

Work Methods in Beit Loya



Dagan Farancz

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Introduction

This report is on three of the work methodologies employed on the mosaic floor located in situ at Beit loya. The work is separated into three methods. The first deals with the small losses that were filled with cement upon initial excavation of the site. The second deals with the fill around located around the edge of the main space where it connects with a wall. The third method deals with replacing the stratigraphy of large lacunas in the forward section of the church. The work is conducted by a medium sized crew from the mosaic conservation workshop of the Israel Antiquities Authority. Due to the location of the site and the conditions on site there are certain logistical issues that have to be taken into consideration when work is being conducted on the site. The site is only accessible one day a week and for only half the day. All the work materials must be taken to and from the site each work day and there is no water supply on site.

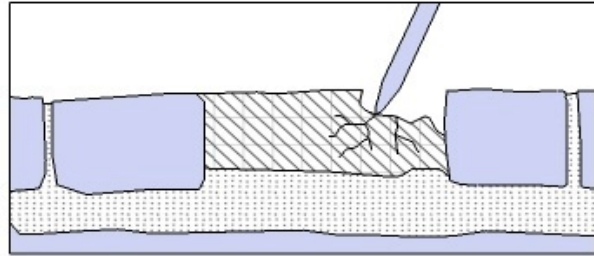
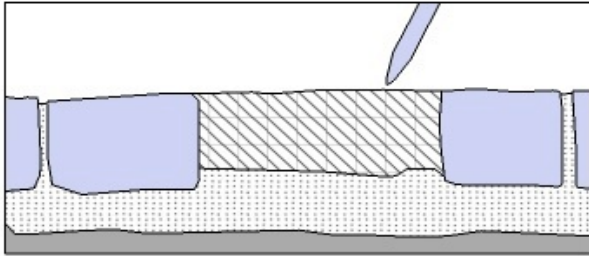


Overview of Procedures

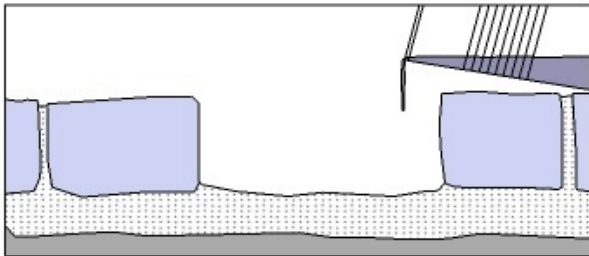
Procedure 1	<p>Small Voids</p> <ul style="list-style-type: none">• Brush away loose surface material• Careful removal of cement• Fill the void with water, hydraulic lime then Mortar• Covering with dirt, blanket and then water
Procedure 2	<p>Edge of Mosaic</p> <ul style="list-style-type: none">• Brush away loose surface material• Careful removal of cement• Digging out slightly deeper channel along wall edge• Saving found tessera• Filling void with water, hydraulic lime and mortar• Covering with dirt, blanket and then water
Procedure 3	<p>Large Voids</p> <ul style="list-style-type: none">• Using a small or large pickaxe open up the area that will be worked on• Careful removal of cement, if it appears to adhered to the tessera leave for later removal• Save any tessera that are found or become detached• Clear work area of any and all debris• Lay down a layer of stones• Wet stones then dust with hydraulic lime then place mortar on top• Smooth out mortar let dry and then tamp in dirt surface• Cover with blankets, weigh them down then wet blankets

Procedure 1

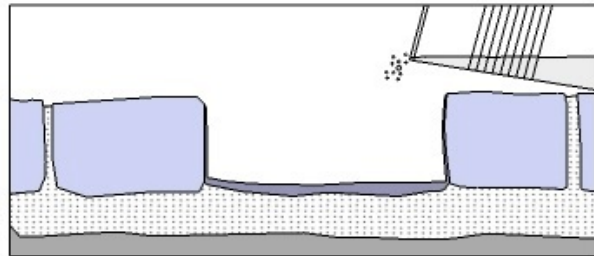
The small cement fills in the gaps in the mosaics need to be removed. Having cement in contact with the tessera is detrimental to the health of the tessera.



