# MARINA EL-ALAMEIN SITE PRESENTATION PROJECT (ARCE/EAP) PRELIMINARY ARCHAEOLOGICAL REPORT 

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#### Abstract

The initial idea behind the MASP site presentation project, conceived and directed by architect Agnieszka Dobrowolska within the frame of the Egyptian Antiquities Conservation program of the American Research Center in Egypt (ARCE/EAC) under USAID Agreement No. 263-A-00-04-00018-00, was to remove the various kinds of artificial dumps polluting the landscape of the archaeological site in Marina el-Alamein. Archaeological monitoring of the removal of dumps and the subsequent survey and documentation work were envisaged as the first and prerequisite stage of a site presentation project. The actual arranging of the prospected archaeological park was to proceed over the next couple of years with the ultimate objective of opening the site to the tourist industry as an important stop on the Mediterranean coastal itinerary - a veritable Egyptian "Pompeii" to be visited.

The ARCE/EAP MASP project was carried out independently, taking advantage of a close association with the Polish Centre of Mediterranean Archaeology, which bolds the license for archaeological exploration and conservation of the site.

The archaeological stage of the project took place over a period of eight weeks between January 25 and March 15, 2006, with an additional two weeks at the Polish Centre in Cairo for completing the documentation. ${ }^{1}$ Altogether an area of some $8850 \mathrm{~m}^{2}$ was surveyed archaeologically and recorded, and the offensive dumps were removed and landscaped in preparation for the next stages of the project.


1 The team consisted of Iwona Zych, who field-directed the archaeological part of the project at this stage and archaeologists Artur Obłuski and Urszula Wicenciak, who doubled in the respective capacities of photographer and pottery specialist, as well as efficiently handling as a team both the architectural and small-finds documentation. A debt of gratitude is acknowledged to the SCA Inspectors assigned to the Mission, Mr. Hamdi Magdy Saleh and Mr. Ahmed Mohamed Amin, who were extremely helpful and cooperative in bringing the work to a successful end. Site Director, Mr. Mahmud Yassin, kindly provided all the necessary assistance.
Last but not least, thanks are due the Directors of the ARCE/EAP program, the Late Robert "Chip" Vincent and Michael Jones, who visited the site in the course of the work and discussed various aspects of the project. The Project is also indebted to the Authorities of the Supreme Council of Antiquities with the Secretary General, Dr. Zahi Hawass, and the Director for Lower Egypt Antiquities Dr. Attiyah Radwan, for having the vision and conviction to support this undertaking at all stages.

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Fig. 1. Plan of the site of Marina el-Alamein introducing a grid of squares and including the results of the MASP survey in 2006; building dumps of the mid-1980s shaded in gray (PCMA archives, updated for MASP by A. Obtuski, U. Wicenciak)

## REMOVAL OF THE DUMPS

Dumps, whatever their origins, can be a terrible eyesore at any open archaeological site. This was the case of Marina elAlamein. The original accidental discovery of the site in the mid 1980s, during earthworks carried out in preparation for the construction of a tourist village, left huge mounds of earth bulldozed through archaeological layers along the course of prospected streets cutting across the site from northeast to southwest. The end effect was an unnatural landscape, suggesting streets where there were none, and generally obscuring from view the different parts of the site.

More recently, archaeological dumps had accrued wherever excavations hade been proceeding in the past two decades and a variety of building works along the modern coastal road had left building debris dumped along the northern outskirts of the site.

Given the logistics of the undertaking and budgetary constraints, as well as the overall aesthetic objectives of the site presentation plan, the project director ultimately decided to landscape the area [Fig. 1], removing as much of the volume of the dumps as possible and partly backfilling the deep artificial wadis in an effort to render the unexcavated parts of the site more natural to the eye. This decision required full-scale archaeological recording of the bottom of these two cuts prior to their backfilling.

Only the mounds left by the building contractors of the mid-1980s held any archaeological promise, hence attention was concentrated on these. Early trials with heavy equipment at this and other sites have demonstrated these machines entirely capable of carrying out under strict supervision even very delicate work,
assuming there is access. Testing proved this method to be satisfactory in most places at Marina as well. The actual removal was preceded by intensive fieldwalking once more (these dumps had already been fieldwalked by archaeologists, repeatedly over the past twenty years) of the tops and sides of the dumps in search of diagnostic material of archaeological value, scrutiny of mound structure in an effort to estimate actual extent and height, and recording of architectural remains observed in the sides of the bulldozed troughs.

