

British Mission to Tell el-Amarna

**Great Aten Temple
Report on Recent Work
(October–November, 2019)**



Barry Kemp and Miriam Bertram
November 4th, 2019

British Mission to Tell el-Amarna

Report on work done by the British Mission to Tell el-Amarna, October–November, 2019

The mission worked between September 30th and November 11th. The team comprised Barry Kemp (director), Miriam Bertram, Fabien Balestra, Marzia Cavriani, Alisée Devillers, Juan Friedrichs, Sue Kelly, Julia Vilaró (archaeologists), Anna Hodgkinson (archaeologist, workshop study group), Marsha Hill, Kristin Thompson (sculpture), Alexandra Winkels (gypsum analysis), Sarah Doherty (ceramics), Frederik Rademakers (metallurgy), Rainer Gerisch (wood and charcoal), Margaret Serpico (incense) and Andreas Mesli (photography). The Ministry of Antiquities was represented by Nasriin Sobhy Ahmed (site inspector), Mustafa Mohamed Gamal (site conservator), and Mohamed Abd el-Mohsen and Tharwat Shawki Damian (magazine inspectors). The expedition also wishes to acknowledge its debt to the Permanent Committee of the Ministry of Antiquities for permission to work at Amarna, and to the antiquities officials of Middle Egypt, especially Gamal Abu Bakr in Minia, Mahmoud Salah for South Minia, Fathy Awad, the general director of archaeology for the Mallawi area and Hamada Kellawy, the chief inspector of Amarna. The prompt delivery of cut blocks of stone from the Tura quarries needed for the building work at the temple was thanks to Nicholas Warner and Mahmoud El-Tayeb in Cairo.

Work at the Great Aten Temple

The fieldwork occupied two areas within the large temenos of the temple. The main area covered the front of the stone temple (the Long Temple) and ground to the west and south (and a length of the northern temple wall). The second area lay 500 m to the east, between the Long Temple and the Sanctuary and beside the site of the Stela (Figure 1). In the following account areas 1–6 belong to the former (Figure 2), and area 7 is the latter.

1. Re-examination of the mud-brick platforms and gypsum-lined basins in front of the Long Temple

In the course of three seasons (2013, 2014, 2015) Sue Kelly supervised the excavation of an area between the small palace and the front of the Long Temple which had been occupied by a row of five rectangular platforms made from mud bricks and surrounded on all four sides by basins or troughs thickly plastered with gypsum; together with a wide strip of adjacent ground plastered with mud (Figures 3 and 4). Subsequent study of the records, and especially of the photographs, made it seem desirable to check some of the details in the strip of adjacent ground and to take a set of photographs of the whole area intended for photogrammetric visualisation.

A group of workmen first removed the covering of dust and sand which had been used to protect these features and then repeatedly brushed the surfaces to clean them. Multiple photographs were taken, and a fresh plan made of the eastern strip. Two particular features emerged with greater clarity. The first was a series of marks in the very irregular mud surface which seem to have been made by the transportation of something heavy across it in a direction at right angles to the temple axis. A set of narrow parallel abrasion marks or scratches had been noted towards the north in 2015. To them was now added two wider parallel grooves to the south which resemble marks left by sledge runners or possible wheels (Figure 5).

One possible explanation for the platforms and basins is that they were places where coffins or the bodies of the dead were laid for a purifying, washing ritual. The leaving of a short track or road which ran along one end of the structures and provided access, a track which bears the marks of heavy transport, is a useful additional piece of evidence as to how the area was used. As a result of use, the ground along the line of the track developed a markedly undulating surface, as if the mud of which it was composed had become plastic from the absorption of water.

