

CHAPTER 6

ABU TBEIRAH AND AREA 1 IN THE SECOND HALF OF THE 3RD MILL. BC



Abu Tbeirah

Excavations I. Area 1

Last Phase and Building A – Phase 1

edited by
Licia Romano and Franco D'Agostino



Collana Materiali e documenti 44

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*This book is dedicated to Amir Doshi,
whose friendship is the pillar
of our work at Abu Tbeirah*

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CHAPTER 6

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IN THE SECOND HALF OF THE 3RD MILL. BC

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6.1 ABU TBEIRAH: OVERVIEW OF THE SITE

Abu Tbeirah is located 7 km south of Nasiriyah, in a petrol area known as Al-Rafidayn, and is divided in four sectors by traces of an ancient channel running north-west to south-east (flanked by a secondary and smaller artificial channel) and by a pipeline running north-east to south-west (Figs 6.1-2). The site covers an area of approximately 42 ha that in different parts was damaged by large modern pits and trenches (see § 2). The north-east sector is the highest portion of the site and reaches a maximum height of 4.30 m in respect to the surrounding area, that has an elevation of 4 m above sea levels.¹ On the surface, pottery and other materials are not particularly abundant, due to erosion, with the exception of the northern part of the mound (and some isolated spots of the other sectors) where archaeological materials were brought to the surface by modern activities and by deep gullies excavated by rainfall, more pronounced in this higher sector of the Tell.² Sporadic findings, both from the surface and the excavation of the south-eastern area, revealed a possible occupation since the Uruk-Jemdet Nasr Period. However, it must be stressed that our periodization can be affected by the strong erosion and salinization of the Tell surface: at present it is not possible to determine how much of the site has been eroded and, moreover, the low amount



Fig. 6.1 Abu Tbeirah satellite imagery (24th September 2013). © DigitalGlobe, distributed by e-GEOS.

of artifacts dispersion on the surface can hide a chronological span wider than that detected until now.

The geological and palaeo-environmental setting described (§§ 3-5) allows to reconstruct a brackish water environment surrounding Abu Tbeirah in the 3rd mill. BC, with sedges, reeds, rushes, palms and cereal fields. The possible reconstruction of the position of the ancient shoreline seems to point towards a close proximity of Abu Tbeirah to the sea, a resource that was surely exploited by its ancient inhabitants.³ The analysis carried out by J. Jothery (§ 5) of the complex canalization system, characterizing southern Mesopotamia during the

¹ The absolute elevation of the Tell will be specified in the next publications. Due to problem with border customs, the instruments for geo-referring of the site were only recently reacquired from Basra airport. Without undermining the overall interpretation here presented, plans and sections were realized using relative elevations.

² On the survey of this area see D'Agostino - Romano 2017.

³ See § 13 on the sweet water and salt water fishes and shell fishes recovered during the excavation.

