

# SUDAN & NUBIA

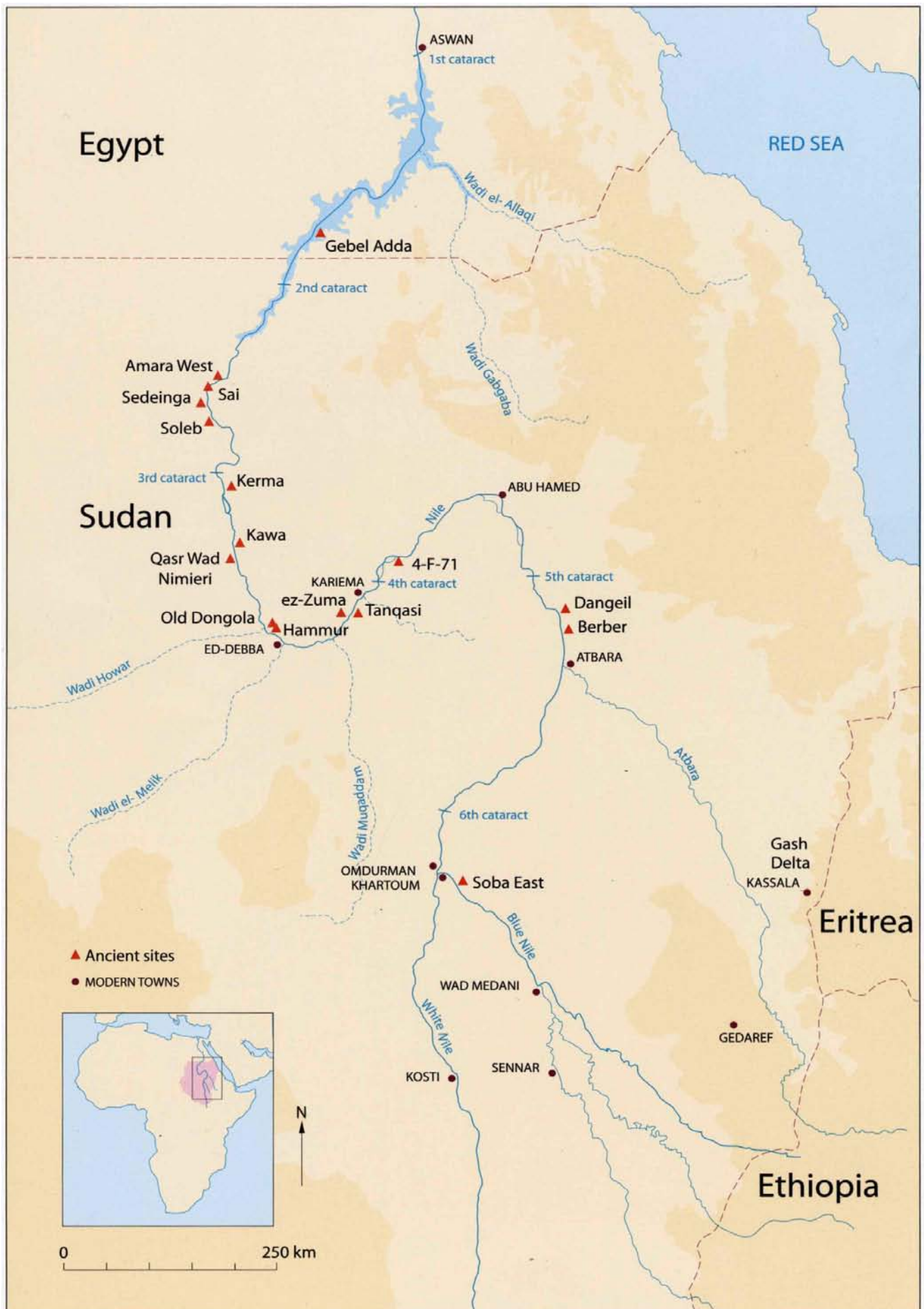
The Sudan Archaeological Research Society



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2010





# SUDAN & NUBIA

The Sudan Archaeological Research Society



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*Front cover:* Berber Meroitic Cemetery. Tomb, BMC 8, showing grave goods, the extended position of the skeleton and the remains of a coffin (photo: Mahmoud Suleiman Bashir).

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# Nubian architecture in an Egyptian town? Building E12.11 at Amara West

Neal Spencer

## Egypt in Kush

Upon an island on the Nile, north of the Third Cataract, the town of Amara West would have presented a distinctively pharaonic appearance to visitors whether approaching by river or from across the desert plateau to the north. An imposing mud-brick wall, 2.8m thick, surrounded the settlement, punctuated with brick bastions and corner towers. Two sandstone gates pierced this wall, the main northern one bearing the hieroglyphic titulary of Ramesses II (Spencer 1997, 17 and pl. 7c–d), while the western gate presented the same titulary but also a more extensive decorative scheme in its corridor including a scene of a victorious campaign over Nubians (Spencer 1997, 18–19 and pls 10–12, 13a). In addition, the entrance to the decorated sandstone temple in the north east of the walled town was fronted by a courtyard in which monumental royal stelae were erected, and at least one of the gates into this forecourt was again decorated with the royal titulary (Spencer 1997, 29–32 and pls 21d, 22b). Given that these decorated sandstone gates were likely to originally have been painted, their ancient appearance would have had more impact than suggested by the archive excavation images.

Once inside the town, the temples and houses conformed to the architectural norms encountered in contemporary Egypt. On the rubbish-strewn alluvial slope west of the walled town, a suburb developed in the late 19<sup>th</sup> or early 20<sup>th</sup> Dynasty. The area featured large villas, again typical of New Kingdom elite domestic architecture (Plate 1). This brief contribution, however, presents a small building, revealed in the western suburb during the 2010 season, that does not conform to the pharaonic architectural traditions prevalent at Amara West.

