

Alexandria Kom el-Dikka. Excavations and preservation work in the 2018 season



Abstract: The 2018 season saw a continuation of research on Roman housing and urbanism in Alexandria. Excavations were focused in the central area of the Kom el-Dikka site, where some early to mid-Roman structures (2nd–3rd centuries AD) were explored. The uncovered part of the building seems to combine domestic and commercial functions. A couple of shops opening onto the street were identified. Evidence of artisanal production of glass beads was also recognised in the post-occupation phase. Post-processing of the finds (pottery, glass vessels, painted wall plaster and coins) was continued. The paper also brings an overview of the preservation program, which was limited this season to maintenance conservation of structures seriously threatened by unfavourable climatic conditions (mainly the Baths and auditoria).

Keywords: Alexandria, Roman housing, Roman pottery, architecture, conservation

The ongoing site presentation project at the site of Kom el-Dikka in Alexandria entailed a continuation of the essential repairs and maintenance conservation in various parts of the site, while putting in another season of fieldwork, which is now focused on the excavating of the central part of the site [Fig. 1]. Documentation of finds from the present and earlier seasons was part of the regular Mission program. Specialists working this season on the finds collected on site included glass expert Renata Kucharczyk, studying finds from current excavations in Area FW as well as other glass categories in storage, ranging from early Roman to Mamluk times (for a review of this work, see Kucharczyk 2019, in this

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volume). Another specialist study is that of Barbara Tkaczow, who is researching a vast collection of painted wall plaster fragments from earlier excavations in the Roman houses, but also the auditoria complex. Numismatists Barbara Lichocka

and Katarzyna Lach, each focused on discrete groups of Ptolemaic and Roman age coinage. The lattermost research involved prior cleaning and documentation of a substantial number of bronze coins from the excavations.

EXCAVATIONS AND RESEARCH

Research on vestiges of early Roman domestic architecture previously identified in the central part of the site [see Fig. 1] was at the core of the season's schedule

(for results of earlier work, see Majcherek 1995: 14–20; 1996: 13–20; 1997: 19–30; 1998: 25–30; 1999: 35–39; 2011: 38–46; 2012: 27–32). Trenches investigated in 2009 in the

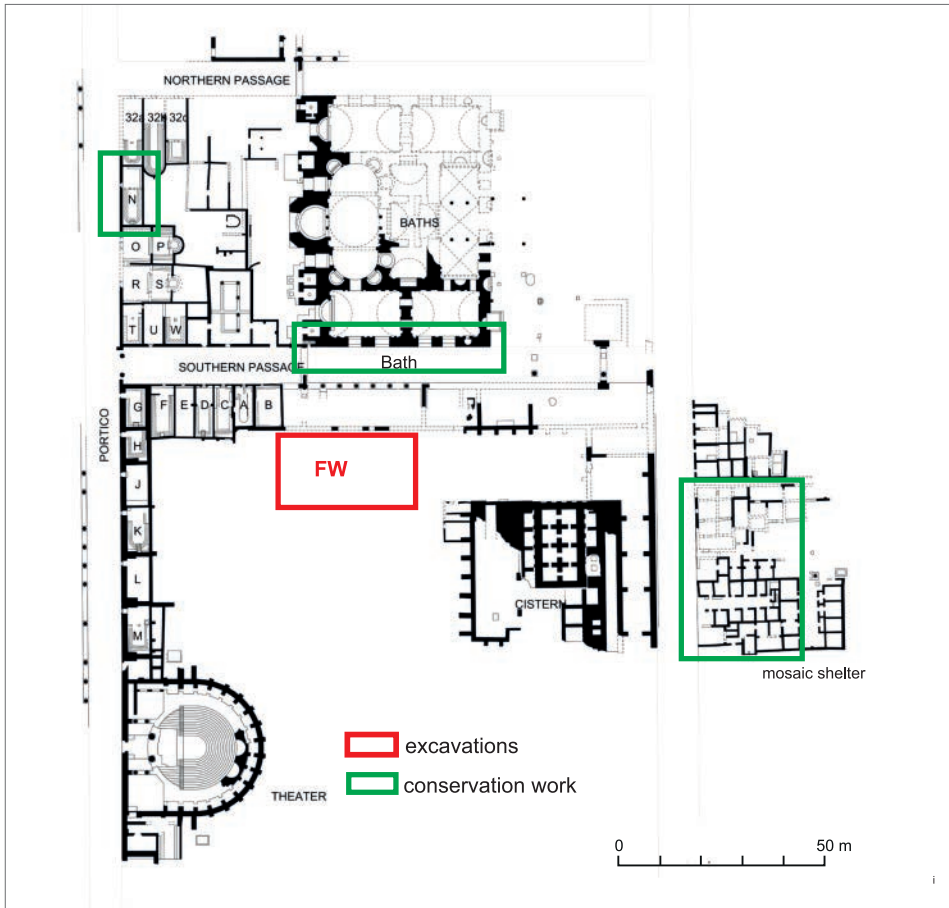


Fig. 1. The Kom el-Dikka site: areas of excavation and conservation work in the 2018 season (PCMA UW Alexandria Kom el-Dikka Project | drawing W. Kołtąj, updated D. Tarara)

western part of Sector F (Area FW) were expanded west and south, exploring an area approximately 16 m by 10 m.