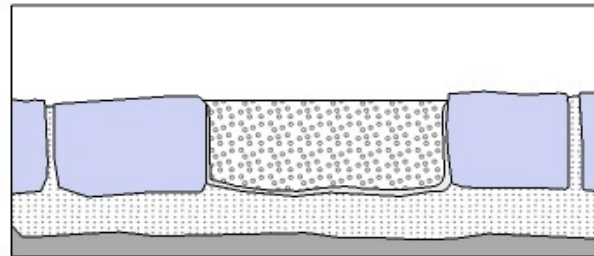
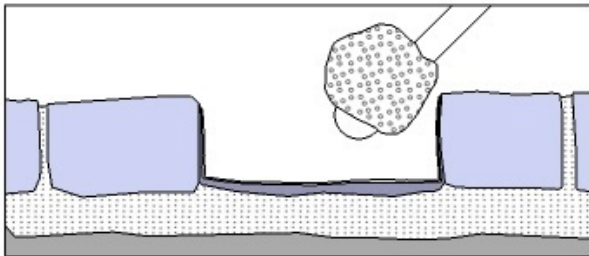
The new clean space should first be wet



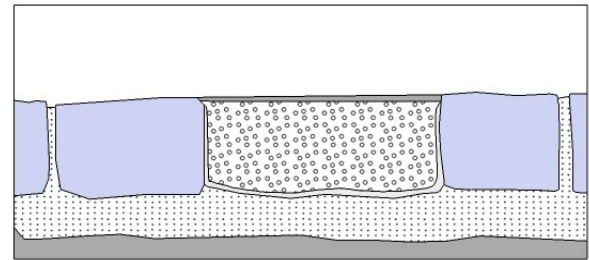
Hydraulic lime powder put down in a layer.



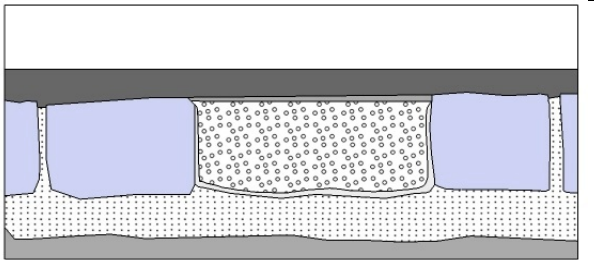
The mortar is applied and brought almost all the way up to the layer of the top of the tessera.



The area is covered with dirt which is tamped down into the mortar



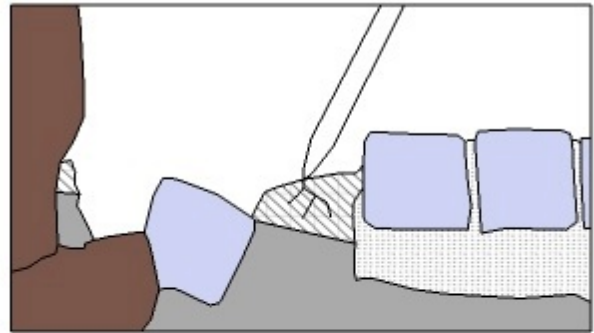
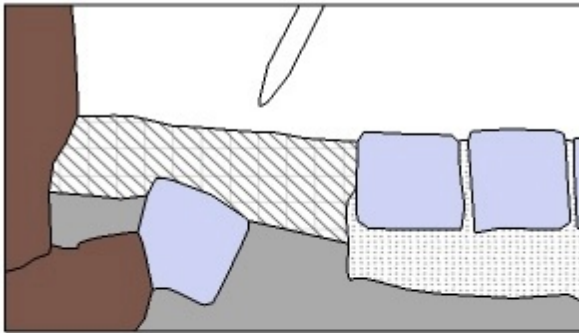
The area is covered with a blanket which is wet with water