## The western suburb

Excavations in 2009 uncovered a 497m<sup>2</sup> villa (E12.10, Spencer 2009, 50–7) built of mud brick, with a courtyard, food processing and cooking areas and a suite of more private spaces to the rear, set around a smaller brick-paved courtyard. Ceramics from the occupation strata, rubble layers and wind-blown sand deposits within the building indicated that the villa was occupied during the late 19<sup>th</sup> and 20<sup>th</sup> Dynasties, a supposition confirmed by the presence of early Ramesside

pottery, including blue-painted ware, in deposits beneath the villa's clay floors.

The main door of the villa is preceded by a porch, a rectangular space which projects from the southern wall. Contemporary with the main construction phase of the villa, the porch is paved with a pathway of schist slabs leading to the sandstone gate. Wind-blown sand was evidently a problem for the ancient inhabitants of Amara West, as it is for present-day archaeologists working at the site, as the porch gradually filled up with sand prompting the construction of a modest wall to close off the west-facing opening. A small flight of two steps was built against the inside of this wall, to allow persons to descend from the contemporary ground level into the villa. It is reasonable to assume that the occupation of the villa spanned much of the 20<sup>th</sup> Dynasty (c. 1186–1069 BC) as two distinct floor layers were identified in some rooms and an additional room was added to the main courtyard (room 6). Perhaps during its last phase of use, brick blocking walls were inserted in the main gate, as well as into some internal doors.

Remnants of a curving wall (2145), built directly onto the preserved top of the porch wall (2119), were revealed in 2009 (Figure 1), mirroring a feature visible on the magnetometry data (Plate 1). The rise in contemporary ground level, due to accumulated rubbish and wind-blown sand deposits, allowed the construction of this curving wall immediately atop the porch wall (2119–2075). As the porch may never have been a

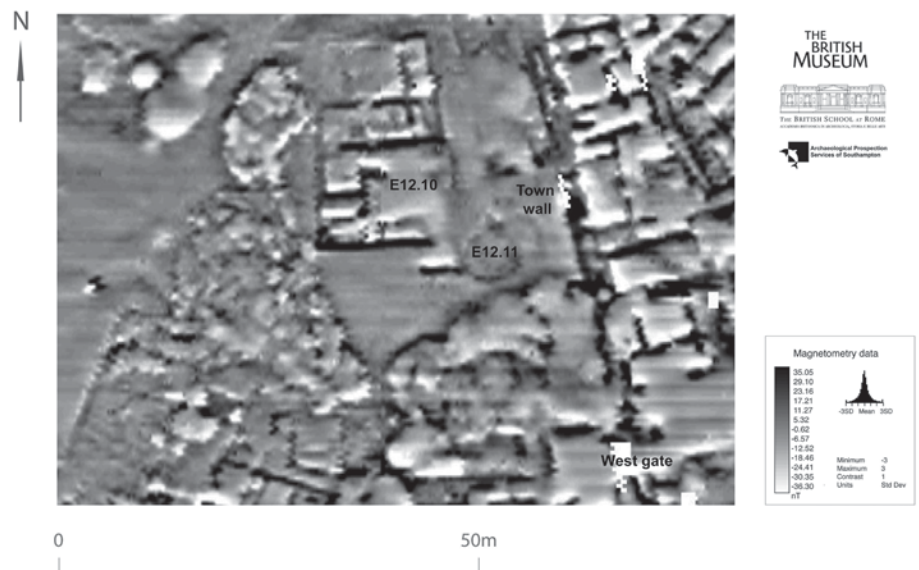


Plate 1. Magnetometry survey of the northern part of the western suburb, showing the location of E12.11 outside the western town wall.

full-height structure, it is unclear if it had become eroded, or even partly dismantled prior to the construction of wall 2145.

A principal aim of the 2010 season was to gain an understanding of the stratigraphy between villa E12.10 and the western town wall (2212), thus a 9.2m east-west trench was opened allowing a profile of deposits and structures to be assessed (Plate 2, Figures 1–2). Three superimposed build-