EARLY ROMAN PHASE

Continued work on the early Roman building uncovered in the previous season (see Majcherek 2018) was designed to give a better understanding of the ground plan, which is far from typical and not like any of the other houses located in the sector further to the east. A group of rooms (26–28) was investigated, not all in their entirety, in 2018 [Figs 2–3]. It turned out that the building was separated from house FB (excavated in 2009, see Majcherek 2012), the two east walls, W760 and W761, revealing no doorways. The existence of doors in the northern part of the house (which was

demolished by the building of the imperial bath complex in the 4th century AD) cannot be excluded, but does not seem probable to say the least. The impression is that the structure under excavation was an independent building, barely 9.30 m wide (E–W), closed from the west by a double wall (W1107 and W1108), which further supports the assumption of yet another building being located in this direction. The building was clearly accessible from a side street that seems to have run south of the excavated area. Small sections of a narrow street (approximately 4.80–5.00 m wide), running east–west across the large *insula*, were identified in the eastern part of the area, alongside houses FA (Majcherek 2011: 46; 2012: Fig. 2) and FD (Majcherek 1998).

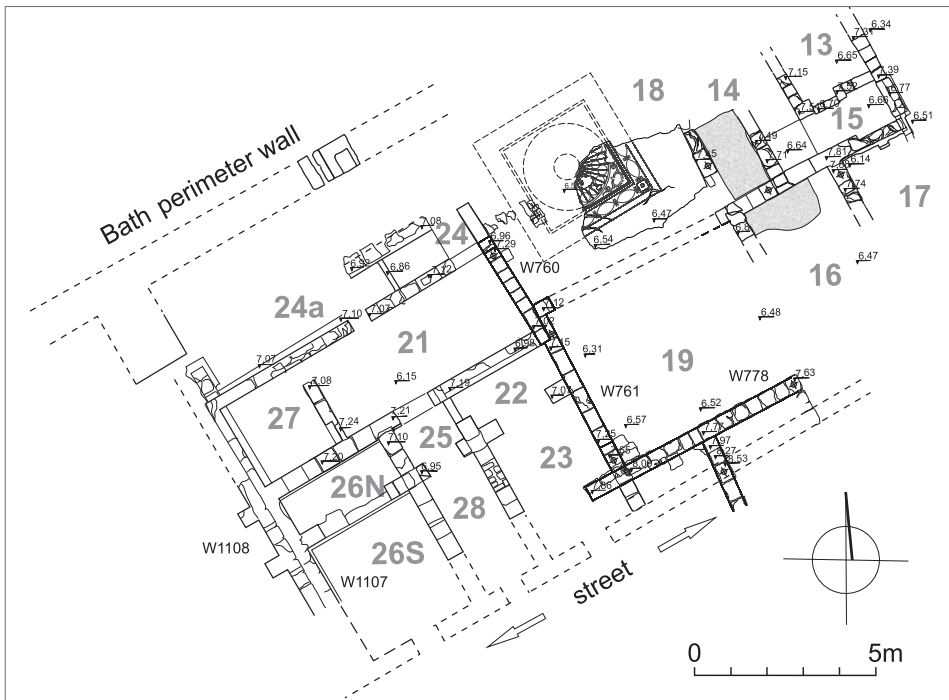


Fig. 2. Area FW. Plan of the early Roman building (PCMA UW Alexandria Kom el-Dikka Project | drawing M. Soltys, G. Majcherek)

The actual entrance has yet to be excavated, but it appears to have opened onto a narrow corridor/vestibule (1.65 m wide), divided by two pilasters into two units (Nos 25 and 28), but forming a single space as indicated by the uniform floor decoration. It was a rather crude mosaic floor, featuring simple geometric decoration: two white single-filet lozenges inscribed in, respectively, a rectangle (1.15 m by 0.75 m) and a square (0.75 m by 0.75 m), both set against a black background [Fig. 4]. The large black and white cubes, roughly cut of basalt and marble respectively, of which the mosaic was made, measured between 3 and 4 cm.

A wide doorway in the north wall of room 25 opened onto the largest unit (No. 21; 6.90 m by 2.50 m), presumed at first to be a courtyard. The doorway was 1.05 m wide. An additional door in the northwestern corner led to a small, roughly square room (No. 27; 2.35 m by 2.50 m). The inlet of a finely built waste channel was uncovered here, the sloping, stone-paved floor of the room emptying into it and crossing the courtyard No. 21 to a sewer discovered along the east walls of the building.

