

QAL'AT EL-MISHNAQA RESTORATION AND TOURIST DEVELOPMENT

by
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"Machaerus: Plan for Restoration, Maintenance and Tourist Development"¹ was presented in July 1991 and put into action at the end of the same year. The project is concerned with the Herodian fort² and the ruins of the village of Mekawer (Fig. 1)³ and takes into its overall view the whole of this area. The workplan became necessary because of the precarious state of conservation of the surviving architectural remains. It aims to restore and develop an important landscape and historic area which, in its present condition, does not fall within the interest of the visitor. The degradation of the materials and the state of ruin of the buildings is serious, at times near to a state of collapse. This situation is due to various causes which operate separately but often they compound the deterioration by acting together. The causes are linked to the natural ageing of the materials and structures but there are factors also connected with the

long-term state of abandonment of the area without prompt and continuous maintenance. It is in fact frequently the case that seemingly innocuous forms of degradation are underestimated, thus exposing the site to the risk of new mechanisms of degeneration which may become irreversible and at times cause serious problems which are not easily solved, presenting also problems of funding. This is a scenario which can easily be applied to other sites and monuments in Jordan. It should be admitted that one of the reasons for the decay of archaeological sites could be the archaeological excavations when adequate preventative measures are not adopted in order to protect the walls. No less a risk is "tourism" itself when it pushes the excavation to exploitation, and remains which have previously been abandoned are "restored" with recourse to uncontrolled intervention which cancels the last evidence of these remains.⁴

1. The project was requested by His Excellency Nasri Atalla the Director General at the Ministry of Tourism and Antiquities. Co-working on the project are R. Sabelli of the University of Florence and R. Mkhjian, N. Qusus, H. Al Shawa and A. Tarawneh from the Ministry of Tourism and Antiquities. The first article on the work is by the same authors and is called 'An Herodian Fortress Yields its Secrets,' in *Marmor* 37, (1992), pp. 20-34.
2. The fortress, recalled by J. Flavius, was rediscovered in the middle of the last century (Seetzen 1854-9), visited at the beginning of this century (Smith, 1904; Ricciotti, 1936) and excavated on various occasions (Corbo 1978, 1979, 1989 and 1981; Piccirillo, 1979). Strobel (1974) surveyed and analyzed the Roman siege system.
3. M. Piccirillo, 'Lo scavo della chiesa del Vescovo Malechios a Mekawer,' *LA* 60 (1990), pp. 466-468, Fig. 83-85.
4. The question of the conservation of sites and historic monuments represents a research field which has been worked on for a number of years

at the University of Florence in the context of a wider research programme which may be called "archaeological restoration," a first article entitled 'The conservation of Historic Sites and Monuments: A Fact-finding Analysis in Jordan' was presented to the Fifth International Conference on the History and Archaeology of Jordan. Being printed at the University of Florence is an article on the same theme entitled 'Report on the State of Conservation of Archaeological Areas and Monuments in Jordan.' The previous report (*Materiali da costruzione e tecniche edili antiche. Indagini e rilievi nell'ottica della conservazione*, Firenze, 1991) contains a number of references to Jordan i.e. L. Marino and M. Piccirillo, *La torre di Umm er-Rasas — Kastron Mefaa*; L. Marino, *Insediamenti nel nord della Giordania. Osservazioni sulle strutture "all stone" a Umm el-Jemal*; F. Barogi and B. Giorgi, *Indagini preliminari sulle tecniche costruttive dei mosaici pavimentali di alcuni esempi della "scuola di Madaba" in Giordania*.