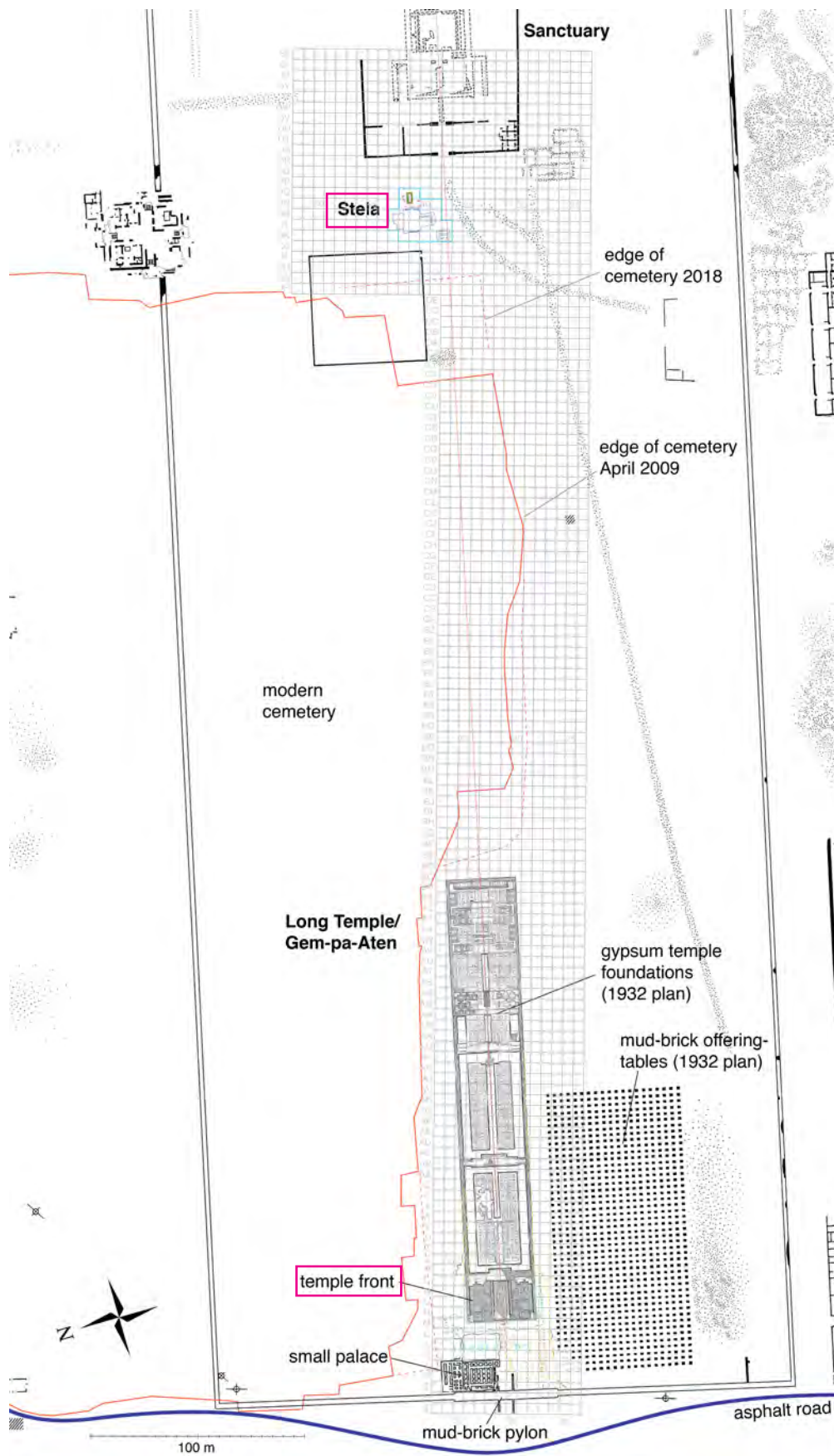


Figure 1. Plan of the enclosure of the Great Aten Temple. It shows the main features within the enclosure and the location of the two areas of current fieldwork (the temple front and the stela) which are highlighted in red.

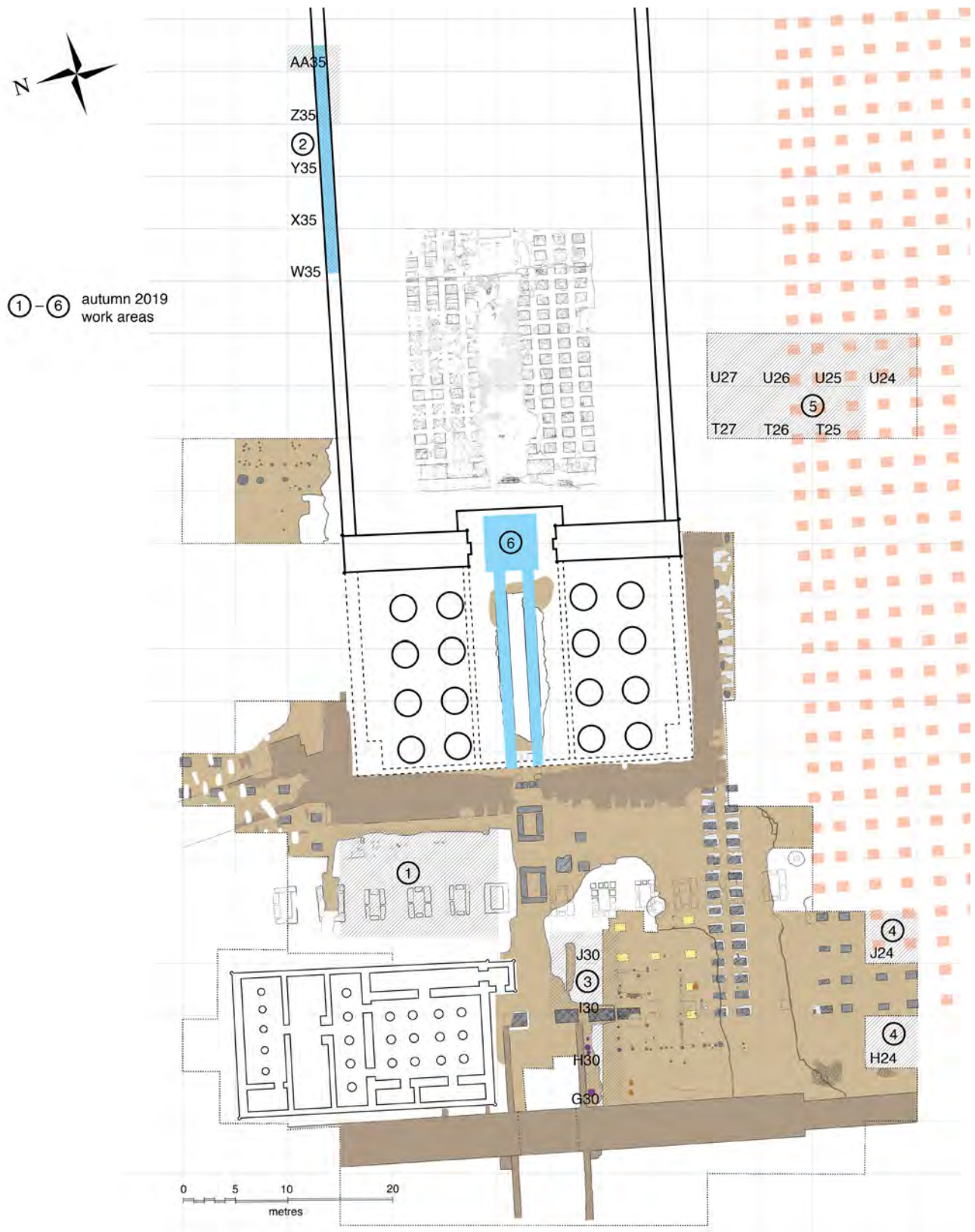


Figure 2. Plan of the front part of the Great Aten Temple (Long Temple) showing areas of recent work. Nos. 1–6 in circles refer to areas where work was carried out during autumn 2019.

