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Published in: Catalhoyuk excavations

Publication date: 2014

Document version Early version, also known as pre-print

Citation for published version (APA): Yeomans, L. M. (2014). External Space 279 and Buildings 70 and 71. In I. Hodder (Ed.), *Catalhoyuk excavations: the 2000-2008 seasons* (pp. 527-539). London: British Institute of Archaeology in Ankara. Catalhoyuk Project (Series), Vol.. 7, British Academy Monographs in Archaeology, Vol.. 46, Monumenta Archaeologica, Vol.. 29

Chapter 27

External Space 279 and Buildings 70 and 71

Lisa Yeomans

Sp.279 refers to a large midden area, the physical limits of which varied as buildings where constructed on the edges of the area and as the dumping activities shifted. This wide exposure of midden in the 4040 Area differed from midden excavated in the South Area in that it was bounded on all sides by buildings rather than partially by the limits of excavation. As a result the Sp.279 midden had to be phased in respect to all the buildings around it. The large area of the Sp.279 midden could be seen back in 2003 when the area was first surface scraped (Fig. 27.1) and the extent of Sp.279 deposits excavated is shown in Fig. 27.2. In terms of the overall phasing, the sequence of deposits in Sp.279 as well as B.70 and B.71 was assigned to Level 4040 Level I (see Chapter 4, Fig. 4.30).

The earliest midden deposits exposed, but not extensively excavated, were towards the southern end of Sp.279 where they accumulated over the roomfill of an unexposed building only seen in the foundation trench excavated for the north shelter to the southwest of B.55. Subsequently, several buildings (B.66 then B.55 and B.64) clustered together went out of use. After a period of infilling within these buildings (Chapter 17; Chapter 21; Chapter 22) a series of large inter-cutting quarry pits were dug though parts of buildings B.55 and B.64. These were dug for the extraction of materials to be reformed into new bricks or reused as other construction materials. The pits were left open for some time before midden deposition in the pits. The limited sequences of excavated deposits from B.70 and B.71 are also discussed in this section as these building were built as the midden sequence accumulated.

One aspect that is worth bearing in mind when discussing this area is the topography of the area after the quarrying. This may have influenced the type of use of the area. For instance, the midden in the large quarry pits was not the finely laminated midden deposits usually found that were created by people walking and undertaking activities and creating fire spots. After the bases of pits had infilled and the area was relatively flat again, a number of fire spots were used in the area. But there were large quantities of pottery in Sp.279 midden when compared to the Sp.133 midden. This may be a product of temporal variation, but it may also have been produced by functional differences between Sp.279 and other middens. An additional difference was the high density of plant remains recovered from heavy residue in the Sp.279 midden. Analysis of phytoliths from several of the midden units in Sp.279 also showed a comparatively high representation.

Space 279 Phase D

(Fig. 27.3 Harris matrix on CD)

For a summary of the stratigraphic sequence of the phases see inset in Fig. 27.3. A single midden deposit from Phase D has been excavated from within Foundation Trench 14. This midden deposit (14931) was excavated overlying the infill of an earlier, probably narrow unexposed building between B.66 and B.55. Although only a small area of this deposit was excavated in Foundation Trench 14 it yielded significant bone, ceramic and obsidian assemblages from its finely laminated sequence of deposits. Examination of the tip lines of the midden deposits in the sections exposed by the foundation trenches for B.41 indicated that the unexcavated midden in the southern part of Sp.279 would probably have been very broadly contemporary with this midden. Analysis of the finds from the midden (14931) showed that a worked bone 14931.x1 recovered was a split distal sheep metatarsal with converging triple incised lines as decoration. Additionally the medial section of an inscribed Canhasan III point 14931.A1 was found in the deposit. This tool had been resharpened at least twice before being discarded in the midden and previous finds of these artifacts on the East Mound were both from Aceramic Neolithic contexts in Sp.181 (Level Pre-XII.A and Level Pre-XII.C). The recovery of an example in a later midden may suggest that it was a curated heirloom. A single mini clay ball was found in this deposit.