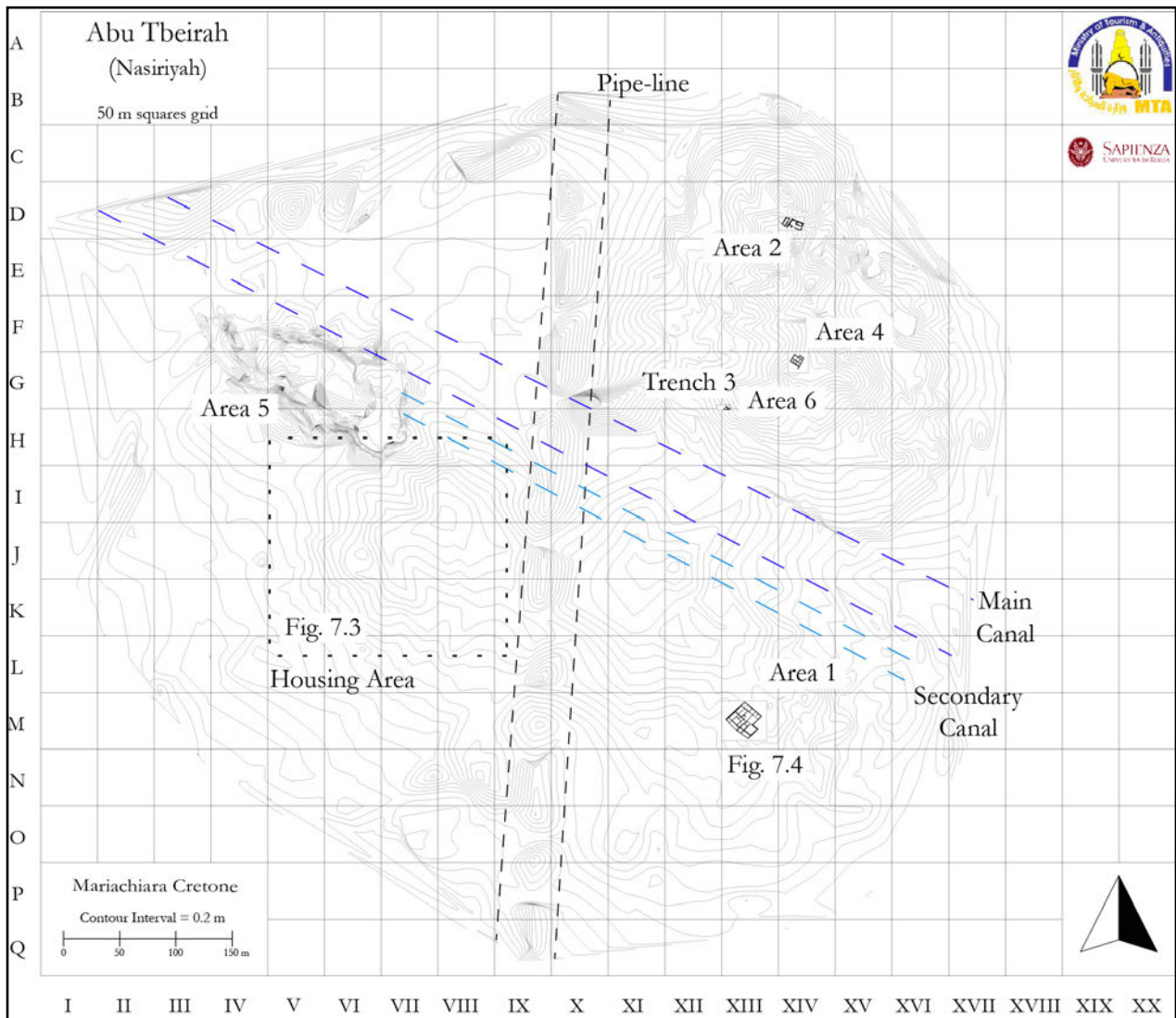


Fig. 6.2 The topographic grid is based on squares of 50 × 50 meters, oriented to the magnetic north. Each square takes the name of its north-west pinpeg, with a capital letter and a Latin number. Every main square is divided in 100 little squares of 5 × 5 m, indicated by a small letter and a number. Realized by M. Cretone.

3rd mill. BC and Abu Tbeirah Area in particular, suggests the possible connection with Ur through the main channel crossing the site. This channel coming from Ur crosses the small settlement of Tell Ahaimer, a 3rd mill. BC site located 1 km north-west from Abu Tbeirah (see Fig. 2.6) and almost destroyed by modern activities and Bedouin encampments. A rapid survey made during 2018 did not reveal a significant ancient artifacts dispersion, though rare fragments of ED III/Akk. pottery were found scattered especially along the ancient channel benches. Notwithstanding the extremely poor state of conservation of the site, with large modern dump pits, a possible dependence of Tell Ahaimer from Abu Tbeirah, given the difference in size, the apparently coeval occupation and the reduced distance between the sites, can be hypothesized.

Some general considerations about the ancient urban layout of Abu Tbeirah can be derived from the analysis of satellite imagery and the topographic characteristics of the Tell. The two channels, running parallel across the site, were the two main elements according to which the settlement was organized. Moreover, satellite imagery⁴ allowed to identify different mud-bricks buildings, revealed on the surface by the darker traces left by the buried walls. In particular, in the south-west area (Fig. 6.3) a dense settlement is easily recognizable, rising aside what looks like a wide straight road oriented from south-east to north-west. According to the few materials

⁴We are deeply grateful to E. Stone, Stony Brook University, that kindly granted us the satellite imagery discussed here.



Fig. 6.3 Abu Tbeirah south-west area. Courtesy of the Digital Globe Corporation.

