

Ostia Antica. Piazzale delle Corporazioni. The maintenance of the mosaic floors

Roberto Nardi

C.C.A., Centro di Conservazione Archeologica - Roma

Abstract

In 1998 the Superintendenza of Ostia began a programme for the conservation, protection and maintenance of monuments with open-air mosaic floors. The *Termae dei Cisiarii* was the first monument to be treated. (1994-96).

In 1998, with the introduction of a special law for the Gubileo 2000, a conservation programme was created for the Piazzale delle Corporazioni. This programme included the maintenance of the floors and indirect measures of protection such as new paths for visitors.

Piazzale delle Corporazioni was one of the main squares of Ostia and is still today a key transit node for visitors. The ancient monument now consists of remains of the walls and about 1900 square metres of pavement* (flooring). Of these, about 1000 sq. metres are mosaic - some in situ, others detached and laid on a cement base during the 60s. The remainder is reconstructed in cement.

This paper presents the maintenance programme of all the floors, carried out during June and July 1998. The techniques, time and costs of the treatment, the conception of informing the public as the work progresses and the planned measures for protection and future maintenance are described

Twenty years have past since the birth of IICM and during these twenty years some large question marks have passed over the discussion table most of which have been supplied with an answer. Or, at least a standard has been decided on which to model the operative answers that can be adjusted to the situation of the monument under conservation.

The instrument that has permitted the acquisition of this maturity is the technical literature that, thanks to the very same ICCM, boasts an extremely respectable solidity.

The areas that have been discussed the most are the use of cement and synthetic materials versus traditional materials and techniques, the detachment versus in situ conservation and, more recently, restoration versus preventive conservation.

The latter, having so recently been put under the microscope and even after one or two conferences on the subject is still a question of too many words but very little action.

The work presented here today is a small contribution to the subject of preventive conservation. It illustrates a maintenance programme implemented in Ostia Antica on the floors of the Piazzale delle Corporazioni and is part of a general programme of conservation, maintenance and presentation initiated by the Soprintendenza of Ostia in 1994 with the intervention at the Terme dei Cisiarii.

Like the intervention on the Terme dei Cisiarii, of which we must acknowledge the courage of the Soprintendenza of Ostia for having initiated a different method from that of the normal restoration interventions of which the various administrations are familiar, Piazzale delle Corporation is one of the main monuments in the site and is surely the one that most of the visitors cross, walk on, photograph and remember.

The Soprintendenza for its internal policy decided to invest the funds put at their disposal by the Millennium laws in interventions of maintenance and preventive conservation. This decision would seem to endorse the fact that, in this case, a radical change has taken place in the field of conservation. This kind of intervention is characterised by a low economic and spectacular profile, but at the same time it has a wide range of action and a long lasting impact on conservation. If to these extremely positive characteristics we add the large cultural content that an intervention of this kind can generate,

obviously the economic side of the programme could not have anything but extremely positive results. It is probably worthwhile explaining in more detail this concept of a low economic and spectacular profile, but at the same time wide range action and consequently, a long lasting impact on conservation. Piazzale delle Corporazioni is an ideal example.

The Piazzale delle Corporazioni is a monument that incorporates about 2000 square metres of flooring of which 1000 are made of cement grit laid in the 60s and 70s and 1000 square metres of mosaic. All the flooring is exposed to the open-air and to the trampling of tourists. Of the 1000 square meters of mosaic some were lifted and relaid on reinforced cement ; some were treated on site and others left untouched.

The state of conservation is not homogeneous and varies from situations of stability to situations of serious decay.

The mosaic had procured serious damage from atmospheric agents, root growth and tourist trampling. At this point the decision to be taken could not be postponed. The administration had two alternatives: a direct intervention on the floor or an intervention on the environment.

The former meant a complete restoration: the usual way, comfortable and easy. The latter instead meant the intervention and the modification of the actual conditions of use to a maintenance plan and therefore to impede access to the floor and create an alternative equipped route.

The first operation, at the actual market price, would have cost about 600,000 euro, the second about 65,000 euro as far as maintenance is concerned.

The calculation made by the administration was simply a question of good sense: keeping in mind the available resources, the obvious choice was the one that offered the more complete result.