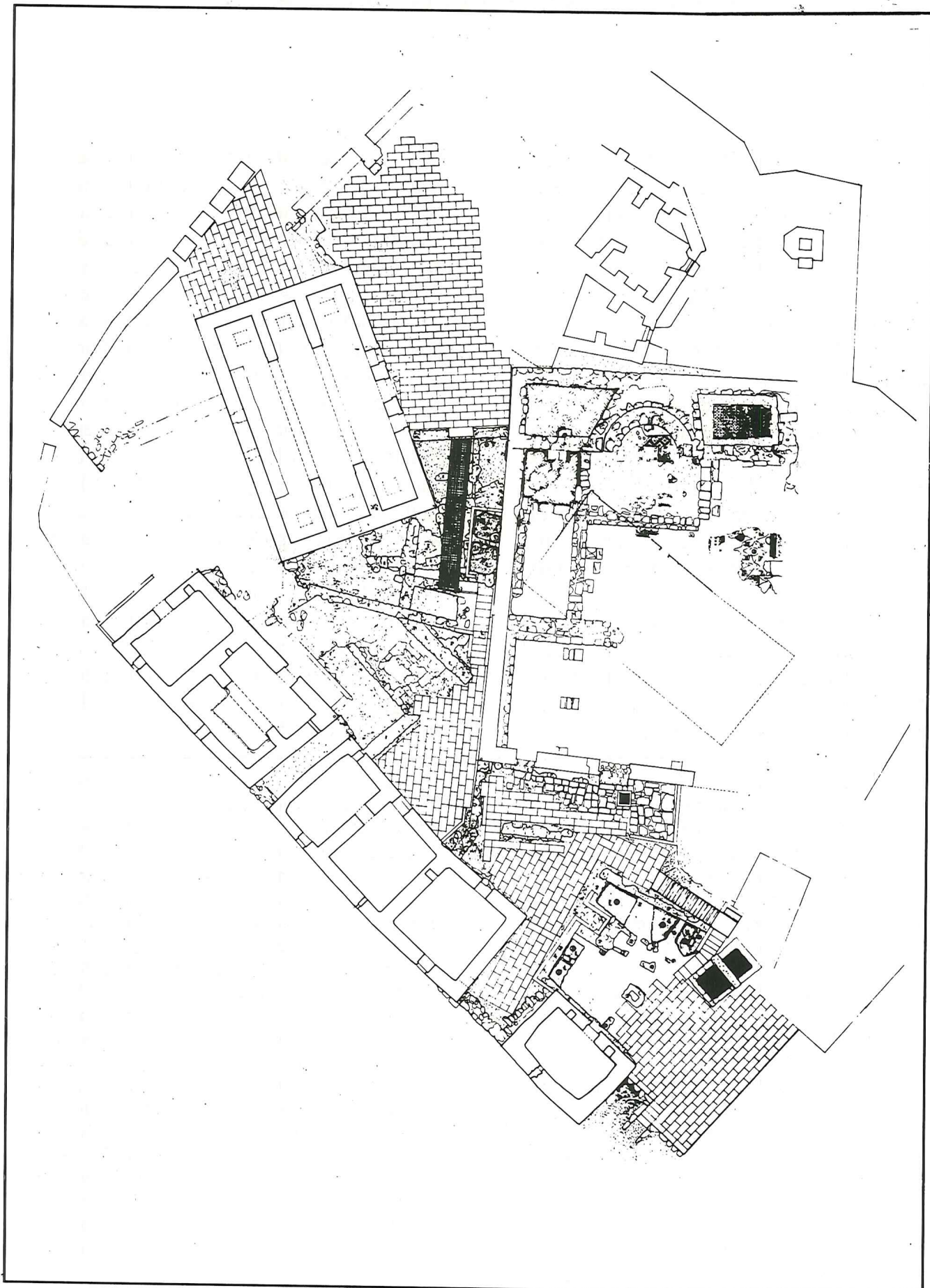


Fig. 1. General plan of the village around the church of Bishop Malechios (Oct. 1992).

Findings from the drawings and photographic surveys we did before the work, together with the archive data, confirm a dangerous concentration of phenomena of decay and ruin due to various occasional causes and also to stresses which recur cyclically (Fig. 2). Investigations so far carried out allow us to blame the precarious state of conservation, although found in all abandoned open archaeological sites⁵, on factors which in our area present themselves in a particularly serious way as they are worsened by the geotopographical situation and the configuration of the terrain (Fig. 3). The deterioration and subsidence phenomena can be summarised as follows:

a) widespread cracks; b) localised lesions with recognisable fissures; c) actual or potential collapse; d) loss of vertical position of walls through collapse of the upper part; e) surface deterioration following thermohigrometric variations and deeper faults caused by freeze-thaw phenomena; f) undermined phenomena at the bases or tops of structures as a result of lateral ground thrust; g) pools of rainwater in hollows or runnels; h) surface wash-out of terrain, rain-borne erosion; i) settling caused by negligence or vandalism.