Building 71

B.71 (Sp.317) was only excavated to its last phase of use in the northeast corner and it was heavily truncated by the foundation trenches for B.41 (Fig. 27.4). Unexcavated midden deposits to the south obscured the full plan of the building. From the sections provided by the foundation trenches for B.41, it is known that the building was constructed on the unexcavated midden deposits in Sp.279 Phase D. The phasing of the occupation and the abandonment of the building cannot be tied into the phasing for the midden area but the phases of occupation and closure are discussed here subsequent to the construction of the building. During the occupation of B.71 midden deposits assigned to Phase Sp.279 Phase Bi accumulated against the external walls of the building.



27.1. *Photograph taken after the surface scrape showing the Sp.279 midden truncated by the wall founda-tions of B.41 (Photograph by Jason Quinlan).*

Building 71 Phase C: Construction

(Fig. 27.5 Harris matrix on CD)

The walls of B.71 were built in construction cuts truncating the Sp.279 Phase D midden deposits. After construction of B.71, Sp.279 Phase Bi midden deposits accumulated externally to this building. Not much more information can be provided on the construction of the building, as this phase was only visible from the sections. There was evidence that the walls suffered from slumping as a result of being built over midden deposits.

Building 71 Phase B: Occupation

The floor sequence in B.71 was not excavated; only the uppermost surface (14923) was recorded in plan but not removed from the northeast corner of the space. A single find lay on the small area of this exposed surface 14923.x1 and was a greenstone axe.

Building 71 Phase A: Closure/infilling

The floor of B.71 was sealed by a layer of roomfill (14917) measuring 0.2m in thickness. This deposit contained mudbrick fragments that could have been from the demolition of

the walls of the space. A flint knife 14917.x1 and five undiagnostic pottery sherds were recovered from this layer. As mentioned before, the phasing of the closure of the building cannot be tied into the phasing of the midden although it seems probable that the midden formation in Sp.279 Phase Bi would have been contemporary to the occupation of the building. The infill of B.71 was sealed by the topsoil.

Space 279 Phase C: Quarrying

A series of inter-cutting pits (10325)/(10387)/(13130)/ (13135)/(14148) was dug though the remains of the partially infilled buildings, B.55 and B.64, to extract material from the walls and other features for reuse. No midden had accumulated in this northern part of Sp.279 at the time that the quarry pits were dug and perhaps this partially influenced the decision to quarry in the northern part of Sp.279.

The cuts of the pits were circular or oval in plan with steep sides and flat bases. The pits varied in size and depth; the deepest one was 2m in depth and together the inter-cutting pits covered an area of 5.65m from north to south and 6.28m from

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Figure 27.2. *Plan showing the extent of the Sp.279 midden deposits excavated (Plan by Camilla Mazzucato, Cordelia Hall and David Mackie).*



Figure 27.4. *Heavily truncated B.71 built on top of unexcavated midden (Photograph by Freya Sadarangani).*

east to west. The pitting was concentrated in the area of the double walls around the northwest corner of B.55 that would have provided a good source of building material. The pitting then expanded from this area as other building materials were sought from the quarry. Stratigraphically the pitting occurred at the same time and all the pits merged into one uneven truncation of the underlying buildings (Fig. 27.6). John Swogger reconstructed the pit digging (Fig. 27.7) as it may have looked as people were extracting material for building bricks. In the background B.60 is visible since a later building was constructed upon the remains of B.59 and it is suggested that the occupation of B.60 overlapped with the pitting activity.

After the digging activity the pits were left open for some time as several deposits of washed-in material and material from slumping accumulated. For example, fill (13131) was mid grayish brown silty clay and was washed-in roomfill from B.64. A similar deposit (13136) was interpreted as slumping of the northwest side of the pits and it seemed to represent a "layer of roomfill probably from B.64 that had slumped into pit (13130) suggesting that the pit was open for a while before being backfilled" (US 13136, LY, 16.07.06). Relatively few artifacts were recovered from these deposits. 13131.x1, however, was an obsidian point which probably originally derived from the infill of B.64.