The other feature to emerge with greater clarity is a shallow trench, c. 45 cm wide, which ran along the eastern edge of the track. It was floored and lined with mud and had been later filled in with fine mud rubble. Individual lengths of it had been noted before. It was now found to have been continuous though also distorted by the heavy use of the adjacent track. A line of holes, closely set although at irregular intervals, followed the east edge of the trench. Many of them appear to have been places where pottery jars had been pressed into the ground, some surrounded by traces of water having spilled out of them. One large pottery storage jar had been buried up to its rim within the trench and near its northern end. Other holes, small and sometimes forming groups of four set at the corners of a rectangle, could be where the legs of wooden stands or tables had sunk into the muddy surface. In one place a roughly rectangular area of gypsum cement still bore an impression left by a stone block.

The full explanation of how this area was used has still not been reached beyond much doubt. But the idea that it was a place for funerary ceremonies, including the placing of offerings on tables, remains attractive. It would then be an adaptation for an Aten context of the funerary gardens depicted in tombs of the period.

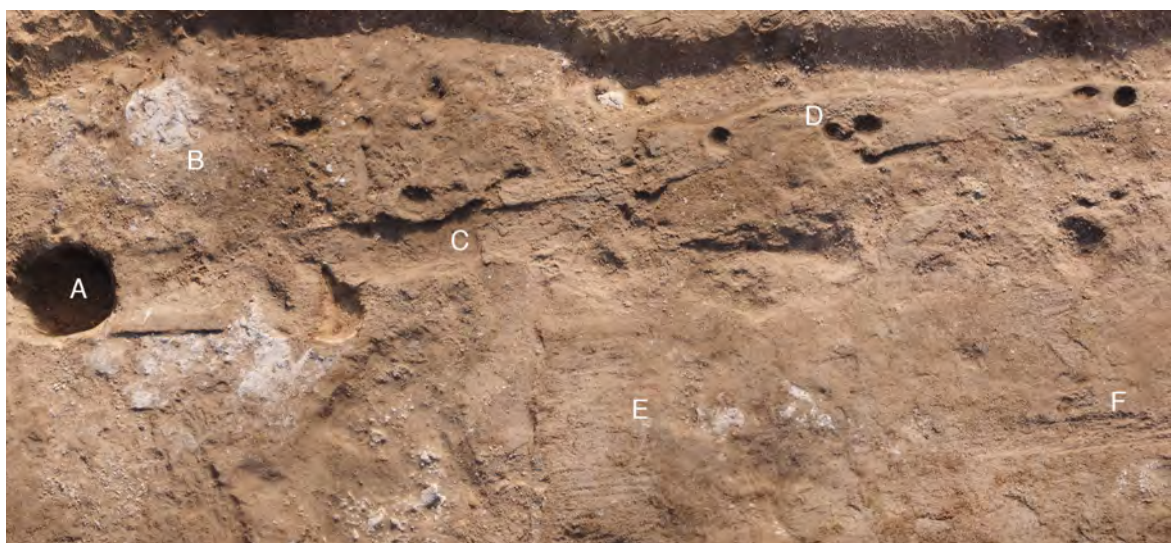


Figure 3. Aerial view of the platforms, gypsum-lined basins and ground to the east (area 1) after re-clearance. North is to the left. A: hole from which a pottery storage jar has been removed. B: gypsum base for stone block. C: shallow channel crossing the site. D: irregular line of pot holes. E: area of drag marks. F: track left by sledge runners (?). Photo by Anna Hodgkinson.



Figure 4. View of the mud platforms and gypsum-lined basins of area 1, seen from the west. Photo by Anna Hodgkinson.



Figure 5. Mud surface at point C (Figure 3) where dragging lines are in two parallel strips: from the runners of a sledge? View to the south. Photo by B. Kemp.

2. North wall trench

In May and June, 2019, a length of 15 m along the line of the north wall of the Long Temple was emptied of its sandy fill. According to the report of the 1932 excavation this wall trench had been entirely cleared and its gypsum-concrete foundations planned. Both an aerial photograph taken in 1935 and the present appearance of the ground strongly suggest, however, that the 1932 work extended only part of the way along the trench and that, from around 40 m from its western end, it was left untouched until about 70 m from the north-east corner of the temple. Thus the intervening length of about 70 m has not been excavated before.

The clearance carried out in the spring advanced to a point close to the likely end of the 1932 excavation. Even so, the finding of large stones firmly embedded in sandy fill (and particularly the heavy fragment of indurated limestone sculpture S-12758) raises the possibility that, perhaps as time was running out, the earlier excavators 'jumped' across patches of fill that they could see were going to take time.

The latest work (autumn 2019, supervised by Juan Friedrichs) resumed the removal of fill along the trench, eventually stopping at a point 47 m from the eastern face of the pylon, representing an extension to the trench of 22 m. For part of the length the gypsum-concrete foundation layer remained well preserved. It included many traces of block impressions and lengths of black lines marking the intended course of the wall. Beyond this the central part had been broken up when the lowest course of stones had been lifted as part of the demolition of the temple (Figures 6 and 7). The edge strips on both sides had, however, remained and still preserved lengths of black guide lines.

The south side of the trench bordered a thick layer of gypsum concrete belonging to the temple and forming a pavement to the first court of the temple. A long stretch of it was brushed and recorded. This revealed that a narrow strip of it had fallen at an angle into the trench, probably disturbed by the digging of the graves. The original top surface of this strip was perfectly preserved, being smooth but interrupted by some of the small rounded stones which formed part of the concrete mix. It showed no trace of a layer of mortar or of other signs that paving stones had been laid over it, yet it is unlikely that its uneven surface was intended to be final. This could be a sign of the extent to which the temple remained unfinished.