The plan of intervention operates in a number of directions. On the one hand there will be operations aimed at solving the more serious and urgent aspects of degradation and on the other there will be operations aimed at the development of tourism in the whole area. It is proposed that there will be a small educational museum and services in the village houses which could be occupied again immediately afterwards. Whatever choices are made the important thing, and at times the determining factor, will be the policy of having ordinary main-

tenance which we shall be able to ensure. Such a policy will certainly not be easy to carry out particularly in view of the fact that there is no tradition of conservation in the area. One aspect of the plan then is this creation of a systematic opera of maintenance programmed over a period of time, with procedures which will enable us to avoid, or at least reduce to acceptable levels, the risk of these destructive processes returning in the future. On the other hand the planning of archaeological parks (as also happens in nature parks) is doomed to failure if there is no provision for constant maintenance, since it would be an illusion to suppose that just because the ruins are within the boundaries of a park that they are able to look after themselves.

The project is concerned with the general re-organisation of the area, aiming to create itineraries which start in the village and lead to the top of the fortress, as well as the necessary works for the welcoming of tourists (Fig. 4). A large park will also play the role of an area able to supply the tourist with information before the ascent and refreshment on return.

There should be provision for itineraries leading to the top of the mountain with compulsory pathways so as to prevent visitors from passing over the more fragile walls by making use of elevated walkways. One will be able to go up to the fortress using the new road, along the traces of the aqueduct, and be able to visit the water tanks and to go along the seige ramp as well as to take a path to visit the remains of the Roman fortifications in the direction of the Dead Sea. Of no less importance there will be suitable educational features in the progressively more specialized information signs.

The interventions of restoration and lo-

5. L. Marino, 'Archeologia e restauro, restauro dell'archeologia,' in *Archeologia e restauro dei monumenti*, University of Siena, Summer School on Archaeology (Sept-Oct 1987), pp. 135-155; *Id.*, 'La conservazione dei manufatti edilizi ridotti

allo stato di rudere. Prevenzione e interventi d'urgenza,' in *Conservazione e manutenzione di manufatti edilizi ridotti allo stato di rudere*, Firenze (1989), pp. 1-3.