The existence of a second storey, or at least a terraced roof, is well evidenced by the presence of a straight-run staircase, partly preserved in room 24. Several broken treads made of large, rather thin (0.10–0.14 m) slabs were found pressed into the ground. Remains of staircases were noted in other houses of the same age, investigated throughout the site, e.g., stairwells with cantilevers and putlog holes for stair stringers in houses H as well as FA, FB and FC (Majcherek 1996: 15, Fig. 1; 1998: 29; 2010: 39, Fig. 8).

Room 26S and its small annex 26N (both roughly 3.25 m wide), located in the southwestern section of the building, were separated from the rest of the house and obviously opened directly onto the side street. The rooms were divided by square pilasters, placed symmetrically along the walls. An identical arrangement was recognised last season in room 22 *en suite* with annex 23. Given the location and lack of communication of these rooms with the rest of the building, it is quite probable that they were used as shops. Similarly located shops (both space for retail and workshops) were previously identified in nearby house FA (Majcherek 1996). They were all equipped, as a rule, with standard-size doorways (approximately 0.90 m wide), following, as expected, a Greek rather than Roman layout of the *tabernae* (οἰκήματα) (Holleran 2012).

The wall construction technique, identified in sections explored this season, was paralleled by other structures of early Roman age excavated at the site. Walls, approximately 0.40–0.45 m thick, standing to an average preserved height of 0.90–1.00 m above floor level, were built in the regular isodomic technique with courses of ashlar ranging from 0.35 m to 0.45 m. Lime mortar with some ash added to it was used in construction. Ashlars were invariably cut from local soft oolitic limestone, quarried in one of the carbonate ridges extending along the coast, either in the Mex district or further west in the Mareotis (Klemm and Klemm 2008: 36–39). As before (Majcherek 2018), deep diagonal and almost vertical fissures, generally considered as earthquake-induced, are observed in some walls (Stiros 1996), although no signs of sudden collapse were found directly on



Fig. 3. The early Roman building in Area FW: top, looking south; bottom, looking north, on the entrance axis (PCMA UW Alexandria Kom el-Dikka Project | photos G. Majcherek)

the floor level. However, the evidence of seismic-related destruction is quite often mixed with the effects of abandonment (Galadini, Hinzen, and Stiros 2006).

The fill in all the rooms produced sizeable quantities of broken multicolored plastering: black, red, green and white monochromatic fragments. Tiny patches (showing stripes of black and green) were found extant on the walls in rooms 26N and 26S. The coloring and most probably the design are reminiscent of better preserved surfaces found in room 23 (Majcherek 2018).

The building was used for a prolonged time, but the occupational history remains vague. In the final phase, some rooms were apparently turned into kitchens and workshops. Evidence for this secondary occu-

pation emerged, among others, in room 28 where some domestic implements were uncovered in a thick deposit of ash originating from a stone-lined hearth by the east wall. The set included a group of pestles of various sizes, crafted of granodiorite, greywacke, porphyry and even alabaster. They all bear signs of wear from prolonged use [Fig. 5 bottom]. Such typical Roman *pistilla* could have been used for grinding food. Fragments of a large granite mortar, as well as some ceramic ones (see below), confirm this assumption. The smaller examples would have been destined rather for non-culinary purposes, such as cosmetics or preparing medicine.

Of even greater interest is a sizeable quantity of loose glass beads found scattered in the fill in the different rooms.



Fig. 4. Mosaic pavement in the corridor/vestibule (units 25 and 28); on left, entrance to room 21 (PCMA UW Alexandria Kom el-Dikka Project | photo G. Majcherek)

Their presence is clear evidence of artisanal production of some kind (see Kucharczyk 2019, in this volume).

Layers associated with the last phase of settlement or final abandonment of the house produced a substantial collection of pottery, some lamps and glass vessels, belonging mostly to the 2nd–4th century AD horizon. The repertoire included both Egyptian and im-

ported pottery. Early variants of LR 4 (Gaza–Ashkelon) amphorae made up an overwhelming bulk of the finds. Other forms included some Tripolitanian oil amphorae [Fig. 6:1] and Gaulish wine containers (Gauloise 1 amphora) [Fig. 6:2]. Egyptian AE3 vessels, produced mostly in the Mareotic region [Fig. 6:4] were also recognised, although in small quantities.