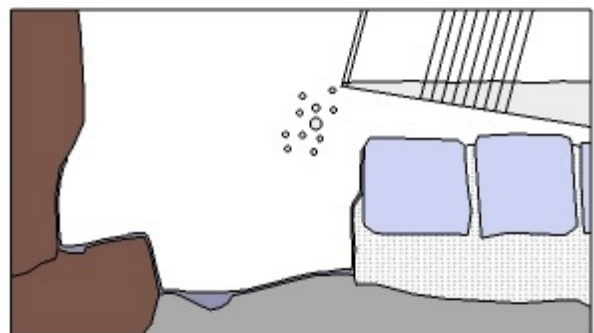
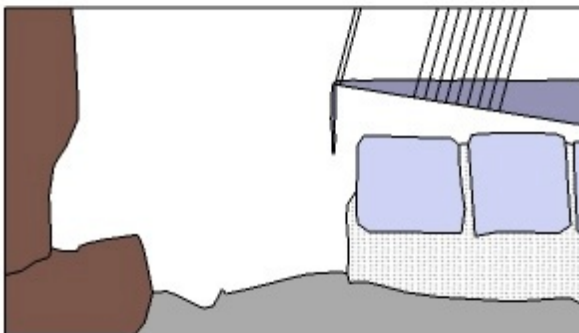
Procedure 2

Cement fills the track that runs along the outside edge mosaic on the north? side of the church
It is cleared of all cement as well as some of the underlying dirt layer and filled with hydraulic lime and mortar.

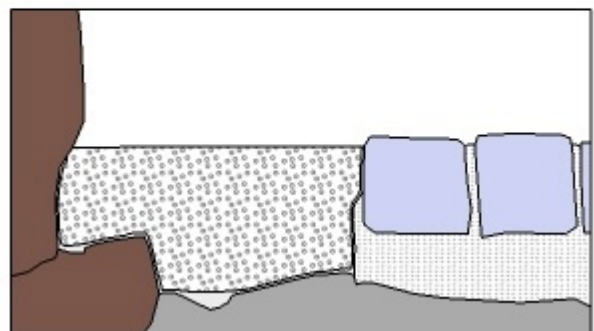
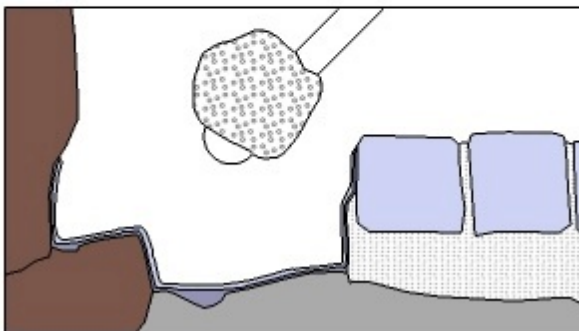
Cement removed with chisel any tessera found or that come loose are kept



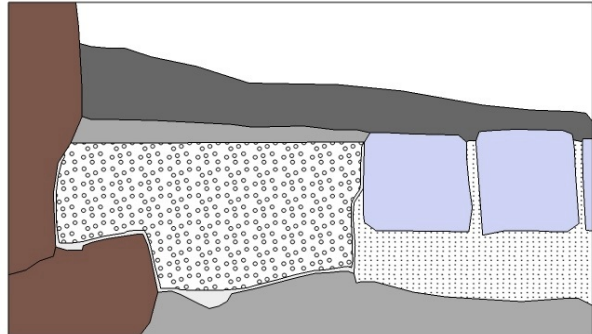
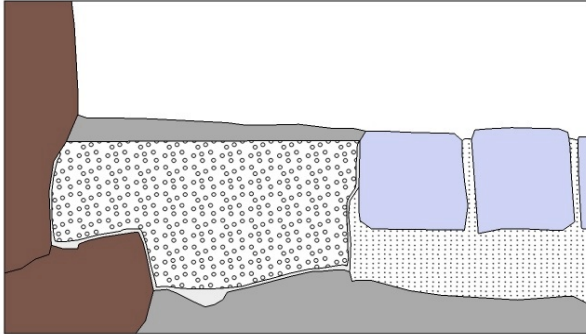
Water added then hydraulic lime.