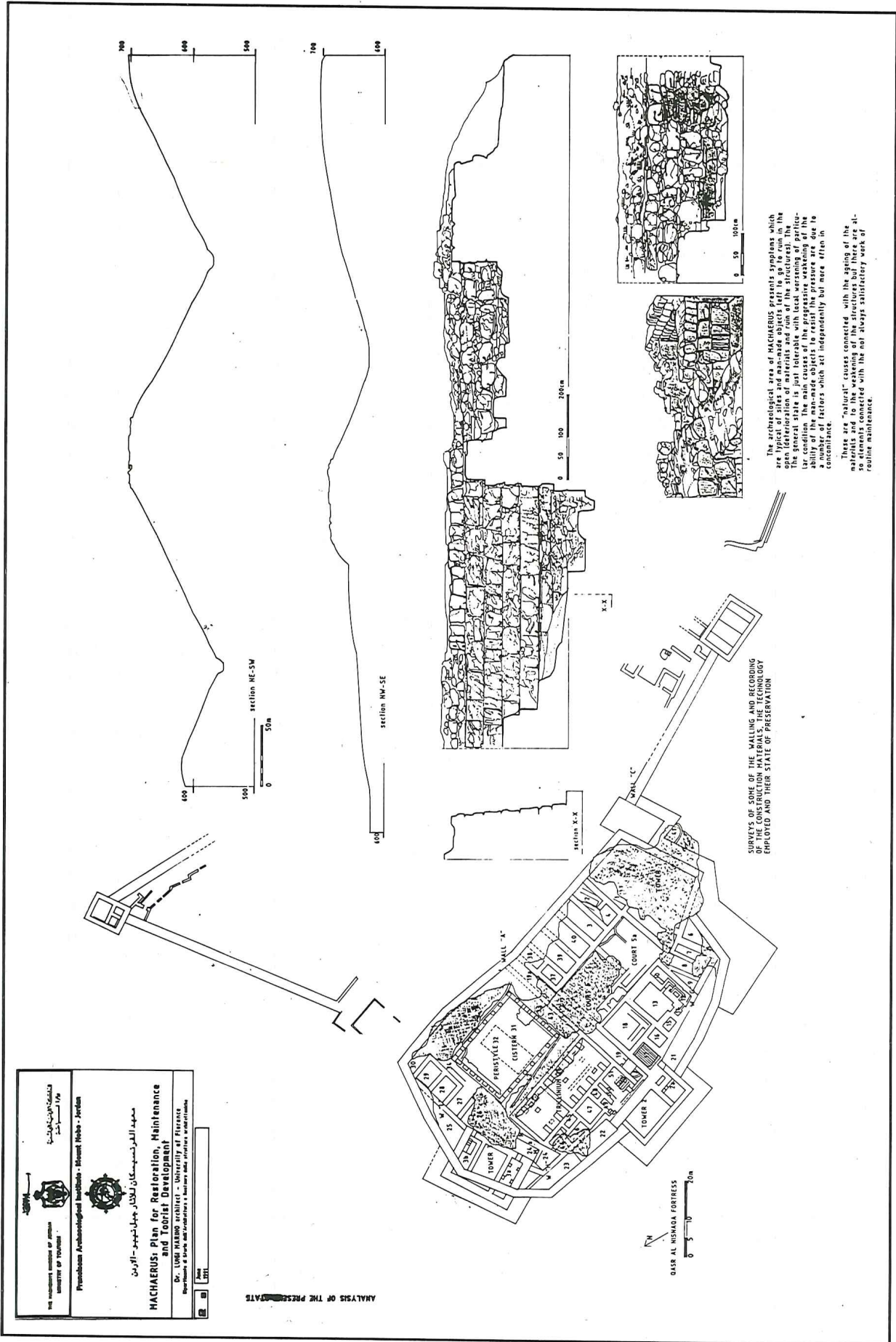


Fig. 2. Table 2 of the project for the work on the fortress: analysis of the present state.