Fig. 5. Finds from the early Roman building: top, bronze nails, pins and bracelets; bottom, collection of pestles (PCMA UW Alexandria Kom el-Dikka Project | photos G. Majcherek)

Aegean cooking ware formed another distinct group. Until recently, these vessels were rarely reported from Alexandria and other Egyptian sites, hence their significance in this context [Fig. 6:3–5]. Few examples have been recorded from excavations in the ancient city, prompting conclusions about their rather marginal influx (Waksman and Trégliá 2007). However, the picture emerging from Polish research at the Kom el-Dikka site is entirely different. Several forms were collected in the previous season (Majcherek 2018: Fig. 6:5–6) and now one can add more newly identified shapes. Apart from the typical and most common *kakkabe* with a flaring rim [Fig. 6:4], a slightly larger form with a tightly ribbed body and almost vertical bifid rim was noted [Fig. 6:5]. All examples are, apparently, made of a kaolinitic clay fabric, most probably originating from eastern Lycia (Waksman and Trégliá 2007). Color is usually orange-to-red with abundant ferruginous particles, while the surface is often brown. Examples of thin-walled red ferruginous fabric vessels were also recognised. They might be however of Knidian or Phocian origin [Fig. 6:3].

Fine wares were definitely less numerous in the fill. A few examples of Cypriot Sigillata forms [Fig. 6:6] and their Egyptian counterparts, particularly a small bowl with a triangular rim, imitating form P40, were recorded [Fig. 6:7]. The latter seems to be the most frequently copied form, known not only from other excavations in Alexandria, but also from other Greco-Roman sites in Egypt (Hayes and Harlout 2002). They are particularly common in ceramic assemblages from Marina el-Alamein (Daszewski et al. 1990). Other fine wares include some

ARS fragments, including a bowl form 45 [Fig. 6:8], dated to AD 230–320.

A noteworthy find was a large North Syrian mortarium (No. 1285.36.18, assembled from joining fragments) bearing the stamp TIMOK/ΛΗΤΟC (Vallerin 1994) [Fig. 6:9]. Examples of such mortaria, produced in a distinct Ras el-Bassit fabric (red-to-brown, coarse, with common black sand and quartz inclusions) and dated to the late 3rd–early 4th century AD, have been identified in Alexandria before. A group of 20 plus finds from the Greco-Roman Museum collection were published (Breccia 1921: 12–16). In his pioneering study John W. Hayes also quoted examples from other Egyptian findspots (1967: 342–343). Furthermore, several stamps were previously identified at the Kom el-Dikka site (Sztetyllo 1978: 304–306, Nos 100–106; 1990: 210, No. 160). However, Timokletos is reported from Alexandria for the first time.

The few metal artifacts from the fill include a small, dome-shaped bell, a fragment of a bracelet, and a fragment of a pin, ending in a solid elongated knob [Fig. 5 top]. All specimens are heavily corroded due to extremely adverse soil conditions. Among other finds, from the last phase of occupation, one should list a marble votive plaque (No. 1285.56.18; 8.3 cm by 7.8 cm) with a phallic representation and a limestone pedestal (No. 1280.27.18; H. 0.23 m), most probably serving as a support for some domestic utensils.

The chronology of the building is not entirely clear as yet. A preliminary assessment points to the 1st century AD as the most probable construction date and the end of the 3rd–early 4th century AD