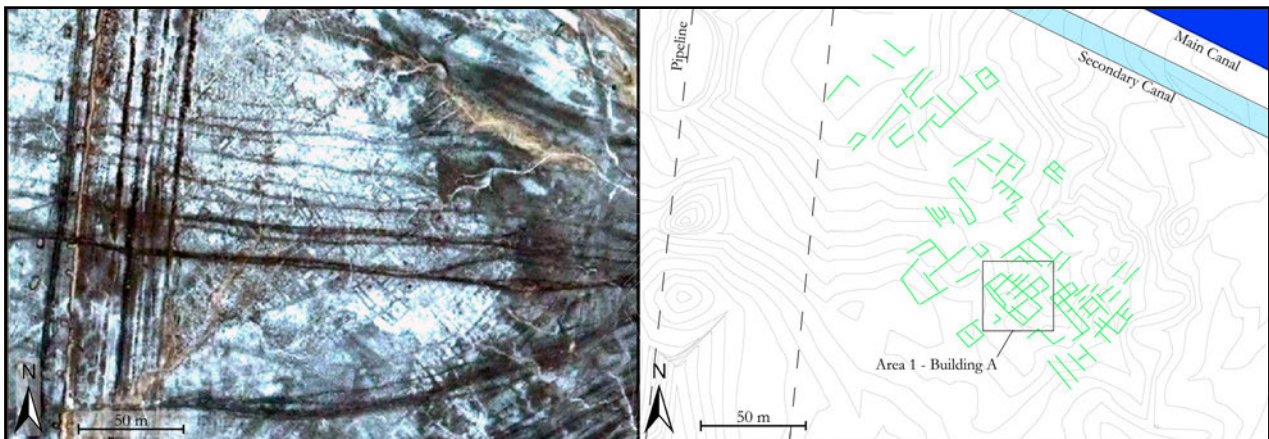


Fig. 6.4 Abu Tbeirah south-east area. Courtesy of the Digital Globe Corporation.

recovered on this section of the Tell a dating to the end of the 3rd mill. BC is hypothesized.

The south-eastern area (Area 1 - Fig. 6.4) shows a large articulated complex of buildings which seem to form a unit and that, given the size, might have played a peculiar role in the life of the settlement. Building A, which is described in its last occupational phase in § 8, seems to be the southernmost part of this complex. The excavations carried out in Area 1 involved a surface clearance of 1000 sqm while the excavations were realized only in correspondence of the Building A structure. Consequently, the presence of a connection between Building A and the huge structure made of small rooms visible north-eastward is still not proved on the ground.

The north-western area of the Tell suffered the heaviest damages: for almost all its extension there are modern large and deep pits and the corresponding heaps of unearthed soil.

Other excavations have been carried out so far in the north-eastern sector of the Tell (Areas 2, 3, 4 and 6 - Fig. 6.2) and in the Harbour (Area 5). The north-eastern part shows an occupation at least until the Amar-Suena reign on the basis of two half-bricks discovered in the foundation of Building E (Area 6) in 2017 (see § 16).⁵ Area 2 and 4 present instead other apparently domestic buildings though realized with bigger walls than those of Area 1 Building A.⁶ At present the artifacts recovered in this part of the Tell, with the exception of Area 6 Ur III pottery, do not show substantial differences with the assemblages in Area 1, though it is possible to assign this context to a later chronology.⁷ Area 5, as well as the houses quarter south of the Harbour - which have a low

⁵ D'Agostino - Romano *in press a*; *in press b*.

⁶ D'Agostino - Romano 2015; *in press a*.

⁷ Area 2 pottery seems comparable to the Area 1 assemblages, while Areas 4 and 5 show pottery shapes similar to those of the ED III/Akk Transition but with (at least from the autoptic observations) slightly different fabrics.



Fig. 6.5 Modern bricks on the Tell surface.

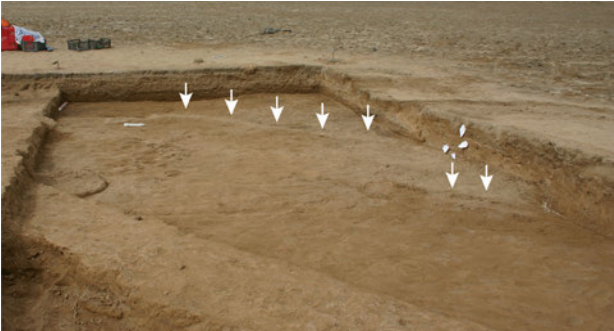


Fig. 6.6 Accumulation of salt between strata. View of Grave 4-5-13 during the excavation. The white arrows indicates the limits of the cut.

artifacts dispersion - seem to be more correlated to Area 4 findings, based on the few pottery fragments recovered. Further excavations and studies are needed to have a clearer chronological correlation among Abu Tbeirah areas.