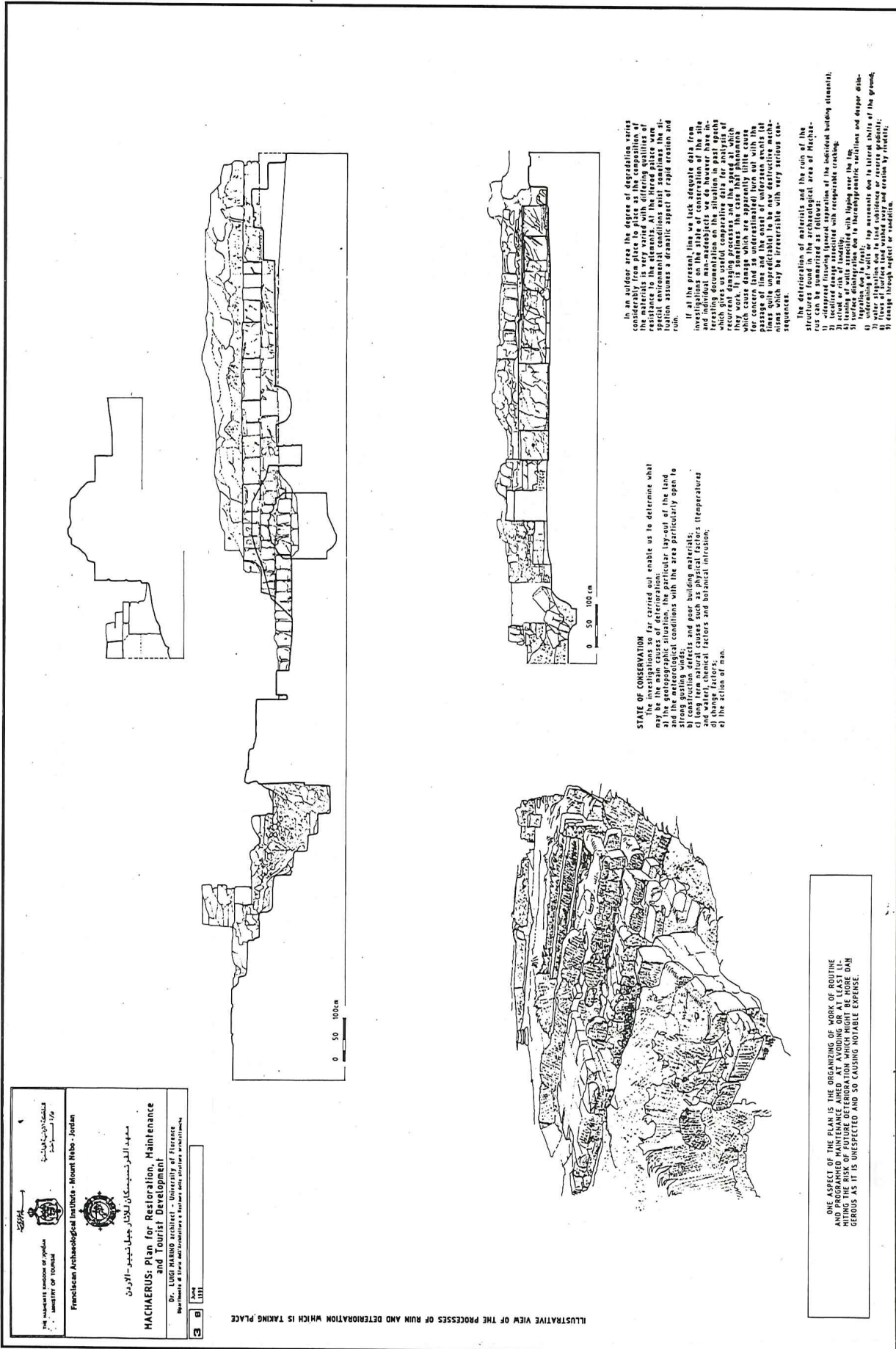


Fig. 3. Table 3 of the project for the work on the fortress: illustrative view of the processes of ruin and deterioration which are taking place.