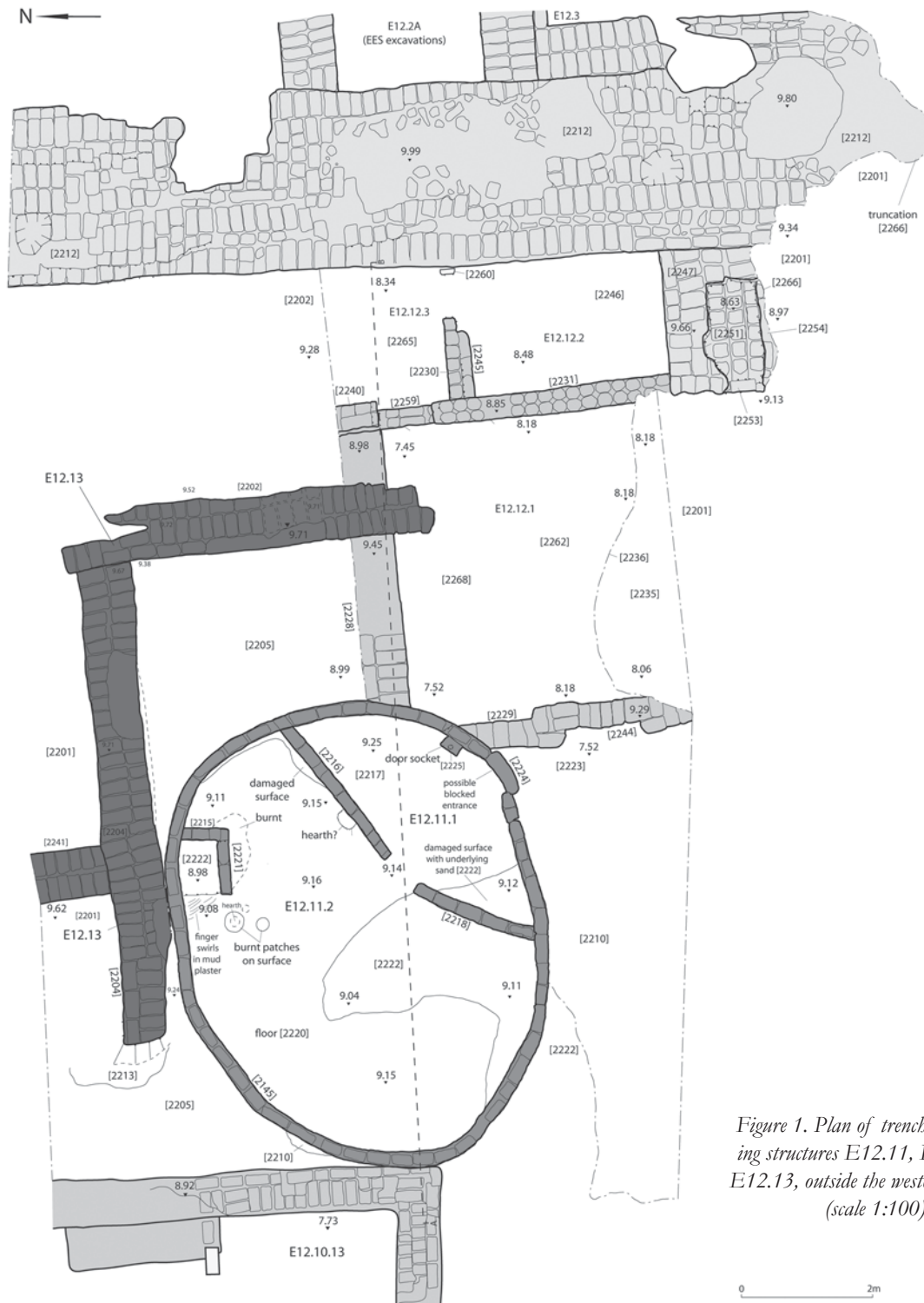


Figure 1. Plan of trench WB, showing structures E12.11, E12.12 and E12.13, outside the western town wall (scale 1:100).

ings were discovered: E12.12 (earliest), E12.11 and E12.13 (latest). The largest room exposed in building E12.12 (room 1, Plate 2) was at least 3.86 x 4.4m in area (southern limit not defined) and featured a 680mm-wide doorway on its western side, later blocked with brickwork (2244) and plastered over. The principal walls (2228, 2229), were preserved to a height of six courses, founded directly on a thin deposit (2262) of compact river silts and brick rubble, perhaps from reworked or degraded earlier (19<sup>th</sup> Dynasty?) buildings within the town wall (Figure 2). An 800mm-wide doorway, with

a brick threshold, was found on the eastern side of room E12.12.1, through wall (2231), leading into a narrow room (E12.12.3). The former room was at least 1.76 x 2.04m in size though the northern edge was not exposed; a 660mm door through the southern wall (2230) provided access to a further room (E12.12.2). The whole eastern side of building E12.12 used the exterior of the western town wall (2212) as its boundary, while one of the exterior buttresses (2247) formed the southern wall of room E12.2.2. This seems to be the earliest building constructed in this location. Natural



Plate 2. Earlier phase architecture within the excavation area, looking north: building E12.12 built against western town wall; structure E12.11 to the left.

silt deposits, containing no cultural material, were reached at site level 7.47m in villa E12.10 (room 3); beneath the early building E12.12, layers 2268 and 2265 may represent similar silts levelled to create a surface for construction (Figure 2).

A detailed discussion of building E12.12 lies outside the scope of this paper. Though its foundation level (8.39m) lies above that of villa E12.10 (7.73m, see Figure 2), the orthogonal arrangement of rooms echoes the villa in style, as do the construction methods of the walls (plastered with plain clay, with bricks of 350–380 x 170–180 x 60–70mm). Furthermore, the rooms were provided with hard clay floors (later phase 2243, 2248, 2250; earlier phase 2256, 2258) which run continuously across the building, through the doorways, and lap up against the walls. Differences between E12.12 and the villa, such as the use of stone door-sills and brick-paved floors in the private rooms of the latter, could be interpreted as embellishments fit for a higher status dwelling. Occupation deposits (2239, 2249, 2261) were encountered above the floors in E12.12, but all underneath significant rubble deposits, likely to be from the collapse of the building's walls and any roofing, perhaps mixed with debris from the town wall itself. This rubble was between 300 and 400mm thick (2233 in room 1; 2232 in rooms 2 and 3); amongst the mud-brick fragments, a significant amount of ash and ceramics were encountered. The ceramic material from building E12.12 is of late New Kingdom date, with a high proportion of plates and

jars (including beer jars), but also remnants of bread moulds, *doka*, pot stands, bowls and a restricted Nubian cooking vessel. Interestingly, Nubian fabrics make up nearly 60% of the assemblage in one occupation deposit in room 3 (2261). The Egyptian-form vessels included sherds of Marl D (in 2268) and the fragment of a vessel in a Canaanite fabric (in 2265).

While the purpose of building E12.12 is unknown, it clearly lies within the norms of pharaonic settlement architecture, as were nearly all of the buildings at Amara West. As such, it may have been a dependency of villa E12.10, perhaps slightly later in date. An insufficient area was exposed to assess whether it may have been used as a dwelling or for other purposes such as production and/or food preparation. Over the remains of this structure, and subsequent deposits of wind-blown sand mixed with silt (2223, 300mm deep) and a thin layer of clean sand (2222), a very different type of building was erected: the oval structure E12.11 (Plate 3).



Plate 3. View over excavation trench WB, showing E12.11 built above a corner of villa E12.10 (background left), with parts of E12.13 visible bottom right.