Mortar is added. Smoothed out and brought to a level slightly below the tessera



Cover the area with dirt and then a blanket which should be wet with water.



Procedure 3

Preparing the area to be filled with stones and mortar to make a new floor.



Fig. 3.1



Fig. 3.2

Areas where there are large gaps between the mosaics, that means areas a few meters in area need to be dug up to make ready for a new layer of ground and mortar.

Carefully removing the cement from the boarder of the tessera.



Fig. 3.3



Fig. 3.4



Fig. 3.5

Placing the stones in the cleaned space.
Adding water and then hydraulic lime.
Adding the mortar. Smoothing out the mortar



Fig. 3.6



Fig. 3.7



Fig. 3.8



Fig. 3.9



Fig. 3.10

Using a level to check the stone height.



Fig. 3.11

Making a lip around the edge of the tessera.



Fig. 3.12

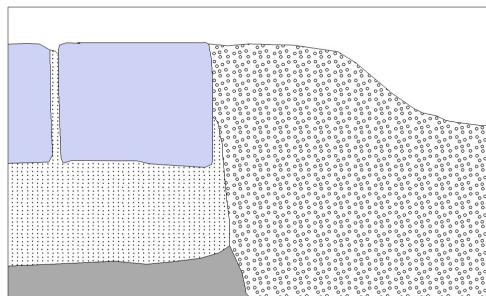


Fig. 3.13

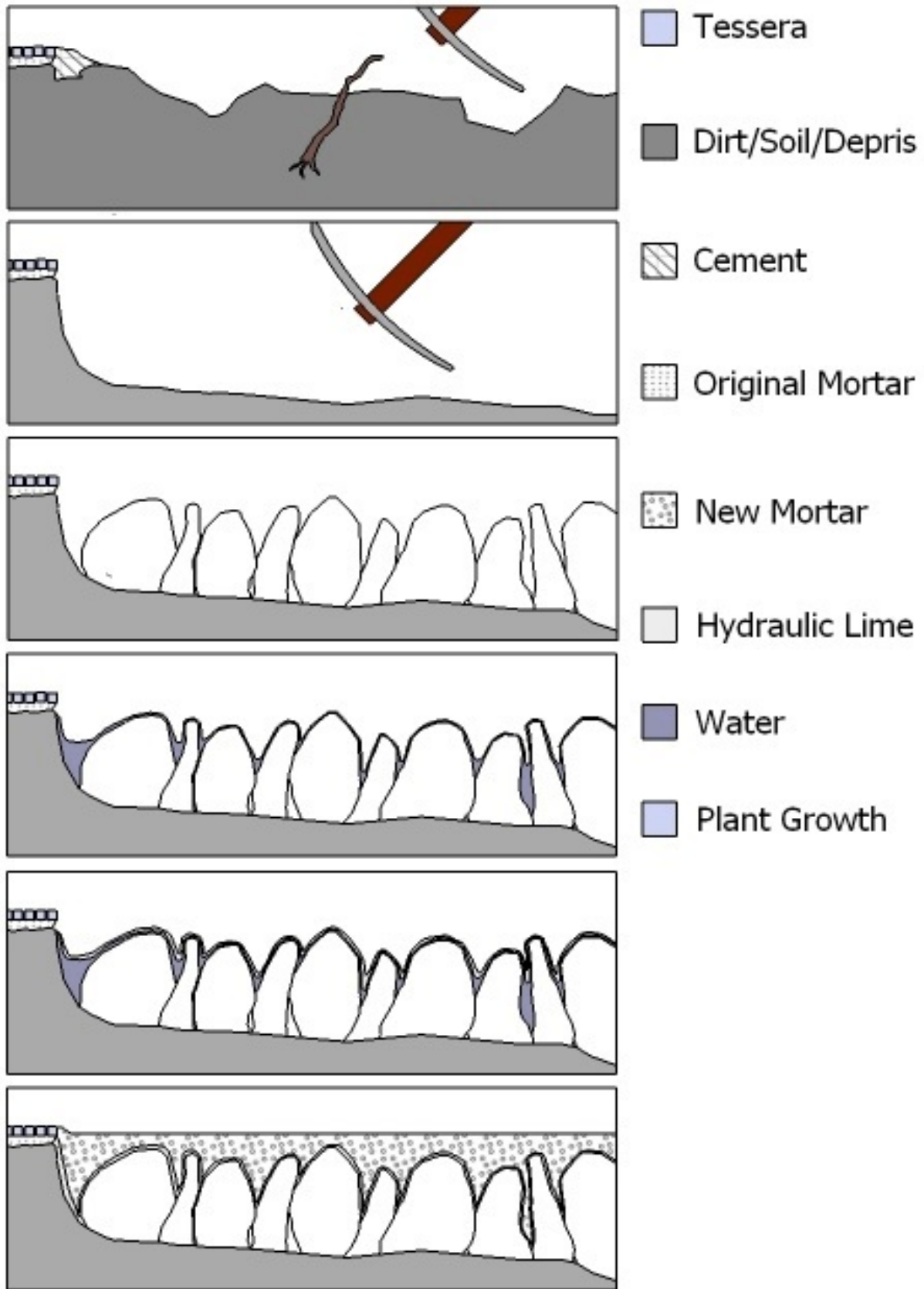
Covering with dirt and Tamping down the dirt. Covering with blankets