6.1.1 POST-DEPOSITIONAL ALTERATIONS AND TAPHONOMIC AGENTS

In the following section information regarding post-depositional alterations and taphonomic agents, gathered mainly through direct experience on the field, will be summarized. Though these factors described below could have characteristics connected with the geological setting of Abu Tbeirah, they are commonly attested in all southern Mesopotamia. However, due to the span separating modern investigations in southern Iraq and the previously undertaken archaeological activities, it might be useful to describe the experience gained, in most cases in an empiric way, in digging and “reading” Abu Tbeirah’s soil and in analysing its artifacts.

6.1.1.1 Salinization

Salinization has always been an important problem for the inhabitants of the Mesopotamian alluvial

Plain⁸ and it is also a disturbing agent during the excavation of ancient settlements. The salt crystals infiltrate the soil and then “burrow” towards the surface through the empty spaces generated by differences in consistency. For example, the maximum concentration of salt crystals is usually found on the vase/shard surfaces (both external and internal in entire vessels) and inside bones. In particular, bones and pottery shards (especially those coming from the surface) are flaked apart due to the accumulation and expansion of salt crystals. In Fig. 6.5 the flaking of a modern brick on the surface of the Tell is shown: this gives an idea of the degree of alteration to which the surface findings underwent and explains the low surface dispersion and the small amount of information coming from the survey.⁹

In combination with the continuous passing of wheeled and heavy vehicles on the Tell in the years preceding the beginning of the excavation,¹⁰ salt accumulation caused a peculiar phenomenon: the compression realized by vehicles also affected the underlying layers, causing post depositional accumulation and creating white parallel sub-traces that can continue for at least on meter under the original surface (Fig. 7.1).

The stratigraphic units are often very compact, cemented by salt accumulation, making the excavations more complicated: for horizontal strata not pertaining to important contexts heavy excavation methods (picks) are used, while for more delicate contexts, such as burials, it is necessary to use water in order to soften the soil and allow a more careful excavation. Nevertheless, the use of water causes further accumulation of salt crystals and damages to the findings, thus this procedure is limited only to peculiar situations.

The accumulation of salt between different strata is however a good indicator for understanding the stratigraphy: the extreme difficulty in discerning clay strata one from the other is sometimes mitigated by the accumulation of salt at the interface of the units of stratigraphy (US) (Fig. 6.6). This however means that limits between US are usually diffused, the whitish hard area probably

⁸ Altaweel 2018.

⁹ D’Agostino - Romano 2017.

¹⁰ At present only the street running parallel to the pipeline continues to be used.

mixing materials from both the strata: in these cases it is usually preferred to over-excavate the later stratum in order to avoid (or at least reduce the impact of) artifacts mixing and having a clearer chronological differentiation.

Other than being a good indicator for the interpretation of the stratigraphy, salt is also responsible for the traces visible from the satellite. After a rainfall, the dissolved salt crystals are recreated more rapidly in the clay filled rooms, while their penetration in the ancient walls is slowed down by the similar but more compact nature of the mud-bricks: this allows to discern the city layout, though with some limits (see § 6.3).

6.1.1.2 ¹⁴C Datings, Isotope Analysis and Bitumen Contamination

At present a reliable set of ¹⁴C datings for Abu Tbeirah contexts is not available. Abu Tbeirah short-lived vegetal samples (see chapter 4) were analysed by CEntro di Fisica applicata, DATazione e Diagnostica (CEDAD - University of Salento) in Lecce, and mostly by the Istituto Nazionale di Fisica Nucleare (INFN) and Istituto Nazionale di Ottica (INO) in Florence. The cooperation with these research groups of INFN and INO started in the frame of the Consortium of Italian Research Infrastructure for Cultural Heritage (CoIRICH). Its aim, on one side, is to obtain reliable ¹⁴C datings of Abu Tbeirah stratigraphic sequence through the INFN AMS, and on the other side to test and improve the INO SCAR (saturated-absorption cavity ring-down spectroscopy) apparatus.¹¹

Of all the analysed samples, only three have yielded reliable datings while the others show clearly inappropriate ancient dates: the mixing of organic sample with the ¹⁴C “dead” bitumen alters the relative quantity of carbon isotopes. Unfortunately, the contamination did not only affected reed-mats or baskets, that could have been water-proofed with bitumen coating, but also cereal caryopses and other unsuspected vegetal samples. Moreover, the generalized contamination of reed artifacts seems to be limited to the samples recovered in

Area 1, while similar findings from the north-eastern Area 2 revealed no contamination.¹² It is thus possible that the results from Area 1 can be due to a general post-depositional contamination, probably influencing the results of the isotope analyses performed on animal and human bones (see § 12.5).