The dumps in question, shaded gray in Fig. 1, appear on either side of two 'cuts', both some 25 m wide, traced under the future streets. They run parallel to one another, a few dozen meters apart. The eastern sides of the cuts were more heavily covered by sand and rubble excavated from the bottom. These mounds were from 1012 m to 28.50 m wide at the base, rising to a height of from 2 to 3 m . The westernside dumps were smaller and less extensive and actually nonexistent over long stretches, the edges of the cuts being actually in undisturbed ground. All of the dumps presented a characteristic crescent-shaped pattern of ridges, resulting from loaders pushing particular scoops of material before them without any further leveling.

Tests on a part of one dump demonstrated a classic case of inverted stratigraphy. Ancient remains were dumped at the very top and lying in the open for the past twenty years. Everything underneath was drifted sand, which had previously buried the ruins under a layer one to two meters thick. Loaders had lifted this natural layer (destroying in the process ancient walls and carrying with it modern debris), stopping for whatever reason at what proved to be Roman-age floor levels
[Fig. 2]. The occupational levels from the bottom of the 'cuts' ended up on top of the mounds. Moreover, with the length of the traced streets being between 130 and 180 m , it is only logical to assume that particular sections of the mounds contents corresponded to archaeological features found at the bottom of the cut in the immediate vicinity. Fieldwalking of the mounds largely bore out this assumption. Most obviously, there was a World War II bottle coming from the whereabouts of military trenches in the western of the cuts and a piece of water spout, which proved to fit a pipe in the wall of a structure uncovered in the eastern cut.

Careful monitoring of the removal and landscaping work proved the dumps sadly lacking of archaeological objects. Whatever diagnostic material was picked up, it was almost exclusively from the surface of the mounds, prior to the removal work. All the architectural members noted on the mounds' surface have already been registered and documented by R. Czerner of the Polish-Egyptian Conservation Mission (to be published soon in the BAR Series). Coming from the mounds were a few pieces of damaged architectural members (crumbling marble column shaft, two or three broken limestone column drums, heavily destroyed limestone Ionic


Fig. 2. One of the building dumps and the uncovered archaeological features in the western part of the bulldozed cuts $(\operatorname{Tr} 05+07)$ (Photo A. Obtuski, courtesy MASP ARCE/EAP)
capital, water spout); otherwise it was mostly broken stone and some regular dressed blocks, slabs and paving stones, which were concentrated in some areas and not very abundant at that in any case.

The only objects of significance were discovered in the dump overlying the presumed remnants of an important public structure located east of the city center. In this case, the only way of removing it was by human labor. Consequently, mounds up to 1.50 m high were removed by hand and carried by basket to where they could be carted away with the use of heavy
equipment. Once the tumbled debris of the underlying building started to appear on the surface, work in this area desisted [Fig. 3]. ${ }^{2}$ Finds from the disturbed surface layer in this area included sizable quantities of broken marble tiles and slabs, possibly from wall revetment and floor paving, a lion's leg of limestone which could have been a bench support (in analogy to the supports found in the South Portico), and several pieces of architectural cornice decoration matching pieces found earlier in the area by the archaeological mission and obviously belonging to the


Fig. 3. The eastern side of the main town square following removal of the dump, view from the west (Photo I. Zych, courtesy MASP ARCE/EAP)

2 After the close of this stage of the project, further clearing work in the area of the main town square was completed for MASP, but not by the present author; it is not included in this report.
building still concealed under layers of sand here. A dating find is a coin of Constantine the Great, one of a commemorative issue struck in AD 330-341, on the occasion of building the new capital in Constantinople [Fig. 4]. It and two other unidentified coins came from a patch of ashes and burning found between the tumble of blocks, hence it can be assumed with fair certainty that it reflects late occupation of the town square and its surroundings.


Fig. 4. Constantine's commemorative coin ( $A D$ 330-341), obverse and reverse (Photo A. Obtuski, courtesy MASP ARCE/EAP)

## ARCHAEOLOGICAL SURVEY AND BACKFILL

A mixed random-selective method of sampling was adopted for surveying of the bottom of the bulldozed cuts. The thick undergrowth was cleared first and the cuts surveyed on foot. The topographical approach, meant to provide fuller information on the layout of individual structures and the overall urban pattern, was coupled with selected testing to determine the stratigraphy and chronology of the features being investigated. Trenches, each starting out as 10 by 10 m squares, were marked out wherever the remains visible on the ground gave promise of architecture being preserved just under the surface. Wall tops were then cleared on the current ground level. This often carried the need to follow walls outside the trench borders, thus 'inflating' squares in various directions. Extensions were desisted when the remains of walls broke off. In areas revealing no ancient remains on the surface, squares were put down at random, in order to test as much of the survey area as possible. Overall, eleven trenches were tested, covering some $20 \%$ of the area potentially to be backfilled.