Space 279 Phase B

Space 279 Phase B(i): Midden formation

To the northwest of B.71 a midden (14924) accumulated outside the external walls. This was the same as deposits (10396) and (14916) but truncated by the foundation trenches for B.41 into separate blocks of midden stratigraphy. These middens formed within the area of the walls of the abandoned building



Figure 27.6. *Quarry pits truncating the remains of a sequence of buildings that ended with the abandonment of B.55 and B.64 (Photographs by Jason Quinlan).*

B.55. There was a high density of a diverse range of material in these midden deposits. The animal bone showed fairly low weathering of the bone, with little digestion or burning. There was evidence of filleting, dismembering and consumption.

Truncating the midden deposits was a pit F.2034. The cut (10381) measured approximately 0.67m in diameter with a depth of 0.56m. The fill (10380) of the pit was midden but was not laminated, possibly suggesting that it was redeposited midden from the layers that the pit had been cut through. The function of the pit was obscure but perhaps it served to quickly bury a specific concentration of waste within the midden area. The analysis of the faunal remains suggested a similar interpretation, as the bone was exceptionally well preserved. It consisted mainly of sheep/goat bones with some equid and a little cattle. There was a lot of carnivore bone as well as some large bird and fish remains. The pit contents were interpreted as direct deposition of significant amount of daily consumption remain waste with an unusual deposition of whole carcasses as opposed to partially butchered carcasses.

There was a burial F.2031 at the interface between the wall remnants of B.70 (see below) and the midden. The



Figure 27.7. Reconstruction of quarrying activity (Illustration by John Swogger).



Figure 27.8. *Figurines recovered from midden deposit (10396) (Photograph by Jason Quinlan).*



Figure 27.10. Neonatal skeleton (10388) disturbing the bones of a slightly younger neonate (10384) (Photograph by Elizabeth Lee).

skeletal remains consisted of two neonates. The bones of a slightly older baby (10388) were disturbed by the burial of a neonate (10384). No cut was visible and it could not be ascertained whether the bodies had been laid into a cut in the top of the fill of pit F.2034 before the construction of B.70. Both of the individuals were positioned with their heads to the west; the bones of skeleton (10384) were disturbed whilst those of skeleton (10388) indicated that the individual was lying on its back with arms to the side of the body, the lower legs were crossed and flexed alongside the lower body (Fig. 27.10). Given the stratigraphic position of these burials it seems possible that they may have been foundation burials prior to the construction of B.70 as burials in midden areas are not common. The isotope values of the two skeletons differed, with a slightly lower nitrogen isotope value in (10388) possibly reflecting the difference in age of the two skeletons (Volume 8 Chapter 13).



Figure 27.11. Lowest midden fill in the base of the deepest part of the quarry pits truncating earlier buildings B.55 and B.64 (Photograph by Jason Quinlan).

Space 279 Phase B(ii): Midden deposition in quarry pits

Approximately equivalent temporally to the midden in Sp.279 Phase Bi, but separated stratigraphically by the foundation trenches for B.41, was a series of midden deposits that accumulated in the pits that had been left by the earlier quarrying. Excavation methodology for the midden within the pits attempted to avoid cutting across depositional layers but defining individual units was problematic when much of the deposit consisted of laminated, discontinuous tip lenses. Overall these tip layers sloped towards the centre of the pits but many were broken and impossible to follow. Occasionally, however, continuous lenses that were heavily burnt and charcoal-rich were encountered and these were usually associated with light, but slightly variable gray sandy silt lenses that could be followed as distinct excavation units. The presence of discrete events that could be identified in this way suggested that waste from a particular, possibly large scale, activity was regularly discarded into the midden area.

In the base of the deepest cut was a layered ashy midden deposit (14187) (Fig. 27.11). The animal bones in the deposit were very well preserved with minimal surface damage and sharp edges. However, a number of the long bones had their epiphyses gnawed off by dogs and there were a few digested bones suggesting that dogs had some access. A very low proportion of the bone had been burnt and where heat damage had affected the bones it only occurred at low temperature. Taxa represented by the animal bones included cattle, sheep/ goat, equid, pig and dog with sheep/goat dominating the assemblage. The body-part representation of the sheep/goat bones indicated that the lower limb bones were considerably under-represented indicating that primary butchery waste was absent from the assemblage. The worked bone portion of the assemblage was, compared to the number of pieces in Sp.279 Phase Bi midden, relatively low. Four pieces were recovered and three of these were points and the last one was either a point or a chisel. No clay balls were found.

