huge leap forward from traditional electricity (ReEnergy Holdings LLC, 2011; Saidur et al., 2011). Saidur et al. (2011) provide a concise summary of how biomass energy is carbon neutral. When biomass is burned to produce fuel, carbon dioxide is formed from the process, however, “if fully combusted the amount of carbon dioxide produced is equal to the amount which was taken from the atmosphere during the growing stage” (Saidur et al., 2011, p. 2266). Figure 3.5 illustrates a basic visualisation of the biomass conversion process and the cyclical nature of carbon.

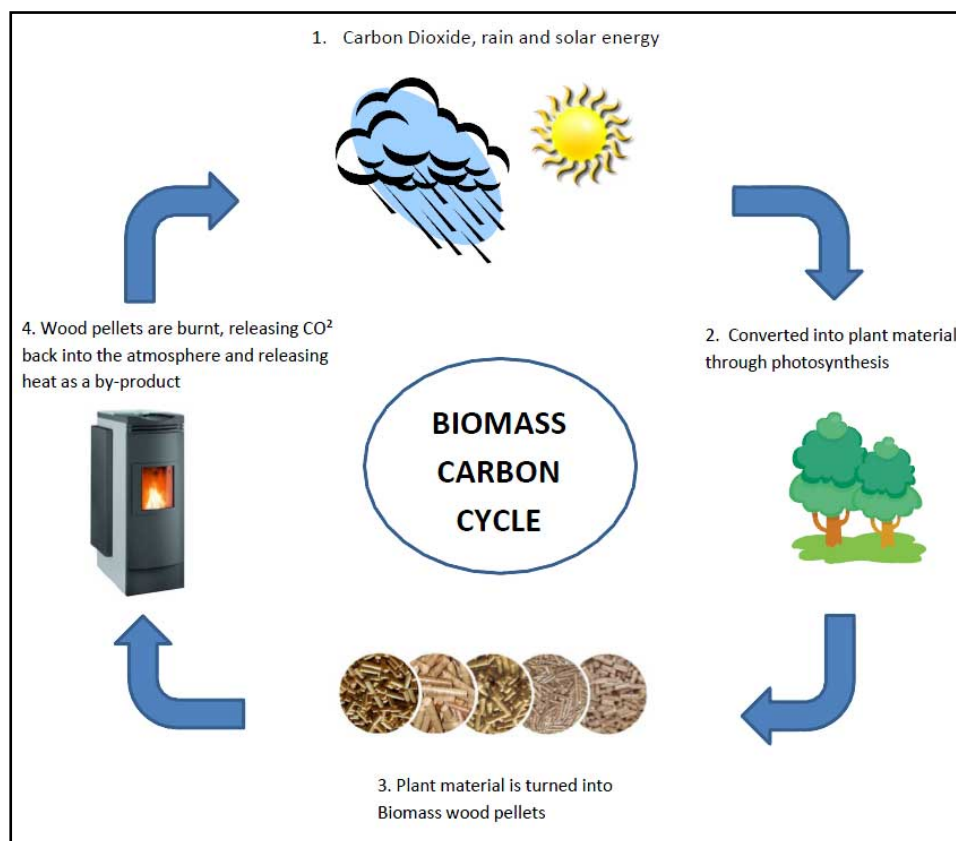


Figure 3.5 Biomass Carbon Cycle
Source: (Biomass Boilers and Stoves, 2014)

Although an improvement on conventional fuel sources, biomass energy is not yet without its problems. Environmental impacts such as deforestation, loss of biodiversity and soil erosion have been associated with burning biomass in boilers (Saidur et al., 2011). However

fundamentally, using biomass in boilers offers benefits of financial savings, the conservation of fossil fuels, job creation, and CO₂ and NO_x emissions reductions (Saidur et al., 2011). As such, the utilisation of this fuel source attends in some way to all three sustainable aspects: social, economic and environmental.

3.2.3 Sustainable Urban Drainage Systems (SUDS)

A third eco-innovation is sustainable urban drainage systems (SUDS). This could be classified as a structural innovation as they have been developed to mitigate excessive rainfall and flood prevention in built up areas. Moreover, they can be classified as an eco-innovation because of its incorporation of the environment into design, such as vegetation for example, which is used to control water levels and drainage. One example of a SUDS that is of particular interest, is green roofs.

Unlike conventional roofing, green roofs utilise the space on top of buildings by growing vegetation, without disrupting urban infrastructure (Dowdey, 2007). They are a simple and elegant eco-innovation that embody several key sustainability traits. On account of their ability to make use of previously unused space, they maximise the resources available whilst simultaneously, not impeding on people's demands for open space on the ground (Forest Research, 2010). For this reason, green roofs exemplify the trait of efficiency. Additionally, they promote the growth of vegetation through their efficient use of space, and thus, increases green space.

Green roofs are important to urban infrastructure for many reasons, for one, they *"...contribute significant benefits for urban water management, including stormwater management"* (Mentens et al., 2006 cited in, Forest Research, 2010, p. 9). Numerous studies have discovered, and since demonstrated green roofs' effectiveness in water mitigation in comparison to conventional roofing. For instance, *"A study by Seters et al. (2009) on evaluating the quality of runoff from an extensive green roof on a multi-storey building found that most chemical variables in green roof runoff were lower than from the conventional roof"* (cited in, Forest Research, 2010, p. 10). Furthermore, a cost benefit analysis of SUDS and drainage has been conducted and produced by Duffy et al. (2008) (cited in, Forest Research, 2010, p. 10). The analysis indicated and gave support to the installation of SUDS. It argued that a well-designed and maintained SUDS is more cost effective than traditional drainage solutions because they both cost less to construct, and also to maintain (Duffy et al. 2008, cited in, Forest Research, 2010, p. 10). Therefore, one could endorse the transition and installation of SUDS

such as green roofs on account of its superiority; it is more effective in its drainage capabilities, and is a more feasible solution, thus offering an economic advantage.

In sum, eco-innovation offers a crucial pathway to a sustainable world by inventing, developing, and modifying the system and its structures. Solar power, biomass, and SUDS are but a few examples of technological changes that can help to modify the course. They are especially significant to this thesis as they represent focal innovations for the Brewery and the council. These innovations have either been installed, or else, are under consideration of being installed.

3.3 Approaches and Environmental Discourses to a Sustainable World

A second theoretical base in which to frame the thesis is formed from an assembly of approaches and environmental discourses. The exploration of approaches to sustainability and environmental discourses is critical because they provide the foundational context on which the research is built. Furthermore, it is important to recognise how leading environmental discourse has evolved from within the system as it helps to illuminate the current environmental climate. With this theoretical foundation, it is then possible to make an informed analysis of the study's results as uncovered through the methodology. At which point, answers and indicators to the research questions can be brought to light. Dryzek's *'The Politics of the Earth'* expertly explores and richly summarises the central discourses relevant to the research (2013). Therefore, the following section will condense and review significant discourses situated within approaches to sustainability.

To create and maintain a sustainable world, so far this thesis has illustrated some of the fundamental difficulties that are posed, e.g. conceptual variances and disputes. However, moving beyond conceptual differences, there are firmly held positions on how to practically achieve a sustainable world. To clearly frame these positions, the work of Clifton and Amran (2011) will help to condense them.

Clifton and Amran (2011) identify two overarching approaches to formulating a sustainable world. These two approaches are recognised as Transformationalism and Reformism.

3.3.1 Transformationalism

Firstly, addressing the Transformational approach, it recognises the system as the root cause of unsustainability; the political, social, economic, and institutional systems function in opposition to the attainment of a sustainable world. Therefore, a systemic transformation is

necessary (Clifton & Amran, 2011). The Transformational approach calls for restrained consumptive and production practices as it both recognises and acknowledges ecological limitations. If there are ecological limits then to continually increase consumption and production it will reach a point that cannot be satisfied and is therefore, not sustainable. As such, a steady economy based on the recognition of ecological limits and a non-growing resource throughput should be implemented (Clifton & Amran, 2011).

As an overarching approach to sustainability, it is possible to place environmental discourses within the Transformational approach. Key characteristics of the approach recognise ecological limits, and the necessity for drastic and transformational change, this allows what is known as the Limits and Survivalism discourse to sit comfortably within the overarching approach to a sustainable world.

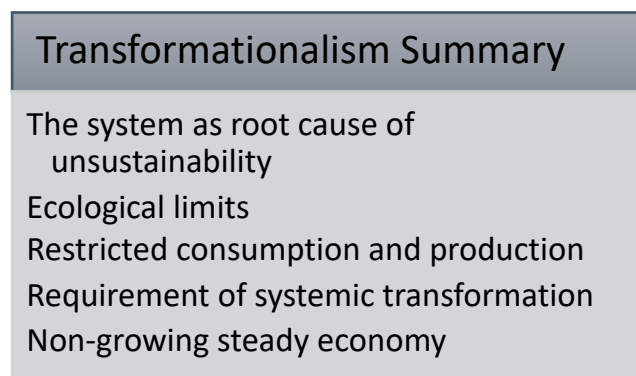


Figure 3.6 Transformationalism Summary Box

Limits and Survivalism Discourse

As stated in the 1. Introduction, ‘environmentalism’ exploded onto the scene in the 1960s and matters of survival and ecological limitations dominated the 1970s. The seminal book ‘*The Limits to Growth*’ aptly demonstrated the concerns of the time, and marked the environmental discourse (Meadows, Meadows, Randers, & Behrens, 1972). One of the book’s central conclusions centres on humanity’s progression of industrial expansion; population surges; intensification of food production; the depletion of finite resources, and increased pollution levels (Meadows et al., 1972, p. 23). The growth trends, as were illustrated at the time, were predicted to reach their limits within the subsequent century. At such a time, the precipitous decline in population and industrial capacity would likely be sudden and uncontrollable (Meadows et al., 1972, p. 23).

The survivalist discourse in essence concerns itself with “...*finite ecosystems with fixed stocks of resources, where human population explosion and economic growth threaten to*

overshoot the limits of these systems or transgress the boundaries of a “safe operating space” (Dryzek, 2013, p. 70).

In this way, one can see the survivalism discourse draws heavily on dramatic concepts and metaphors. The language employed is apocalyptic with concerns over how uncontrolled population growth and economic pursuit will deplete limited resources and will push the Earth into an uninhabitable state of which there is no return.

Older forms of survivalism drew from scholars such as Malthus when considering humanity’s future and trajectory. Malthus theorised that unchecked population growth would lead to the starvation of populations because food production cannot be supplied at the same rate (Malthus, 1798). He proposed population checks that would balance out the rates, such as, family planning and celibacy (Malthus, 1798). Hardin later built on work regarding the analytics of environmental problems with his essay *‘The Tragedy of the Commons’* (1968, cited in, Dryzek, 2013, p. 28). In sum, Hardin’s argument was rooted in how the *“...private benefit and the public interest point in opposite directions”* (Dryzek, 2013, p. 29). In this way, a rational, self-interested person will calculate the benefits for themselves and the costs would be shared across ‘the commons’ (environmental resources). As all rational, self-interested people think in this way, stresses upon the commons would soon destroy or deplete the resources, either used as sources or as sinks.

Chiefly, the central message of survivalists is the assertion of the limits to growth: *“Population biologists and ecologists have long deployed the concept of “carrying capacity” – the maximum population of a species that an ecosystem can support in perpetuity”* (Dryzek, 2013, p. 27). The current dominant system leads us to overshoot, and will eventually lead to collapse, and so, in the survivalist discourse, a complete overhaul of the system is required. However, the discourse has little traction in the way of serious political will and discourse dominance. As such, at the very least, the survivalist discourse calls for the fundamental requisite of strong governance to curb populations and consumption. The concentration of power within centralised governance reduces individuals to aggregates and populations to be controlled through public policy and elite governance (Dryzek, 2013). In this way, agency and the capacity to act falls entirely to elites, whose own motivations determine the major agendas and environmental priorities.

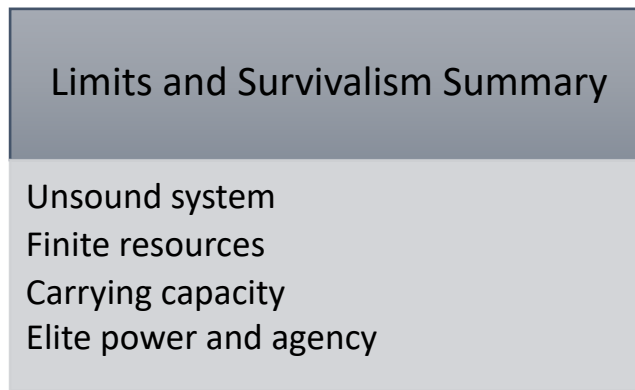


Figure 3.7 Limits and Survivalism Summary Box

3.3.2 Reformism

The second approach to sustainability, and likely the more popular, is the Reformist position. Reformists surmise that the dominant socio-economic system is sound, and what needs to be done to attain human development (i.e. sustainable development) is to ‘green’ the system and make it more socially just (Clifton & Amran, 2011, p. 122). To this end, reformists seek continued economic growth which is further enabled by globalising processes and the liberal free-market. This is understood as key in addressing issues of human welfare such as poverty. As such, one can see the substantial role afforded to business, and more specifically in a globalised world, the role of multinational corporations (MNCs). Economic growth is indispensable if one hopes to meet and satisfy the needs of the poor. For this reason, it is notably job creation that can aid in poverty amelioration and increase human wellbeing. Thus, unhindered by economic or political barriers, the MNC can play a critical role in alleviating poverty in the global South through industry and job creation. This also serves to address two of the pillars of sustainability: economic and social.

Lastly and addressing the third pillar, in reducing, and thus, alleviating poverty, the environment will benefit as a result. This is because poverty is known as one of the most basic causes of environmental degradation as “...poor people are forced to abuse their local environment just to survive” (Dryzek, 2013, p. 155). Therefore, following this line of logic, the domino effect becomes apparent. In order to reform the system into becoming more environmentally-conscious, the dominant economic system needs an increased free rein, enabling further human development, which will then decrease stresses on the environment. Clearly, the sustainability pillars within this approach are hierarchically set in terms of priority.

Reformists also place a high value on the role of technology in aiding the greening of the system. It recognises that technological advances are key to improving resource efficiency,

and also, in developing less polluting production and consumption processes (Clifton & Amran, 2011). This further still cements the Reformist position on the soundness of the socio-economic system; it does not need a transformation or an overhaul, instead it requires fine-tuning.



Figure 3.8 Reformism Summary Box

From this summary of the approach, several environmental discourses demonstrate commonalities that place them within the Reformist approach, namely: the Promethean, and Environmental Problem-Solving discourses.

Promethean Discourse

What is known as the Promethean discourse emerged as a response to the apocalyptic predictions made by survivalists (as discussed in 3.3.1). While biologists and ecologists advocated for the Survivalism and Limits discourse, it was largely economists who were at the forefront of the counterattack. Contrary to the discourse on the limits to growth, the Prometheans refute the notion of limits based on the understanding that nature, and its subcomponents (ecosystems and resources) do not exist, instead they are “...just brute matter...infinitely transformable, given enough energy” (Dryzek, 2013, pp. 59-60). Consequently, raw materials and resources are available at the discretion of humanity to be moulded and used as seen fit. In this way, through the ingenuity of humans, the counterattack on the Limits discourse is extended. Limits do not exist, because once a resource has been depleted, an individual’s resourcefulness and creativity will invent something that will step in to supplant and upgrade the ailing resource. It is in the view of Prometheans that through an individual’s ingenuity, advancing technologies will ensure the survival and thriving of humanity.