The first layer removed from the entire surface of each trench was arbitrary, averaging 20 cm in depth. This usually gave an idea of the extant architecture below. Decisions were then made to follow walls by digging narrow trenches alongside the faces, sufficiently deep to make certain that the broken-stone structures were indeed walls and not tumble. As a rule, the fill in the centers of particular units and inside the various features was not removed, the conditions of the survey leaving no time for such effort. Wall corners, doorways, important features like cisterns, sections through public passages etc. were chosen for spot stratigraphical testing. These test pits were dug down to the last stone in the walls (nowhere was a pit continued beyond that point).

The backfilling and landscaping operation took into account the results of the survey. In the case of the western of the 'cuts', the presence of a large exedra of unknown function and attribution, its location on the main $\mathrm{E}-\mathrm{W}$ axis of the town, and the nearby presence of marble columns and bases - on the dump but logically
originating from this structure or close to it - prompted a decision not to cover the entire northernmost end of the cut [Fig. 5〕. The exedra was connected with a double set of very thick walls, unlike anything discovered in Marina so far, and for this reason it was decided to leave the area open for regular excavations in the future. Also at the northernmost end of the eastern of the cuts the line of the landscaped slope was receded south beyond the trench, leaving the architecture here open for future excavations should such a project be considered. The backfill where it was accomplished measures from barely a few centimeters to over a meter of sand and
rubble. Fortuitous sandstorms blowing during the time of the mission helped to impart a "natural" appearance on the artificially formed surfaces in these two areas.

By sheer chance the structures recorded in both cuts turned out to be of domestic nature, the 'back doors', so to speak, of private houses, such as have already been recorded, studied and restored further east in Marina (see previous reports in earlier volumes of $P A M$ ). Clusters of rooms have been recorded, none representing a complete structure. In all cases, walls either continued into the sides of the 'cuts' or were destroyed and could not be traced


Fig. 5. View of the western cut looking north - ancient walls bulldozed at floor level; the pit at center back marks the position of a sunk exedra (Photo A. Obtuski, courtesy MASP ARCE/EAP)
further by surface testing. No rooms of official function, reception areas or courtyards with porticoes etc. were discovered. Evidence has been noted of development by agglutination, a process characteristic of private architecture in Marina, as well as repeated rebuilding, making use of older
walls as foundations for new ones. At least one rebuilding stage followed a major catastrophe combined with a conflagration which may have consumed most of the town (very possibly in the earthquake of AD 164, which was heavily felt in the Eastern Mediterranean, in Cyprus as well as Libya).

## EASTERN SET OF TRENCHES (TR01, 02, 03+011, 04)

The clusters of rooms identified in this area of the survey formed presumably five or six separate complexes, all oriented $\mathrm{N}-\mathrm{S}$ and $\mathrm{E}-\mathrm{W}$, the mutual connection of which could not be clarified well enough based on the collected evidence. The walls were erected for the most part of broken stone, the thickness being from 0.60 to 0.80 m (measured at the top where this kind of wall exhibits a tendency to slide apart). A rare few walls were built of stone slabs and extremely seldom of stone blocks, both of standard sizes. The change in bondwork apparently did not reflect on room function, walls of stone slabs no more than c. 20 cm wide being used for exterior walls ( Tr 03 ) as well as for inner partitions (Tr01). Standing walls from the last phase of use reached a height of up to 2 m ; their foundations were found to go down to a depth of near to 2 m . Indeed, the extreme depth of most of the tested foundations was something of a surprise. On the other hand, there were walls that were founded a mere 0.50 or 0.60 m below the ground surface. Paved areas evidently served household or workshop purposes, combined as they were with cisterns, channels, fireplaces and bins (as in Tr01, see below). Other domestic facilities, like
cooking areas and a latrine, were also recorded. Units ranged from small compartments to rooms of fairly large size (c. $40 \mathrm{~m}^{2}$ ).