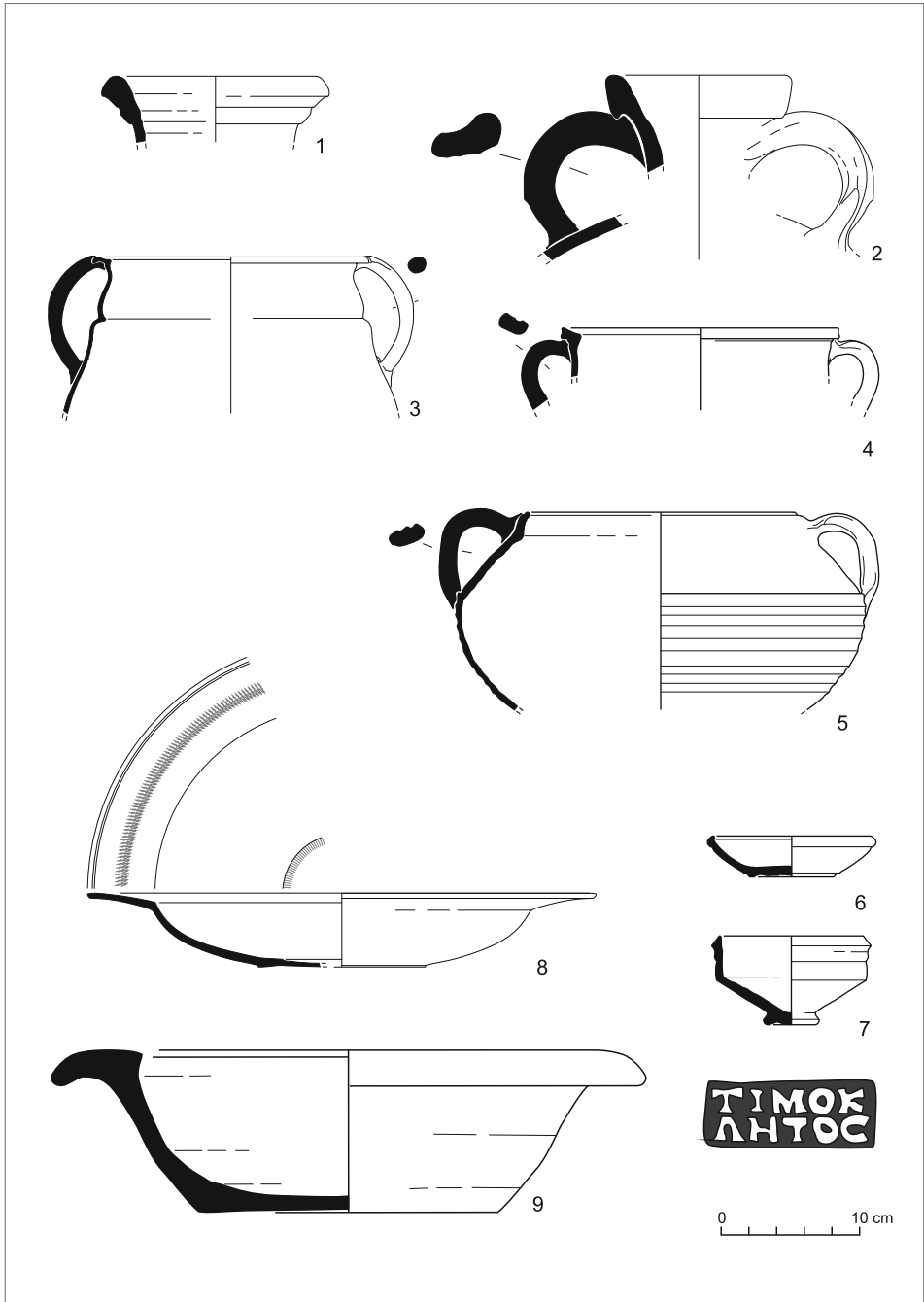


Fig. 6. Selection of early Roman pottery: 1 – Tripolitanian amphora; 2 – Gauloise 1 amphora; 3–5 – Aegean cooking pots; 6 – Cypriot Sigillata dish; 7 – Egyptian imitation (Nile silt fabric) of Cypriot Sigillata form P40; 8 – African Red Slip bowl, form 45; 9 – North Syrian stamped mortarium (PCMA UW Alexandria Kom el-Dikka Project | drawing M. Momot)

as its ultimate abandonment. However, one should keep in mind that neither underfloor deposits nor material from foundation trenches have been recovered. Conversely, evidence for the end of oc-

cupation, in terms of associated deposits, is far stronger, although without coins it is necessarily only an approximation. Establishing the chronology would thus be an obvious priority for future work.

LATE ROMAN PHASE

Deposits lying over the early Roman ruins consisted mostly of lime refuse, ashes and slag, with a heavy concentration of marble detritus, which was apparently raw material for lime production. Most of the noted fragments belonged to wall tiles or pavement slabs representing a wide variety of decorative stones both local and foreign. Proconnessian marble certainly accounts for the largest share, but examples of *cippolino verde* and *rosso, giallo antico*, and *greco scritto*, were likewise recorded. Egyptian alabaster, red porphyry and nummulithic limestone complete the list of stone materials.

In the southern part of the trench,

two large lime kilns (marked respectively Fe and Ff) were excavated directly on top of the ruined front wall of the early Roman building. Both were found framed by solid walls made mostly of recycled material, including assorted limestone blocks, marble and granite column shafts, cornices, as well as fragments of capitals [Fig. 7 left]. Inside the southern section of the wall of kiln Ff, a large reused Corinthian capital was found. It is relatively well preserved, made of nummulithic limestone and dated to the late Ptolemaic period (2nd–1st centuries BC). The form is heterogenous [Fig. 7 right], combining traits of



Fig. 7. Assorted architectural elements from the late Roman lime kiln complex: left, fragments of a capital and cornice of Proconnessian marble; right, late Ptolemaic capital of the Alexandrian I type, made of nummulithic limestone (PCMA UW Alexandria Kom el-Dikka Project | photos G. Majcherek, R. Kucharczyk)

the so-called Alexandrian 1 type of capital with those of a “standard” Corinthian one featuring helices stemming from the cauliculus (McKenzie 2007: 84–88).

