

Reburial of a mosaic floor discovered at Tocra (Taucheira)

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Abstract

A large number of mosaic floors in Cyrenaica are in poor condition and a systematic programme for the assessment of exposed mosaics followed by strategic planning for their long term preservation is long overdue and badly needed. A mosaic floor discovered at Tocra in 1972 is a prime example of a deteriorated pavement. In this case the Department of Antiquities decided to protect the mosaic by careful reburial in a methodical fashion. Preservation of the Tocra pavement by careful reburial, with due regard to context and need, is unprecedented and represents a new, extreme but essential conservation activity for Libyan archaeology.

This report concerns a remarkable and unpublished mosaic floor discovered at Tocra in 1972 during the training excavations of Benghazi University. The pavement has been long exposed to the environment and, lacking any protection, has been vulnerable to a wide range of factors which have exacerbated its deterioration. Continued loss has demanded immediate measures to ensure its long-term survival. Various options were considered and burial *in situ* is judged to be the best preservation solution (Stewart 2004). Crucially, the last three decades have witnessed the publication of a great deal of information regarding the reburial of mosaics which aided the choice of intervention, its planning and implementation (a review of published conservation literature on mosaics can be found in Demas and Roby 2012 and Roby 2004). This article describes the methods used in order to bring them to a wider audience and draw attention to new conservation activity in Libya.

Only two examples of discovered mosaic floors have been reburied in the region. The first was at Gasr Bandis, some 5 km south of al-Beida. The floor was discovered in 1976 by the Department of Antiquities, Shahat (Ward-Perkins and Goodchild 2003, 393). It was not fully uncovered and since the bad weather conditions prevented the excavators from completing the excavation they simply decided to cover it with no reburial provisions. The second example came from Euesperides where excavations in Area P have brought to light houses furnished

with mosaic pavements composed partly of pebbles and cut tesserae dated back to the first half of the third century BC (Bennett *et al.* 2000; Lloyd *et al.* 1998). Seasonal rainfall caused serious damage to the discovered floors and subsequently undermined the exposed southern section of the floors. A temporary retaining wall along the southern side of the discovered mosaics was built and the gap in between was backfilled to stabilise the mosaic floors, which were also covered with a thin layer of the excavated decomposed mud-mortar from the antepenultimate phase beneath (Wilson *et al.* 2005).

At Tocra, the poor condition of and significant damage to this important polychrome mosaic, some 100 m south-west of the East Church, led the Department of Antiquities to call for an urgent intervention to protect it. The building occupies a whole insula and was excavated by Benghazi University but never published (Bentaher and Dobias-Lalou 1999). An apsed hall is located at the south-west corner of the building measuring 10.35 × 5.15 m and was furnished with four consecutive floor-levels: two of mosaic overlaid by two successive mortar floors (Stucchi 1975, 426–27). The two mosaics represent important evidence for the construction and decoration of Christian monuments in Tocra, and Cyrenaica more broadly, during the Late Roman and early Byzantine periods (Ward-Perkins and Goodchild 2003, 217–22). The upper mosaic floor was lifted in 1976 and re-laid in a store which forms part of the now dilapidated Tocra Museum. The mosaic is in poor condition and the building is in danger of collapse. This figured pavement has a range of iconography, often inscribed, which includes the Rivers of Paradise positioned at the four corners, representations of *Ktisis*, *Kosmesis* and *Ananeosis* as well as Nilotic and rural-life scenes.

The earlier mosaic floor remained *in situ* with no provision for its protection (Fig 1). It consists of 55 approximately square panels which contain representations of birds, fish, and other animals, flowers and baskets of fruits. Each panel is framed by a two-strand guilloche (Ward-Perkins and Goodchild 2003, 218). The pavement includes two Greek inscriptions. One is contained within a panel positioned in the middle of the floor and, most likely, mentions the name of the patron. The other occupied the whole length of the northern end of the

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Figure 1. The mosaic floor before restoration (photo: P. Kenrick).

hall and has been interpreted as a goodwill blessing on those entering or leaving.

The mosaic has continued to deteriorate and, until recently, there was a real risk that this process might accelerate and result in complete loss. The problems affecting the floor can be attributed to environmental and human factors. Over the course of almost 40 years, the mosaic has been exposed to extreme weather conditions with wide seasonal fluctuations which bring rain and drought, heat and cold. Plants grow across the archaeological remains, penetrating and damaging the mosaic. Salts are also common due to the site's coastal location.

This aggressive environment is made more so by human and animal interaction. There has been no systematic monitoring or maintenance since the floor's excavation. The area has no perimeter fence and the site no custodian. Shepherds graze their flocks across the site, frequently using the standing walls as a temporary enclosure for the sheep or goats. The animals covet the plants around the mosaic, another factor which causes them to trample the floor. Their droppings can be found across the pavement, as evidence of their visits, and in large quantities might stimulate insect activity, which is problematic if they were to burrow into the mosaic. Human visitors have exacerbated these issues. Areas of detachment can be worsened by being walked upon, for example, and on one occasion a fire was lit on the surface.