### Building E12.11

The distinctive oval plan of E12.11 is formed by a 150–180mm thick exterior wall (2145), using mud bricks (330–360 x 140–180 x 70–80mm) laid end-to-end (Figure 1, Plate 4). Only preserved to a maximum of three courses, the wall

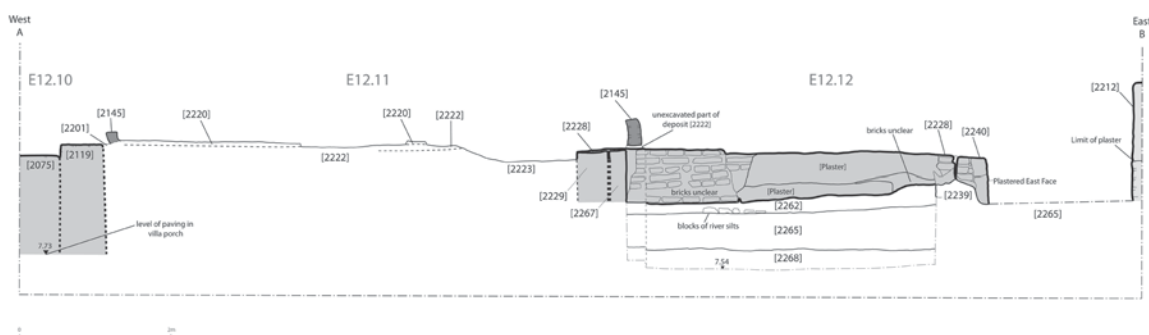


Figure 2. East-west section across the western suburb, showing the relationship between structures E12.12, E12.11, the western town wall (2212) and villa E12.10. For the location of the section, see Figure 1.



*Plate 4. General view over E12.11, with the workman Sayed Ali.*

sits directly on a layer of wind-blown sand (2222), without any foundation trench, and was plastered with plain clay on both the interior and exterior surfaces (Colour plate IV). The remains of an entrance were identified on its south-eastern side. This consisted of a 550mm-wide gap in wall 2145, in front of which was a line of poorly laid bricks (2224). These bricks may represent a later blocking of the entrance, or possibly part of the doorway structure, i.e. a simple threshold. Presumably made of wood, the door once pivoted in a socket created from a hole (diameter 60mm, depth 30mm) cut into a large mud brick (2225, Plate 5). This socket had been plastered and bears light traces of wear. Internally, building



*Plate 5. Detail of brickwork 2225, with a door-socket.*

E12.11 was divided into two spaces through the construction of wall segments 2216 and 2218. Both walls, of the same thickness as the exterior wall, are preserved to two courses in height with the contemporary surfaces lapping up against the brickwork in places. Wall segment 2218 is laid out as an arc (Colour plate V, Plate 6). The gap between the two segments creates a 700mm doorway; in this case there was no evidence of door fittings such as a pivot-hole. These internal

walls are clearly contemporary with the external wall (2145) of the building.

A surface preserved across most of the southern room (E12.11.1, Plate 7) consists of a 30mm layer of compacted clay with a small amount of charcoal flecks (2217), but no areas of burning or ashy lenses were identified. The floor seems to represent a single deposition of material, and the building does not seem to have experienced periodic re-laying of the floors as is common in many of the houses at Amara West. The southern space could have been roofed with timber, matting and reed, as the maximum span was 1.95m. However, no impressions of roofing beams, branches or palm were noted on the clay fragments and brick rubble found in the building.

The principal, northern, space (E12.11.1), was also provided with a clay floor (2220, Plates 6 and 8), though significant areas were not preserved, exposing the underlying sand deposit (2222). Could this larger space have been roofed? A span of almost 4m would need to have been



*Plate 6. View to the south west, showing structure E12.11, with later wall 2204 in the right foreground.*

covered, unlikely to be possible without a supporting pillar or post. There was no evidence of post-holes across the preserved areas of floor, suggesting a conical roof was not extant in this building, nor any significant internal installations supported by wooden poles or posts. Remnants of any stone architectural fittings, such as column bases, door lintels or doorsills were also absent (fragments of a carved door lintel F2175, found upon surface deposit 2201, are likely to have come from the adjacent villa or even from within the walled town). Furthermore, the modest thickness of all walls precludes an upper storey having existed.

The best evidence for the purpose of this building lies in the northern part of the larger room where two bonded brick walls (2215-2221) form an L-shaped installation open to the west and preserved to a maximum of four courses (Plates 6-9). It may be notable that much smaller bricks, perhaps



Plate 7. The southern part of E12.11, with floors 2220 (left) and 2217 (right).

re-used ones, were employed for this feature (150–200 x 140–150 x 50–60mm), but as surface 2220 laps up against the base of the walls, this installation seems to be contemporary with the construction of the oval external wall. Immediately to the west of the installation, finger impressions are visible in the clay floor (Plate 10) near two small circular patches of burning. The floor did not continue into the installation, with only the sand (2222) underlying the whole building present within. Originally, a wall may have existed which closed off

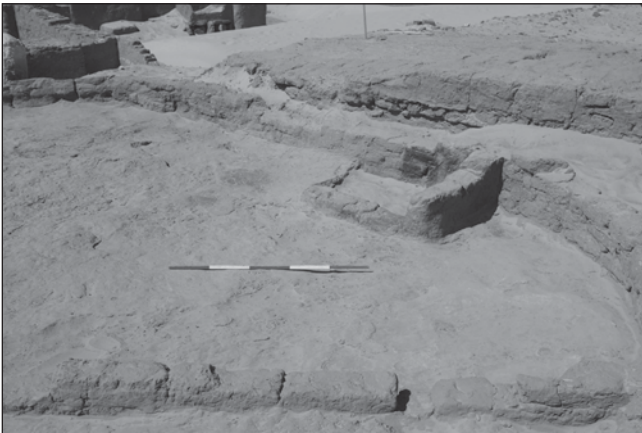


Plate 8. Detail of the northern room in E12.11, with the installation (2215-2221) against its outer wall (2145), view to the north west.

this space (joining 2221 to 2145), something hinted at by the line of the break in floor 2220, and also the extent of the mud plaster on the interior face of 2145 (Plate 9). Within the installation some form of activity involving heating occurred, as all three wall surfaces bear traces of burning. Strikingly, burning traces on the interior of wall 2145 are restricted in extent (Plate 9) leaving a clearly visible line that must reflect the original presence of two objects against the wall that stopped the burning from spreading. This object cannot have been circular, such as a pottery stand, given the burning traces, but was rather rectangular in section. While the easternmost section of wall not affected by burning is plastered, no plaster is preserved on the western part. The