The southernmost cluster of rooms ( $\operatorname{Tr} 04$ ), separated by a presumed alley from a structure already outside the survey area, consisted of four units and a small paved area in the center [Fig. 6]. Thresholds to at least two of the units were observed. Evidence of destruction in a violent conflagration was present everywhere, including a deposit of objects evidently in use at the time of the catastrophe, composed of a small iron adze mounted on a wooden handle, iron fittings (of a box?) wrapped in plain cloth, ${ }^{3}$ bronze pyxis lid with hoop handle, terracotta fragment, a varied set of complete bowls, plates and jugs of plain and table wares, a faience bowl [cf. Fig. 11], and last but hardly the least, a fine example of a Cretan ivy-leaf lamp [cf. Fig. 10]. The combined evidence of this material places the catastrophic event in the second half of the 2nd century AD.

The next cluster of rooms, which appears to be self-contained, was located just east of the first one and consisted of three units all with entrances leading down into them. In the latest represented stage, a long

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Fig. 6. General view of the cluster of rooms in Tr04 looking west; note wall of ashlar blocks in the west side of the cut (Photo A. Obtuski, courtesy MASP ARCE/EAP)


Fig. 7. Channel feeding a cistern in Tr04, view looking northeast (left) and detail of one end of the cistern with waterproofed plastering on the walls and characteristic corner projections
(Photo A. Obtuski, courtesy MASP ARCE/EAP)
rectangular cistern with a curious sideways projecting extension was introduced, destroying a few house walls in the process. The cistern was probably fed through a channel that meandered somewhere from the southwest. The architecture north of the cistern feature fails to be easily identified for the moment [Fig. 7].

The next cluster of rooms (Tr11) belonged to a house located presumably to the north of the above described group. Only its eastern or perhaps eastern and southeastern part has been revealed, along with an interesting doorway presumably leading from a central domestic space up some steps into a room on the south. A kitchen area in the western part contained a monolithic block of limestone of gigantic size, cut with recesses for mounting some kind of installation.

Across a lane from this structure (and the road or alley extending to the north and


Fig. 8. Latrine(?) compartment in a building in Tr03, top view. The entrance to the room was from the west (to the right in the photo) and the channel emptied into a street outside through a triangular bole in the east wall. Some kind of permanent seating had been installed above the channel (Photo A. Obtuski, courtesy MASP ARCE/EAP)
east of this structure) there stood yet another complex ( $\operatorname{Tr} 03$ ), of which only the southeastern corner with well preserved latrine(?) was preserved [Fig. 8]. This building or at least the part of it that was recorded within the limits of the surveyed area was built entirely of slabs. Standing walls measured some 1.70 m . With the 3 m or so of tumbled wall slabs that were found lying practically in order immediately to the south of this structure, it gives us a height of at least 4.50 m for the building. Considering the small size of the latrine(?) unit in the southwestern compartment of this structure, one cannot but think of there being an upper floor to this building. The latrine had a paved floor and a waterproofed channel that emptied through a triangular opening in the wall into the open (?) space located to the south. The unit next to it was paved but with no other features to identify its function. A coin found fortuitously in the blocks from the collapsed upper parts of walls inside the presumed latrine suggest that the destruction occurred not earlier than in the earthquake of AD 164.

A curious depression in the ground must have existed already in antiquity between the present trenches $\operatorname{Tr} 03$ and Tr01. Apparently, once the building with latrine had collapsed (it was already half full of sand at this time and the level of sand outside was even higher), it was not rebuilt, unlike the neighboring structures described above. The ruins lay in a hollow that filled out quickly with pure sand and remained open ground until the end of the city's days. This open stretch of ground, some $40-50 \mathrm{~m}$ long, ended with another cluster of rooms, representing possibly two complexes joined by back-to-back walls ( Tr 01 ). One of the two complexes consisted of a paved area with a cistern and bin in the
corners [Fig. 9]. A masonry drain pipe was pierced through one of the walls (its outlet was not discovered unfortunately) [cf. Fig. 9, top right]. The paved area turned out to have a channel installation fitted under the earth platform in the eastern end, fed through a pottery vessel rim mortared to the floor and emptying in the general direction of the cistern in the southern part of the unit (the connection could not be traced because of overlying flagstones).

The next-door unit to the east yielded one of the small limestone altars discovered by the mission. The complex was also a source of two lamps of pointed interest for chronological reasons: An Isis-in-lotus-flower-nursing-Harpokrates lamp handle attachment and a "Frog"-type lamp, both of which can be helpful with the dating of these complexes [Fig. 10].