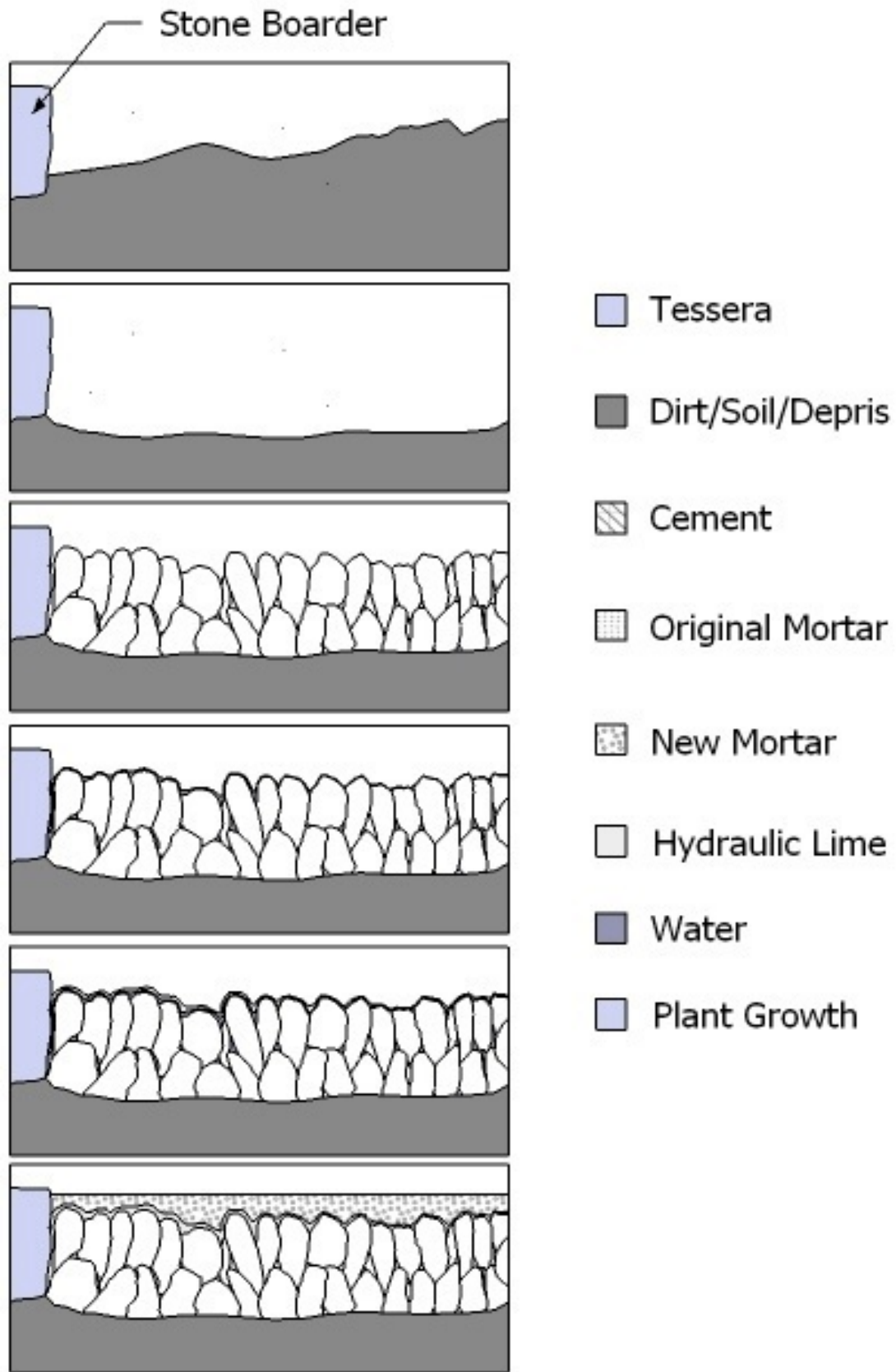
Fig. 3.14



Fig. 3.15



Coss Section of New Stratum



Cross Section of Double Stone Stratum

Notes/Comments_

There are a number of logistic issues at the site that impede work. The location of the site poses the largest issue. The site is located near a military training/testing ground and it is only open to access by the IAA for one day a week and only for half the day. There is also no storage or water source at the site. This means all materials must be transported to and from the site every work day which takes up work time, it also means there is a limit to how much work can be done due to the utilization of water in the mixing of mortar, soaking the blankets and for drinking. Due to the work being done only once a week and maybe only every two weeks if a problem with scheduling arises having resources kept at the site poses a problem. If they were damaged or stolen from the site there would be no way to know what's missing until the work crew arrived and then would possibly be unable to work due to the missing or damaged tools or materials. To prevent this would require security of some sort on site which may or may not be in the budget. The crew on site must also be