The lowest fill in the quarry pits was sealed by further midden deposits (12972)/(13140)/(14186) spreading across the western part of the pitted area. The midden deposit against the northern edge of the pit cut was interwoven with lenses of roomfill that must have eroded from the edge of the pit as the midden was accumulating. This indicated that the rate of deposition was not very rapid; the edge of the pit was giving way as midden deposits were forming. The feathered lenses of roomfill at the edge of the midden deposit were not excavated separately. It is possible that people accessing the midden area accelerated the weathering process of the edges of the pits as they stood, walked and collapsed parts of the sides of the pitting. The three midden deposits produced a huge amount of finds during their excavation.

West of deposits (12972)/(13140)/(14186) was a similar laminated midden deposit (13129) cut by a large pit (13128). Only the worked bone was recorded from deposit (13129) including a fragment of a needle thrown away because it was broken 13129.F1, a complete point made on an unfused split distal sheep/goat metapodial 13129.x2, the tip of an additional broken point 13129.x3, a fake red deer canine bead 13129. x5 broken before discard and part of needle made on split rib 13129.x7. Two whole mini clay balls and three clay ball fragments were also recovered from this context.

The pit (13128) that truncated midden deposit (13129) was backfilled with midden but the fill (13127) was not laminated suggesting that it was deposited as a single event; the fill was interpreted as redeposited midden that had been shoveled into the pit after it had been dug. As with the slightly earlier pits, pit (13128) could have been dug to extract building material, perhaps for a small building event or repair in the local area requiring similar building materials. After sufficient building material had been removed, the pit was rapidly backfilled with midden. As pottery refits have been found between the underlying midden and the fill (13127), the backfill must have derived from the immediate vicinity. No slumped-in deposits were found in pit (13128) indicating the rapid infill of the lowest part of the cut. Fill (13127) was studied as a priority unit with the results from the animal bone suggesting that it was typical of midden material that had been quickly deposited. The pottery sherds were not abraded and the large size of the sherds also suggested rapid deposition. Some redeposited human bone was also present. The obsidian assemblage included projectile points and scrapers indicating the presence of tools used for hunting and hide working. One fragment of a clay ball, two mini clay balls and a fragment of a mini clay ball were also recovered. One of the most impressive finds was a broken pot with human and aurochs face decoration. The old breaks of the pot indicated that it had been discarded broken and then had become distributed though the midden as a result of later cutting and activity, although much of the

pot was recovered from (13127). The pot was a unique find in the pottery assemblage of Çatalhöyük (Figs. 27.12 and 27.13) and differed substantially from the typical pots found in the midden (Fig. 27.14).

Also stratigraphically above midden (13129) was a concentration of bone (13107) that may have represented the deposition of waste from one event. Analysis of the animal bone indicated that, unusually, bones from cattle-sized animals were more frequent than bones from sheep-sized animals and the bones were not as heavily processed as those normally found in the middens. Carnivores had gnawed a substantial portion of the assemblage and the species represented were cattle, equid, boar, deer, sheep/goat and wild sheep. The body-part representation was biased towards the meat bearing bones of the skeleton and the lack of heavy processing was more indicative of post-consumption waste where not much effort had been expended on gaining as much nutritional value from the carcasses as possible. Aside from the general animal bone, a number of worked bones were recovered. These were the base of an unsplit distal sheep/goat tibia tool, possibly a point 13129.F109, a small fragment of a plastering tool made on a scapula blade 13129.F121 and a pre-form for a point to be made on a split sheep/goat metacarpal 13129. F190 which displayed traces of the grove and break technique for splitting bone. Decorative items of worked bone were represented by a tubular bead that had been used for a long time and was well polished 13129.F198. Two mini clay balls and three fragments were also recovered.