Figure 6 (left). View to the south-west of the north wall trench (area 2). The pit <19139> in the centre of the picture contained the double burial of an adult female and infant. Photo by B. Kemp.

Figure 7 (right). Aerial view of the north wall trench. North is towards the left. The floor of the trench contains the remains of the gypsum-concrete foundation layer for the stone wall of the temple. Photo by Anna Hodgkinson.



Later burials. Starting at a distance of c. 35 m along the trench (measured from the eastern face of the pylon) a group of burials was discovered within the sandy fill of the trench. They lay towards the beginning of the long stretch of trench which had not been excavated in 1932. The sand was thus hard-packed and contained larger pieces of stone and gypsum rubble.

The first burial (19255), a child or infant, lay at or just beneath the base of a large slab of gypsum concrete which had fallen at an angle into the trench from the southern side at a time when the trench was mostly open. The first assumption was that the burial was ‘modern’ and belonged with a group of ‘modern graves’ which is marked on the 1932 plan of the temple towards the north-east corner of the first court (*City of Akhenaten* III, 14, n. 3, Pl. III). The edge of these burials had been encountered during the 2012 excavation of the western half of this court, and they had been left untouched. After local consultation it was agreed that the bones of the child could be reburied in an adjacent part of the cemetery and this was duly carried out.

No.	square	unit	location	description	comments
1	Z35/ AA35	(19223)	trench	no distinct pit; infant less than 2 years; right side; head at west; face looking up	copper-alloy ring beside left ear
2	Z35	(19226)	trench	no distinct pit; infant less than 2 years; right side; head at south-west, face to south-east	
3	Y35/ Z35	(19227)	trench	burial in double pit <19139> adult female; right side; head at west; face to south	copper-alloy coin at mouth
4	Y35/ Z35	(19228)	trench	burial in double pit <19139> infant less than 2 years; right side; head at west; face to south	
5	Z35/ AA35	(19234)	trench	scoop in side of south trench face; infant less than 2 years; on back; head at west; face to south	necklace with beads: carnelian, glass, shell (?)
6	Z34	pit	<19237>	upper gypsum layer	infant less than 2 years; right side; head at south-west; face to south-east
		mud bricks	[19238]		
		body	(19246)		
7	Y34	pit	<19247>	upper gypsum layer	infant less than 2 years; right side, knees bent; head at south-west; face to south-east
		mud bricks	[19248]		
		body	(19253)		
8	X34	pit	<19252>	upper gypsum layer	foetus; right side; head at west; face to south
		mud bricks	[19254]		
		body	(19140)		

Table 1. Summary of burials recorded in the north wall trench. Excluded is the child burial (19255) in square Y35, treated as modern and reburied. Burial pit <19229> (lying separately) was probably intended for it. Age identifications by Gretchen Dabbs.

As the excavation proceeded and more burials came to light a recent date became questionable. The orientation was not quite the same as that of burials within the modern cemetery (where an orientation which recognises the location of Mecca is followed). The discovery of a tiny bronze coin in the area of the mouth of an adult (19227)

confirmed that they must belong to a far earlier period, probably that of the Late Roman Period (5th to 6th centuries AD). The burials were thus treated as archaeological finds and excavated, recorded and transferred to the expedition house magazine. The bones were briefly checked by Gretchen Dabbs but not given a full examination.



Figure 8. Burial pit <19139> in the north wall trench, containing an adult female (19227) and infant (19228). North is towards the top. Photo by Juan Friedrichs.

The burials comprised one adult and four infants less than two years old (not counting the infant/child reburied in the adjacent cemetery; Table 1). One of the infants (19228) had been buried alongside the adult (19227) (Figure 8). One infant (19223) had been buried with a simple earring, a circle of thick bronze wire found on the left side of the skull. Another infant (19234) had been buried with strung beads, a mixture of tiny ring-beads of shell, of tiny flattened spheroid beads of glass and larger individual beads of glass and two of carnelian/agate. It is to be presumed that the people were nominally Christians and connected with, even related to, the people living in the loosely-arranged village of stone huts which fronted the North Tombs and included the church which had been fashioned out of the front hall of Panehsy's tomb. The non-Christian practice of placing a coin in the mouth (often called Charon's fee) has been occasionally found in other early Christian cemeteries, including in Britain (D. Watts, *Christians and Pagans in Roman Britain*, London, Routledge 1991, 2014). A further marker for this period is a Late Roman sherd (object 43334) found in the sand fill of the trench (19121), in square W35. It is from the base of a fine-ware bowl with a simple incised spiral (J. Faiers, *Late Roman Pottery at Amarna and Related Studies*, London, Egypt Exploration Society 2005, 76, no. 64 being one of many examples, though ours is without the interior design).

The circumstances of burial shed light on the condition of the site at this time. When the large fallen slab of gypsum concrete was removed, and the underlying sand cleared away, it was found that a child-sized burial cut <19229> had been made into the gypsum-concrete edging strip of the original Amarna Period wall. It had not, however, been used. An explanation is that, in the cutting of the pit the adjacent sandy side of the trench fell away, causing the strip of overlying concrete to break off and fall into the trench. It was left in place and the child buried

in the sand around its bottom edge. This implies that the trench was still half open and had not yet filled with drift sand.

Further along the trench, to the east, the adult burial (19227) had been laid in a shallow pit <19139> in sand which covered the centre line of the original foundations. It also lay directly beneath a heap of large stones from the temple, one of them part of a limestone column drum. These stones must have been piled up after the burial had been made. The level of the sand around the stone was 47.38, 25 cm above the level of the foundations on the floor of the trench (at 47.13). This again suggests that, after at least seventeen hundred years had passed following the demolition of the temple, the north wall trench was still only half filled with sand and debris.