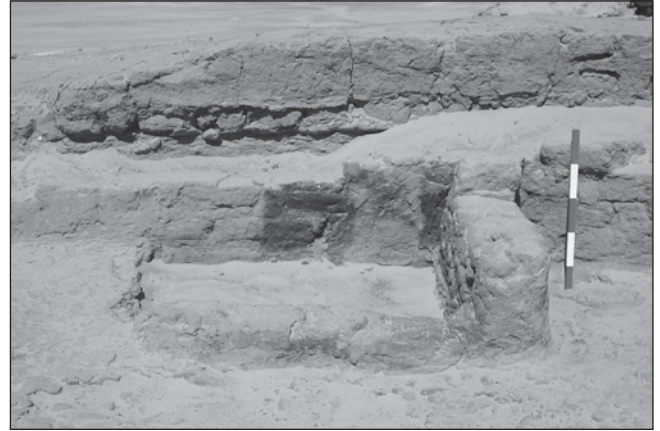


Plate 9. The installation against the north wall, with traces of burning on the interior of wall 2145, view looking north.

position of the installation, inside the north wall, would have provided ample protection from the strong northerly winds.

Significant areas of a clay surface (2210) extended south of the building (Colour plate V) to the edge of our excavation area; this surface lapped up against the exterior of wall 2145. A smaller patch of floor (2213) to the north of the building, may suggest that the circular structure was once entirely surrounded by a coarse surface, rather than a carefully laid floor.

Deposits relating to the occupation and use of E12.11 include a layer (2219) of sand with ash lenses and charcoal flecks (100mm deep) above the floor in the northern room. This layer was sealed by a 150mm-thick deposit of mud-brick



Plate 10. Detail of finger impressions on floor 2220 in the northern room of E12.11. East at top of image.





rubble and ash (2214), covering the whole building. The brick rubble is likely to be the remnants of the upper courses of the walls, suggesting that this building stood to a significant height, providing reasonable shelter from the elements. A significant amount of ceramics were recovered from within the rubble, including a beer jar (C2024). Above this rubble, deposits included a further occupation deposit (charcoal, bone, plaster, silt and sand; 2207) and wind-blown sand mixed with fragments of brick and mud plaster (2205, 2202). These deposits all underlie (directly or stratigraphically) the final architectural phase preserved in the area (building E12.13). No remnants of metal or slag were found in the excavation.

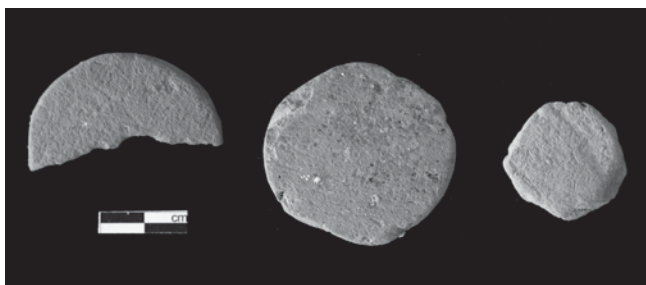


Plate 11. Finds from building E12.11 (left-right): spindle whorl (?) F2189 and ceramic counters F2190 and F2192.

Small finds recovered from deposits relating to the use of the oval building do not particularly elucidate the purpose of the building. Amongst the occupation deposit in the northern room (2219), a sherd reworked into a counter was the only find (F2192), a class of object ubiquitous in all areas of Amara West. Within the collapse material of E12.11, two ceramic discs (F2189, F2190) were found, the former featuring a drilled hole (spindle whorl? Plate 11). Further examples of such artefacts were found in the sand deposit (2222) beneath the floor of the southern room. Deposit 2205, outside the building but predating the later architectural phase, yielded hieratic *ostraca*, including one bearing two texts, the first a series of dates and numbers (a delivery record?); the second may be a letter written in a literary hand (F2201, Colour plate VI).

After the collapse and abandonment of E12.11, there was an immediate return to orthogonally planned architecture, with building E12.13 (visible behind the oval building in Plate 3). The only parts of this phase exposed within the current excavation are two walls, preserved to two courses high, bonded to create an L-shape (2203 and 2204, Figure 1). Features 2194 and 2209, within the area of the abandoned E12.11, might represent internal walls, or even a brick surface relating to this late building, though an adjacent area has a simple clay floor (2208, see Plate 12). The large walls, though not plastered, are built with bricks typical at Amara West (340–400 x

150–200 x 50–70mm), and are 800mm thick, thus similar to the external walls of villa E12.10.

While the porch of the villa (2119) had been partly overbuilt by the oval building (E12.11), there is no reason to assume that the majority of the villa was not still occupied. Building E12.13, perhaps contemporary with the later phases of the villa, may have been a dwelling or a non-residential structure, and it may extend northwards beyond the limits of the current excavation. It is interesting to note that the architecture is not at first evident on the magnetometry survey (Plate 1), despite its substantial brickwork, buried immediately beneath the surface wind-blown sand. Closer inspection of the survey data, however, reveals that this wall does appear with a lower magnetic signal, which might reflect a difference in the clay composition of the bricks.

Chronologically, the oval building E12.11 must date to the 20<sup>th</sup> Dynasty or later, given its construction over part of villa E12.10. Relatively little pottery was encountered in the deposits and floors (2214, 2217, 2220) and vessel forms are restricted almost exclusively to Egyptian types: plates, large bowls, jars and a large pot stand fragment. A fragment of a Nile D storage jar and a marl jar neck were found in the sand layer beneath the building (2222), but excavations across the site have shown that a proportion of vessels used in the town were being imported from Egypt. A small number of Nubian sherds were also found in 2222. The forms relating to the use-phase of the building are typical of the late Ramesside era, thus broadly contemporary with the assemblage found within the villa. The date range of this pottery strongly suggests that the three architectural phases (E12.12, E12.11, E12.13) were restricted to the 20<sup>th</sup> Dynasty: no post-New Kingdom forms were identified amongst the ceramics. However, we do know that post-New Kingdom occupation of the town is likely, given the presence of contemporary burials in cemeter-