Additional midden deposits (103860, (10394) and (10324) were excavated from the midden pits but these were separated stratigraphically from the other midden units by the large foundation cut for the B.41. (14183) was a very large midden unit excavated from the eastern side of the pits. The bone assemblage was large and about a third of the bone was carbonized suggesting that there was some burning in situ within this fill. There was very little evidence of trampling or abrasion indicating that the pit was infilled rapidly. In general, the bones were heavily processed but there were also a few larger bones also suggesting the material was buried rapidly and the space not heavily used for other activities. The species represented by the bones included sheep/goat, cattle, boar, equid, dog and badger. Cattle and sheep/goat were found in approximately equal proportions which is unusual for the midden deposits. Overall the faunal assemblage was interpreted as a mixture of post-butchery and post-consumption waste with the latter more common. One hundred and fifty three mini clay balls were also recovered from this midden deposit, all made from the same dark gray clay (Fig. 27.15). One had the impressions of child's teeth marks on the surface. An extensive collection of worked bones was also recovered from the midden. These included 14 abraded points made on a split distal metapodials (14183.F1, 14183. F4, 14183.F5, 14183.F6, 14183.F123, 14183.x2, 14183.



Figure 27.12. Pot decorated with a human and aurochs face (Photographs by Jason Quinlan).



Figure 27.13. Illustration of the pot decorated with a human and aurochs face (Illustration by Kathryn Killackey).

x12, 14183.x18, 14183.x20, 14183.x21, 14183.x26, 14183. x27 and 14183.x31). (Fig. 27.16) The only decorative piece of worked bone was a small round bead made from antler 14183.F125 but a shell bead was also recovered 14183.L1. The two female figurines that were recovered from this midden are shown in Fig. 27.17.

Space 279 Phase B(iii)

In the western part of Sp.279 the midden deposits overlay

B.66. As well as the more typical midden deposits, the sequence was interspersed with deposits representing *in situ* burning. There appeared to be a repeated sequence comprising an upper loose ashy material, then a very distinctive layer of loose pale greenish-gray material, underlain by a dark brown/black, charcoal rich burnt layer and finally a layer of scorching where the underlying material had been heat affected. There was often a lot of animal bone associated with these horizons. These deposits generally lay in a shallow



Figure 27.14. Typical pots recovered from the Sp.279 midden (Photographs by Jason Quinlan).



Figure 27.15. Mini clay balls recovered from midden unit (14183) (Photograph by Jason Quinlan).



Figure 27.16. *Highly polished point made from a sheep/goat distal tibia (Photograph by Jason Quinlan).*

cut that was circular in plan. The unit numbers of burning sequences are: (13139)/(13141)/(13142)/(13150), (13161)/(13164)/(13165)/(13166), (14127)/(14132) and (14135)). For a discussion of interpretations of this type of *in situ* burning in middens see Volume 8 Chapter 3.

One example of the repeated burning events was provided by (13142) This was described at the time of excavation as a "deposit of dark brown/black burning with frequent charcoal and burnt animal bone, lying in shallow cut with the underlying layer scorched" (US 13142, RT/RK, 17.07.06). The animal bone from this unit was dense and consisted almost entirely of burnt bone. The bones were only carbonized, however, and there was no calcined bone indicating that the temperature of their burning had not been very high. Sheep/goat bones were the most common species and these bones tended to be highly processed and consisted of all elements suggesting the presence of more or less complete carcasses. Bones of animals killed at all ages were present including a lot of bones from infantile and early juvenile animals. Other species included equid, cattle, boar and badger with each of these species just represented by a few bones. Additionally, there were some bones of birds and fish. Overall, the faunal assemblage was interpreted as a rich, mixed midden deposit. The bones did not seem to have been directly related to the burning event that took place in the pit as they were not burnt enough to have been in a fire for very long, but appeared to have been burnt after burial. The entire butchery process of sheep and goats seemed to be represented within material below a fire. A single abraded complete bone point was also found in the unit 13142.x1. Interestingly, one of the largest assemblages of clay balls from the Sp.279 midden was also recovered from this unit. In total, 23 mini clay balls and 6 mini clay balls fragments were recovered as well as a single clay ball fragment.

Aside from burnt midden layers in shallow pits, there were a number of other units that appeared to derive from specific activities or dumps of material. There were also two possible deposits of cess material, identified by their distinctive green color. One of these deposits (13172) was a very thin crust of material and limited in extent. The other (14121) was a fairly large deposit up to 0.3m thick but truncated by



Figure 27.17. *Female figurines* 14183.x11 and 14183.x17 (*Photograph by Jason Quinlan*).

the foundation cut for B.41.