Opting for the restoration - the first choice, only 10% of the floor would have been restored and the rest would have had to await the subsequent available funds.

Instead by choosing the second option the whole monument was saved immediately, infrastructures were built to facilitate the visits, a maintenance programme was outlined and begun and the possibility was left open for future restoration that could even be part of a long term programme.

As has already been said the floors of the Piazzale delle Corporazioni can be divided into surfaces made of cement grit realised in the 60s and 70s and mosaic floors. With the programme described here, both surfaces were treated.

The cement areas had deteriorated heavily and had risen owing to the expansion of the iron bars imbedded in the cement and the roots of the pine trees in the inner square of the piazzale.

The mosaics were covered with a thick layer of dirt, mud, leaves, resin and micro-organisms. Almost everywhere the mortar or cement between the tesserae had eroded; in many areas tesserae were lifting or missing owing to the action of the iron in the bedding layer or for the detachment of the cement used in the lacunae or for root growth. The continuous trampling of visitors had worsened the situation of the tesserae causing numerous small lacunae.

Bearing in mind the administration's decision to block access to the pavement and therefore prevent trampling, the methodological choices were as follows:

- removal of the unstable or lifted lacunae made of grit and iron and the substitution with new ones made of cement grit but no iron.
- removal of iron from under the tesserae by lifting or raising small portions of mosaic
- filling of small lacunae by using original tesserae

With this introductory operation the following tasks were carried out:

- graphic and photographic documentation;
- pre-consolidation of lifted or unstable areas;
- replacement of unstable cement grit in the lacunae with a new filling of cement grit but no iron;
- lifting or raising of small areas of mosaic on a new bed of lime mortar;
- treatment of small lacunae by using original tesserae;
- cleaning of the mosaic surfaces taking particular care of the spaces between the tesserae;
- application of a liquid hydraulic mortar between the tesserae

Together with the interventions on the floor, a new visiting trail with infrastructures for public

information was created. Balustrades were set up to block access to the pavement. The rain water drainage system was cleaned out and roots were cut along the inner perimeter of the monument.

The materials used for cleaning the mosaics were water, mechanical and manual power. Slaked lime, sand and stone powder were used for relaying tesserae, hydraulic lime Lafarge and stone powder were used for consolidation between the tesserae.

The crucial point of the intervention was the time factor. When an intervention has to be carried out on such a large scale the time factor determines the success of the operation. As has already been said many times before, for maintenance to be feasible on a large scale it must be both ethically and economically profitable. And the only acceptable answer to both these conditions is if the aforesaid is realised using experimented technical operations and the intervention has a large organisational support.

Whoever therefore still believes that maintenance is a banal operation based on the use of a few "cleaners" who wander through the monuments picking up leaves and litter, has the completely wrong idea.

Maintenance is not a single technical operation but a programme made of several activities managed according to a plan.

To have a complete picture of the activities carried out for the realisation of the intervention with the planned techniques and timetable required we have to add the following technical operations to the list:

- testing
- planning
- upgrading conservators
- preparation of the work-site
- protection and setting up of the work area
- preparation of materials and tools
- controlling

Testing is the first activity of the entire project. During this operation, materials and techniques that have already been used elsewhere on the monument and on large scale operations are put on trial for adaptability. With this operation the details for application, the length of time necessary, the quantity of material required and all the logistical and organisational components of the future site are defined.

Data collected this way is used to edit a plan of intervention. This will be the instrument used for managing and controlling all the activities. In this phase the time factor, specialisation and the amount of resources available is defined. Planning is a dynamic instrument that is constantly updated as the intervention develops. At the same time it works as a remainder of the plan so that the unexpected or unforeseen can be positively put to use in the form of experience for future projects.

Based on the tests and the planning, the time necessary to complete the programme was 3 months. One month would be for four operators to prepare and close the final report and two months in which eight operators, six conservators and two carpenters plus a photographer and a designer for the documentation would work to effectively complete the intervention. This gave us a total of 360 working days, which means on average 5.5 square meters per day per person.

Before beginning the work, the results of the test and the planning were used to inform the conservators about the operations and the dynamics of the programme. The process of informing the operators is another activity that closely follows the course of the work and it ends with the conclusion of the project.