Fig. 9. Paved unit with well (to right), fireplace and bin in Tr01, looking northeast; the channel under the platform (photo at top right) was fed from a drain in the corner of the room and emptied into the well structure; the vertical drain in the wall above the channel was not connected with it (Photo U. Wicenciak, courtesy MASP ARCE/EAP)


Fig. 10. Isis nursing Harpokrates, lamp handle attachment (bottom right) and "Frog"-type lamp from Tr01; Cretan ivy-leaf lamp from Tr04 (Pboto A. Obtuski, courtesy MASP ARCE/EAP)


Fig. 11. Selection of finds from the survey (clockwise from top left): Cyprus sigillata krater P.40, 1st-century AD cooking pot, limestone mortar bowl, two limestone pounders with evidence of use on the working surfaces, 2nd-century $A D$ faience bowl, glass unguentarium bottle of the 1st century AD (Photo A. Obtuski, courtesy MASP ARCE/EAP)


Fig. 12. General view of Tr06 with cistern in foreground, looking northwest; note remains of WWII structures in the western side of the cut (Photo A. Obtuski, courtesy MASP ARCE/EAP)


Fig. 13. Household area in Tr06 with bin containing amphorae on left and cistern with feeding channel for rainwater collected from the roof at center back and right, looking east (Photo A. Obtuski, courtesy MASP ARCE/EAP)

## WESTERN SET OF TRENCHES (TR05+07, 06, 08, 09, 10)

The cluster of units around a cistern in the middle of the surveyed area proved to be in effect part of a big complex that extended all the way to the north of the surveyed area. It also contained a big exedra opening to the east, the function of which cannot be ascertained at present except that it may have had some connection with water use. Further west of this feature, a double set of walls of a thickness up to 1.50 m not encountered in Marina so far (to the present author's knowledge) cut across the surveyed area, following a N-S orientation $(\operatorname{Tr} 05+\mathrm{Tr} 07)$. These walls proved to be connected with the building, of which the
cistern was a part of in a later stage of its use ( $\operatorname{Tr} 06$ ) [Fig. 12].

The cistern functioned in association with a paved area used for some household activities, a small kitchen area perhaps and storage space (perhaps open courtyard) where a bin containing three amphorae, one with dipinti and another one a typical Rhodian import of the 1st century AD, was discovered [Fig. 13]. A small limestone altar was also discovered here. The building obviously extended to the north, into the side of the 'cut', where an ancient wall was found to touch a World War II trench built practically on top of it [Fig. 14]. (Indeed,


Fig. 14. World War II structure resting on top of ruined walls from the Roman age (Photo I. Zych, courtesy MASP ARCE/EAP)
the center part of this area must have been drilled full of pits by the World War II structures, ${ }^{4}$ several of which were found alongside it and on the opposite side and which evidently destroyed much of this last-phase architecture in and west of Tr06).

An alley c. 3 m wide turned sharply around the southwestern corner of the complex with cistern in $\operatorname{Tr} 06$. The other face of this alley was constituted by the exterior wall of yet another cluster of rooms. A wide threshold opened off the alley. Another threshold inside the complex led to a small room, while more units obviously extended into the dump on the south side ( $\operatorname{Tr} 10$ ). Beyond this cluster, the area at ground level appears to contain no material evidence of structures, although they must have existed here. Not enough time was available to check for underlying structures
at this point. In any case, a solitary N-S wall was noted in Tr 08 . It was obviously the exterior west wall of some complex. The modesty of the architectural remains were compensated for by the small finds: a coin of Maximinus of AD 308 and a bronze pendant in the shape of a draped female(?) bust.

The last trench, located furthest west, turned up a rectangular unit with walls of broken stone, to which a wall of slabs was inherently connected. There may have been an entrance in the northwestern corner, which disappeared into the side of the 'cut'. Otherwise, the structure was notable for a deposit of pottery, including an amphora base with charred remains of an offering, found upside down next to a stone by the east wall of the structure. It was also notable for foundations of walls going at least 2 m down (the last stone was not reached).