Another unusual deposit was (13183) which had a distinctive pink color, a high concentration of animal bone and also a high density of phytoliths. It lay directly under the thin crust of cess material (13172) and therefore may have been associated. Analysis of the phytoliths showed the highest presence of wheat chaff and wild grass husks. There were also high proportions of wild grass leaves/stems which may have entered the record with the wild grass husks, possibly within dung fuel.

More typical midden deposits were interspersed between the deposits representing burning and these often contained a large amount of animal bone, as well as significant numbers of beads, worked bone points, obsidian projectile points and figurines. Among these deposits (14136) was a "fairly thick layer of loose ash that is probably midden deposit but it might be associated with destruction of B.66" (US 14136, RT/RK, 10.08.2006). The animal bone from this layer was dense and the faunal analysis suggested that it was more like an accumulation of rubbish rather than a demolition event. Preservation of the bone was good with the edges of the bone fairly sharp, having minimal evidence of trampling or abrasion. Only 2-3 per cent of the fragments were burnt with the burning that occurred taking place at low temperature. The bone was heavily processed with few complete bones but the distribution of the skeletal elements of sheep/goat bones suggested that most parts of carcasses were discarded to form part of this midden layer and juvenile sheep/goat bones were more common than adults. Cattle were well represented with cranial, long bone and foot elements mostly but large mammal axial skeleton was also present. Boar, equid and red deer bones were present but rare within the assemblage. Fox was represented by part of a hind limb and there were a large number of bones from young but large species of bird.

The lowest midden layers ((14145)/(14152)/(13181)/(13194)/(14155)) below (14136) infilled B.66 and were mixed with wall collapse from this building. Details concerning the material found in these units are described in the B.66

write-up (Chapter 22).

There was no stratigraphic link between the midden deposits on the eastern side of the B.41 foundation trench and the midden sequence described above. Therefore, it is possible that the lower part of the sequence just described may be contemporary with the pre-B.70 middens on the eastern side of the B.41 foundation trench. The unexcavated midden (14133) at the base of this sequence was probably the same as (10396) which underlay the construction of B.70 but postdated the construction of B.71.



Figure 27.19. *External face of west wall showing the building constructed on the uneven underlying midden deposits (Photograph by Freya Sadarangani).*

Building 70

B.70 was badly preserved because of its proximity to the surface and truncation by late foundation trenches for B.41. It was built overlying Sp.279 Phase Bi midden deposits and only a single space (Sp.267) within B.70 was preserved. As none of the walls were plastered, it may have formed a storage room in the building but there was also evidence of a hearth suggesting it was a main room. It seems probable that this building was only in use for a short period of time.

All four walls of the space were present although the west end of the northern wall was truncated by a pit (10376) and the northern end of the western wall had eroded away. Internally the room measured 3.93m by 2.62m. The floors from the space had eroded away apart from in the southwest corner. B.70 was built to abut the northern walls of the pre-existing B.71. Like B.71, it was built on midden but, instead of being built in a construction cut, the walls were set on a foundation course of mortar. The construction of B.70 occurred after the deposition of Sp.279 Phase Bi midden deposits but, as with B.71, the phasing of the occupation and abandonment of the building could not be tied into the midden sequence. The two buildings were, however, probably in occupation at the same time at some point during their use. After the construction of the B.70, midden continued to accumulate against the western wall of the building so Sp.279 was still functioning as a midden area even though the area of Sp.279 had been reduced in the eastern side. The focus of the midden formation shifted to the northwestern corner of the external area. B.70 has been completely excavated.

Building 70 Phase 1: Construction

(Fig. 27.18 Harris matrix on CD)

The walls of Sp.267 were constructed on a foundation course of mortar overlying midden. The western wall F.2750 survived to a height of 0.55m whereas only one course survived in the southern, eastern and northern walls (Fig. 27.19). A floor make-up layer (14907) survived in the southwest corner of the room and was laid after the walls had been constructed.

Building 70 Phase 2: Occupation

The primary floor was a highly fragmented white plaster surface (14904). Two hearth fills (14906) and (14905) were excavated from the area close to the western wall. The primary surface was also sealed by a further white plaster surface (14908) before the building was abandoned.