Above the trench, on the south, and at a height of just under 1 m above the trench floor and virtually at the present ground level, a wide stretch of gypsum-concrete foundations was preserved, a remnant of the original pavement of the first court of the temple. In cleaning the surface in squares X34, Y34 and Z34 small oval cuts into the surface were discovered, aligned at a slight south-east to north-west angle to the side of the trench. Each, when excavated, contained a single burial of an infant laid on the right side, head at the south-west, face towards the south-east. Each had been protected with a layer of mud bricks covered with sand. No objects were found other than a small textile fragment (19253) and fragments of thread (19140). Other similar small pits are probably present in the upper gypsum level to the west of the cleaned portion.

The only guide that we have to the dating of the three burials in pits cut into the upper gypsum layer is their orientation: at a slightly different angle to the burials in the trench. This angle corresponds to the alignment of the narrow burial mounds in the adjacent cemetery of El-Till, as recorded in the aerial photograph of 1935 (a section appears here in Figure 15). The photograph shows, in the zone adjacent to the current excavations, a wide strip of ground separating the cemetery from the outlines of the temple. Yet our excavations of 2015, in ground next to the north-west corner of the temple, uncovered the outlines of several pits that were clearly grave pits which followed the same general alignment yet were not represented by grave mounds in the 1935 aerial photograph (the excavations did no more than reveal the outlines of the graves without going deeper). This argues that, whilst the graves belonged to the Muslim inhabitants of El-Till, they are considerably earlier than 'modern' (for which the bench mark is the 1935 photograph). A cemetery is marked in this position in the Amarna map of the Lepsius expedition of the 1840s, and the label 'Sheikh's Tombs' appears in a similar position on Wilkinson's map made on the basis of visits in 1824 and 1826 (both are reproduced in B.J. Kemp and S. Garfi, *A Survey of the Ancient City of El-'Amarna*, London, Egypt Exploration Society 1993, 14–15, Fig. 3; 18, Fig. 4).

This raises the question: might the cemetery contain a record of burial (and thus of village occupation) that is continuous from the Late Roman period to today?

3, 4 and 5. The early mud floor and field of mud-brick offering-tables

It is now well established that the field of over 900 offering-tables made from mud bricks and briefly described by earlier archaeologists (Petrie and Pendlebury) belongs to the first period of the temple and had later been buried in rubble so as to be invisible. They stood on a floor of mud plaster which has been generally well preserved by the levelling-rubble. The expedition has, since it began in 2012, exposed and recorded an area of c. 750 sq m of this early mud floor in the southern sector. For this season two further areas, at the northern and southern limits of the area, have been examined (**areas 3 and 4**, respectively).

At the northern end (**area 3**) a strip of levelling-rubble was removed which allows the plans of adjacent areas to be joined up. It extends by a few metres our picture of the ground in front of the wooden palace discovered in 2017. The newly uncovered floor confirms that a row of large holes runs alongside the southern wall of the later



Figure 9. Area 3, the southern end of the large exposure of early mud floor. The white rectangle is a stone pedestal made to support a heavy stone object and pre-dates the final floors. The bottom centre area contains three holes, possibly for pottery jars, and above them part of a low platform of sand with a mud-plaster surface which perhaps provided them with a raised edge. South is towards the top. Photo by Anna Hodgkinson.



Figure 10. Area 3, view to the south. The low rounded platform has been added to the mud floor and consists of sand covered with a layer of mud plaster. Photo by Miriam Bertram.

temporary access ramp, thus across the front of the wooden palace. Also preserved is the edge of what appears to have been a ramp or platform roughly made of mud plaster laid over a sand core (Figures 9 and 10). Three of the large holes lie immediately beyond the preserved part of the ramp and raise the possibility that they held pottery jars and that the 'ramp' formed a raised edge around them. The general mud floor had several times been re-made. Careful brushing and study revealed faint traces of the rectangular outline of one of the mud-brick offering-tables which had covered much of the ground at the front of the temple in its earliest phase. It takes them close to the temple axis. The site supervisor was Miriam Bertram.

At the southern end of the study area (area 4) two complete 5 x 5 m squares were cleared of their covering of levelling-rubble, which here reached a depth of 0.7 m. Square H24 was predicted from previous work to contain



Figure 11. Area 4, square J24, viewed from above. North is towards the bottom. Four mud-brick offering-tables are exposed, standing on a mud-plaster floor. The square piece of limestone mid-way between the lower two offering-tables might have been a seat. Photo by Anna Hodgkinson.