## REMARKS ON STRATIGRAPHY AND DATING

In both the surveyed areas, bulldozing works in the mid 1980s destroyed and removed all of the architecture representing the later occupational level, possibly from the 3 rd or even early 4th century AD. It is very likely that the ruins here had been standing just as high as in other parts of the site, that is, at least two meters (like the complex of houses in the eastern part of the site), and were buried in drifted sand. It is this sand and loose architectural rubble (dressed limestone blocks and broken stone used traditionally in the residential architecture of Marina)
which ended up on the building dumps. However, this later phase of the buildings was built atop earlier walls, closely retaining the original urban layout and thus suggesting a social and cultural continuity of the habitation.

A calamity of some kind hit the town sometime in the 2nd century AD. Most of the structures discovered in both areas demonstrate destruction-related tumbles and burning. This earlier habitation level of the 2 nd century AD (perhaps its second part) was not the earliest in the area with evidence of pottery and glass finds

[^1]pointing to a 1 st century AD presence of some substance. No evidence of an earlier date than the 1 st century AD was noted anywhere in the trenches (but admittedly, the lower-lying deposits may not have been reached in any of the trenches).

The archaeological material from the trenches, which is currently under study, covers the usual set of tableware and plain and storage wares, some terracottas and oil lamps, three of which have been presented in this report, a variety of bronze and iron fragments, including the above mentioned iron adze, which is fortunately dated by the context to the second half of the 2nd century AD , stone vessels and tools, as well as various architectural elements and furnishings, of which not the least are three small limestone altars. The set of coins, mostly Antonine issues of the mid-2nd century and some later, 4th century examples, deserves note. The glass finds, while not spectacular on the whole, constitute a fair representation of the repertoire known to come from the second half of the 1st century BC through the 3rd century AD excavated elsewhere in Marina (Kucharczyk 2005). ${ }^{5}$ The assemblage is fragmentary, showing advanced black and ivory weathering, and peacock irisation. As
far as it could be made out, the glass is colorless with yellowish and greenish tinge or a natural green and greenish-blue. Few of the mainly free blown, open vessels are decorated. Tableware is represented by indented beakers with rounded rims and flat, almost square bases; deep bowls; shallow dishes with different rims; ring bases, and applied "fillets" tooled into a series of ribs imitating handles. Other open forms include cast dishes/shallow bowls and ribbed bowls. Closed forms are attested mostly by a flagon with fine ribbed handle and bottles, some possibly furnished with handles, used as tableware and for cosmetic purposes. They are represented mostly by their bases of different shapes and sizes (with a slightly domed bottom, with applied thick trail forming a ring, with closed and open folds) with no clear indication as to body shape. The pontil mark is generally absent, although large scars have been noted in a few cases. A few finds, including game pieces (monochrome astragali and a ball), and a spherical bead probably made of mosaic glass, were formed by non-blowing techniques. Two fragments represented cast glass - thick, flat window panes with original rounded and cut edges.

## TRENCH 12 ALONGSIDE THE THOLOS BATHS

Plans for a tourist path through the city center and past the east side of the tholos bath required some archaeological clearing at the junction of the baths and the eastern portico of the main town square, where one of the presumed entrances to the baths was located. Blocks lying on the surface sug-
gested that the entire east wall of the round tholos room had tumbled to the ground in this area (at a fairly late date to be lying this way). This wall was cleared and found to be in order, all 3.50 m of it, giving a total height for the tholos bath wall of about 5.40 m in this place. The tumble at the

[^2]southern end of this trench turned out to belong to a set of walls, a blocked entrance
and threshold, making up part of the intricate urban layout in this part of the town.
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It can be said in conclusion that the salvage surveying and recording that was carried out for the ARCE/EAP MASP project in the spring of 2006 (followed later in the year by other more extensive

## REFERENCES

Kucharczyk, R.
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[^0]:    3 I am indebted to textile expert and conservator Barbara Czaja-Szewczak for her comments on the cloth impressions found on these iron fittings. Marek Woźniak helped with his comments based on the photo documentation provided to exclude the presumed identification of the pieces as an iron sword blade.

[^1]:    4 Archeozoologist Marta Osypińska from the Institute of Archaeology and Ethnology of the Polish Academy of Sciences (Poznań branch) kindly consulted the photo documentation of animal bones recovered from the various trenches, including the World War II remains. The absolutely predominant species represented in this material is camel. Considering the disturbed character of the contexts in which these bones were found, it must be assumed for the moment that all of them are connected with the British and allied soldiers stationing at the site during the Battle of el-Alamein.

[^2]:    5 Renata Kucharczyk of the PCMA, who has studied extensively the glass from Polish excavations in Marina, kindly provided the following remarks in extenso.