Contrariwise to the Survivalist discourse on the matter of actors and agency, the Promethean discourse recognises a wider range of actors responsible for, and capable of, creating a sustainable world beyond that of government. It is in the Promethean held view that everyone has the capacity to act, on account of their roles as economic actors. They see little role for government in environmental and natural resources policy, instead favouring the market as central to managing environmental affairs. By design, it is through the market that solutions can be found and problems can be solved. Economic competition between humans drives innovation, thus, overcoming scarcity fears (Dryzek, 2013, p. 61). For this reason, the sign of a healthy society is capitalist economic growth, because growth is synonymous with good (Dryzek, 2013, p. 53). Although, it has to be pointed out, that oftentimes growth comes at the expense of the environment. For example, one only has to consider the depletion of resources, or else, the growing pollution levels to see how industry is prioritised.

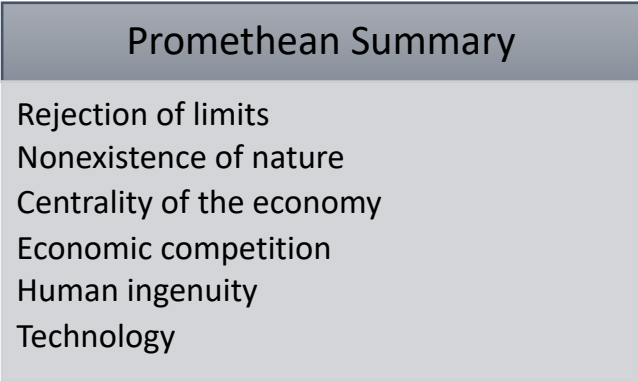


Figure 3.9 Promethean Summary Box

A further body of discourses that fit beneath the umbrella approach of Reformism are the Environmental Problem-Solving Discourses.

“The discourses of environmental problem solving recognize ecological problems, but treat them as tractable within the basic framework of the political economy of industrial society” (Dryzek, 2013, p. 73). In this way they demonstrate how they fit within the overarching Reformist approach because, all in all, they are amenable to the political economy of industrial society. Thus, are compatible with, and do not challenge the dominant social order.

The environmental problem-solving discourses largely focus on dealing with the issues at hand; searching for solutions of the here and now. There are three central strains from within the environmental problem-solving discourses: Administrative Rationalism, Democratic Pragmatism, and Economic Rationalism.

Administrative Rationalism

Looking first at Administrative Rationalism, it is judged to be positioned within the Reformist approach to sustainability because “...*the political-economic structural status quo of liberal capitalism as given*” (Dryzek, 2013, p. 89). Hence, it plainly does not seek to challenge the dominant system. Dryzek defines Administrative Rationalism as “...*the problem solving discourse which emphasizes the role of the expert rather than the citizen or producer/consumer in social problem solving, and which stresses social relationships of hierarchy rather than equality or competition*” (2013, p. 75). Deconstructing the definition exposes how in terms of power, people would be considered subordinate to the state for reason of the societal hierarchy being founded upon expertise. As such, experts and managers’ dominant positions within the state’s hierarchy is wholly justified by their expertise (Dryzek, 2013, p. 89). Administrative Rationalism recognises the complexity of social and economic problems and how they cannot effectively be dealt with by isolated individuals. Instead, the complexity of socio-economic problems needs to be dealt with on multiple knowledgeable fronts, in a coordinated manner. For this reason, complex issues need to be broken down into subsets and tackled by various expert bodies. Therefore, in regards to the environment, key institutions would tackle specific environmental aspects based on their expertise, these would include: resource-management bureaucracies, pollution control agencies, expert advisory commissions, regulatory controls (legislation), planning (Dryzek, 2013). As such, one can logically presume that in aiming for a sustainable world, the primary leading role falls to the ‘managers’ and ‘experts’ to navigate society, out of the public interest.

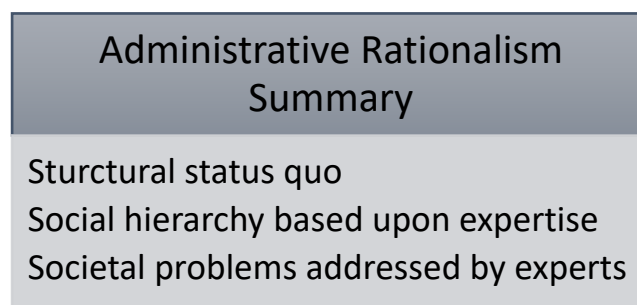


Figure 3.10 Administrative Rationalism Summary Box

Democratic Pragmatism

Alternatively, Democratic Pragmatism can be understood as “...*interactive problem solving within the basic institutional structure of liberal capitalist democracy*” (Dryzek, 2013,

p. 99). Once again highlighting how well suited the environmental problem-solving discourses fit within Reformism on account of how it resolves matters within the societal structures, or else, ‘amends’ its inept facets. Democratic Pragmatism ascertains that the most rational way to solve problems is learning through experimentation (Dryzek, 2013). The knowledge needed for differing degrees of problem solving is best gained from a spectrum, and so a plurality of voices, and the cooperation of the many should be flexible and not limited to a single individual or institutional body (Dryzek, 2013, p. 100). In light of this, one can see how the discourse of Democratic Pragmatism differs from Administrative Rationalism which delimits agency and responsibility to ‘the experts’, whereas, Democratic Pragmatism recognises the value of multivocality.

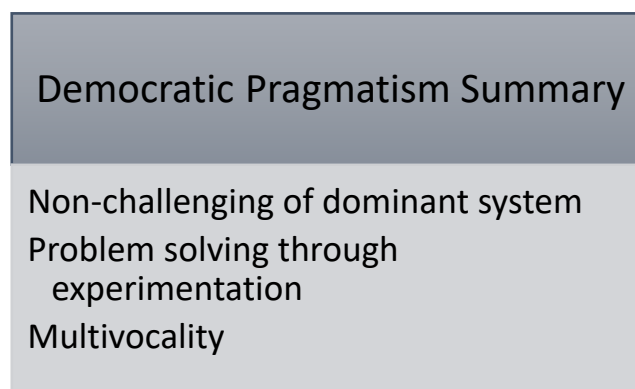


Figure 3.11 Democratic Pragmatism Summary Box

Economic Rationalism

The third and final strain of environmental problem-solving discourses is Economic Rationalism. Its placement within Reformism is justified because of its application of the governing capitalist system, and thus, does not seek its removal. The discourse appeals for the intelligent deployment of market mechanisms to achieve public ends (Dryzek, 2013, p. 122). As such, the market is believed to best to steer the sustainability course. However, for the mechanisms to really become effective, they need to be consistently and firmly established and standardised. For this purpose, the role of government is relegated to specifying, establishing and enforcing the market mechanisms and the privatisation of property (Dryzek, 2013, p. 122). Besides this function, the discourse prefers the market to play the starring role.

In utilising the market to steer sustainability, the environment by default, would become privatised. One can reasonably conceive the environment to be comprised of ‘land, air, and water’, however, the conception of the environment could be extended to include species and

wildlife (Dryzek, 2013). If the ‘environment’ was then privatised, market rationalists believe humanity could head towards effectively solving environmental problems (Dryzek, 2013, p. 128). This conclusion is reached based upon employing the market to determine the balance between conservation, extinction and depletion: *“The private property right to the good in question will be bought by whoever values it most, and can make the most profitable use of it”* (Dryzek, 2013, p. 124). For this reason, the environment can be successfully moderated by the market through granting ownership of it to whichever party values it most, and is subsequently protected in consequence of privatisation legalities. Developing the argument for the market as arbiter further, it is in the opinion of market rationalists that people care more so for what is theirs individually than what they hold in common with others (Dryzek, 2013, p. 124). In consequence, the ‘most fitting’ parties will have propriety over that which they care for. Furthermore, this elegant solution is considered by market rationalists to be the solution to ‘the tragedy of the commons’ on account of individual ownership reducing pressures on ‘the commons’ (Dryzek, 2013).

Economic Rationalists are not so foolish as to assume the market can singlehandedly solve all environmental problems unrestricted. For the market to function effectively, it requires a supporting framework. Dryzek elucidates this argument as *“...markets in environmental goods do not always exist, and so often need to be created and managed, sometimes even by taxation. Thus, their discourse is rationalistic, entailing substantial cogitation, calculation, and design on the part of policy makers”* (2013, p. 122). Thus, reaffirming the auxiliary role vitally performed by government to keep in check, and regulate the mechanisms.

The application of market mechanisms to the environment is exhibited in the marketisation of the climate. This form of environmental marketisation has found its place on the international stage with concerns to climate change (Paterson, 2011, cited in Dryzek, 2013, p. 130). Mechanisms featured in the marketisation of climate change can be seen through the likes of emissions trading, offsetting, quotas, and quasi-market incentives otherwise known as green taxation (Dryzek, 2013). One could take green taxation on goods to demonstrate how the market can be applied to the environment. The green taxes are designed to coax consumers into making purchases that are less environmentally damaging (Dryzek, 2013, p. 133). In this way, the market targets ‘purchasing power’ to modify consumer behaviour and values, thereby amending the social system as a result.

Arguably, this serves to demonstrate how in one respect, economic rationalism could be regarded as anthropocentric on account of its intense market-focus and perception of people as economic actors (*Homo Economicus*). When observed through the economic lens of market

rationalism, the human experience is reduced to a single commercial dimension. Under such a perception, humans are categorised as either consumers or producers (Dryzek, 2013). As such, the social world within market rationalism recognises human relationships that are grounded on competition, and not cooperation or collaboration as in other discourses (Dryzek, 2013). Patently, the world perceived by market rationalists is one that is mechanistic in nature, whereby, the social world is likened to a machine. For the efficient, smooth functioning of the mechanistic system, it is required that some elements will need modifying, as has been shown through the economic rationalists' backing and promoting of the property rights of the environment. One could argue that the economic rationalism discourse is reductionist as it oversimplifies environmental problems and their solutions to be priced and marketed. What is more, "...the environment exists only as a medium for the effects of some human actions on other humans, and as a source of inputs for the socioeconomic machine" (Dryzek, 2013, pp. 141-142). In this way, the environment, in and of itself has no intrinsic value, and is only recognised as raw materials for production or as amenities, for example the wilderness or clean air (Dryzek, 2013, p. 136).

Evidently, this environmental discourse functions within the dominant economic system, and solves problems from within it. This has been demonstrated through the marketisation and privatisation of the environment, and in consequence to that, has driven the dominant system even deeper.

Economic Rationalism Summary
Centrality of the market & capitalist economy
Amendments to the system are market driven
Privatisation of nature
Market incentives & sanctions
Auxiliary role of government

Figure 3.12 Economic Rationalism Summary Box

3.4 Stakeholder Theory

A central aspect to achieving sustainable development, if that is indeed the aim, is to pursue it collectively. As has already been stated, for sustainable development to take prominence and to progress, it needs the collective attention and commitment from all arenas,

at multiple levels; from the local to the global. For this to happen, actors need to recognise the stake they hold in the discourse and cooperate with other stakeholders.

Initially, the first step in mobilising actors into action is to identify who and what constitutes a stakeholder. Who is considered a stakeholder is potentially limitless; an action or its impacts can have far-reaching effects and so directly, or if not, indirectly, almost anyone could be considered to hold a stake. In the frame of sustainability, one could use the example of fossil fuels. If a decision was made to ban all transport using fossil fuels, oil companies, car owners, and transport services would be hit hard and directly affected; internationally, global markets will be drastically shaken affecting national economies and markets. This is not an exclusive list limited to the few mentioned, but clearly, this demonstrates the wide-ranging consequences of a decision, and a range of those who hold a stake in it. Evidently the concept has to be restricted or else the analysis would be inexhaustible and nigh on impossible. Freeman (1984) has defined the concept as “...*any individual or group who can affect an organisation’s performance or who is affected by the achievement of this organisation’s objectives*” (cited in, De Brucker, Macharis, & Verbeke, 2013, p. 124). Similarly, Post, Lawrence and Weber defined stakeholders as “...*people and groups that can affect, or can be affected by, an organization’s decisions, policies and operations*” (2002, p. 8-9, cited in, Boutilier, 2009, pp. 92-93). One can see from the definitions that they are heavily influenced by the corporate or institutional context. This is useful when considering the cases of the Brewery and the council as both fit within the category of corporation and institution. Moreover, it is valuable in limiting the conceptual frame of who needs to be considered within the scope of stakeholders for each case. In this way, the analysis of both cases can be more effectively targeted and help to build a better understanding of their individual obstacles. Furthermore, the recognition of a stakeholder as either an individual or as a group is advantageous when considering them under the lens of sustainability. This is because it simultaneously recognises the motivations and the agency of an individual, whilst also being inclusive of groups of people, bound together by a common cause or interest (Boutilier, 2009, p. 94). This is important in the context of sustainable development as collaboration and cooperation are key to pursuing and embedding sustainable behaviours in practice.

Clifton and Amran (2011) further enhance the stakeholder discussion through the categorisation of a narrow and broad view take on the stakeholder. The narrow view centres around the primary stakeholders, or those who have a direct relevance to the economic interests of a corporation. These include, but are not limited to, shareholders, customers, suppliers, local communities, and in some cases, governments (Clifton & Amran, 2011). The broad view, as in

the name, encompasses a larger group. It can encompass humans or human groups in the present, in some cases it is extended to include future generations, and in others, even inclusive of the natural world (Clifton & Amran, 2011). Restricting the stakeholder concept even further in the context of sustainable world, the corporation “...*should pay attention to anyone or anything in the socio-ecological field that is impacted on by its activities over both time and space....*” (Clifton & Amran, 2011, p. 127).

For a sustainable world, the economic domain has to evolve whereby corporations’ sole purpose cannot be limited to profit. For this to function, the ‘sustainable-world-comes-first-principle’ has to be at its core (Clifton & Amran, 2011). For it to work, there needs to be a socio-economic system that eliminates business that does not conform to this standard. At present, this is not commonplace, and is instead limited only to business that consistently does not turn a profit, or does not function successfully to the economic principle (Clifton & Amran, 2011).

An interesting dimension to consider the ‘stakeholder’ is through the attributes of a stakeholder. Mitchell et al. (1997), have categorised a model based on three critical aspects that hierarchically assess the primacy of stakeholders in relation to a corporation (cited in, Clifton & Amran, 2011, p. 130). This is a descriptive model that considers stakeholder salience in the attributes of power, urgency, and legitimacy (Mitchell et al, 1997, cited in, Clifton & Amran, 2011). Power is considered the most important attribute that influences stakeholder management; where the interests of a powerful stakeholder are recognised more readily than those of a weak stakeholder. Within a sustainable world framework this is problematic because in the context of sustainability, distributive justice is among the key criteria recognising human equity. Thus, “...*favouring one party’s interests over those of another simply due to power differentials, breaches justice principles by using high power levels as a relevant criteria for such favouritism*” (Clifton & Amran, 2011, pp. 130-131).