The westernmost of the kilns (Ff) was explored. Its rounded, rather moderately sized chamber (1.20 m in diameter) was built of flat square bricks: 25 x 25 cm, approximately 4.5 cm thick, encased in a stone-built outer wall. The chamber was apparently tronco-conical in shape (the inside has yet to be cleared) and most probably of the open-top type. The whole structure was partly sunk into the ground. A vaulted stoke hole (0.58–0.60 m wide) opened to the north. The chamber, its inside walls coated with a black vitrified layer testifying to high temperatures, was

found filled with ashes, slag, kiln waste and lime [Fig. 8].

The two kilns, along with four others (Fa–Fd) previously discovered in sector F, can be associated with extensive building activity in the area. The location and stratigraphic position strongly suggest intensive lime production in connection with the construction of the bath and cistern complexes in the 4th century AD. Parallel kilns were previously excavated further east in this area (Majcherek 1999: 37; 2010: 37–38).

The vast central area of the site, set between the bathhouse, the cisterns and the theater, was never fully built up and was, in a way, isolated from the urban fabric of late antique Alexandria. Starting



Fig. 8. Lime kiln in area FW, looking south (PCMA UW Alexandria Kom el-Dikka Project | photo G. Majcherek)

from the 4th century AD, it functioned as a huge dumping ground and was gradually filled up with urban refuse and ashes from the nearby bathhouse.

The upper, late antique layers in this area were explored in earlier seasons, clearing the way for this year's excavations starting directly on the underlying layers from the 4th–5th century AD. The thick strata of ashes and urban refuse,

particularly rich in finds, yielded some lamp and glass fragments, but above all a heavy concentration of pottery representing a standard range of forms and types typical of the 4th–5th century AD horizon. All the basic types of Mediterranean commercial amphorae were recognised in the assemblage. Apart from LR1A amphorae, originating mostly from Cilicia and Cyprus, some with fragmen-

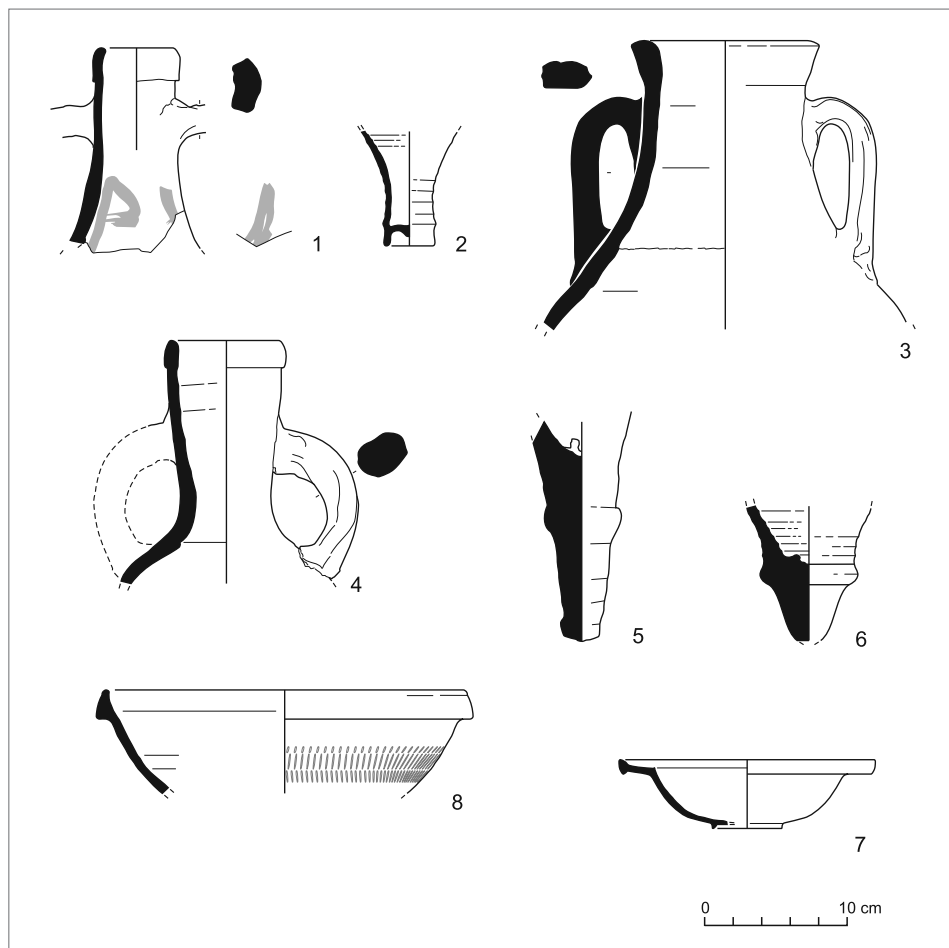


Fig. 9. Selection of late Roman pottery: 1 – LR1A amphora; 2 – LRA 3 amphora from Ephesus, 3 – Africana III (Keay 27) amphora; 4–5 – Egyptian LRA 7; 6 – Egyptian AE3 T-2 amphora type; 7 – African Red Slip ware dish, Hayes form 76; 8 – Aswan Red Slip A Ware bowl (PCMA UW Alexandria Kom el-Dikka Project | drawing M. Momot, G. Majcherek)

