

Figure 18. Area C: the location of the test sections.



Figure 19. Area C, facing northeast: Section 1 where Wall W005 (left) met the stone surface (right). Notice the difference in depth between the two features.

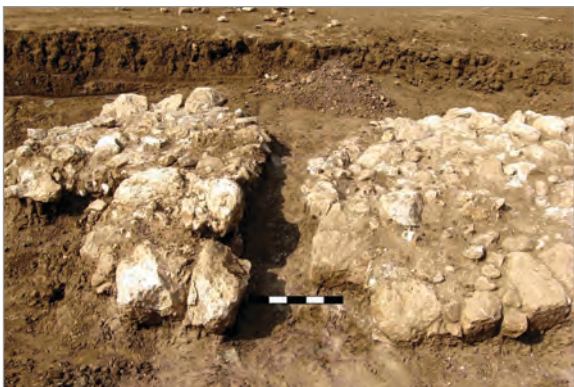


Figure 20. Area C, facing southwest: Section 2.

FINDS

Only a few pottery fragments were found. However, we did recover two indicative rims of Islamic-period bowls (Fig. 21:2,3) and a small sherd from a glass vessel (Fig. 21:1). North of the aqueduct we found a concentration of many fragments from a vessel with signs of burning on its exterior and plaster remains on the interior. Perhaps this vessel was associated with the preparation of the aqueduct plaster.

SUMMARY

The current excavation contributes to our corpus of knowledge regarding the *Kaanatt Benth el-Kaffar* aqueduct. Firstly, we have learned something of the construction's taphonomy, what it underwent after it had gone out of use. Furthermore, we have learned more about the different techniques used in order to maintain the aqueduct's route in an area of difficult terrain.

From the test section that was excavated through the aqueduct in the area of the later disturbance it was clear that most of the stress acted on the southern wall, which collapsed northward and essentially sealed the aqueduct channel. By contrast, the northern wall retained its vertical form throughout the centuries. This wall was the focus of a later stone robbery carried out after the aqueduct had fallen into disuse (but not considerably later, as we can infer from the presence of plaster immediately overlying the aqueduct's fill).

This excavation has also contributed to our knowledge of building techniques in a particular terrain. The fall of the aqueduct base between the eastern and western ends of the site is 0.28m (a 0.27° slope). However the difference between the top of W102/W103 at the eastern and western site limits is 0.92m. This clearly indicates that the eastern area was topographically higher when the aqueduct was constructed, and was therefore deepened by the ancient builders.

A large portion of the excavation focused on the architectural elements adjacent to the aqueduct, and we offer three explanations for these elements:

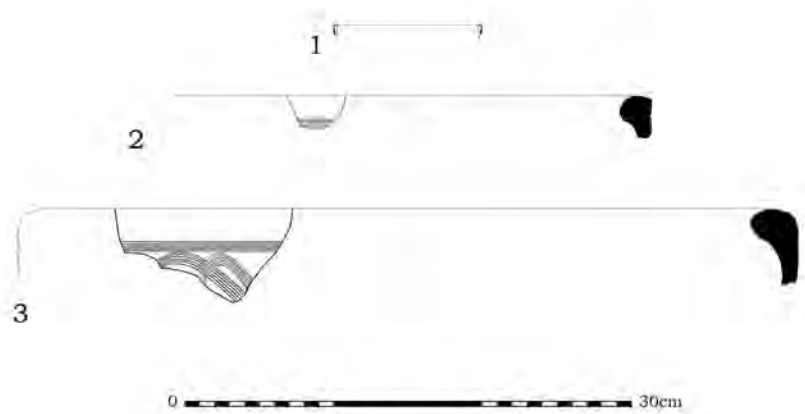


Figure 21. Finds.

No.	Object	Period
1	Glass vessel	
2	Bowl	Umayyad/Abassid
3	Bowl	Umayyad/Abassid

- 1). Already in ancient times it was understood that heavy clayish alluvial soil of the kind found in this area can be problematic for certain construction types. The IAA test excavation revealed that external reinforcements – i.e. W101, W005, and the stones surface north of the aqueduct – were built in places of such difficult soil in order to preserve the aqueduct’s walls. These reinforcements were effective. By contrast, for some reason no reinforcements were put in place in the area of the current excavations and as a result the unforgiving soil caused its southern wall to collapse into the aqueduct.
- 2). As can be seen in the site plan (Fig. 22), a few meters east of W005 the aqueduct’s orientation gently turns north (8°). It is possible that the reinforcement was built in order to support the aqueduct walls at this point of increased water pressure.
- 3). In the IAA excavation eastwards of our excavation (Gorzalzeni 2005) the width of the aqueduct channel was 0.50-55m, which is considerably wider than the 0.4m in our excavation area. It is possible that the narrowing of the canal was a design feature aimed at increasing the water pressure, which may have necessitated some structural reinforcements.