The second attribute, urgency, pertains ordinarily to the stakeholder, or expressed in another way, as short term returns or pressures (Mitchell et al, 1997, cited in, Clifton & Amran, 2011). Again, this is problematic in the sustainability frame which is concerned with the longer term purview, and one that is at odds with the economic urgency of a stakeholder. Thirdly, the legitimacy attribute relates largely to what the corporation views as legitimate, or what is “...*legitimate within the dominant economic rationalist paradigm*” (Mitchell et al, 1997, cited in, Clifton & Amran, 2011, p. 133). This attribute too is problematic, if legitimate corporate objectives are based purely on economic growth then ‘legitimate’ sustainability objectives may be co-opted or marginalised.

De Brucker et al. (2013) contribute to the discussion of stakeholders in the context of sustainable development using a multi-criteria analysis. In sum, they recognise the requirement of four boundaries that must be respected. The first, multiple stakeholder groups must be included and participate in the decision-making process. At which point, their objectives (social, economic, and environmental) must be made explicit. The second, concerns the power attribute acknowledged in the work of Clifton and Amran (2011). Should a stakeholder possess excessive power, it must be counterbalanced to avoid rent-seeking behaviour, or the endangering of social or environmental objectives (De Brucker et al., 2013). Third, issues concerning distribution have to be addressed with particular focus given to social and environmental effects. Fourth and final, in relation to project selection within sustainable development, an aggregation procedure should be in place, but one that concurrently makes restrictions based on ‘musts’ and ‘wants’.

An alternate approach to engagement can be seen in the works of Nassauer (1997, 2011). It is suggested that invoking the notion of care may be a way of promoting sustainability through engaging people in planetary stewardship: *“Care is a deep, pervasive cultural norm that is imposed upon what is noticed and noticeable to others”* (Nassauer, 2011, p. 321). As such, care could motivate people into engaging as stewards by connecting what they notice in everyday life with their effect on larger environmental systems (Nassauer, 2011). Visible evidence of care elicits both a normative and also aesthetic response. If applied to the landscape, it could incite action. Take for example a neglected space or landscape, it would suggest carelessness and irresponsible owners, in addition to being aesthetically displeasing. *“Anticipating this normative response by others is a powerful motivation for conforming behaviour”* (Nassauer, 2011, p. 321). Thus, the normative pressures could induce action so as to ensure positive perceptions from others.

4 The Cases

The sSWOT analysis' was created to aid companies in taking action on environmental challenges (Metzger et al., 2012). In doing so, it helps to evaluate a company's strategies, and translates environmental challenges into opportunities or threats. It also functions to motivate and encourage others to invest and collaborate on environmental challenges; and finally, convince stakeholders of their part to play in tackling environmental challenges. However, the sSWOT analysis has been incorporated into the theoretical framework of the thesis as a tool to assess the multidimensional challenges business and local government face.

4.1 Welbeck Abbey Brewery Analysis

The Brewery is located on a traditional, rural estate in Nottinghamshire in the north of England. It is one of several businesses on the premises, including: the Welbeck Farm Shop, the Dairy, the Dukeries Garden Centre, School of Artisan Food, and the Bakehouse (Welbeck). This is not an extensive list of enterprises on the estate, but a selection of trades that ground the setting of the Welbeck Estate. The Welbeck Estate is not only a commercial development, it is also a residential space, home to historic properties, woodland, and land. As such, it is a uniquely interesting space to create, develop, and innovate artisanal commerce (Welbeck).

The Brewery itself, "*...is a small, traditional, Brewery at the heart of Welbeck's artisan food village*"(Welbeck). It brews 15,000 pints of handcrafted ales and beer a week, and exclusively supplies to pubs, restaurants and specialist bottle beer shops within a 35 mile radius (Welbeck Abbey Brewery, 2017).

The two guiding principles that underpin the Brewery are:

*To produce the best quality beer in the market and;
To provide its customers with exemplary service every time
(Welbeck Abbey Brewery, 2017).*

As stated in the 1. Introduction, an initial internship period at the Brewery marked the start of the observations. The Brewery is situated within a barn-cum-warehouse consisting of a core employee team of around ten people. As such, it is evidently a small-scale business without the capacity to expand on an industrial scale, in terms of physical capacity, manpower, or financial capital.

4.1.1 Participant Observation

Observations of the Brewery took place during the internship period, where as an intern I analysed the efficiency of the brewing processes. This was a particularly insightful and relevant position to obtain in relation to the subsequent thesis topic. It gave a contextual basis to understand the brewing processes and work ethic, and significantly, the attitudes towards more sustainable practice.

One could see the scale of the business: small and remarkably industrious. In light of this, it illuminated how limited it would be in expanding its production processes. The Brewery is geographically and physically restricted as a former barn. As such, it is restricted in the type of equipment that could be installed in the space, even if it had the capacity to expand or install green technologies. Furthermore, the small-scale operations of the business restricts its economic prospects, and so, in places where installing green technologies would be physically possible, they are unable to do so because of financial limitations.

The small-scale operations of the Brewery further impact on their sustainable capabilities because human resources are limited. This means that employees can only realistically perform their core duties, and thus, the Brewery is largely denied the opportunity to function beyond its sole purpose as a business. The size of the labour force that works at the Brewery provide them with enough manpower to cost-effectively brew, distribute and sell their product. As a result, time is not something that can be used sparingly; they do not possess the luxury of laying aside time for researching more sustainable brewing practices or reviewing their current practices.

4.1.2 Interviews

Two interviews were conducted for an analysis of the Brewery; one was carried out with the Brewery Manager, and a further interview with the Bakehouse Manager. These were performed so that it would be possible to compare and evaluate the Brewery's approach alongside another estate enterprise. This also aided in being able to see how streamlined the sustainability efforts were across the estate by way of comparing responses to business targets, ethics, future goals, and interpretations of sustainability.

The line of questioning considered the general objectives of the respective business and its future aims. The interview then moved into issues concerning sustainability, broadly following a 'SWOT' style. This allowed for a reflective discussion identifying the Bakehouse and Brewery's strengths and areas for improvement.

Brewery Interview:

Foremost, the Brewery's principle concern is targeted at the quality of the products they produce and the quality of their service. For this reason, revenue is not seen as the uppermost priority. Needless to say, the Brewery has to turn a profit, however, growing their profit margin is not stressed as the leading goal. This is because it is believed that increasing production would come at the expense of quality. The Brewery has established a niche with its products, and formed a solid, independent customer base. By expanding its customer base to the likes of supermarkets, the sale price for its products would decrease because the prices would be dictated by the central buyers so as to be competitive. A result of which, is that it is likely the quality of the Brewery's products would decrease in order to remain profitable. Therefore ultimately, to take the Brewery in this direction would be contradictory to its core principles of producing excellent quality products and providing excellent service.

Moreover, as has been mentioned, to be able to compete in a larger market, the price of the Brewery's products would have to be lowered. The result of the decrease would mean the profit margin for each unit sold would decrease proportionally, and to recompense for the loss of profit, the Brewery would need to produce at a larger scale. However, the course of expansion would be unsustainable for the Brewery from a business perspective seeing as the Brewery is not in a position to carry out large-scale production, and therefore, cannot benefit from economies of scale. Even if the quality of the products were to decrease to lower the production cost, the Brewery will not be able to compete with firms that have a much higher scale of production, and therefore, a lower cost per unit produced. As a small-scale business, the Brewery has to focus on the quality of its products to remain stable and sustainable as they are not in a position to compete on product price with large-scale businesses.

The interview revealed that attentions directed toward sustainability have only been a recent development in the last year. This is for the reason being that the Brewery has had a concentrated number of staff, which has limited its ability to realistically consider the issue. Thus, one could reach the conclusion that human capital has presented itself as a challenge to initiate sustainable practices. In turn, time itself, cannot be treated as a luxury to utilise in ways other than to complete core functions. As such, time could be considered an additional challenge to sustainable development when the lack of it results in the incapacity to attend to its progress; through research, implementation, and daily maintenance. For example, neither the Brewery Manager nor employees had the time to research their brewing processes, it was only through reaching out to the Welbeck Estate myself that the possibility of researching and improving the water-usage became an option. Moreover, the interview reaffirmed this relational

dynamic between university and business, when the Brewery Manager mentioned that a university had recently contacted her regarding potential projects. This indicates that a possible solution to aiding sustainable development is through improved communications with academic spheres. The Brewery does not have the time or knowledge to implement certain sustainable practices, however, universities may be the key to unlocking them.

The motivations behind pursuing sustainable options or embedding a sustainable ethos were identified as multi-layered. In one respect, there is believed to be a financial advantage in pursuing sustainable options. For example, the Brewery recognise the water-intense process of brewing, and so, focus on its water usage and how to reduce its consumption rates. By doing so, costs will be reduced alongside also establishing more environmentally-conscious practices. The personal motivations of management were also revealed as important to establishing sustainable practice. In the interview it quickly became apparent how significant the environmental cause was to the Brewery Manager who perceived the businesses on the Estate as “*Guardians of the land around us*” (A, 2017). A further motivation comes from the Estate at large. The Estate has turned its attentions to sustainability, and is considering multiple ‘sustainable’ options, such as, PV panelling, or electric vehicles in an effort to embed a sustainable core. For this reason, as Brewery Manager, she is endeavouring to tie in the dual objectives; both in reducing costs and falling into line with the rest of the Estate’s mindset.

An interesting topic and driving force for establishing sustainable practice was the significance afforded to strong leadership and management. The Brewery Manager exclusively noted the importance of leading from the top down when integrating a sustainable ethos. In recognition of the Brewery’s consumption of natural resources, the Brewery Manager firmly believes in the need to be environmentally-conscious, and in being so, to then be environmentally-friendly. In order to do this, it is important to lead by example; to encourage the shift in attitude. As such, the Brewery Manager is motivated to act and improve on the water usage. This involves her stressing the environmental agenda upon the Brewery workforce; to consciously reflect on their water usage, and thereby, change the ways in which they carry out water-intensive tasks. For example, making alterations to the cleaning schedules and monitoring routines to reduce usage. In this way, the changes become the norm. Furthermore, it is vital as manager, to enforce and oversee the shift so that the attitude will change. This is recognised as a significant portion of the overall challenge; it is about leading, and then altering the mindsets of those who can make those changes. It is imperative that everyone validates and supports the environmental agenda so that they subscribe to the same common goal.

As has been stated, the brewing process is water-intensive, and so, the Brewery's main concern is looking into ways of reducing its consumption and identifying potential alternatives. These can include the implementation of tighter monitoring measures for water intake and output, as well as alternatives, such as, rainwater harvesting. Water is recognised as the paramount resource for the Brewery to investigate, and also establish better practices because of the water-usage in brewing. Moreover, the Brewery has identified it as something that can realistically be acted upon. Whereas, other resources or other sustainable measures, appear to be unrealistic or impossible for the Brewery to undertake.

The Brewery Manager recognises that electricity is another area that deserves attention for improvement. However, unlike in the instance of water, electricity does not appear a clear-cut challenge to tackle. To an extent, this assessment of the difficulty with electricity may be because the full circumstances have yet to be researched. Nonetheless, the possibility of installing PV panelling onto the Brewery is not a viable option due to the structural integrity of the building. Furthermore, cost and financial limitations are prohibitive in sustainable constructions, such as, the installation of PV panelling or biomass boilers for the Brewery. In addition, the constrained working space of the Brewery means that even if costs were not prohibitive, the physical capacity would be. Lastly, the bureaucratic organisation of the Estate can inhibit, or at least slow processes for change. For example, the Brewery sheds are rented from the Welbeck Estate, who is both the landowner and landlord. And so, to make alterations to buildings or the grounds, the Brewery Manager must first consult the landowner, and then be granted permission to proceed. Within this scenario, one can see how the Brewery's lack of ownership inhibits the sustainable movements because alterations are dependent upon the Estate.

A last point that was suggested and something to consider, was a generational element. The Brewery Manager held the opinion that the younger generations, and 'millennials', demonstrated concern for the environment and an environmental-consciousness that was lacking in previous generations; they are interested in knowing what they are consuming, where it's from, whether it's locally sourced, and if it's sustainably sourced. This environmental-consciousness has taken many years of campaigning to build, and to make people realise the damage that has been wrought on the environment. As such, she believes there is a trend that is redirecting society onto a new and more sustainable path.

Bakehouse Interview:

So as to compare and contrast the consistency of sustainability efforts across the Estate, and also to gauge how the Brewery fares in its environmental endeavours, a further interview was conducted with the Bakehouse. The most striking premise that developed through the interview was the prominence of business-centred, economic thought. The primary objective of the Bakehouse is to deliver its products and remain financially profitable. Moreover, the Bakehouse's predictions for the future, as envisioned by the Bakehouse Manager, forecast extensive growth in the business. The Bakehouse is predicted to upscale production; to physically relocate to a larger premise, in addition to acquiring a series of outlets.

Further emphasising the business-minded outlook presented by the Bakehouse, its interpretation of sustainability was conspicuously directed towards economic sustainability; by increasing profits the viability of the business would endure. This may be true for the economic condition of the Bakehouse; however, the outcome will likely see the uneven pursuit of the sustainability aspects. Admittedly, the multiple facets of sustainability are acknowledged as being something that has to be balanced throughout all areas of the business, from Human Resources to Finance. However, ultimately, it is still weighted in favour of business objectives, because if the features of sustainability are inconsistent with the business objectives, the business would suffer. Fundamentally, 'sustainability' can only be pursued so long as it does not compromise the ethics of the business.

In contrast to the Brewery, the Bakehouse appears to have clearer comprehension of their current condition and circumstances. What is more, it has considered both short- and long-term options for increasing its environmental and economic sustainability in greater depth. For instance, it has recognised that there is the possibility of sourcing its ingredients locally. By doing so, 'food miles' would be reduced, thus, promoting sustainability within the local economy, and also reducing carbon emissions. Longer term considerations also include substituting its current packaging with alternatives, such as, corn starch packaging which is 100% biodegradable. The Bakehouse has also incorporated a component of efficiency as it donates its waste food products and ingredients to livestock on the Estate. A result of which means that costs in other areas of the Estate as a whole are reduced, and waste is minimised, thus, creating a miniature circular economy¹⁸.

¹⁸ A circular economy is defined as: "an economy in which stakeholders collaborate in order to maximise the value of products and materials, and as such contribute to minimising the depletion of natural resources and create positive societal and environmental impact" (Kraaijenhagen, 2016).

A question revolving around the centrality of sustainability underpinning activities at the Bakehouse, or else the ‘greening’ of the business on a daily basis, revealed the discordancy between business and sustainable aims. It is recognised as something that is desirable to achieve, as an ideal, but also, something that is difficult to accomplish. To increase the Bakehouse’s green footprint, it would take a substantial amount of time and commitment, and as a 24-hour business, there is not even time outside of official hours to investigate it more fully. Profoundly, the Bakehouse Manager was under the conviction that a complete business restructure would be necessary for its achievement. From this purview, one is left with the impression that ultimately, the two ambitions are incompatible; it is seen as a case of finding a balance or compromise. Thus, demonstrating the degree to which the pursuit of sustainable practices would be incompatible with business aims in the view of one enterprise on the Estate.