Based on the circumstances cited above it was deemed necessary to rebury the mosaic in a methodical fashion appropriate to its context and needs. This idea was entirely our own and would preserve the mosaic in the short and medium term, until resources become available for its proper conservation, protection and display. In advance of the reburial we were fortunate to have the opportunity to discuss the reburial process with W. Wootton and J. Stewart, who visited Tocra in April 2012 during the evaluation trip for the *Conserving and Managing Mosaics in Libya* project (Wootton forthcoming). The mosaic did not require any critical pre-stabilisation before reburial. A small number of tesserae were detached, but the tessellatum was relatively well adhered. After consideration, discussion and consultation of the appropriate sources, the materials and processes were decided upon and these can be summarised as follows:

1- Documentation

The decoration of the mosaic was recorded, as was its condition prior to reburial. We also documented the reburial process itself using photography. Both written and graphic documentation were deposited in the Tocra office of the Department of Antiquities for archival purposes.

2- Cleaning

Vegetation that covered the floor was carefully removed. A grass cutter was used to cut off the

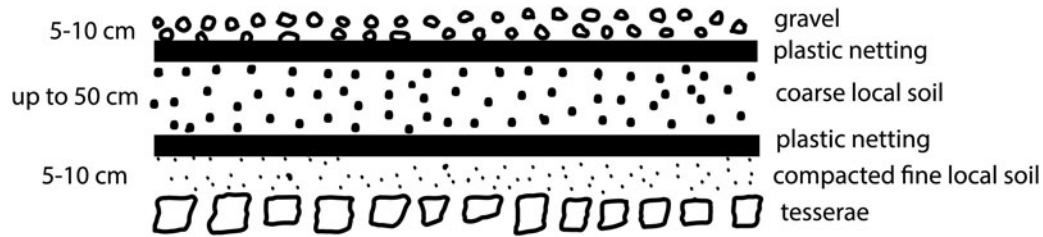


Figure 2. Diagram showing the successive stages of reburial (drawing: A. Buzaian).

plants at the base of their stems as pulling out the plants by hand would cause damage to the pavement and risk dislodging the tesserae from their bedding. The entire surface was cleaned of earth with a soft brush, especially at the borders.

3- Border protection

The level of the east wall of the building was raised to the same level as the other three. This demarcated the complete mosaic in order to prevent erosion or loss of the fill material. For aesthetic reasons, special care was taken during this construction activity to use similar building materials to the original. Squared stones were still available on the spoil heap of the earlier excavation. A lime mortar mixed with soil was used as the binding material.

4- The fill materials and layer separation markers (Fig. 2).

Sieved local soil from previous excavations inside the ancient city was used to cover the floor. The spoil heap of the ongoing training excavations of Benghazi University made an excellent and practical source. This soil was sieved, loaded into sacks and then transported to the location of the mosaic floor. It was then spread onto the mosaic's surface and into voids, forming a layer between 5 and 10 cm thick and, following laying, was well compacted (Fig. 3).

- Over this was placed a carpet of netting with a mesh size of 1.35×1.35 mm and manufactured from white polyethylene. The purpose of the plastic mesh was to indicate the presence of the delicate mosaic surface in the case of future



Figure 3. Covering the mosaic floor with sieved soil from previous excavations. Note the re-used stone blocks in the wall in the background (photo: A. Buzaian).

re-excavation (Roby 2004, fig. 6; Stewart 2004, fig. 7). This plastic netting also forms an interface between the sieved layer and the coarser soil above, and it will allow the transmission of moisture through the reburial covering.

- Unsieved soil was then laid to the height of border walls. This layer was up to 50 cm thick and well compacted;
- Another similar plastic mesh was placed above to add stability to the coarse soil below;
- Gravel was used for the upper-most layer to stabilise the soil and to prevent the growth of vegetation on the top.
- Breeze-blocks were also used to surround the paved hall. These were positioned directly on the low sills flanking the pavement on the north and south sides, without using any cement mortar.

Conclusions

The work was carried out within nine days. The initial preparation of the materials required about a week and was followed by the reburial, which lasted

two days. The final cost of the reburial was 1000 LD (equivalent to about £500, €600 or \$770) for both materials and labour. The retaining walls and fill materials will be subject to a three-monthly periodical monitoring by members from the Department of Antiquities, Tocra.

There are a large number of mosaic floors in Cyrenaica which are exposed to similarly harmful environmental and human factors and are in poor condition. Therefore, we are suggesting a systematic programme for the assessment of these mosaics followed by strategic planning at individual sites and on a regional level. This may include proposals for further reburials where appropriate.

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