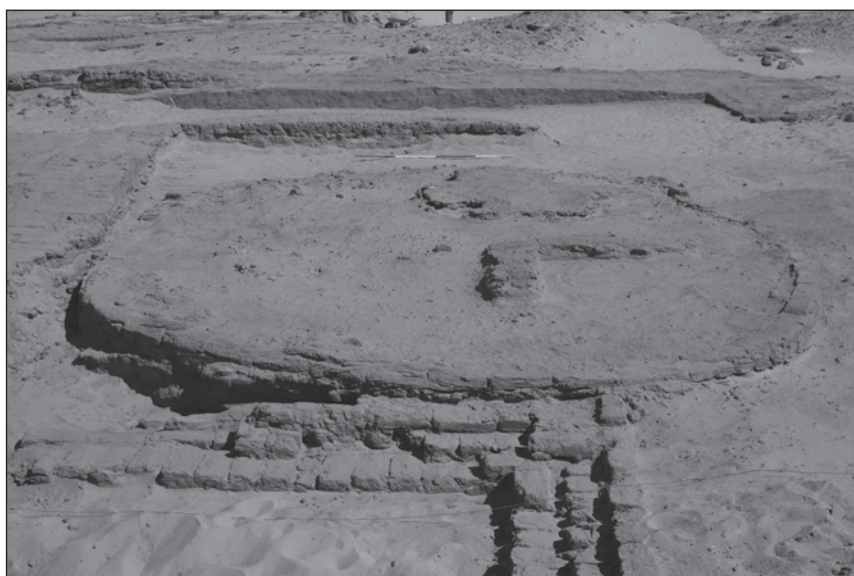


Plate 12. View east over building E12.11, with the later L-shaped structure E12.13 visible, along with paving (?) remnants 2194-2208-2209 visible within the earlier oval building (E12.11). The western town wall (2212) is visible in the background.

ies C and D (see Spencer 2009, 57–61; Binder *et al.* 2010); furthermore, a surface survey has indicated that post-New Kingdom pottery is scattered across the southern part of the town mound. It is not yet clear whether architecture associated with this period can be identified in the town.

Elsewhere at Amara West, other than the temple, buildings are regularly modified, levelled and rebuilt, something clear from both the EES excavations (Spencer 1997) and the structures in the north-western corner of the town (E13.3, see Spencer 2009, 48–50). Despite all these modifications, however, the architectural language remains strikingly consistent. The situation in the part of the western suburb immediately outside the town wall is notably different: between the construction and use of two rather unremarkable orthogonal buildings (E12.12 and later E12.13), an oval structure was erected and used for a relatively short time. What purpose did it serve, and for whom?

### An indigenous architectural tradition

The oval plan of E12.11 clearly lies beyond the norms of pharaonic architecture. Circular or oval structures within pharaonic settlements are generally confined to silos, wells, or tree-pits. Given the presence of clay floors in both internal spaces, E12.11 cannot have been a tree-pit (for brick-lined examples of the Kushite era, at Kerma and Kawa, see Mohamed Ahmed 1992, 36, 39, fig. 4; Macadam 1955, 221–2, pl. 108 [f]), or a well. Silos are found at many contemporary sites in Egypt, typically featuring a wall, formed from a circle of bricks laid end-to-end, usually 3–7m in diameter (e.g., at Tell Heboua: el-Maksoud 1998, 129 fig. 2 and 136 fig. 11). It seems that many of these silos were rather short-lived, as one often encounters several of these structures superimposed upon each other within a short timespan. It is possible that once empty, these silos were renewed; again, the nature of the architecture indicates they could have been erected rather rapidly. The division of space within E12.11, but especially the L-shaped installation (2215–2221) argue against interpreting it as a silo. Furthermore, a large number of storage bins, in the form of rectangular brick bins elevated off the floor through the use of schist blocks, are found throughout the houses at Amara West (e.g. Spencer 2009, 52–3, pl. 11, col. pl. 17).

The oval building does, however, lie within the sphere of indigenous, Nubian architecture. While circular or sub-circular dwellings are, of course, found in Predynastic Egypt (e.g. Hoffman 1982, 133–4), orthogonal architecture soon became the norm within Egyptian settlements (Köhler 2009, 40 fig. 1). Circular huts are still found in dynastic contexts, though principally at temporary encampments in remote desert locations, for example at the New Kingdom quarry of Hatnub (Shaw 1986, 198–200, fig. 10.6). Sinusoidal enclosing walls are also found around some houses and sacred structures (Vercoutter 1970, 97–101 and pl. 9), but the buildings themselves are orthogonal in plan.

In contrast, non-orthogonal building plans are a feature of permanent Nubian settlements for a much longer period.

Neolithic houses at Kerma are of circular form (Honegger 2006, 7–12) and the remnants of a C-group settlement on the east bank at Wadi es-Sebua include rectangular houses, built with undressed stone, but also structures with curvilinear walls (Sauneron 1963). Evidence for reed and clay roofing supported by wooden posts was found at the latter site. A stone-built settlement at Sayala featured an oval enclosure with several circular huts inside (Bietak 1966, 31–4, pls 12–13). Early-phase houses at Kerma may have been single-room structures with associated silos of less than 4m in diameter (Bonnet 1996, 28–9, fig. 6) and ‘huts’ of uncertain purpose have also been discovered, defined by surfaces and post-holes (Bonnet 2004, 81 fig. 62, 91–2 fig. 75). The latter type of building features walls constructed from bricks laid end to end, as with E12.11 at Amara West. It is particularly striking that the introduction of mud brick as a building material did not see a wholesale migration towards the construction of orthogonal buildings. Although this became the dominant form (see, for a *Kerma Classique* settlement, Gism el-Arba, Gratien *et al.* 2008, fig. 5), the non-orthogonal tradition persists throughout the second millennium BC. In its most imposing manifestation, the ‘great hut’ at Kerma epitomises this indigenous tradition with its rounded walls, including two smaller internal spaces (Bonnet 1996, 32–4 fig. 7, pl. 10). This building features rows of post-holes within a roughly circular plan, between 15.5 and 16.5m in diameter, though also internal curvilinear walls. The structure is set within a rectangular enclosure; a profusion of post-holes within the building prompted the reconstruction with a large conical thatched roof (Bonnet 1990, 35 [28]). The *Kerma Classique* town also included a number of other circular buildings, often within enclosures containing small rectangular houses (Bonnet 2004, 8–9 fig. 6 e.g. nos 16, 47). In the ‘*agglomeration secondaire*’, circular silos were associated with secondary buildings, but these are all around 2–4m in diameter and do not feature internal walls (Bonnet 2004, 105 fig. 84).