When posed questions regarding obstacles that inhibit or prohibit sustainable practices, the responses echoed the answers provided by the Brewery Manager. Namely, concerns regarding the time commitments that would be required to implement the sustainable undertakings, and also, the limited time actually available to give to the issue. This returns one’s focus back to discordancy between sustainable ambitions and business motivations. Another difficulty regarded by both the Bakehouse and the Brewery as an obstacle, is the inadequate knowledge base for increasing environmental sustainability. The limited knowledge that both businesses possess severely restricts the options available to make amendments to practices. Moreover, the issue is further confounded as they are either unable or unwilling to create the time to investigate what options exist. Therefore, the pathways to progress sustainably are narrowed and cannot be fully realised. It also means that to an extent, the businesses are dependent upon external help to initiate, investigate, and enlighten them on sustainable alternatives.

Additionally, comparable to the Brewery Manager, dominant society was recognised as an obstacle that crucially would have to change for a complete, sustainable transition. The Bakehouse Manager held the view that the prevailing culture employs a wasteful, throw-away mindset; a linear process of use that is inefficient and overly consumptive. If something no longer works or becomes outdated, it is thrown away for something new, and often less expensive to maintain. As such, financial apprehensions reoccurred as an additional obstacle that would prohibit environmentally-friendly practices. The Bakehouse Manager was assuredly convinced that the environmental alternatives that were available would always be costlier. For this reason, it would be counterproductive to economic sustainability to invest in the alternatives.

What has been revealed from the Bakehouse interview is that ultimately, the two ambitions of business growth and environmental pursuits will not be completely harmonious. Instead, at worst, they are wholly incompatible, or will come at the cost of one another. Or alternatively at best, the pursuit of both ambitions will result in a case of finding a ‘balance’ and require compromises and concessions. In recognition of this conclusion, the Bakehouse Manager made clear that business goals are frequently at odds with the transition on to a sustainable path, whereby, for it to be realised, business will have to be compelled into committing to the environmental objectives by means of financial incentives or sanctions.

4.1.3 Text Analysis

The following section is comprised of textual information gathered from documents and electronic sources that refer specifically to the case in hand, that of the Welbeck Brewery. The text analysis forms a foundational element of the research because it grounds and assembles a contextual basis for the case.

Initially, the text analysis for Welbeck began with an examination of its website. Interestingly, the terminology used resonates loudly with the language of sustainability, terms such as, develop, innovate, development, and thriving. These terms elicit the progressive and positive framing of the sustainable development lexicon. On the website, it is even stated that *“Sustainability, innovation and rural diversification underpin all we do...”* (Welbeck). Clearly, one can see how the sustainability discourse permeates into the domains of small-scale companies to such an extent that it underpins how they conduct business. Moreover, the dominance and strength of the discourse is not bound to the realms of higher levels e.g. the UN, or national government, or else, restricted to academic fields. This could further confirm the appeal and applicability of sustainability.

In addition to the website, environmental documents also supplemented the examination. I was also supplied with the overarching ‘**Environmental Objectives**’ for the entire estate by the Brewery Manager. It consisted of a two-page document referring to various environmental goals pertaining to short- and long-term objectives. As such, one could conclude that it indicated an elementary understanding of sustainability. The document content demonstrated a rudimentary consideration of environmental issues such as, **Renewable Energy, and Pollution and Resource Management** (Welbeck).

The section ‘**Renewable Energy**’ considered options of **Biomass, Solar Energy, and Anaerobic Digestion**. Notably, it is asserted that the Estate does not have an overall policy for

installing renewable heating systems, however, they will be considered should the financial and logistical gains prove beneficial to the company (Welbeck). One could interpret this to mean ‘sustainable developments’ are held to ransom; conditional upon extrinsic advantages. Thus, they are not wholly viewed as a means in themselves, but as a means to an end. What is more, it demonstrates the asymmetric valuation and prioritisation of the sustainability dimensions. Here, we can see the economic dimension is bestowed a higher precedence. If conceived under the ‘sustainable pillar’ illustration, the structural imbalance is unmistakable.

Firstly, the section on **Biomass** is of particular interest as it stands as one of the more developed renewable energy considerations. The estate has already installed an 800kw biomass boiler and is considering the viability of installing a further two across the estate. The energy generated from the 800kw boiler is fuelled by woodchip sourced from the estate’s own woodlands, and has reduced the reliance on oil to only a backup feature (Welbeck). Two points need to be addressed in light of this. First, it demonstrates how the self-contained resourcefulness of the estate has enabled it to consider options of energy-supply that are not available to the ‘typical’ small-scale business, thus demonstrating the uniqueness of their situation. Secondly, and in consequence to their exceptional circumstances, the conversion to biomass energy enables their reduced reliance on, and disaffiliation from environmentally-harmful, and ultimately, unsustainable practices.

The intentions that warrant the additional smaller boilers is that they will supply heat primarily to residential developments on the estate (chiefly to elderly tenants and former employees). In view of this, one can see how the production of energy will predominantly be used to support human wellbeing. This is of note because it means that the installation of additional boilers’ purpose is not solely concentrated on the industrial element, i.e. in reducing the economic costs of its various enterprises. Again, in the frame of sustainability, the transition to a sustainable energy supply is aimed at supporting and also addressing all three sustainability dimensions. This is exemplified in the example of the boilers as their installation reduce pressures on the environment, thus accounting for the environmental dimension. The social aspect too, is afforded a level of prominence as human welfare is accounted for in supplying heat to residential developments. Finally, the economic dimension is attended to in the form of reduced energy fees for multiple segments of the estate (industrial and residential). Moreover, following the initial expenditure associated with the boiler, the costs should level out and eventually become cost-effective because energy related outgoings are diminished. This is on account of the viable utilisation of woodchip from the estate’s own woodlands that can be maintained in perpetuity.

Secondly, the Estate has weighed up realistic possibilities for the implementation and adoption of **Solar** energies. Therefore, at present, the company has 50kw of photovoltaic (PV) panelling mounted on its roofs (Welbeck). The intent of the panels is to compensate, or offset the power usage of the boiler, and thus, negate the energy consumptions, possibly even a bid to become carbon-neutral. In addition to the existing PV panelling, there are proposals for a 250kw scheme that will be used by the Estate businesses and residencies (Welbeck). Evidently, one could argue the Estate is proactively taking steps to attend to its assertions that “*Sustainability...underpin(s) all we do*”, and so, bestowing the sustainability discourse more than merely just ‘lip service’ (Lafferty and Meadowcraft, 2000, cited in, Dryzek, 2013, p. 153; Welbeck). Finally, an **Anaerobic Digestion** option has been voiced which may demonstrate a renewable route for the future. However, at this stage, it has only been proposed as a potential opportunity and not a near-future venture.

The other category of the Estate’s environmental objectives concerns **Pollution and Resource Management**. Predominantly, Water Supply and the Disposal of Waste Water account for a considerable segment of the objectives. As has been brought to attention on multiple instances in this thesis, my connections with the Estate were made possible through project work examining the water supply of the Brewery.

Once more, the company finds itself in a unique position as it is also fortunate enough to be the owner of its own water company by virtue of possessing a borehole on the Estate itself. The borehole provides water to in the region of 350 private and Estate properties (Welbeck). Similar to how the biomass boiler is supplementary to sustaining the self-contained locality of Welbeck, the borehole corroborates the developing self-sufficiency and independence of the Estate. The company further state that it is reviewing the usage of water across the entire Estate, and monitoring leaks, supplies and meters (Welbeck). A result of which should be that the wastage and pumping from the borehole is kept to a minimum, and resource-efficiency is optimal, i.e. sustainably managed.

However, although the Estate claims it is reviewing and monitoring its water-usage, it was found during the internship that no clear records were kept of the meters, and distinguishing monthly water-use records proved difficult. The records that were kept in relation to the Brewery, identified water usage spanning six-month periods. The calculations formulated during the internship allowed me to estimate an average monthly water-usage approximation from the six-month periods. The calculations identified the in-flows of water predominantly used in the brewing process, and also, the out-flows, i.e., the waste water. From this point, it was then possible to distinguish the resource intensity of the brewing process and also the

efficiency of resource usage. The estimates were subsequently measured up against the industry's standard to contextualise the Brewery's performance. The culmination of the calculations and resulting comparisons revealed the Brewery performed to the industry standard. This example serves to illustrate, firstly, discrepancies in what is stated as being done from its documentation, with what is proven to be done. Secondly, it demonstrates break downs in communication across the Estate as the Welbeck organisation claims one thing, and then its individual units (Brewery) highlight the deficient coordination of those assertions. Thirdly, it is an example of how the ignorance of their resource-usage severely limits how efficient and 'green' they can realistically be. Therefore, it is possible to conclude that sub-optimal and inaccurate record keeping is an obstacle to sustainable practice.

The Estate further address **Waste Management**, claiming that the minimisation of waste from each Department is key (Welbeck). What is more, it maintains that there are investigations underway for potentials in composting or mulching green waste that is produced by various departments on the Estate (Welbeck). Therefore, it is clear, at the very least, the Estate is aware of its responsibility in attending to the waste it produces. On the other hand, what comes to light from this recognition of responsibility, is that the only concern shown is for the Estate's internal Departments, and therefore, detaches the duties of the Estate from the enterprises on the Estate. Thus, potentially signalling a lack of coordination from the Estate in its entirety, and so, limiting the effectiveness of sustainable efforts on a wider scale.

Lastly, "*In an attempt to reduce greenhouse gases...*" the Welbeck Estate's final Environmental Objective, pertains to Vehicle Management (Welbeck). To achieve this aim, multiple modifications have been applied to its vehicles, and the Estate has also undertaken trials for alternative modes of transport. The modifications and trials have included global positioning systems (GPS) modifications, the use of electric cars, and also the adoption of all-terrain vehicles (ATVs) for the Game Department (Welbeck). What this serves to prove is how broad the scope of attention, and how wide-ranging the environmental considerations have been by the Estate. It has attempted to address a multitude of environmental concerns, even if it is in a very preliminary and rudimentary manner at this stage. Furthermore, and significantly, it illustrates a willingness and a drive to develop sustainably.

4.2 Dover District Council Analysis

The town of Dover is located on the coast of the South East of England as illustrated in *Figure 4.1*.



Figure 4.1 Map of England
Dover can be seen below London on the lower right side of the map.
Source: (About-Britain.com, 2009-2018)

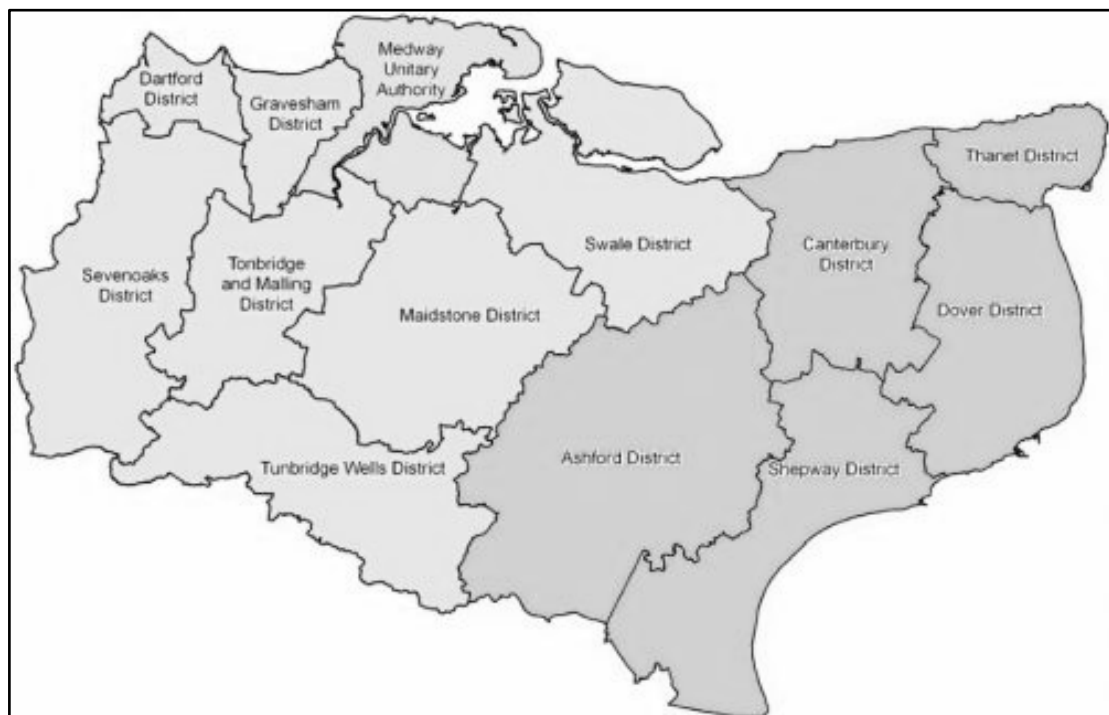


Figure 4.2 Map of the Districts
Source: (The Canterbury Society, 2016)

However, Dover District Council (DDC) is a local authority at the district level, spanning the boroughs of three towns: Dover, Deal and Sandwich, which is illustrated in *Figure 4.2*. At this level of government, district councils are generally responsible for community-based services amongst other responsibilities. The community services typically concern maintenance and ‘on-the-ground’ practicalities, such as, rubbish collection and recycling; housing and planning applications, and the council tax collections (Gov.uk). *Figure 4.3* illustrates a visual breakdown of the government structure in the United Kingdom (UK), where DDC sits at the district level as one of 201 non-metropolitan districts. This also aids in demonstrating DDC’s relatively low-level position in government.

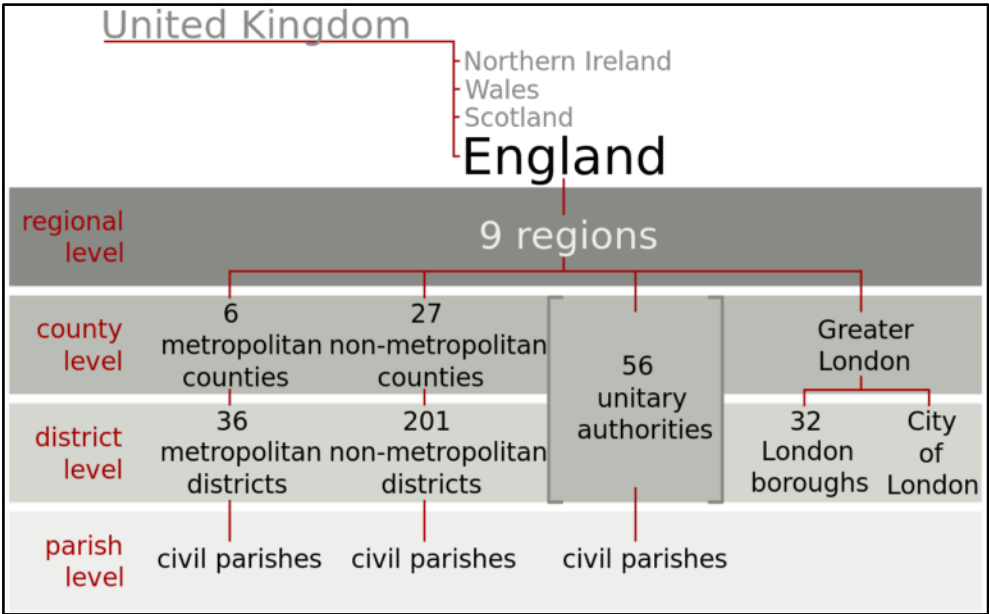


Figure 4.3 British Governmental Structure
Source: (Squadrin, 2018)

4.2.1 Participant Observation

Akin to the Welbeck case, the observations for Dover District Council took place during an internship spanning three months within its Planning Department. The placement within the Planning Department was insightful because its principal purpose is to consider and evaluate structural developments in the district whilst rigorously adhering to a nationally drawn up document known as the ‘**National Planning Policy Framework**’ (NPPF) (Department for Communities and Local Government, 2012). The NPPF synthesises all previous planning documentation into a fifty-page guide for planners to refer to. Consequently, all planned developments must comply with the developmental guidelines of the NPPF.