tarily preserved red ink *dipinti* [Fig. 9:1], also present were LRA3, produced in Western Asia Minor (region of Ephesus) [Fig. 9:2]. The latter belonged mostly to the one-handed version (LRA 3A) quite common not only in Alexandria, but also in smaller centers like Marina el-Alamein (Majcherek 2007). LRA 4 (Gaza/Ashkelon amphorae) were invariably the most numerous containers, amounting to as much as 70% of all amphorae. African containers were also evidenced, albeit in a rather limited number. Some examples of cylindrical containers, mostly of Africana III type (Keay 27) [Fig. 9:3], were collected. Once again the figures speak for themselves. The bulk of commercial amphorae in this period is overwhelmingly from the East, whereas African oil and wine clearly plays a secondary role on the Alexandrian market (Majcherek 2017).

Egyptian LRA 7 containers [Fig. 9:4–5], produced in a conspicuous Nile silt

fabric, were also recorded although in moderate quantity. Most of them belonged to an earlier morphological variant (Dixneuf 2011: 154–164, type AE7-1.1–2). Quite a number of sherds of yet another Nile silt amphora type, featuring a distinctive foot with an applied ring (Dixneuf 2011: type AE3 T-2), were also identified [Fig. 9:6].

By contrast, fine wares were rather sparse. But a few fragments of Cypriot Red Slip ware (LRD), mostly belonging to Hayes form 2 dishes (Hayes 1972: 373–376), were noted. African Red Slip ware was relatively more common, represented mostly by sherds from a large dish with a knobbed rim, recognized as Hayes form 76 [Fig. 9:7]. Surprisingly enough, Egyptian products were even less visible. Only a few sherds of Red Slip A Ware produced in Aswan were identified [Fig. 9:8] (Gempeler 1992: 73, form 228).

CONSERVATION WORK

The conclusion of the first stage of the Site Presentation Project, which resulted in the site being opened more extensively to visitors, had an obvious impact on this season's conservation program. Both duration and range could now be reduced. The mission conducted only limited routine conservation and maintenance work, focusing on the most endangered monuments.

BATHS

The southern elevation of the baths, restored in 2008 (Majcherek 2011: 46–47) was once again in dire need of repair and conservation. Damage, caused by

the increasing number of visitors, required quick intervention. One of the most affected structures was a brick-made water channel, running along the facade. Large sections of the channel walls next to the *sudatorium* were damaged and many bricks crushed and dislocated [Fig. 11]. Conservation measures, undertaken there, comprised fixing bricks with a new mortar, completed with restoration in modern bricks wherever necessary. As before, the new bricks had to be cut to measure, corresponding to the original dimensions. Likewise, the mortar used during the work was based on an ancient Roman

formula made of sand, lime and crushed bricks, the latter added for colouring.

The growing number of visitors, while certainly a reason for everyone's



Fig. 10. Preserving the furnace in the *destrictarium* of the baths (PCMA UW Alexandria Kom el-Dikka Project | photo G. Majcherek)

satisfaction, causes issues for regular maintenance. Further degradation in the future can be eliminated only by denying direct access to the bath building. The area (26 m long) along the southern elevation has been fenced off with railings of the same type as used in other parts of the site, that is, a steel cable mounted on posts made of steel pipes, the posts additionally reinforced with concrete bases. Moreover, two *praefurnia* heating the *destrictarium* and a vaulted area accessible from the underground were repaired (Kołątaj 1992: 134–137, Fig. 46). They had also suffered some damage due to increased tourist traffic. In both cases, stoking channels and combustion chambers were seriously affected.



Fig. 11. The southern elevation of the bath, showing the damaged water channel (PCMA UW Alexandria Kom el-Dikka Project | photo G. Majcherek)

Damaged bricks had to be replaced, losses in joints completed with a new lime-based mortar and the whole structured consolidated [Fig. 10].

Residential Quarter (Area W1)

Conservation work was continued also in the eastern part of the site, focusing on buildings (C, D and F), located in the central part of the area, excavated and

partly restored in the 1970s (Rodziewicz 1984). Large sections of walls in rooms C-1, C-2, C-4, C-8, and D-14, as well as F-5 were treated [Fig. 12]. The main reason for intervention was to reduce the speed of degradation by repairing the damage. Climatic conditions, moisture penetration and weak stone material (soft oolitic limestone) prone to weathering are the main causes of deterioration. In accord-



Fig. 12. Sector W₁N: areas of preservation work (in yellow) in the 2018 season (PCMA UW Alexandria Kom el-Dikka Project | drawing D. Tarara, M. Soltys)



Fig. 13. Walled doors in rooms E-2 and E-4: top, prior to the preservation in 2018 and, bottom, after preservation (PCMA UW Alexandria Kom el-Dikka Project | photos G. Majcherek)

ance with established procedures, well tested and effective traditional building methods were applied. In all these walls, washed out and decayed joints, which had almost entirely lost their resilience, were re-filled with new mortar and re-pointed. Similar measures were also applied to a set of two basins, uncovered in 1989 in room G-8 (Majcherek 1990: 82–83). Both were constructed of small blocks and lined with *opus signinum* (*cocciopesto*) plaster. Loose blocks were now re-set in new mortar. Furthermore, a wall capping was shaped in order to prevent water penetration.