More recently, a series of circular structures within Dokki Gel, the Egyptian town immediately north of Kerma, underline that indigenous architectural traditions persisted even during periods of pharaonic control, when a walled complex with pharaonic-style cult temples dominated the settlement. The superimposed remnants of a circular building contemporary with the 18<sup>th</sup> Dynasty, but subsequently modified and renovated throughout the remainder of the New Kingdom and into the early Napatan Period (Bonnet 2008, v–vi, Bonnet 2009, 98–107, figs 3–14), feature horseshoe-shaped buttresses embellishing the exterior, but also an L-shaped installation against one wall and internal curvilinear walls. In contrast to the Amara West structure, a series of post-holes in the centre of the building were interpreted as outlining a circular shrine, presumably built from wooden poles. The excavator designated the building a Nubian temple (see also Bonnet 2004, 150 fig. 117); it is interesting that circular chapels are represented in model form as late as the 1<sup>st</sup> century AD (Baud 2010, 71 [69]), replete with iconography echoing pharaonic temple decor. At another site contemporaneous with the



Egyptian occupation of Kush, Areika, circular architecture is combined with rectangular buildings, with walls built from a combination of mud-brick, rubble and undressed stone (Randall-Maciver and Woolley 1909, 5–18, pls 5–8). Here, some of the circular buildings were up to 6m in diameter, and there was evidence of mud, reed and wattle roofing. The function of the circular buildings is not clear at Areika, as they seem to cluster around the edge of a rectangular structure, with hearths only noted in the latter building.

The Amara building clearly represents a continuation of this indigenous architecture expressed in mud brick, which clearly also existed at Dokki Gel in the late New Kingdom (Bonnet 2009). It is interesting that at Dokki Gel the Egyptian temple enclosure wall of the mid-18<sup>th</sup> Dynasty ensured that this building, though not destroyed, lay outside the sacred temple space (see Bonnet 2009, 103 fig. 10). Parallels to this architectural form are not yet known from other contemporary Egyptian towns, though few have been exhaustively excavated. The exposed areas of the towns at Sesebi (Fairman 1938, pl. 8), Sai (Azim 1975, 98, pl. 4) and Aksha (Rosenwasser 1964, fig. 1) consist exclusively of orthogonally laid out buildings, other than silos. One exception is a massive circular structure in the south-eastern corner of the walled town at Sesebi, provided with no entrances and yet it had internal walls (Fairman 1938, 153, pls 8 and 9.4). It is important to note, however, that only the interiors of these walled towns have been excavated.

Following the end of Egyptian control over Upper Nubia, elements of the indigenous tradition continue into the early Kushite era, for example the non-orthogonal walls of building A3 at Kawa (Welsby 2001, 64–6, pl. 1; 2010, fig. 1), or circular dwellings of more perishable materials at Napatan-era Kerma (Mohamed Ahmed 1992, 96). Examples of dwellings with curvilinear walls are known from even later periods, for example, the stone and *jalous* dwellings at Kulubnarti (Adams 1994, 236–7, maps 7.4 and 7.5).

### The purpose of the Amara West oval building

In summary, the oval structure E12.11 featured two internal spaces with clay floors, one with an installation which required heating, perhaps for cooking. It is unlikely to have been roofed across its entirety and undoubtedly had no upper storey. Nonetheless, the amount of brick rubble recovered suggests that the walls stood to a significant height. Given its stratigraphic position, it is likely to have been occupied for a relatively short timespan within the 20<sup>th</sup> Dynasty; the shallow deposits, lightly worn door-pivot hole, single floor surface and the small amounts of ash encountered, could even argue for a very brief occupation. Such a structure could have been comfortably erected in a day, on the basis of modern mud-brick construction work in this area.

Identifying the purpose of E12.11 is less straightforward than seeking architectural parallels. The examples discussed above might suggest it was a modest dwelling, but other possibilities deserve consideration. The use of mud brick, with

walls of a considerable height, argue against it being identified as an animal pen. Preliminary conclusions from the analysis of faunal remains from Amara West hint at the meat component of the inhabitants' diet (39% pig, 39% sheep/goat and 22% cattle), but where these animals were housed is not yet clear. It is possible that some of the meat was processed farther afield. Pig pens found outside the Workman's Village at Tell el-Amarna in Middle Egypt provide one possible solution, with brick-lined and stone-lined pens, accessed through small doorways, no prepared surfaces and drinking troughs (Shaw 1987). Much later in date, lengths of dry-stone wall at Kulubnarti, often curvilinear, were identified as animal pens (Adams 1994, 24–5 map 2.2 and 113). However, it is also likely that upon areas of the ancient island that do not preserve remnants of architecture, reeds, branches and stones may have been used to create animal pens, a practice prevalent in the area today (*zariha*).

Industrial activity on any scale seems unlikely to have taken place within E12.11. Only small areas of burning or quantities of ash, are found in the building, other than in the installation against the north side of the larger room. Even then, the extent of the brick discolouration argues against particularly high temperature or large conflagrations occurring here. The absence of ceramic wasters, slag, metal fragments or stone chippings, all material of little intrinsic value which should survive in the depositional environments of this part of the site, suggests the structure did not house a workshop centred around ceramic, metal, or stone working. Traces of pigment were not found in the building, in contrast to elsewhere in the town site, where yellow and red ochre is often encountered. Wood and textile is rarely encountered across the town site, thus a workshop connected with these types of material cannot be ruled out. However, one would perhaps expect a greater concentration of artefacts such as spindle whorls, or even possible loom emplacements, in such a scenario. Furthermore, it seems that the majority of pharaonic textile production took place within houses or temples (see Kemp and Vogelsang-Eastwood 2001, 427–32).