The Planning Department consisted of small number of heritage officers, planners, and ecologists. Both within the department, and on a wider level the council, the tasks and responsibilities of each person was clearly defined and separated. Although this did not mean that there was a complete breakdown in communication as the overarching goal of producing a Local Plan was essential to all. However, it was clear to see how the individual purposes did disrupt and fracture the agendas and aims of the department because each individual set out to achieve their own goals. A further noteworthy point to make is that the variety of backgrounds and expertise benefitted the department as it was then capable of delivering well-informed and targeted strategies and plans. Whilst being a clear advantage for producing and delivering institutional requirements such as the Local Plan, it also brought to light internal discordance regarding priorities, visions, and motivations. For instance, the planners were primarily concerned with producing sound documentation like the Local Plan or else the Green Infrastructure Strategy. In their view, a document was considered sound if it adhered to, and satisfied the requirements of government which for instance, could be achieved by following the NPPF guidelines. In this way, one could argue the planners appeared blinkered as they carried out their tasks. In some ways, this led to strains within the department as others perceived different features as critical to consider for proposed developments. Take for example ecologists who viewed environmental features as important to safeguard in plans and developments and thus, was deserving of increased prominence. However, if the plans and strategies are restricted to following prescribed, general guidelines then that severely narrows their applicability and relevance.

4.2.2 Interviews

The size of the district council, while not enormous, was substantially larger than the operations at the Brewery and so the number of conducted interviews reflects this proportionate scoping. The respondents of the interviews were specifically chosen as they reflected a range of fields and positions. This is key to gaining a fuller and more rounded depiction of the topic at hand. For this reason, both planners and ecologists were selected, furthermore, they also ranged in positions of authority to see how opinions either correlated or differed.

The obstacles or challenges that faced the council in pursuing sustainable targets in one way or another all fed into one another. Through summarising reoccurring arguments and positions made by the various respondents, the condensed themes revolve around **Power Differentials & Leadership, Economic Standing, Motivations & Prioritisation, and**

Relations & Communications. Other challenges also emerged, and so, have been factored in as elements of the overarching obstacles.

Power Differentials & Leadership

Leadership, which was very much interwoven with the element of power differentials, featured prominently in the interviews.

One interview drew attention to the professional distribution of environmentalists, and how many choose to work for environmental organisations. While this was viewed positively for it promotes the environment, it was also deemed important to take up positions in other areas of influence. Using the respondent's own position as an example illustration, "*the overarching aims of the authority (DDC) are not central to the environment and that's why it's important to instil it into the planning and practical action*" (C, 2017). This was reinforced by asserting that it was crucial for environmentalists to reach decision-making roles in the civil service, such as senior advisers in Whitehall (C, 2017). Thus, one can see how action and engagement are necessary across all scales. Moreover, a vital element is the steer from authoritative positions, in a top-down approach to validate and enforce the agenda.

Concerning all the various tiers of government, the internal corporate ladder of the council, and the positions of authority, the **Power Differentials** featured as a significant difficulty in addressing and committing to sustainable goals. Despite individuals' personal motivations to attend to issues of sustainability, they are often superseded by the hierarchical, authoritative order in which actors are subordinate to. In each interview, every respondent articulated difficulties that stemmed from their restrained manoeuvrability in which to act upon environmental intentions. The restrictions were caused by a degree of powerlessness in the face of an overruling authority.

After completing all of the interviews and reading through the transcribed recordings, thematic notions began to emerge. Foremost, one cannot deny a perceptible distinction between the planners and the ecologists in regard to what should be deemed important and prioritised. The planners appeared blinkered; grasping only the guidance and directives provided by national government. Beyond meeting those requirements, there was very limited demonstrable evidence of pursuing further agendas; almost to the point of incomprehension. It is of interest to note that management consisted of former planners in their previous job roles before progressing to management.

From the position of employees within the department, it was asserted that they had aspirations for incorporating environmental concerns into their report writing, or else, to

consider more fully environmental impacts when assessing developments. However, they felt restricted in doing so because it was perceived that higher management would be unreceptive for the reason that it would be a costly or time-consuming divergence from their core purpose, or deviation from the official guidance. Furthermore, assessing and prioritising environmental impacts beyond the requirements of official obligations, was to a large extent, believed to be outside the remit of their job roles. An additional issue that impeded efforts to go beyond requirements was the time confines. The time restraints in which to complete projects, to reach deadlines, and achieve targets were seen to be extremely difficult and tight in and of themselves, let alone by increasing the workload and taking focus off the core purpose.

Moreover, management too, displayed similar struggles of narrow flexibility and powerlessness resulting from national deadlines and targets. As was stated in one interview, the district council could be recognised as the ‘little worker ants’ at the bottommost of an institutional order where they are tasked with carrying out directives (B, 2017). In interviews, management voiced the pressures they felt to achieve the anticipated results of directives determined at higher levels. These pressures were made more pronounced because as managers, they were responsible for the operations and its outcomes. For this reason, they often stressed the importance of ensuring employees stay on task and focus their energies on achieving these ends. In light of this, all attentions are directed to this purpose, and deviations are excessive to the cause.

The council’s position as a low-level authority was also used as justification for why they were so limited in doing more to progress the sustainable development discourse. As a district council they did not have the authority to dictate agendas, or change the priorities set by national government, thus, were unable to go beyond their remit. What was suggested on multiple occasions was that although they themselves did not possess the authority, national government could take the lead and drive sustainable development as a priority. Respondents suggested economic sanctions and incentives as a means for steering the goal. The recent ‘5p tax’ on plastic bags¹⁹ was used to illustrate the belief that by use of the economic system, people could be incentivised into sustainable behaviours (B, 2017; C, 2017). More specifically, “...it is about making people think when they pay; little conscious daily decisions, they are minute but principle” (C, 2017). In consequence, it was believed that further taxation on unsustainable behaviours would continue to be of value. Furthermore, incentives such as funding and tax

¹⁹ The tax was introduced to reduce the use of single-use plastic carrier bags, by encouraging people to reuse bags (Department for Environment Food & Rural Affairs, 2018)

breaks for businesses, or authorities to act sustainably would be beneficial. While these suggestions all hold utility, it is not on the authority of local government to implement them; the steer has to come from top government. Therefore, a challenge in maximising the potential of sustainable development, as perceived by DDC, is its low level of authority.

As the responsible bodies for ensuring the mandates of government are carried out, the council management felt they had to concern themselves solely with carrying out those directives. As such, *“they did not have the time, they just had to get on”*, and what was needed was a system in place that they could understand as non-specialists and was operational in practice (B, 2017). Nonetheless, whilst the respondents of the Planning Department appealed to this reasoning as justification, they also acknowledged that other councils excelled in more evenly balancing development. One member of the Planning Department had described how she had left Bristol fifteen years earlier, and as a city, they had fitted communal gardens, fruit trees, and cycle lanes. This serves to undermine the management’s argument, as other areas of the country have progressed more sustainably through providing sustainable options. For sustainable options such as, the construction of cycle roads, or the development of communal gardens, to have become available, it would have had to pass the assessments of a planning authority. Therefore, it was not considered ‘beyond the remit’ of other authoritative bodies.

In another vein, the perception of powerlessness originated, to an extent, from being at the mercy of prospective developers. The weak local economy, and relatively low desirability of the area meant that the council’s planners did not hold a strong position to dictate terms of developments, and instead, had only the government-provided guidance to justify requirements for new builds. As such, to a large degree, concern for the environment and its protections were only supportable if already recognised by the higher authorities. Thus, one could reasonably conclude that for sustainable progress to be made, it has to be enshrined and supported from top levels in order for lower levels, such as councils, to be justified in enforcing.

At the other end of the scale, respondents claimed power could also stem from civil society. It is through local elections that council leaders and members are chosen, and it is at a local level politicians’ campaign, and are keen to represent the district. From an interview, citizen advocacy was appealed for, and it was stressed that politicians listen to local residents and are very sensitive to the views of the people: *“If local people are really interested and keen on preserving areas, they can make a massive impact”* (B, 2017). As such, the priorities of the elected members can represent the views of the people, and so, if civil society truly wanted to change things, they had to voice those views. In addition, when new strategies, policies, and plans are being developed and going to be adopted, they go through a process of consultation.

This phase in implementation is yet another opportunity for residents to voice concern and opinion as their comments go on record, and “...the council does try to give people what they say” (B, 2017). Lastly, in a further interview, one respondent was working on a strategy that had an aim to engage the community through the enhancement of the natural environment of the district. Surveys had come back indicating that people valued the natural environment and enjoyed the ambience. Therefore, the goal was to maintain and enhance the environment which could increase community engagement and influence the politicians. What this demonstrates is the importance of collective goal-setting, whereby, at all levels, people are united by the common goal of reaching for sustainability.

Motivations & Prioritisation

From an interview with some of the council’s management, the national government’s position on sustainability observed that the three aspects should be perceived as equal. However, the reality of pursuing sustainability on the ground when considering planning applications was that they are not equal, and rarely are they balanced. Hypothetically speaking, for one development, the social benefits of the build may have greater value than environmental ones, and so the balancing act is never evenly matched. The assessments that are carried out for a forthcoming development reveal the full extent of the benefits and drawbacks that will arise from the build, and as stated in the interview, “ultimately, the environment loses, because with built development, you’re losing land essentially” (D&E, 2017). This admission indicates the concrete reality of pursuing sustainable development equally and demonstrates an idealistic quality in doing so.

As acknowledged in the section on Power, the actions undertaken, and objectives aimed for are dependent upon the motivations and priorities of those with the power to determine them. It is essential there is strong leadership at all levels to direct and enforce changes or initiatives. For this reason, it is vital to the implementation and progress of sustainable development that leaders and management are driven by this cause. The interviews aptly demonstrated how dependent the progression is upon the direction from those with power. In a further interview with management from the Planning department, they explained that there had been an election of a new council leader for the district and he was interested in progressing the social welfare of the district. What this means is that the focus and drive of the council is highly likely to reflect this. Moreover, in an another interview, it was stated that the previous council leader was heavily against the environmental focus and referred to those who tried to drive it forward as ‘environmental jihadists’ (C, 2017). Unmistakeably, the position the leader

held on environmental concerns and the political sway his position held would certainly influence the direction and progression of the agenda. In addition, given the economic circumstances of the district, and the decreased funding available, it would appear excessive and unnecessary to concentrate monies in that way.

Furthermore, it is important that the motivations and priorities are aligned at all levels of management to effectively spearhead the agenda. The interviews especially demonstrated how important this point was because in many instances ‘sustainably-minded’ aspirations were stunted as a result of being hindered by more significant levels of management. As stated, several employees voiced how they wanted to consider more closely environmental impacts or incorporate environmental elements into their strategies but felt they would be disregarded by management. Similarly, management of the planning department felt relatively powerless to dictate agendas or give impetus to sustainability in ways that had not come from higher government.

Alternatively, in an affirmative frame, when leaders in charge are motivated to protect and enhance the environment, the impact they can make is substantial, even on the local scale. This came to be the case in one interview with the manager of another department. He explained that in his personal life he was incredibly driven by the sustainable cause which reflected how he managed the department: *“It might not be the business of the council I suppose (but) I look at the world in a sense of we need to try to act on those matters in our daily lives on a personal and professional level, because I take them very seriously”* (C, 2017). Clearly, there is a variance in attitude towards sustainable development in the two departments; one minimises responsibility while the other shoulder’s the ‘burden’ as duty. This example epitomises the argument for how central motivations are in progressing sustainable development. Likewise, without the motivations driving the agenda, it serves as a hindrance and obstacle to its progression.

Economic Standing

The prioritisation of goals and objectives leads into another key theme, that of the district’s Economic Standing. The district has been hit hard by economic crashes and is not as desirable an investment zone as others in the country. As such, the district council’s overarching goal and emphasis is set on regeneration and economic growth. This is one reason why balancing the sustainability aspects is especially tough when the drive from both the council, and from higher authorities presses so insistently for new builds. By and large, the building of new infrastructure and development inevitably comes at the expense of the natural environment.

One respondent asserted that it was wrong “*to be constantly ‘chasing the dollar’*”, that society had exploited the world for too long and; there is a tipping point because there are limits to growth (F, 2017). The challenge to sustainable development as the respondent saw it, and was reconfirmed in another interview, was in trying to have economic growth and regeneration above all else (C, 2017; F, 2017). This assertion highlights the realities of pursuing sustainable development equally, and unmistakably, the weight of the scales tips heavily for the economic dimension.

In one interview it was brought to attention that with the previous Labour party in government, there had been an immense drive for partnership working with other authorities and agencies, which then generated funding. This then enabled the council to pursue additional projects outside of their core functions. However, with the subsequent election and transition to a coalition government, coupled with the economic crisis, the collaborative work disappeared, and agencies were disbanded to save money where possible. The result of which meant that several projects were discontinued or put on hold, and the council receded back to focusing solely on carrying out its core duties. This was the outcome of two significant factors: the upheaval in political power and the radical shift in economic stability. Therefore, these are two substantial factors that heavily affect progressing sustainable development, and so, can represent severe challenges to the agenda. A further issue that this raises, is that without external funding, the pursuit of balanced sustainable development is stunted; funds available to the council are prioritised and utilised as a means of its survival. In this way, this draws attention to views expressed during interviews that perceived “*the green stuff to be a bit of a luxury*” within the district (B, 2017; C, 2017). Indicatively, progress is not balanced when priorities and funds are channelled into infrastructure development and ‘staying afloat’, while environmental development is considered an additional feature. This was pointedly demonstrated in an interview that revealed a large biomass boiler had been fitted within the district, but one that had been installed by investors and developers and not the district council. Thus, for the installation of green technologies, it has to be funded by external actors as it is an unaffordable extravagance for the council.

As has been made clear, the district is focused on regeneration and housing development, one impetus for this has come from a population explosion in the South-East, as such, there is a genuine need for housing. While this is attending to a legitimate social need, the concern lies with government targets of houses produced, and therefore, quantity. In several interviews, respondents displayed apprehension and incomprehension that there appears to be no planning for the future, or for when there is a drop-off point. This example illustrates a

concentrated effort to tackle a serious social need, and so, addresses one of the aspects of sustainability. However, while it is a socially instigated cause for development, it is considerably lacking in durability, and therefore, a challenge to sustainable development.

