



## water outset and reuse

Mai Hill is the symbol of the new Aba Shawl, with its three water towers and green covered grounds. The inhabitants' allotment gardens surrounds the top, with a public vein stretching through the area and up to the highest point.



## allotment gardens

Mai Hill is visible from most parts of Asmara. The existing restaurant lies in an axis stretching from the main street in Asmara, Harnet Street, through the Mercato Market area, and up to Mai Hill. It is one of the few public viewing points, and one can easily imagine it as a strategic point for the city. But today there is little activity there. The restaurant has seen better days and the rest of the park has no sort of development. It is mostly used as a toilet for by inhabitants in the area and is not an attractive place to stay. It is not the symbol of Aba Shawl like it has the potential to be.

### measures

The allotment gardens surround the hilltop, claiming it as the property of the residents of Aba Shawl. Pathways make the area more accessible, connecting roads on both sides of the hill. The main road leading up to the top is kept public. It leads you up to the new water tanks and café where you can admire the view over the city.

### allotment gardens

Through the wastewater treatment plant and the ecological sanitation system, the inhabitant of Aba Shawl creates new resources that can be used to improve their lives. Water, soil and fertilizer give the possibility to grow your own food. This can be both health improving and an economical benefit for the community.

The allotment gardens are structured into areas shared by one or more backyards. The system is based on the existing social structure of the area and the gardens become social meeting points for the residents. The inhabitants themselves decide how they want to use the system and develop the area further.

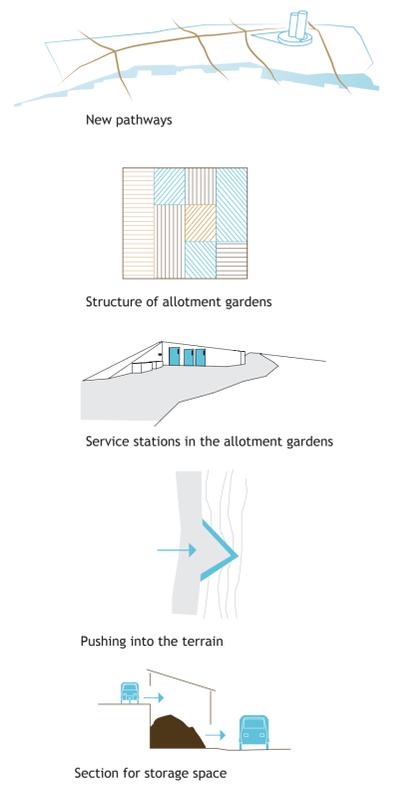
In the allotment gardens, the area of land you get is based on how many family members you have and whether you have the possibility to grow vegetables in your own backyard or not. If one subtracts the area needed for communication and common functions, an area of about 17 000 sqm is left for the allotment gardens. We suggest a minimum plot size of 20 sqm per family. This gives the possibility of developing 850 gardens. A rough count suggests that Aba Shawl consists of about 420 backyards. This means that it is possible to develop the system to also cover other areas of the unplanned city in the future.

Some sort of enclosure of the gardens is necessary to prevent theft and vandalism. Fences made of bamboo could be both a cheap and aesthetical solution. The bamboo can be grown at parts of the hilltop or at the agricultural showroom at Wedgan Square.

Functions such as tool shed, waste collectors, water taps and small storages for soil and fertilizer are necessary for the allotment gardens to function properly. These distribution points are spread out over the area where they create small meeting places.

The sloping terrain is exploited to create these small stations. Blocks are either pushed into the terrain or used to build up an extra plateau to make extra space in steep slopes in connection to the new pathways.

Storage space for soil and fertilizer from the new ecological sanitation system is added at Mai Hill. The section is exploited to make the delivery and collection of the waste as easy as possible. One of the buildings also function as a service central for the allotment gardens.

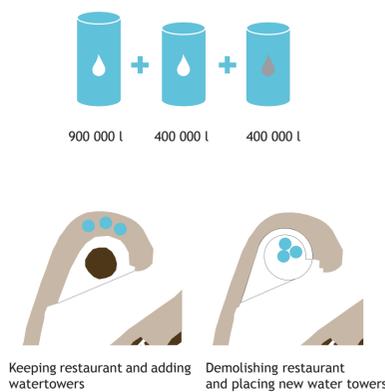


## water tower

Three water towers are placed on Mai Hill. Two of the towers provide clean water to the new water distribution network in the streets of Aba Shawl, while the third supplies the allotment gardens with greywater.

We have based our calculations for the volume of the water tanks on a daily consumption of 50 liters per capita per day. Today, many of the inhabitants of Aba Shawl have as little as 5 to 18 liters per day. The new water distribution system gives better access to water, and together with an assumed increase in wealth, this will give a higher consumption level. With 15 000 people living in Aba Shawl today, this gives a daily consumption of 750 000 liters per day. A security factor of 20 % is added to handle the unstable water distribution network in Asmara. This gives a volume of 900 000 liters. It is necessary to elevate the tanks an additional 8 meters from the top level of the hilltop to get the required water pressure for distributing water to the inhabitants of Aba Shawl. This gives guidelines for the design.

The existing restaurant at the hilltop is in bad condition and today only serves a few types of beverages to the small number of visitors. A possible solution when constructing the new water tanks at Mai Hill would be to arrange them in interaction with this building and assume a continued activity at the restaurant. Another option is to demolish the restaurant and build the new water towers, based on them symbolizing the new Aba Shawl. We have chosen to propose a design for the last alternative.



### section\_B-B, 1:1000



## situation plan\_1:1000