The preparation of the work-site and the protection and setting up of the working area are activities with multiple functions. On one hand these functions are necessary to make the work of the operators efficient and pleasurable and above all not to aggravate the technicians with unnecessary tension, tiredness and distractions that could be added to the physiological problems of the intervention. On the other hand these operations are needed to stop interference with the flow of the public to the monument that, we must underline, was constantly open during the intervention. So no tin huts, no piles of metal, no tubing or wiring in sight and no attempts on the lives of tourists.

But that is not all. As has been normal procedure for C.C.A. over the last ten years, the decision was

taken to use this "front line" intervention of conservation to inform the public about the fragility of the archaeological heritage. Common sensibility is necessary to enable everyone of us, through the use of information and education, to participate and contribute to the prevention of damage to the our heritage. This can be achieved through shrewd and intelligent use of sites and monuments.

During June and July, the exact months of the intervention and the period when most of its 500,000 visitors come, Ostia once again became the preferential point for the activity of informing the public. To manage this operation, routes were created alongside the areas under conservation. Information panels were prepared and the conservators took turns to talk to the public and answer any questions. All these very modest operations were achieved using simple and economic materials, but thanks to the willingness offered by the conservators and the great number of questions and the interest shown by the public, the results were extremely encouraging.

The preparation of the materials, particularly in this situation, is a task that plays an important role. As we have already said, large areas were already integrated with areas of cement. This meant a complete change in organisation and in the investments to be made. New machines for cleaning and applying grit were absolutely necessary.

For this reason a mechanical disk used for applying cement beds, a high pressure hydro-cleaner and a mechanical brush with plastic disks appeared on the site.

Consequently both the replacement of cement that had been lifted and substituted and the cleaning of the remaining in situ meant that more the 50% of the entire surface was treated with extreme rapidity. The mosaic surfaces were treated manually the traditional way. The only addition were vacuum cleaners used to facilitate the cleaning and removal of consolidant in excess.

We believe, by having used these techniques, to have met the economic requirements.

Almost certainly more than a few people will be turning their noses up at the idea of using these methods for various reasons I can think of. But probably the most recurring of these would be the vicinity of such a noble subject as mosaic and its conservation to trivial issues such as economic factors of interventions.

But it is exactly this that has to be talked about if, going back to my initial discussion, we want to produce facts to sustain the need to develop maintenance and preventive conservation programmes. A proposal, a technique, a method to be accepted and regularly applied must be economically viable from both points of view: the heritage, that is kept in good condition at a low cost; the operator, that implements economically feasible activities.

So, if we want maintenance to pass from theory to practice in the form of ordinary expense specifications in public administration (most probably private enterprises have already taken steps in this direction) we must continue to spread the word among the administrators and push towards the realisation of maintenance projects (extra-ordinary or ordinary).

At the same time we must be agile in organising groups of technicians trained in maintenance. These technicians having come from the world of professional conservators must be dedicated, equipped and specialised in the field of maintenance interventions with the hope that the market will help them survive for just long enough to pay off the costs of the machinery and the trained staff in which they have invested. In this way a cultural and methodological leap could be made that will be put on the market in the form of orders in the field of maintenance.

The commitment to create all this must once again come from us. From our professional ambient. Lets recall when specialisation in restoration slowly began. Painting on canvas, mural paintings, archaeological materials, metals etc. and specialisation in this very field with detachment from the site and in situ conservation.. We must once again, as we did so many years ago, divide and open the profession up to new colleagues and direct them towards further areas of specialisation, or rather maintenance and, more generally, preventive conservation.

Captions.

1. Ostia Antica. Piazzale delle Corporazioni. General view

2.3. Ostia Antica. Piazzale delle Corporazioni. The materials used for cleaning the mosaics were water, mechanical and manual strength. Slaked lime, sand and stone powder were used for relaying tesserae, hydraulic lime Lafarge and stone powder were used for consolidation between the tesserae.

4.5. Ostia Antica. Piazzale delle Corporazioni. This intervention has been carried out keeping the worksite opened to the public. This was done to inform the public about the fragility of the archaeological heritage. To manage this operation, routes were created alongside the areas under conservation. Information panels were prepared and the conservators took turns to talk to the public and answer any questions.