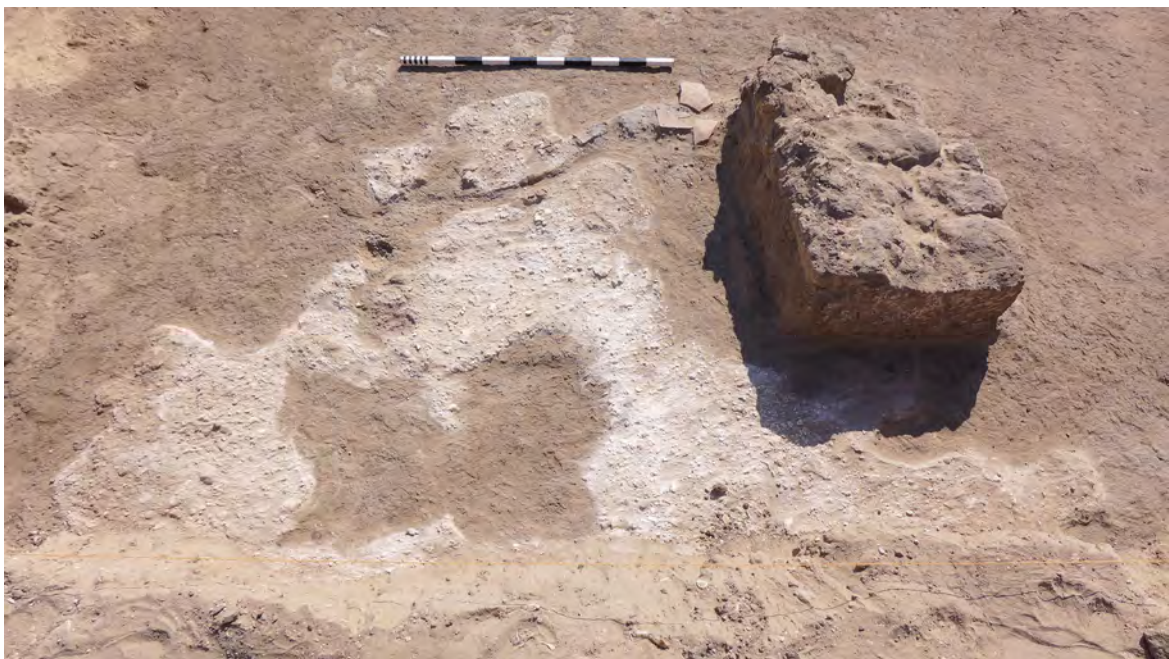


Figure 12. Area 4, square J24, view to the south. The offering-table stands beside a layer of stone chippings and dust. The limestone slab beside the pale layer which appears in Figure 11 has been removed. Photo by Fabien Balestra.

only an unbroken extent of mud plaster and this proved to be the case, except that an area of the floor was covered with stone chippings and sherds (some of them blue-painted) which had been trampled flat. Square J24 was predicted to contain four of the offering-tables, which duly appeared (Figures 11 and 12). Despite having been exposed by previous excavators they were in a reasonable condition, showing also that, by the time they had been buried, they had suffered damage and the loss of much of their white surface plaster although some extended

areas remain. Beside one of the offering-tables is a thin, irregular deposit of small pieces of limestone embedded in white dust. Fabien Balestra and Alysée Devillers were the archaeologists responsible.

According to the soundings of Petrie and Pendlebury the offering-tables cover a space of c. 60 x 230 m to the south of the temple. It is a huge area to be examined by a modern archaeological mission, yet the older work was only superficial. In autumn 2017 a plan was started to remove by excavation some of the large dumps of excavators' spoil on the south side of the temple, opposite the first court of the temple. This has been continued in 2018 and in the current season (**area 5**). By the end of the season the stone debris and sand of which the dumps were composed had been removed over a block of six 5 x 5 m squares, with a start having been made on a seventh. Julia Vilaró has been the archaeologist responsible. In some places the top of the levelling-rubble had been reached (recognisable from its darker colour). By continuing this plan to north and south it should be possible to develop a 10-m wide trench across the area of the mud-brick offering-tables and their junction with the temple foundations.

6. Outlining the temple with new stones

In 2014 the mission began a long-term project to mark with new stones the outline of the Long Temple. After the end of the Amarna Period almost all of the original stones (including statues) were either removed or broken up but leaving the outlines of the building marked on a foundation layer of gypsum concrete. From this we know the plan, but the foundation layer is often on the floor of deep trenches and is also too fragile to be left exposed. The new stones come from the famous Tura quarries, just outside Cairo, and are cut to the ancient size.

In successive seasons the foundations of the front part of the temple have been exposed and recorded, including the two stone towers which formed the outer pylon entrance, massive solid pedestals for two sets of eight colossal columns which stood in front, and a wide paved area between the columns and in front of the entrance which showed clear traces of having supported a long staircase between wide stone borders which would have borne, in turn, stone balustrade slabs. The staircase would have led to a platform between the pylons. Both the staircase and platform are shown in the pictures of the temple in the tombs of Meryra and Panehsy although placed within the first courtyard.



Figure 13. The building team nearing the end of the work on the front of the temple. The sloping blocks of limestone mark the start of the base for balustrade slabs which would have been inserted into the slots which have been cut down the middle of the blocks. Token pieces of red granite have yet to be inserted. View to the south. Photo by B. Kemp.



Figure 14. The beginning of the staircase that led to the offering-platform at the front of the Great Aten Temple. The slots in the surface of the sloping limestone blocks are awaiting red granite inserts. View to the south-east. Photo by B. Kemp.

All of these parts, which form a single monumental entrance system to the temple, have now been marked out with the new stone alignments (Figures 13 and 14). The last part to be completed is the staircase and platform. It was bordered by wide stone supports for balustrade slabs in hard stones (of which fragments have been found). The beginnings of these have been formed from blocks shaped at a low angle of ascent and with a wide slot for the balustrades themselves. These will be represented by lengths of red granite. The first two steps, 1 m long, are