What is more, the low desirability of the area leaves planners in a weak position to negotiate better terms for a development in regard to social or environmental attentions. The interviews drew attention to the fact that there are alternative methods, materials, and speeds for constructing houses in a far more sustainable way, and that could offset some of the damage to the environment. Respondents suggested modular housing, or the construction of housing that includes green roofs or PV panelling (C, 2017; D&E, 2017). From this, it is clear how planning and infrastructure have so much potential for contributing to a more sustainable mode of living yet are restricted. When questioned as to why these features or options were not the norm and commonplace, it was understood to be the result of the area's low desirability. In this way, one can see how the economic circumstances of the district play into the theme of power; whoever holds the stronger economic footing in this situation, is also in a stronger position to dictate terms. Within this scenario, the developer holds far more power to dictate builds because of the district's struggling circumstances. In mind of this, additional reasoning maintained that central government has to legislate for these environmental measures because local authorities do not have the authority to enforce it, thus, developers do not do it (C, 2017). Therefore, challenges to sustainable practice are evidently tangled up in capital and power relations.

Relations & Communications

A highly perceptible obstacle that I witnessed through the time spent at the council and was also made apparent through the various interviews revolved around relations and communications. Frequently miscommunications occurred where respondents struggled to present environmental initiatives as a focus that would go beyond the fundamental necessity laid down by national government. This occurred at each rung of the institutional ladder; from employee to management; and from management to portfolio developers or to the councillors of the district.

Each district council has to develop and implement a Local Plan which lays out the targets and courses of action for the development of the respective area for the following five years (Department for Communities and Local Government, 2012). On the one hand, this is a rational, structured plan; it is one that informs the constituents of the district of the council's direction and courses of action. In addition, it clearly identifies what it is employees of the council should aim to achieve so that they all can work together to achieve the single purpose.

On the other hand, while the Local Plan spans the length of a single political term and should enable enough time to launch a politically-guided agenda, it is an incredibly short time for a *sustainable* agenda. For example, to establish protections and safeguard the district's environment, or to effectively attend to the social needs of the district. To effectually protect and enhance the environment, it requires longer term thinking and planning in order to see and experience the results. However, with a shift in political priorities every four to five years, the danger of abandoning pursuits, and initiatives not coming to fruition, is heightened. This incongruence between political agendas and environmental timescale was expressed in several interviews, thus, it stressed a considerable obstacle for low level government to overcome. This is only at the district level, but if one were to consider higher government, such as the national government, they too are under the same time parameters of four to five years. With this in mind, one can see how the obstacle is enlarged onto a far wider scale than just the district level. Should a political party endeavour to focus on social, economic, or environmental sustainability, district councils are required to pour their resources into achieving those ends. If a political turnover then occurs with the following political term, then results are likely to be reduced and ineffectual.

Council to Council

A further political challenge concerning the disparate timetabling for each council was unearthed through the research. As clarified in the previous section, each council is required to produce a Local Plan for its respective district. However, they are not produced in unison. The preparation and progression of each Local Plan is specific to each council, and so they are at different stages of plan development and released at various intervals. This was asserted as the case for DDC who were further along with their Plan development than their neighbouring authorities. A consequence of the differing schedules means that communications, potential collaborative opportunities, and project management between councils are either lost or immensely reduced. For instance, DDC were considering the developments and projections for the future of the district in their upcoming Local Plan, and so, they had a greater comprehension of the state of their district than the surrounding authorities. Consequently, they could see potential areas for collaborative works. However, because the neighbouring districts were not at the same stage, these opportunities were ultimately dismissed as the resources could not be spared for lesser goals, and it was not a priority at that point in time. This is problematic for sustainable development in all aspects, but prominently to the environment: natural boundaries are not synonymous with political borders. Thus, for effective environmental safeguarding and

development, it needs to be planned and carried out at a landscape scale rather than fractured pockets of space. Therefore, it becomes exceedingly difficult to effectively protect the environment and all it entails when the land is divided administratively, and councils act in isolation.

Challenges to sustainability continue to arise from the isolated operations of councils on account of the different councillors with varying priorities and political agendas to achieve. While devolved power to individual authorities allow them to hone in on the challenges facing their district and concentrate on the development of the area, it can also endanger the pursuit of sustainable development when there is not a single, clear, and unified goal that all are pursuing. This was drawn attention to in one interview with a case in point of a local politician challenging the protection of an area that was a habitat for a protected species in favour of development. When power is devolved too far down then it runs the risk of pursuing individualistic political agendas which can then come at the cost of other affairs of importance. This too, brings us back to the line of reasoning made by management whereby sustainable development is rarely an equally balanced pursuit. Moreover, if each council sets out to achieve distinctive and totally exclusive goals, unrelated to the surrounding regions, then developments are far from uniform and enfeeble sustainable development.

The Duty to Cooperate is a legal requirement for local authorities to achieve and aims to encourage communication across administrations (Department for Communities and Local Government, 2014). This looks to be a reasonable and important obligation that to an extent, does achieve its purpose of compelling councils to interact. For instance, in an interview with two respondents, they conceded that without the duty to cooperate requirement, it is unlikely they would seriously seek to communicate with neighbouring authorities in the same way. Nonetheless, the tone in which the acknowledgement was made would suggest that the legal requirement goes no further other than to satisfy the obligation, and so, is not conducted in the spirit of the requirement. Pursuing other authorities is time consuming and can be resource-intensive for several reasons, such as; trying to make contact with the correct persons and initiate dialogue; arranging meetings that suit the schedules of both parties (which is made more arduous if the consultation is not a priority or of urgency to both), and also; the follow up courses of action which may or may not be viable and require professional investigation. Without the serious commitment of the parties involved, the efficacy of the obligation is weakened because its practical application goes no further than the bare minimum, and so, opportunities to truly think about improvements and collaborative developments are lost.

Internal Council Communications

A surprising subject was uncovered through the observations and was then bolstered further in the interviews as each respondent voiced feelings of suspicion, doubt and scepticism. In each relationship; internally from within the council, council to council, council to general public, and council to national government, respondents expressed statements that would suggest serious deficiencies in communication at all levels.

Section themes concerning motivations and power revealed tensions and schisms between members within the council itself. In addition to these tensions, and arguably the cause of them, could be boiled down to communicative failures. The struggles of openly communicating was evident through the observations and appeared more so through the interviews. Management spoke intensively of their core purpose and incapability to go beyond that. Employees voiced their regret in being unable to do more than ‘the basics’, and even doubted whether management truly understood what sustainable development meant. On one occasion, it was mentioned how they were incorporating additional environmental elements into their work as it was possible to remain under the radar. This would then allow them to creatively apply solutions and thus, maximise strategy potentials. It was considered easier to go about it in an artful manner rather than outright communicating with the management because they “...*just wouldn’t understand*” (F, 2017). As has been stated, the planners appeared inexplicably blinkered to information, ideas, and concepts that had not originated from top government or planning documentation (F, 2017). Plainly, the inability to communicate with management or others within the department is a notable challenge for jointly pursuing the same goals. Also, when reduced to slipping environmental policy items into strategies, the overall effectiveness of making headway on sustainable development is weakened.

As aforementioned, there are clear complications with collaborative actions between local councils due to alternate scheduling, isolated operations, and varying priorities. The complications are then amplified because of a certain level of competition, to a degree, the districts are competing for investments. For the district to prosper, it requires investment and development, to then aid in the development of a neighbouring district, it runs the risk of then losing investment for its own district. As such, while consultations and contact can be beneficial to both parties, it is also a guarded exchange. The meetings concern the topic or issue at hand and are prepped to discuss such issues. Beyond this point, councils are less forthcoming or reticent to divulge more information than necessary. When discussing relevant topics, and considering the possibility of collaborating on projects, there appeared to be feelings of cynicism over the funding of projects.

National Government-District Council Relations

Communicative issues also occurred at the level of the council towards national government. The interview held with management revealed that while national government claimed to make decisions and introduce policy based on empirical evidence, their impacts and results appeared dubious. At times, it was questionable whether there could be any empirical evidence to have based the policies on when they seemed so far removed from reality, and led some to suggest it was instead based on vested economic interests (C, 2017; D&E, 2017). Moreover, the continual shifting of priorities, initiatives, and targets led some respondents to believe that they were the wilful decisions made by top government to keep the council in a state of constant turmoil. If local government existed in a state of disarray, then it would limit how effective it would be in carrying out the directives of the government. Consequently, any ill-conceived scheme that would be doomed to fail from the offset could not be placed on the doorstep of government, but on the failings of local authorities' inability to carry out the initiative. In essence, it could be seen as a means of scapegoating. National government could be well-aware that the targets or initiatives that they set were unrealistic and impractical, yet still appear to have good intentions. For example, it could assert its commitment to leading the way on sustainable development, or pledge significant economic regeneration, and so, set targets for local government to achieve. If those targets are not met or exceeded, then the blame will be laid on the authority carrying them out. Even if this is not the disconcerting reality and underlying purpose, it indubitably illustrates a lack of trust or faith on the part of local government over the true intentions of national government. Furthermore, it demonstrates a lack of solidarity or unity in core goals from the governmental institution as a whole.

A further issue that was brought to light, was the ignorance in the state of affairs from government to council and vice versa. The unawareness top government displayed in instructing local authorities to carry out certain initiatives, and how impractical they are to the realities on the ground, demonstrated how out of touch they are. Likewise, the cynicism exhibited by the respondents revealed incomprehension on their part of the workings of national government and what it genuinely aims to achieve.

Local Authorities-Civil Society Relations

As has been stated, local authorities carry out the programs, goals and schemes of national government, and so, are the face of government. They represent the government on the ground and are what the public see and interact with. As such, they are very much on the firing line for the unpopular responsibilities and decisions they are tasked with, and respondents very

clearly state that they are disliked by the public as a result. Several times respondents spoke of a patent perception the public held of local government as having a ‘cushy’ job, where it was undemanding, comfortable and they reaped the benefits of it (B, 2017; F, 2017). Moreover, respondents perceived that there was an intrinsic feeling that councils were corrupt. The respondents’ anecdotes further expanded on this estimation where the public regularly questioned and criticised the use or ‘disappearance’ of their taxes. Thereby inferring that the authorities were misappropriating the money and its employees were dishonest people.

Miscommunications and perceptions also existed between government and the world of academia. Foremost, this was demonstrated through the observations and interactions made during the internship, and then reaffirmed in the interviews. Conceptions and theory surrounding sustainable development that are commonplace in academic circles, were often unheard of at the council. In other instances, they were known, but were deemed as irrelevant and unworkable in practice, and so, left to gather dust. For example, questions and discussions concerning the sustainable development goals were met with either ignorance or irrelevance. In the instances that the SDGs were known, they were considered to be the affairs of national government; if the council’s actions helped towards these goals that was a bonus, but it was not something they were actively trying to achieve or even considered. Many respondents at the council also felt that the academic domain was too far removed from the realities of practically attending to sustainable development. One respondent stated in regards to academics, *“You try to talk to them about the situations and realities on the ground with biodiversity but there’s a complete lack of comprehension on their side, because they’re dealing with biodiversity but they’re not dealing with the people who deal with biodiversity, and that’s a subtle difference”* (F, 2017). The quotation aptly captures the disjuncture and illuminates one of the obstacles for sustainable practice. The theory developed in academia could go no further than being mere theory as the practicalities made it unfeasible. Thus, this too demonstrated a severance in the communicative links.

From both angles, the fractures in communication are clear, in one occurrence, the local government reveals apparent ignorance, and in the other, academia demonstrates failures in its utility when its conceptions are out of touch and inoperative. Thus, highlighting a significant obstacle in pursuing sustainable development when alternatives and solutions put forward are unknown or unusable. The result being, fewer accessible pathways for shifting the current course and continuing ‘business-as-usual’ and proceeding along an unsustainable and damaging path.

As was stated in the beginning of the Interviews section, and elucidated in the subsequent analysis, the challenges that have emerged in some way interact and impact on one another. *Figure 4.4* illustrates the interconnectedness of the highlighted themes:

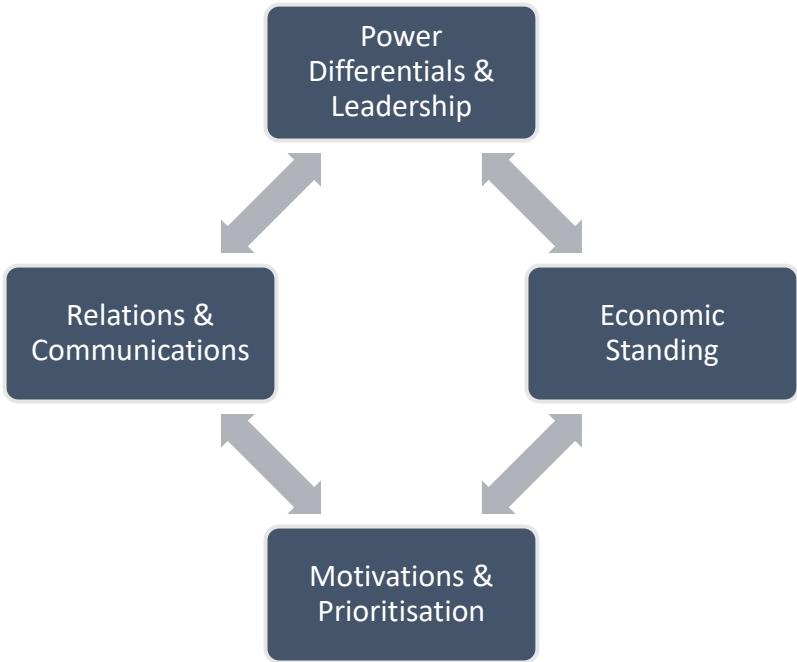


Figure 4.4 Illustration of the Interconnected Themes

4.2.3 Text Analysis

As before with the case analysis of the Welbeck Brewery, a text analysis has been conducted for DDC. Likewise, the purpose is to supplement the methodology; to inform and ground, to establish a base of understanding. There is extensive documentation provided by, and for, the council. For this reason, the text analysis has been delimited to the most pertinent and relevant documents. In sum, it will review the following information sources: the **DDC website**, and the key document used to make planning decisions, the **NPPF**. The review of these sources has been selected for similar reasoning as with the Welbeck analysis. The website represents the official positioning of the council and so is useful for comparison to the interviews and observations. The NPPF, like the Welbeck Environmental Objectives, is the key source that is used to inform and guide. Therefore, the exploration and analysis of it is vital for contextualising their courses of action and holding them up to examination for their performance in carrying out the guidance.

The DDC Website

The DDC website is split into sections comprising of the council's key duties and activities, such as; planning, housing, environment, council tax and benefits, community and events, elections, and leisure (Dover District Council).

The case analysis of DDC is centred on the activities and operations of the Planning Department. Furthermore, what has been made clear from the analysis insofar is that the focus of the district council is concentrated on regeneration and growth. As such, a pertinent area of the DDC website to examine is the Planning section. Within the Planning division, the regeneration projects that are currently being undertaking are documented with a summary of each development and how it will benefit the district (Dover District Council). Much of the current regeneration projects have been planned and postponed for many years as a result of the economic crashes, diminished investments, and lack of funds.