The southwestern corner of room D-14 required more complex intervention. Large parts of the wall were in extremely poor condition. Some of the ashlar were almost entirely deteriorated, and the wall had lost its structural stability. The badly corroded blocks had to be replaced to prevent further decay and to consolidate the structure. This was done using ancient ashlar, found in nearby excavations, and kept in the storage area.

Some of the modern structures in the area also had to be repaired. The best example is the modern walling in the south walls of rooms E-2 and E-4 (next to the western entrance to the Villa of the Birds), which had partly collapsed during particularly heavy rains last year [Fig. 13]. Both structures were now rebuilt from scratch. Stones used in the original construction back in the 1970s were set in cement–lime mortar. Such reinforcement was necessary due to the fact that the restored blocking serves also as a sustaining wall, counteracting the heavy load of the escarpment behind it.

Mosaic conservation

Top priority was accorded to mosaic conservation. Floor mosaics preserved and displayed in the Villa of the Birds underwent routine annual checking. Affected and threatened areas were identified. Apart from damage caused by underground water and salt migration, some losses caused by vandalism were also noted. In addition, loose tesserae spotted here and there on different mosaics were fixed in new mortar. Repairing the edging was another necessary task.

The conservation of a black-and-white mosaic with geometrical decoration, excavated in the 1970s, was initiated this season. The mosaic was found in Roman House MA (under the portico, near the theatre), temporarily protected and put into storage (Rodziewicz 1984: 35, Fig. 19). The face of the mosaic was protected with canvas and soaked with PVA glue. A heavy steel frame and lime–cement stabilizing layer at the back, introduced in 1987, were both removed. The bedding was then levelled with a thin layer of lime–sand mortar, mixed with PVA. A new rigid supporting surface was made of layers of glass fibre, set in epoxy resin (Araldite 1306, produced by Huntsman International LLC), and reinforced with diagonally welded iron bars [Fig. 14]. Once the conservation work scheduled for the next season is completed, the mosaic will be placed on display in the Villa of the Birds mosaic shelter.

Auditoria

Routine repairs were carried out in Auditorium N. Initial conservation work, carried out there immediately



Fig. 14. Restoring the black-and-white mosaic from House MA (PCMA UW Alexandria Kom el-Dikka Project | photo G. Majcherek)

after the excavations (Majcherek 2005: 21–22), proved effective, but had not covered the whole structure. The necessary measures were now applied, especially in the case of the east and north walls. Built in the pillar-and-panel technique (*opus africanum*), it suffered badly from exposure to the elements. Some stones were seriously deteriorated and many of joints pointed with an ashy lime mortar had decayed. The procedure was applied to the whole



Fig. 15. Damaged mosaic in the northern vestibule of the theatre: top, before repairs and bottom, following preservation (PCMA UW Alexandria Kom el-Dikka Project | photos G. Majcherek)

wall (approximately 18 m long) and consisted of basic building methods: corroded stones were replaced with new ones and joints refilled and pointed.

Additional maintenance work

The Mission undertook also some additional work in other monuments, located outside the current excavation area. In the Theatre, a floor mosaic in the northern vestibule decorated with a scaling pattern and restored in 1967 (Kołątaj and Kołątaj 1975: 88–90), was now treated. The seriously damaged edges of the mosaic were repaired, and lacunae and loose tesserae consolidated [Fig. 15].

Repairs were also undertaken in the southern part of the site, in the display area of architectural decoration elements brought from the Museum and

from Abu Mena and Marea. Some of the stone-built pedestals turned out to be entirely destroyed, due to natural deterioration of the stone material as well as vandalism, causing the architectural elements to collapse. The decayed limestone blocks were removed and new pedestals were shaped from new blocks and set in white Portland cement mortar.

One of the most urgent operations was to repair the main (northern) entrance to the mosaic shelter, the Villa of the Birds, built in 1999. The security glass door and the window above it had to be dismantled. A seriously corroded steel lintel was removed and a new one welded in its place. The door's hinge mechanism was cleaned, oiled and set in a new box in the threshold. The damaged concrete threshold was removed and re-made from scratch.

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