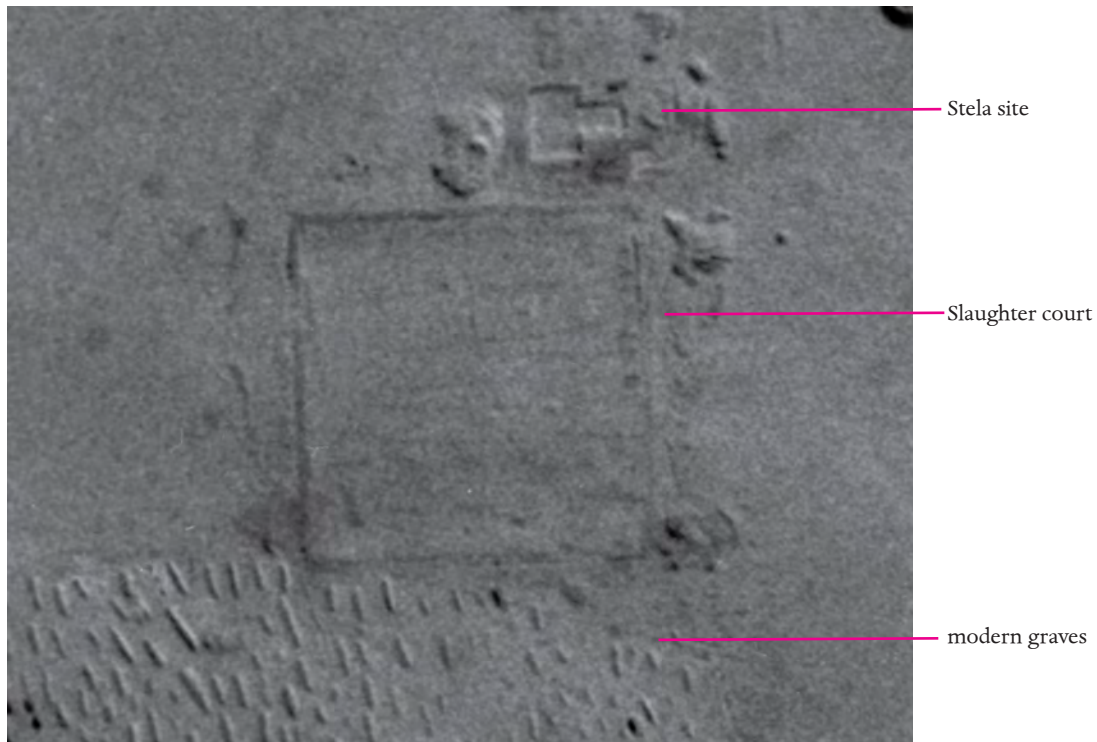


Figure 15. Area 7, site of the stela and adjacent slaughter court. Part of an aerial photograph taken in 1935. North is towards the left. The T-shaped stela site is surrounded by excavators' spoil heaps. A loosely gridded pattern of narrow excavation trenches crosses the slaughter court. To the west (bottom) is the edge of the modern cemetery, where each burial is marked by a ridge of gravel aligned at right-angles to the direction of Mecca. The photograph was taken by the Royal Egyptian Air Force.



Figure 16. Area 7. Aerial photograph taken after the excavation of the stela site in spring 2012 (the outlines of the excavation squares are still visible though with a covering of sand for protection). North is towards the left. The T-shaped feature marks the site of the foundations for a stone platform, with staircase, for the support of the stela. The outline of the eastern part of the adjacent slaughter court is visible. Note how the graves of the cemetery, now with masonry covers, have encroached over the north-western part since 1935. Photo by G. Owen.

formed from white cement coloured orange by mixing in local reddish sand to create the effect of a different kind of stone.

With the front of the temple finished, the next stage is to re-create the line of the northern wall of the temple, which had a length of 200 m. It is for this purpose that the north wall trench is being cleared (see area 1, above).

7. Site of the stela and slaughter court

Behind the Long Temple but in front of the Sanctuary the Pendlebury excavations of 1933 identified the site of a platform reached by a staircase alongside a rectangular platform. What remained were only foundations of gypsum concrete but the location and design match depictions in the tombs of Meryra and Panehsy of a large round-topped stela beside which is a seated statue of Akhenaten. Fragments of the stela (in purple quartzite) had been collected by Pendlebury and (before him) by Petrie. The site was re-excavated in 2012 and many more small fragments of the stela, and of medium-sized statues, were collected for study.

An almost square enclosure, c. 53 x 58 m, had stood to the west of the stela, defined by a mud-brick wall (Figures 15 and 16). It had been briefly examined by the Pendlebury expedition who identified it as the cattle slaughter court or butchers' yard also depicted in the tombs at Amarna. Pendlebury recorded finding 'one or two tethering-stones' there. In recent years a large part of the enclosure has been destroyed by the building of modern tomb enclosures over it.



Figure 17. Area 7, the slaughter court. Aerial view at the end of the 2019 excavation. North is towards the left. The excavation square in the top right corner measures 5 x 5 m. The east wall runs across the upper part of the picture, becoming increasingly eroded towards the right (south). B marks the position of the entrance in the south wall, with a thickening of the wall forming one side of the entrance. A small buttness is on the outer face of the south wall at this point. An irregular band of mud floor runs inside both walls, having been protected by collapsed lengths of wall. Where it runs inside the south wall it is covered by a thin layer of dark organic matter partly covered with a pale crust. Photo by Anna Hodgkinson.



Figure 18. Area 7, the slaughter court, south-east corner. The south wall is in the foreground, and the internal buttness which marks the side of the entrance to the courtyard. View to the east. Photo by Marzia Cavriani.



Figure 19. Area 7, the slaughter court. The picture shows a section of desert sediments cut along the face of a sandstone post sunk to a depth of 50 cm in the desert surface. It is likely to be the base of a tethering-stone for cattle. View to the south-west. Photo by Marzia Cavriani.

It was made the object of excavation this year, Marzia Cavriani and Anna Hodgkinson being the site supervisors. A block of 5 x 5 m squares was laid out over the east wall and included the south-east corner where, according to the Pendlebury sketch plan, an entrance had existed. The excavation covered ten of the squares (Figure 17). The wall survives on the east and south sides as two eroded courses of bricks, laid to be one and a half bricks wide with a gap between. On the outer side of the south wall, close to the entrance, a small brick buttress had been added. The entrance itself survives as a break in the wall, probably at least 3 m wide, the western side doubled in thickness for a short distance as a way of creating a door jamb (Figure 18). The gap showed no clear signs of having been provided with a stone threshold or jambs.