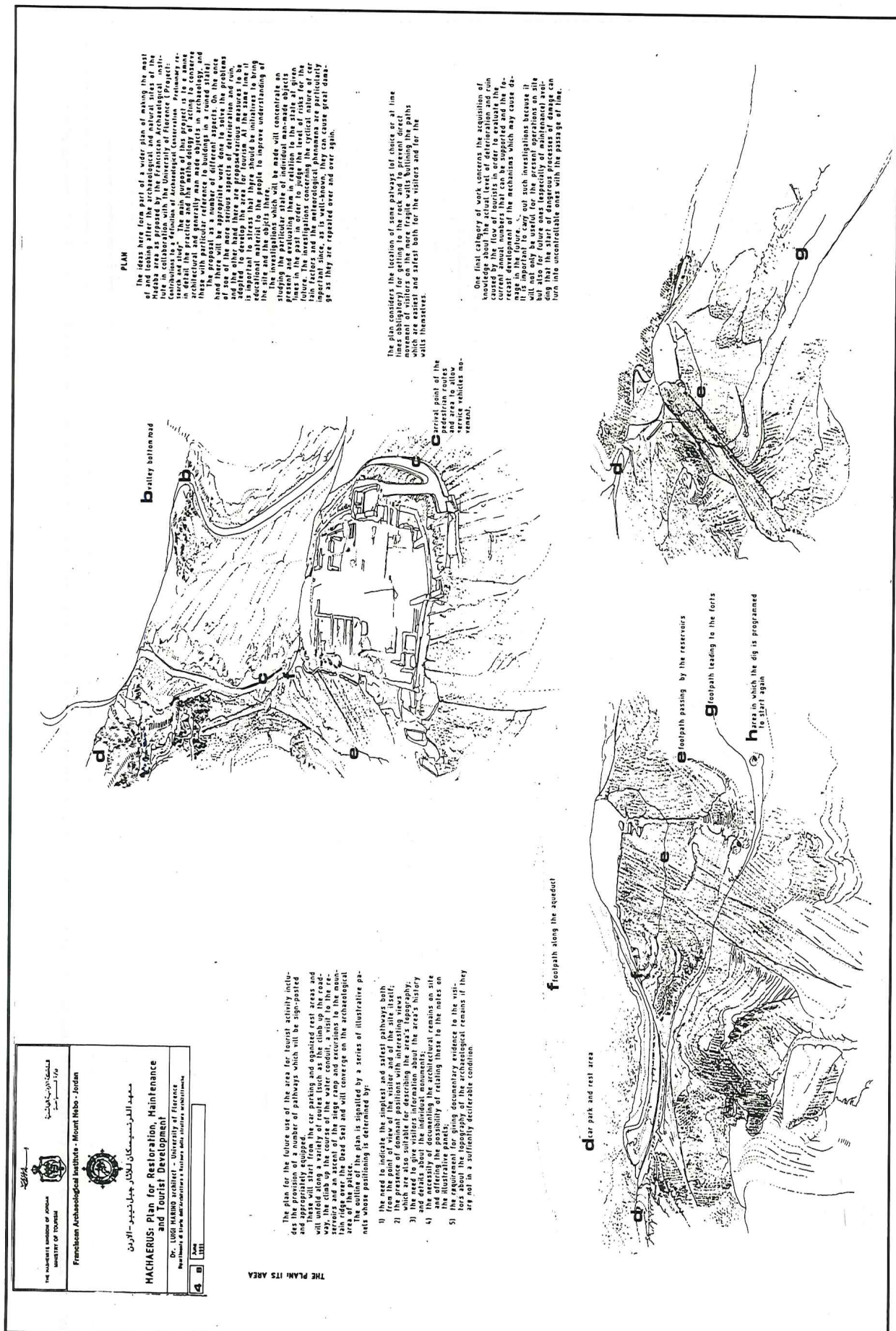


Fig. 4. Table 4 of the project for the work on the fortress; the plan and its area.

calized consolidation of the walls are carried out with the necessary care and attention required by the archaeological context. The preference is for non-invasive techniques and, insofar as it is possible, to use methods which are reversible since in future conditions could present themselves in which it will be possible to take corrective measures and apply new methods to new requirements. We prefer to make use of natural materials, reducing the criteria of intervention based on modern technology and instead taking advantage of the procedures employed in local tradition and operations directed at the conservation of the original materials. For some of the structures it will be necessary to go ahead with limited dismantling in order to permit some consolidation work. In these cases the dismantling is considered purely as an operation of architectural archaeology and as such presupposes all of the necessary caution in the building site preparation and the fullest recording and documentation of the site. Limited works of functional repair and carefully prepared educational back-up will be preferred to works of reconstruction. We believe that works of reconstruction are dangerous not only in themselves but also, and above all, because there is the risk of their becoming the standard example which others who follow copy, multiplying infinitely any original errors. As for the village we have preferred to adopt solutions which make a distinction, whilst being linked together, between the new parts using modular stone elements (low walls, flooring, stairs and walkways) and those conserved *in situ*. The new flooring dry laid on the ground without cement contributes to the stabilization of the terrain, making it easier to move around the area, and ensures good protection of the above ground structures as well as those still underground. The flooring and other new parts can easily be removed if it should be decided to start up ex-

cavation again at some time or for any other reason, and may be re-used elsewhere (Pl. I, 1,2).

The first works at the village represent a sort of test (both from the point of view of the training of the workers and of the use of the materials) for the important works of intervention which will take place at the fortress. The archaeological excavation, the preliminary operation, and the restoration which is limited to that which is strictly necessary, are bringing to light structures which are of great interest as regards the nature of the settlements and their chronology. The excavations at the fortress have dealt with two areas which were not included in the excavations of past years, as well as the two large water tanks under the peristyle.

One of the most important aspects of the project is the fact that it will be a learning experience for the local technical experts and workers. This aspect of the work is certainly a complicating factor, the limited work experience being the most significant element, but it is also an important challenge for those workers who can be trained in the context of future employment at other restoration sites, where they will be useful and qualified helpers. It is a well known fact that the presence of specialized and trained staff is vital at restoration sites and archaeological excavations. In particular it is important that technicians and workers, able to overcome the risks of routine work, be able to intervene promptly and appropriately in all kinds of situations and above all in those "emergencies" which now seem to characterize the greater part of archaeological work, and not only in urban centres.⁶

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6. L. Marino, 'Scavi archeologici e restauro di emergenza,' in *Archeologia in Valdichiana*, Roma (1988), pp. 69-72.



1. View of the village during the works.



2. View of the village during the works.