At present, the district has been able to invest in the 'St James Development' which is a large eight acre, commercial complex (Dover District Council). The intention is to transform the retail and leisure on offer in the heart of Dover. The investment should then attend to increasing the social welfare of the residents of the district. Additionally, the placement of the development is situated close to Dover ferry port and so it should attract the passengers travelling across the English Channel, and also the few cruise ships that dock in the port. As such, the development is believed to be a profitable investment that will significantly increase the activity in the district's economy by creating jobs, raising disposable household income, and increase consumer spending, both from consumers within the district and from outside capital. Therefore, the development addresses both the economic and social aspects of sustainability because it is a long-term investment that enhances the social and economic welfare of the district's residents.

The development has been built in replacement of a dilapidated, industrial area of Dover. As such, it is an effective use of space that improves the commercial built environment of the town and does not encroach on natural lands. For this reason, while not enhancing natural spaces or enriching the environmental aspect, it does not directly harm it either.

The second development project on the regeneration page is the 'Aylesham Village' which has been identified as a key location for increasing housing available in the district (Dover District Council). In total, the completion of the project will see the construction of an additional 1,200 homes to the existing village of Aylesham (Aylesham Village, 2014-2018). Foremost, this development attends to the politically driven agenda of reaching housing targets. Additionally, it is set to rejuvenate the ailing village; to improve the local facilities, in addition

to investing in village-wide landscaping. From the offset, what this development aims to address would attend to all the aspects of sustainability in some form. Nevertheless, the reality of undertaking the project is likely to highlight how the aspects are rarely balanced in practice as stated in interviews by planning management.

One section of the website attends to information about the council as an institution, and its codes including the Freedom of Information, transparency of activities and tax spending (Dover District Council). It is interesting to note that the public perception of local authorities is one of suspicion and distrust when there are visible efforts made to be honest.

The website is also inclusive of the council's strategies and policies regarding all of its activities and duties. Of particular relevance to this study, is the guiding district document: the Local Plan. At present, the development of an updated Local Plan is underway, and will lay out key policies up to 2037.

At the current stage of its production, the council have stated that the Local Plan will identify:

- New homes
- New jobs and business premises
- Open spaces
- Community facilities for people to use
- Infrastructure such as roads
- Schools
- Healthcare

(Dover District Council)

As the name of the document would suggest, the Local Plan plans for the district; one can see from what the Local Plan will address, how it encompasses a multitude of important matters that impact on the social, the environmental, and the economic domains of the district. This stands as the lengthiest policy document that will significantly influence the operations of the council. For this reason, it holds considerable weight if one is to reflect on sustainable development; this single document is largely determinant of the directions, priorities, and goals for the future of the district for the following fifteen years. Thus, it lasts well beyond the durations of political terms, and so, is not dependent upon individual political agendas, and has less potential for being swayed by short term politics. As such, the Local Plan represents both an opportunity and a significant challenge to adopting sustainable practice, depending on the

direction of the new Local Plan. If sustainable development is recognised as the underlying aspiration and runs through each area of policy within the Plan, then future strategies and policy will be written and undertaken with that as the foundation. Alternatively, if the focus remains fixed on economic regeneration and infrastructure development, then it is these priorities that will steer the supporting documentation and actions carried out by the local authority for the next fifteen years. Consequently, DDC is placed at a pivotal point in time where the decisions and direction they choose to take now will define their performance for the foreseeable future.

The Local Plan exists as the leading document that is informed and supported by a variety of ‘evidence-based’ strategies. These too, can be found on the DDC website. They are formed of gathered evidence of the respective topic at hand, be it heritage, transport, or green infrastructure. As such, the Local Plan should be a robust reflection of the state of the district, and how to develop in a balanced, long lasting fashion, i.e., sustainably. In this way, one can see that the Local Plan has the fundamental components for developing sustainably. However, the fact remains that the prioritisation and motivations are a crucial element if it is to come to fruition.

National Planning Policy Framework

Routine planning and infrastructure development are informed and guided by the NPPF. It replaces over a thousand pages of planning documents into a succinct fifty page guide (Department for Communities and Local Government, 2012). As such, this new planning framework is designed to be accessible and inclusive “*allowing people and communities back into planning*” (Department for Communities and Local Government, 2012, ii). This feature resonates strongly with the language of sustainability because collaboration and cooperation are a key factor in its realisation.

The review of the NPPF demonstrated an evident comprehension and focus on sustainable development. To the extent that the document was introduced through a foreword solely concerning sustainable development by the Minister for Planning (Department for Communities and Local Government, 2012, pp. i-ii). In the foreword, it established that the purpose of planning is to help to achieve sustainable development, that planning was about to make sustainable development happen, and that sustainable development should be at the core of each planning decision (Department for Communities and Local Government, 2012, p. i). As a base, sustainable development should be seen “*...as a golden thread running through both plan-making and decision-taking*” (Department for Communities and Local Government, 2012, p. 4). Unambiguously, one can see the position and centrality the concept is expected to

hold in a planning context. It is interesting that it so explicitly defines sustainable development, and that this should be the purpose of planning, while concurrently, employees of the planning department question whether management of the department are even certain of its meaning. In this way we can see how the alignment of guidance and practice are off-centre from the outset when those leading appear uncomprehending.

The foreword also states that planning should be a creative exercise for finding ways to enhance and improve areas (Department for Communities and Local Government, 2012, p. i). This too, is of particular note when a leading theme for the obstacles challenging sustainable practice has revolved around constrained manoeuvrability to work within the framework. This has generated from planners' inability to think critically, let alone creatively about the guidelines. The interpretation they perceive is very much literal, as a word for word guidance. This is in direct opposition to the stated ideal of creativity. This crux could be seen as the origins of some of the fractured relations and miscommunications displayed at the council. The frustrations felt by some members of the department pointed to the limitations in their utilisation of the NPPF. On several occasions, respondents claimed they had found ways to maximise potential opportunities and wanted to include them in the development of the strategy they were working on. For example, the Green Infrastructure strategy, which comprises an element of the evidence-base on which the Local Plan is assembled from, was being developed at the time of observations. Through assessing and researching the state of the green infrastructure in the district, it became apparent there were opportunities for its enhancement. However, when the topic was raised to management, it largely fell on deaf and uncomprehending ears. The actions required to address the opportunities were judged to be beyond the remit of the planning department. Within these constraints it becomes incredibly difficult to maximise the potential effectiveness of the strategy, and thus, poses as a challenge to sustainable development.

Moreover, while the NPPF claims to value the importance of enhancing and improving areas, the interviews suggest a different prioritisation. The emphasis is weighted far heavier on housing growth, and quantity over quality. Once again, the mismatch highlights the opposing ideals, and potentially, the incompatibility between development on the one hand, and sustainability on the other. It could also go some way in substantiating the position some respondents held on the 'true intentions' of government. National government publish documents asserting their official position and commitment to developing sustainably on the one instance, and then requiring those who carry it out to propel certain dimensions of that agenda i.e., the housing growth. In regard to this point, government have given the impression to planners that they are more concerned with quantity and hitting targets, which has so far

indicated an unsustainable growth rate. Concurrently, as the guiding planning document, the NPPF specifically defines what sustainable development means, which is growth that ensures better lives for ourselves that does not come at the cost of future generations (Department for Communities and Local Government, 2012, p. i). However, from the interviews with management, they communicated that the intense attention on quantity leaves little space for place-making and results in a sub-standard of housing. This was a similar predicament of the 1980s and alludes to being a continued problem in the current day. As it stands, planning management are of the opinion that lessons have not been learnt, and we are at risk of following the same patterns. For this reason, one could argue that societal trajectory is still on an unsustainable course of development. As such, the unaltered path represents a significant challenge to sustainable practice.

Moreover, a trouble with the construction of mass housing in the 1980s has resulted in the council having to undertake demolition of sub-standard housing and unsightly blocks. With foresight, one could conclude that the current necessity to pump out housing now, will become the task of future generations to dismantle. Thus, the housing impetus suggests limited 'sustainable' consideration for future generations, and so, has a short-term focus and indicates a reactionary response. These facets are counterintuitive to developing sustainably and certainly challenging to the practice of sustainable development.

What is instantly noticeable about the NPPF is how deeply led it is by sustainable development. The language it utilises is from the lexicon of sustainability. Each chapter addresses different facets of how to develop sustainably; from the economic, social, environmental, and then is inclusive of subdivisions within sustainable progression, such as, transport and heritage (Department for Communities and Local Government, 2012). A point of significance is that the NPPF explicitly states that it (NPPF)x should be "*...taken into account in the preparation of local and neighbourhood plans, and is a material consideration in planning decisions*" (Department for Communities and Local Government, 2012, p. 1). From this, one could argue that not only is sustainable development 'within the remit' of DDC, but it is a course of action they should be actively attending to. However, the phrasing of the directive leaves room to manoeuvre which has allowed some local authorities to apply the guidelines loosely when its instructions conflict with local agendas. So, whilst the NPPF utilises the language of sustainability and argues for the adoption of developing sustainably, the flexibility of the language acts as a challenge to sustainability when the directives are not concrete actions but loose phrasing.

5 Results

This section aims to display the analyses of the previous section into a refined sSWOT illustration of both cases. Together, the 4. Analysis and the illustrated 5. Results constitute the material for the succeeding 6. Discussion and grounds for the 6. Recommendations. Below, *Table 1* and *Table 2* are featured, and summarise the key ideas identified through the analysis of the Welbeck Brewery case and DDC case. The tables illustrate the focal points in a standard SWOT format but with a concentration on sustainability. As such, each box contains the summarised, focal points of each case, for example, either its sustainability strengths or its weaknesses. When displayed in this manner, it should clarify the state of each case and the challenges they face in adopting sustainable practice. The results displayed in this way should be useful as a visual aid to refer to for the following chapters.

5.1 sSWOT Summary of the Welbeck Brewery

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Small-Scale • Independent Customer Base • High Quality of Products and Service • Environmentally-Conscious Leadership • Sustainable Operations Appeal to Customer Base • Communication 	<ul style="list-style-type: none"> • Limited Scale of Operations • Manpower • Physical Space • Financial Limits • Lack of Ownership and Control • Time Pressures • Lack of Expertise and Knowledge
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Investment in Green Technology • Reduced Consumption + Increased Efficiency = Reduced Financial Expenditure • New Generation of Consumers: Shift in Behaviours and Attitudes • Develop Communicative Links with Universities 	<ul style="list-style-type: none"> • Changes in Prioritisation by Landlord • Potential Rejection of Environmental Applications e.g. Solar Panelling. • Expansion: Reduction of Quality and Service

Table 1 - Welbeck Brewery sSWOT Summary

5.2 sSWOT Summary of Dover District Council

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Positive Attitude Towards Open Dialogue, Communication and Collaboration • Holds a Position of Power: Influential • Council Does Consist of Environmentally-Knowledgeable Personnel: Human Capital 	<ul style="list-style-type: none"> • Power Differentials • Fractured Communications • Economic Restraints • Divergent Prioritisation • Time Restraints • Lack of Expertise and Knowledge
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Green Technology Investments e.g. (SUDS, PV, Rainwater Harvesting) • Collaborative Initiatives across a Landscape Scale • Opportune Timing for the Production of a <i>Sustainable</i> Local Plan 	<ul style="list-style-type: none"> • Withdrawal of Funding • Economic Downturns • Shift in Political Agendas and landscape, e.g. Brexit • Missed Opportunities and Sub-optimal Efficacy • Changes in Prioritisation

Table 2 - DDC sSWOT Summary

6 Discussion and Recommendations

This section concerns itself with developing the case analyses further by way of discussing the key themes and points of interest, and what that then means for sustainable practice. The discussions are enhanced when reflected upon in light of the 3. Theoretical Framework. Following the discussion, recommendations will be made based on the results on how to overcome the obstacles to sustainable practice, or at least lessen the challenges. The first case to be discussed and provided recommendations for is the Welbeck Brewery, and thereafter, DDC will follow suit.

6.1 Welbeck Brewery

Welbeck Brewery Discussion

The Welbeck Brewery is a small-scale business where the scale of its operations has proven to be both an asset and a hindrance to sustainable practice. As a converted barn, its physical dimensions prohibit them from installing a variety of green technologies. Technologies that could increase the efficiency of its operations, minimise waste, and maximise the use of their resources as argued by Singh and Kaur as key characteristics of green design (2013). Additionally, the scale of its operations impedes on increasing production, restricting the viability of supplying a larger customer base, and in consequence, limits economic opportunities. Without the opportunity to increase funding, they are then less able or likely, to afford new equipment. Simultaneously, and in contrast to the pitfalls that have been identified, the size enables the Brewery to focus its efforts to improve in a concentrated manner. It does not own multiple operations with varying conditions to account for, solely at Welbeck. The small scale of operations means that it has extensive control over each element of the business; from procurement to production and then to delivery. This factor provides the Brewery major opportunities to affect and impact effectively on the sustainability of its operations.

Communications have featured as a strength in adopting sustainable practice in this Case. The message broadcast from the Welbeck Estate to the public and to businesses on the premises asserts sustainability as underpinning its activities. This encourages enterprises on the Estate to foster sustainable practices into their businesses. The Brewery Manager's interactions with employees informs and guides them in performing their roles with an environmental mindset. Lastly, the relations between universities and the Welbeck Brewery encourage the adoption of sustainable practice by way of enlightening and educating the business on how to

improve its operations, be it through suggesting alternative equipment, or more efficient brewing practices.

The analysis revealed that the Brewery benefits strongly from environmentally motivated leadership, whereby, the Brewery Manager considered them to be “*Guardians of the land around us*” (A, 2017). The perception of playing the role of ‘guardian’ invokes notions advocated by Nassauer of care and stewardship (1997, 2011). Care, as a “*deep, pervasive cultural norm... provoke behavior to change, maintain, and protect landscape appearance*” (Nassauer, 2011, p. 321). In this way, one can see how the Brewery Manager’s personal belief in being environmentally-conscious, coupled with her leadership position provokes others to change their behaviour, maintain, and protect the lands around them. This serves to propel the adoption of sustainable practice further and establish norms. At present, the impetus for developing sustainably from the Estate has been consistent with the Brewery’s efforts. However, the lack of ownership and control of total operations due to being situated on the Estate could threaten the progression of developing sustainably.

Welbeck Brewery Recommendations

From the analysis of the Brewery, the following recommendations are made to aid its progress in developing sustainably:

- Investment in green technology compatible with the locale of the premises.
- Investment in brewing technologies and upgrades in equipment, e.g. meters, programmable thermostats.
- Implementation of resource management strategies, e.g. Clear record-keeping for water consumption and waste water, or electricity rates.
- Regular checks to identify leaks and overflows.
- Promotion of the sustainable ethos to operations.
- Promotion of sustainable operations to customer base.
- The Brewery could benefit from further communication with other businesses on the Estate and learn from measures others have established, e.g., the Bakehouse is considering changes to biodegradable packaging.
- Reach out and establish relationships with universities.