On the east and south sides the wall had fallen inwards and some of the collapsed brickwork survived, preserving the mud floor underneath and, along the south wall, a dark layer containing very fine organic material and small pieces of charcoal. The deposit was covered with a pale grey crust which, at Amarna, seems to be the result of a weathering process affecting organic layers. If this was a slaughter court then it makes sense to interpret this layer as cattle manure.

The remainder of the surface consisted of alternating patches of hard gravelly sand and soft sand. A sandstone post of rectangular section had been buried in it to a depth of 50 cm (Figure 19). The top, resting close to the modern surface, was badly eroded. Pendlebury's discovery of tethering-stones points to this being the lower part of one of them. Fragments of others and part of a possible trough, all in rough limestone, were also found.

The excavation produced several more fragments of the quartzite stela (or perhaps stelae) which must have come from the adjacent stela site, and also a few fragments of statues. Outstanding are three fragments (S-12768-70) from the front and wings of the *nemes*-headdress in indurated limestone, on a smaller-than-lifesize scale. Slight differences in scale and treatment imply that more than one statue is represented, adding to the evidence that the stela site supported, apparently in the open, a collection of royal statues in different stones, none at a particularly large scale. The study of the this material was carried out by Marsha Hill.

8. A special find: a limestone trial-piece with the face of Akhenaten

On 29 October, 2019, the team working in the levelling-rubble of area 3 found a small slab of limestone on one face of which a sculptor had outlined the face of a royal person. The slab measures 16 x 10 cm and is 4 cm thick. It has the registration number S-12959, from square J30, unit (19277). There are sufficient characteristics to identify the person as Akhenaten, but depicted in a more traditional style, reminiscent of Amenhotep III. The relatively short nose and chin in particular make this impression. From the top of the head to part of the way down the neck, and from the ear to the nose the sculptor has carved a face in shallow relief with great sensitivity,

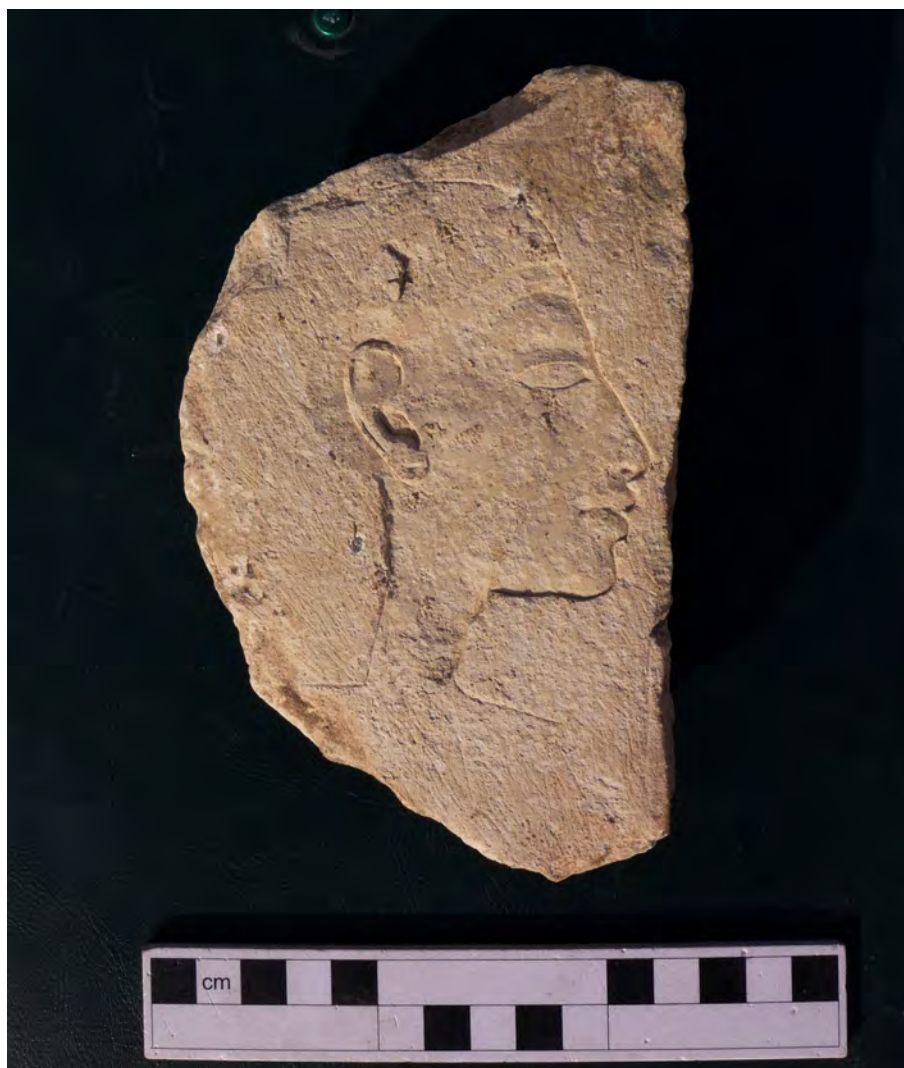


Figure 20. Limestone trial-piece, S-12959, from area 3. Photo by Miriam Bertram.

particularly in the parted lips where the rear dividing line has less of a downward curve than with some examples of Akhenaten's profile. The emphatic Adam's apple, the grooves in the eyelid and the careful modelling of the ear, with its slit, are to be noted as characteristic of the art of the Amarna Period. The carving has stopped behind the ear, where the removal of the surface has been just sufficient to allow the ear to emerge in relief. The last part of the neck and the shoulder lines have been lightly and clumsily incised, as if as an afterthought. As with some similar pieces, no uraeus has been carved on the forehead. In coming from the levelling-rubble it is likely to date to within or before year 12. (We are grateful to Marsha Hill and Kristin Thompson for comments.)