Building 70 Phase 3: Closure/infilling

Sp.267 was infilled by a homogeneous roomfill (14903) 0.2m in thickness which had been truncated by late graves.

Space 279 Phase A

Further layers of midden (12980/14179/14182) overlying the infill of the northwest corner of B.55 and B.64 were also excavated spreading over the top of the quarry pits. Midden deposit (12980) (Video 27.1 http://www.catalhoyuk.com/media/video/2006/20060708 4040 01.html) was selected as a priority unit for study by the lab teams with the animal bone typical of everyday consumption, and providing evidence of rapid burial and of low temperature burning, perhaps in situ. The pottery sherds were large and un-abraded indicating that people walking across the material had minimally affected them. A high proportion of the obsidian consisted of tools rather than waste from production. They were mostly items that had broken and then been discarded and during use would have served as cutting tools, but there was also evidence for drilling activities. To the west the midden layers close to the top of the stratigraphic sequence, near the topsoil, were more likely to be mixed and were excavated as (14154)/ (12653)/(12648)/(12652)/(12654)/(13138).

On the southern and eastern side of the truncation by the late foundation trench, a number of midden deposits respect-



Figure 27.20. West-facing section though the midden formation in the earlier quarry pits (Photograph by Lisa Yeomans).

ing the western wall of B.70 were excavated. The sequence (14900)/(14901)/(14902)/(14912)/(14922)/(10348)/(10369) consisted of blocks of stratigraphy either side of the foundation trenches that were equated in post-excavation. These midden units were again at the top of the stratigraphic sequence and there is the possibility, given the proximity to the surface, that some of the midden layers may have been mixed.

At the top of the midden sequence in the northern part of the area were deposit (12981) and (12983) containing lenses of mudbrick collapse that seemed to have washed into the midden area. There was also a fire spot (12984) where *in situ* burning had taken place.

Discussion

Sp.279 was an external midden area that would have been in use for a long period of time with the borders of the area shifting as buildings came into and went out of use. The earliest phase of the midden remains unexcavated. This midden infilled a number of abandoned buildings below the southern part of the space. B.71 was built over the top of these midden deposits and further midden accumulated in the central area of Sp.279 filling abandoned buildings B.55, B.64 and B.66 as well as the quarry pits. B.70 was constructed after this midden formation and abutted B.71. The midden deposits that were later than this building were close to the surface and were possibly mixed though redeposition and other taphonomic processes.

There are a number of patterns that are visible from the discussion of the Sp.279 data presented above. Faunal analysis has shown that the bones discarded into the midden were dominated by butchery waste and post-consumption waste. Most of the bones had been heavily processed for marrow and bone grease extraction. The main taxa represented in the Sp.279 midden were sheep/goat. All parts of the skeleton were discarded in the midden and generally the pattern of body-part distribution was what would be expected for whole animals.

Activities were also taking place in the midden and these left signatures, particularly in the area where there was level midden formation above B.66. Shallow pits were evidently used for fire allowing the processing of food or heating of materials in the external area. There seems to be some relationship between the occurrence of layers of bone burnt through indirect contact with fire and concentrations of mini clay balls, although the survival of these usually unfired balls may have been produced by the burning itself. Concentrations of bone mixed with mini clay balls may have been placed in the bases of scoops as a means of retaining heat. The clearest case of this was deposit (13142). The mini clay balls, however, were not always used in these shallow fire pit features. The largest concentration of mini clay balls was found in the large midden layer (14183); in section (Fig. 27.20) it is clear that in this deposit there were a number of fine burnt layers that were difficult to excavate as individual lenses. It seems that the upper part of the infilling midden sequence of the quarry pits also contained a wide range of activity events. The results from the botanical analysis (13164) indicated that dung was at times used as fuel in these activities and the presence of the major cereal types may be an indication of the foods being heated.

Acknowledgements

This sequence was excavated piecemeal from 2004 to 2007 under the supervision of Lisa Yeomans, Richard Turnbull, Simon McCann and Freya Sadarangani. They were assisted by students Kelsey Traher, Silvana Rosenfeld and Rachel King.