6.2 Dover District Council

DDC Discussion

The corporate hierarchy of the governmental structure is noticeably apparent having reviewed the analysis. This is an asset to sustainable development when firm instruction is given from higher up the corporate ladder e.g. through the guidelines for sustainable development in the NPPF. However, it has also been shown to impede its progress due to manoeuvrability and agency restrictions that the institutional structure imposes. The various power dynamics evident in the analysis of this case complicates following a single common goal. This is due to the manifold stimuli, interest groups, and priorities. DDC have multiple interest groups to satisfy with varying priorities, for instance; residents of the district, national government, Council Members, and developers. Each group holds differing positions of power and while the Council endeavours to answer to each group, often, the more powerful interests supersede others. This is problematic in a sustainability context which should be based on human equity as stated by Mitchell et al. (1997) (cited in, Clifton & Amran, 2011, p. 130). Even more problematic, is how clear it became that the Planning Department (those responsible for development) were so heavily attentive and invested in short-term, reactionary problem-solving, thus confirming the statement *“Policy makers and industry are increasingly facing difficulties in investing in long-term future due to short political cycles and pressure from shareholders”* (Machiba, 2011, p. 391). The urgency of attending to the short-term pressures highlights a further attribute of assessing the primacy of stakeholder needs identified by Mitchell et al (1997) (cited in, Clifton & Amran, 2011, p. 130). The short-range focus is at odds with a sustainability framework. Arguably, the actions DDC were undertaking could be seen as near-sighted and ill-considered rather than durable solution-solving, and so, were not robust or resilient. This was exemplified in the extensive emphasis put on economic regeneration and the intense drive for reaching housing targets. By respondents themselves, they recognised the rashness and thoughtlessness of focusing solely on the quantity and not quality of the builds, thus, the developments were not sustainable. Furthermore, the corporate objective of economic regeneration as a legitimate goal within the dominant economic rationalist paradigm is problematic for sustainability when ‘sustainable’ objectives are then co-opted or marginalised, as noted as the third attribute recognised by Mitchell et al. (1997) (cited in, Clifton & Amran, 2011).

Resolutions to challenges such as the power differentials could potentially be found in the works of De Brucker et al. (2013) by adjusting the multicriteria analysis to fit the context of the council. The excessive power that certain stakeholders hold, such as council members or

developers, should be counter-balanced to give all an equal weighting and priorities more evenly evaluated. For stakeholders who hold a weaker position of influence, they could be encouraged to engage more if they believed their voices would be heard and acted upon.

Strikingly, fractures and splinters in communication have been revealed in numerous instances within the case analysis of DDC. The institutional pillar of society that is government possesses tremendous sway, and when it is not functioning at an optimum level it can have severe repercussions. In this instance, the suboptimal communication levels have been detrimental for several key relationships; between departments, councils, government and civil society. The results have ranged in negative outlooks and perceptions, missed opportunities, and reduced collaborative ventures, none of which are conducive to pursuing sustainable development.

The continued utilisation of DeBrucker et al.'s (2013) multicriteria analysis could aid in reducing the communicative challenges that the district council face. As a means of improving communication flows, the council could more fully include the stakeholder groups in the decision-making process of strategy prioritisation. This could establish a platform that increases dialogue and communication which has been identified as a crucial element in this case, and found deficient. Additionally, the council could adopt a proactive approach to the Duty to Cooperate and maximise its potential for communication and collaboration with stakeholders such as, neighbouring authorities. A defence respondents expressed for the limited uptake of sustainable practice revolved around constrained timeframes and the lack of expertise. By increasing communication flows and relationship-building with neighbouring authorities or local universities, these challenges could be reduced. Through establishing these relationships, it could seize opportunities to utilise external expertise and to gain access to specialist knowledge.

The interviews for DDC give traction to Nassauer's argument that care could be a powerful motivating force for sustainability (2011). Just as a neglected landscape is suggestive of careless owners and is aesthetically displeasing, a well-maintained and multi-functional landscape elicits positive responses and could incite action (Nassauer, 2011). Adopting this thought-process, members of the Planning department were using this idea by trying to maximise the potential of GI in their strategy development. The hope was to grow the roots of community engagement because "*...people care about the green stuff*" (F, 2017). As such, the respondent had recognised the potential avenue for promoting sustainability as was suggested by Nassauer (2011).

The economic position of the council has proven to be pivotal to their ability and commitment for developing sustainably. The lack of funds has resulted in seeing DDC withdraw its focus to the more basic, fundamental functions of a local authority. As such, attentive, environmental care is considered a luxury that on the whole, it cannot afford. For this reason, the installation of green technology is not considered a viable development option for the authority. Instead, the investment in green technologies is consigned to individuals and business, as shown in the fitting of the biomass boiler. In this way, the progression of sustainable development is challenged because an avenue for its progression is blocked due to economic limitations. A potential remedy could be found in the development of the district's plans and strategies, e.g., the GI strategy. If effectively planned, green infrastructure could be a low-cost solution. It is one that can use space effectively; it can be multifunctional, and it can offer multiple benefits (health, aesthetic, economic).

Whilst not fitting perfectly into distinct discourses, there were indicative signs that the environmental discourses were pervasive from the analysis. It was interesting to note how the discourses, discussed by Dryzek (2013), aligned with the backgrounds of the respondents. For the ecologists of the department, key ideas from the Limits and Survivalism discourse were made known, ideas such as; the limits to growth, concerns regarding the population, and the need to curb consumption, population, development and economic pursuit. Moreover, themes from the Administrative Rationalism discourse were frequently expressed by a variety of respondents. It was often asserted that social relationships and responsibilities were based on hierarchy rather than equality or competition; employees were subordinate to management, likewise, management were outranked by higher levels of government. Additionally, central government, whose hierarchical position was wholly justified based on their expertise, held a vital position in bringing about sustainable development. The Economic Rationalism discourse was also inferred as it was believed significant sustainable progress could be realised if the economic system was harnessed and market mechanisms were applied to the environment. As such, management of the Planning department stated market incentives and sanctions would have a huge impact, such as introducing green taxes like the '5p plastic bag tax', or allocating funding or tax breaks to those developing green technologies. Without the market mechanisms, it was believed sustainable development would make limited and ineffectual progress. Basing solutions *within* the dominant economic paradigm is not unforeseen, and could in fact be one of the effective solutions to the challenges to sustainable practice. Importantly though, utilising the market in this way is not a solution that can be implemented by the council; measures such as these have to be executed by those with the authority to do so, i.e. national government.

Nonetheless, the pervasiveness of the discourses displayed in the analysis does indicate a challenge to sustainable practice when each individual recognises the problems and solutions to sustainable development originate in various areas. For some, it was based on population growth, and for others, the insufficient steer from top government. As such, the lack of unity impedes on a combined approach for tackling the issue. Unfortunately however, this is not a straightforward problem to solve due to the multifaceted and complex challenge of sustainable development when it does indeed originate from so many areas.

DDC Recommendations

Based on the case analysis and discussion of DDC, the following recommendations are presented. It is worthy to note that the recommendations for increasing the sustainability of local government's practice, is inclusive of the suggestions and 'solutions' advocated by participants of the study.

- Streamline approaches and overarching goals: begin internally between departments, and then externally with stakeholders such as neighbouring authorities.
- Increase communication with other local authorities: reduce the chances of missed opportunities.
- Establish collaborative work on a landscape scale: care and maintenance of natural and social worlds would not have to be restricted by administrative borders. DDC, as a small authority constrained by the institutional hierarchy, is in a position to make a tangible impact on sustainable development if it could work with neighbouring authorities and NGOs across districts.
- Establish a dialogue between local authorities and academia. Both domains possess specialist knowledge: develop a joint knowledge base of the practical and theoretical.
- Create a feedback loop with higher governmental authorities to communicate realities of carrying out directives.
- Promote citizen involvement. The political voting power of residents could sway local politics; redirecting the priorities of political leaders on a local scale.
- Low-cost investments in green technologies.
- Maximise potential of its policies and strategies, e.g., the Green Infrastructure Strategies: multifunctional capabilities of GI, e.g., green roofs.

6.3 Common Challenges

A crucial feature revealed through the research is the surfacing of challenges that have proven to be common to both cases.

First, the case analyses have demonstrated the appeal of sustainable development as a concept for business and governmental institutions as was claimed in the theory. It has positive connotations, insinuating that the respective body is concerned for the environment, societal welfare, and allows them to pursue economic aims. The concept grounds both the ethos for the Welbeck Estate and thus, the Brewery, and it is also the ‘golden thread’ running through the fundamental planning guidelines for DDC.

Second, power dynamics and leadership have a significant impact on the commitment and drive to implement and apply sustainable practices. It has become evident that a top-down approach is indispensable; without the steer from management or higher authorities, the enforceability is lost, and thereby, leaving sustainable practice up to choice. For this reason, clear guidance and strong governance is a pivotal element in progressing towards sustainability.

Third, a critical feature pertains to the prioritisation and motivations of those who can affect and are affected by sustainable development. In sum, the stakeholders. It is essential for the progression of sustainable development that it is determined as “...*legitimate within the dominant economic rationalist paradigm*”, or perceived as the dominant principle and not marginalised in favour of economic targets (Clifton & Amran, 2011, p. 133). Furthermore, it needs to be pursued collectively, thus, echoing sentiments made by Boutilier (2009). It is vital stakeholders are driven and motivated by the collective goal; without it, efforts are weakened, and progress can become ineffectual. While leadership is important, and the directives instructed from higher authorities, without the collective motivation from everyone, they may not be followed through to its maximum potential.

Fourth, communication is vital in driving sustainability forward. Fractured communications, or non-existent links, have proven to hinder sustainable development in both of the cases studied, due to ignorance, misunderstanding, and lack of collective goals. This has resulted in slower progress, and splintered efforts, thus weakening impacts and altogether missing opportunities. Creating a nexus of communicative links is important for; increasing information flows, relationship building, collaborations, developing a knowledge base through education, and directing well-defined goals and aims.

Fifth, an economic element also played a significant part in influencing sustainable practice. A weak economic position substantially impacted its progress. This resulted from the

perception of being financially restricted in what could realistically be achieved without external funding. Additionally, limited finances necessitated the prioritisation of the available funding, and frequently, the funding was channelled in other areas. This would suggest that the dominant economic paradigm is counterproductive to sustainable development. To attend to this market failure, funds have to be allocated specifically for the purpose of social or environmental intents. If not, there is a risk that social or environmental efforts will lose its prominence as it has to compete directly with other strategies to be the most profit maximising or low-cost approach. In sum, if sustainable development is at odds with the economic paradigm, then individuals must take it upon themselves to adopt an evolved form of capitalism; one that goes beyond the minimum economic drive and incorporates social or environmental interests. This line of reasoning is akin to the amended socio-economic system discussed by Clifton & Amran (2011) where the ‘sustainable-world-comes-first-principle’ is at its core.

What these shared challenges indicate is that ultimately, challenges to sustainable development are systemic; the roots of the challenges can be found in the base functioning of the dominant system. For this reason, one could conclude that there is limited compatibility between the system structure and sustainable development because it is not possible to ‘have it all’ as the discourse would suggest (Dryzek, 2013). In the pursuit of sustainable development, the dimensions cannot be pursued equally in a balanced fashion. Therefore, this conclusion corroborates and substantiates the discourse of Transformationalism presented in the work of Clifton and Amran (2011). The findings validate that the system is the root cause of unsustainability, and to attain a sustainable world, systemic transformation is necessary.

A system overhaul is highly unlikely however, and so presents the ultimate challenge to sustainable attainment. Whilst this is discouraging, one should not be deterred from the ultimate aspiration. Sustainability is an ideal, and a worthy one that society should strive for. The recommendations presented throughout this discussion for the Welbeck Brewery and Dover District Council would reduce the obstructions they face as they endeavour to develop and progress sustainably. More widely, the recommendations advised in the Common Challenges could be of value and applicable to others. It could begin a less radical, and gradual transformation that would ameliorate the system, and facilitate sustainable practice.

6.4 Research Considerations and Limitations

The challenges that have been identified through the research are indicative of systemic geneses. The challenges are not however, bound solely to those identified. Sustainable development as a concept, and to say nothing of in practice, is infinitely multifaceted and convoluted. Therefore, its challenges for implementation are vast. For this reason, this thesis does not presume to have identified the endless problematics of the discourse. Moreover, it does not profess to have unearthed the totality of challenges that DDC and Welbeck Brewery confront when adopting sustainable practices. However, it has discerned the obtrusive obstacles that have made themselves manifest through the case studies, thus, is of value.

The literature used in this thesis has been invaluable for informing and grounding the subject area. The research has also been informed by further reading material regarding other notable theory, such as ‘green business models’ and ‘circular economy’. However, due to size of paper and time restraints, some have been excluded from the text. Similarly, the subsequent analysis of the cases in point (informed by the theoretical literature) was potentially limitless. As such, the analysis and discussion have been kerbed to degree, in order to expand deeper into key areas of analysis.

The recommendations suggested for the Welbeck Brewery and DDC are specific to those cases in particular. However, seeing as a number of the challenges they face are systemic, the recommendations then could be applicable to other small-scale businesses and local governments. Take for example, it is self-evident that if each person were to pursue alternative, individual goals then priorities would not be unified. If each individual is not motivated to develop sustainably or practice sustainable habits, then its effectiveness will be reduced. Thus, the recommendation for improved communications, collaboration, and joint-goal setting is applicable beyond the cases in point.

The prospective futures for the Welbeck Brewery and DDC indicated developments in the business and priority direction. The Brewery was considering the installation of new ‘greener’ equipment, and DDC were at key stages of Local Plan development. As such, it would be insightful to investigate at a later date how those progressions have taken form, and whether practices have become more sustainable. The research would also benefit from a further study in which to compare the findings from this study alongside another local government and small-scale business. This could further verify the findings of this research and authenticate the conclusions of systemic failures and the incompatibility between the system and sustainable development.

7 Conclusion

The purpose of this thesis has been to explore and analyse the obstacles and challenges that face small-scale business and local government exclusively, under the lens of sustainable development.

Hence, the research question has been presented in the following manner:

What are the challenges that small-scale business and local government in England face when adopting sustainable practice?

The conducted research has revealed some recognised and some surprising obstacles to sustainable development. The analysis of the *modus operandi* has made it possible for one to conclude that the obstacles are systemic defects. This is because they are fundamental structures from within the dominant system, and so subsequently, this resonates with the theories of the environmental discourses which have informed the thesis. What is more, the challenges are influenced by the operative functions of one another, and are not unrelated, discrete obstructions. Thus, for true sustainable development to take precedence and become the norm, there needs to be systemic change. This is unlikely however, and so, the consequential course of action is to implement the incremental changes that will help to redirect the pathway towards sustainability. What is more, due to the interdependent nature of the challenges, by altering certain elements, the domino effect may become a possibility, whereby, one alteration could necessitate and make possible, alterations further down the line.

Notably, the challenges facing sustainable development revolve around power and leadership, economic prioritisation, motivation, communication and collaboration.

The results and recommendations that have been established from this study are case specific for both the Welbeck Brewery and also to DDC. As such, there is no claim of them being universally applicable. More specifically, the conclusory observations of the Welbeck Brewery are exclusive to the case due to the unique-ness of its situation. In spite of this, the identified challenges could resonate with other small businesses, and so, the recommendations could be of value. DDC is possibly a more uniform case of whose obstacles are common amongst other local authorities. Ultimately, the results could demonstrate wider trends that are applicable to other small-scale business and local government due to the systemic nature of the challenges.

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