Could large-scale food processing have taken place here? Again, this type of activity is more typically located within houses. No quernstones, nor stone grinders were found in the building, nor remnants of bread ovens or grindstone emplacements; these are abundant in houses across the site. Furthermore, botanical remains were not noted in unusual quantities. The limited amounts of faunal remains found within E12.11 are consistent with the ratios cited above.

The installation against the north wall is worth further consideration, as the burning patterns described above suggest two features sat flush against the back wall preventing further discolouration of the wall. Could these have been supports for a container or surface which was to be heated, whether for food production or other types of activity? The width of these features would fit well with the re-use of a sandstone door-jamb fragment, or a schist slab, both found in large numbers across the town site. Atop any such stand,

one might perhaps have found a ceramic platter or *doka*; again, fragments of such trays are common in the Amara West ceramic assemblages. The finger impressions immediately outside the 'fireplace' may be related to whatever activity was taking place, as might the circular patches of ash nearby, though it should be emphasised that no emplacements for ceramic vessels were found. These finger marks created a corrugated surface, which may have helped ensure objects or raw/processed material did not slide across the floor. If the northern, larger room was unroofed in places, this would have been an ideal environment for drying cooked or partly cooked food, while being protected from the windblown sand by the brick walls of the building.

Given the interpretation of the Dokki Gel structures, a ritual purpose for the building cannot be ruled out, but a modest dwelling is perhaps more convincing. The presence of a fireplace, shelter from the wind, privacy (through the divided space but also an entrance with a door that could be closed) would provide the basic requirements. The lack of significant storage provision, unless employing archaeologically evasive materials such as basketry, may hint that occupation was only ever envisaged as temporary, or even on a rotating basis. The apparently short time-frame during which the building was in use prompts a further intriguing possibility. Was the building only destined to be used for a short period, perhaps for a festival or celebration of some kind? It is easy to envisage it being constructed within a day, using widely available materials (principally mud); bricks could even have been re-used from partly delapidated buildings (for ancient bricks laid out to dry at Amara West, see Spencer 1997, pl. 143a). Here one should bear in mind that temporary accommodation is often created for housing guests at weddings in the local villages, often through partly renovating an empty house.

Despite the purpose of building E12.11 remaining enigmatic, it is very clear that a conscious decision was taken to use an indigenous, not pharaonic, style of architecture, in a part of the western suburb that formerly consisted of orthogonally laid out mud-brick architecture, including a spacious Egyptian-style villa (Plate 3). No other buildings of this type are visible in the magnetometry survey, though if the structures are of modest scale and buried beneath a significant amount of later architecture or deposits, they may not register with such remote sensing methods.

Though the archaeological evidence does not allow a confident interpretation of the purpose of this building, this brief presentation should serve to draw attention to the presence of non-Egyptian architecture within pharaonic towns in Kush.

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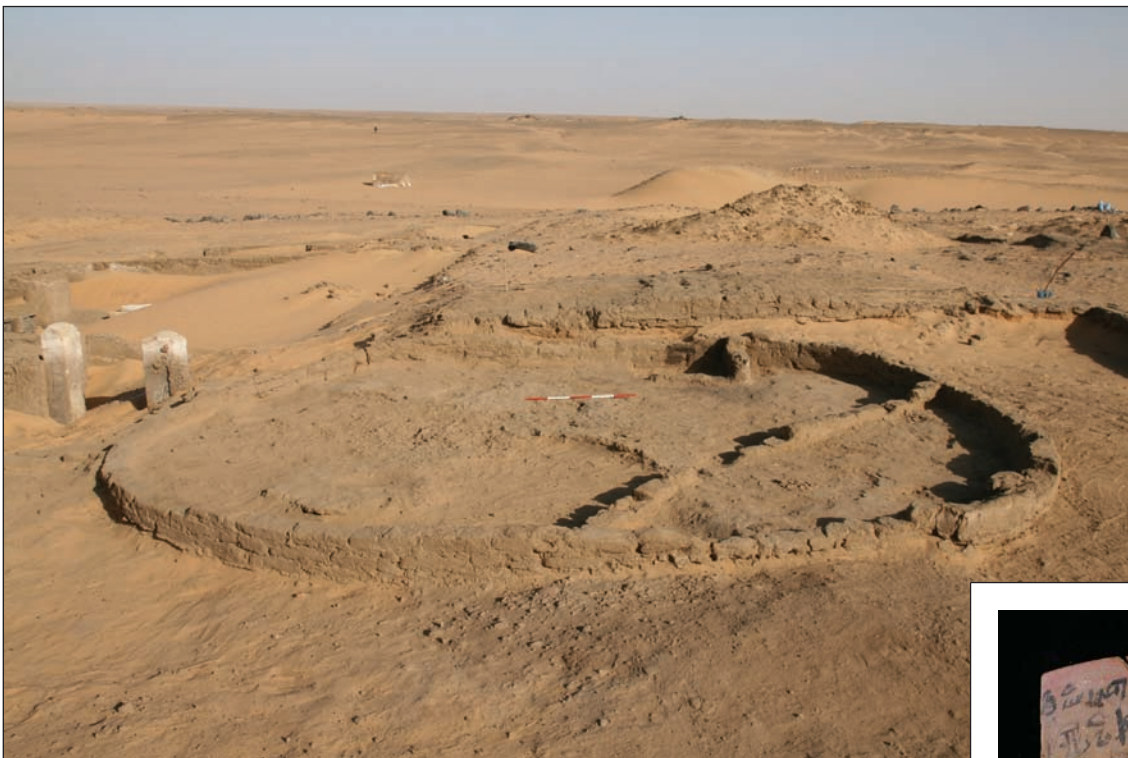
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*Colour plate IV.  
Amara West.  
Detail of the exterior  
face of wall 2145,  
view to the west.*



*Colour plate V. Amara West. View north over structure E12.11.*

*Colour plate VI. Amara West.  
Hieratic ostracon F2201, from  
deposit 2205 outside building  
E12.11.*