able to deal with the heat. At least one member of the crew must also be able to carry buckets of mortar some distance from the mixing area to the areas being worked on which is more than a few meters and on rough terrain.

Materials/Tools_

Mortar - Mix composed of Slaked Lime, Hydraulic Lime, Sand, Crushed Lime Stone, Lime stone Powder, and Ashes

Hydraulic Lime

Mixing Bowl/Tub - Container used to mix the mortar from the buckets with water and the lime in large quantities

Buckets - Used to transport the mortar to the site as well transport mortar from the mixing area to the work area.

Shade

Water - Used for mixing the mortar, drinking and soaking the blankets

Trowel - For smoothing out the larger fills

Spatulas - For smaller losses and creating the lip

Small Pick Axe

Large Pick Axe

Cushions

Coffee and Burner

Photo List

All photos taken by Dagan Farancz

3.1 Area Preparation

3.2 Area Preparation

3.3 Removal of Cement

3.4 Removal of Cement

3.5 Removal of Cement

- 3.6 Placing Stones
- 3.7 Wetting Stones
- 3.8 Adding Hydraulic Lime
- 3.9 Adding Mortar
- 3.10 Smoothing out Mortar
- 3.11 Smoothing out Mortar
- 3.12 Checking the Level
- 3.13 Cross section of Lip
- 3.14 Tamping Dirt Layer
- 3.15 Wetting Blankets