Further investigations will be aimed at understanding this issue, but the omnipresence of bitumen in our archaeological record deserves attention, in particular after the discovery of bitumen processing activities inside Building A (see § 9). Bitumen characterization is being performed by S. Nunziante Cesaro, of the Italian National Research Council, Rome CNR and by M. Santarelli, M. Scarsella and M. Bracciale of the Dept. of Chemical Materials Environmental Engineering CISTeC - Research Centre in Science and Technology for the Conservation of the Historical-Architectural Heritage. The results of these studies will be published in the near future.

As far as ¹⁴C datings are concerned, the range of materials to be analysed will be widened, including bones and teeth, though the bad results of isotopes analysis performed on bone collagen inspires little confidence. Bitumen extraction methods on contaminated samples will also be attempted.

6.1.1.3 Manganese Oxide Coating of Abu Tbeirah Bones and Artifacts

A common characteristic of Abu Tbeirah findings, especially those connected to funerary contexts, is the presence of black-dark reddish stains. At Abu Tbeirah these taphonomic coatings are probably generated from manganese oxide precipitation. Manganese oxides can form different compounds

¹¹ This cooperation and the obtained results might pave the way to radiocarbon dating on archaeological sites, being the SCAR apparatus much more transportable than any AMS machine. See Galli *et al.* 2017.

¹² Two of the datings come from Area 2. The only dating from Area 1 comes from the Cemetery layers and its calibrated age confirms the general attribution to the ED III/Akk. Transition. A single ¹⁴C dating cannot unfortunately be valuated alone and thus absolute chronology for Abu Tbeirah occupational phases will be discussed when a good set of datings will be available. The recent studies by Wencil (2016; 2018) on ¹⁴C datings from ED Mesopotamian context seem to confirm the Middle Chronology: hopefully Abu Tbeirah's focus on well stratified material will add a contribution in the completion of the chronological frame of 3rd mill. BC with datings also from Akkadian and Ur III contexts.



Fig. 6.7 Manganese oxide coating on AbT.17.631.6 (context not described in the present volume).

generating stains of different colour.¹³ These oxides can be formed by chemical or biological oxidation of manganese and are linked to the presence of high humidity.¹⁴ The biological oxidation of manganese involves the action of bacteria and fungi,¹⁵ that grow on the basis of the environmental condition (*e.g.* humidity or PH). Among these, saprophyte bacteria find an optimum growth temperature between 15 and 45 °C.¹⁶

The process from metal decomposition to precipitation and accumulation on bones in archaeological contexts was clearly explained for El Mirón Cave, Cantabrian Spain.¹⁷ The role held by the decomposition of organic matter that would justify the presence of these stains in Abu Tbeirah burial contexts is interesting.¹⁸ Manganese precipitation and adhesion to bones and pottery could be possibly due to the difference of density between the findings and the sediment.¹⁹

¹³ Schalm *et al.* 2011.

¹⁴ Schalm *et al.* 2011: 104; Gabucio *et al.* 2012: 162.

¹⁵ Shahack - Gross 1997: 445.

¹⁶ Marín-Arroyo *et al.* 2008: 808.

¹⁷ Marín-Arroyo *et al.* 2008: esp. 810-812.

¹⁸ The low permeable Abu Tbeirah clay soil shows apparently perfect conditions (humidity and temperature) for manganese coating.

¹⁹ Arroyo *et al.* 2008: 810.

Though geochemical tests have not been yet performed on Abu Tbeirah's findings,²⁰ manganese contamination on our material was recognized by E. Peverati in 2016. The confirmation of this identification has an empirical base: manganese stains were effectively removed both from objects and from bones through the use of ®B.D.G.86 (Fig. 6.7).²¹

6.2 CEMETERY AND OTHER ACTIVITIES

The label "Area 1 Cemetery and Other Activities" indicates all the anthropic traces found immediately under the surface, cutting or covering the strata of Building A - phase 1 (Fig. 6.8).

The chronological distance between the last phase of Building A and the latest graves and activities cannot be at present specified. The pottery horizon discussed in § 10 confirm the continuum of shapes of the ED III/Akk. transition. Since the excavation in Area 1 and in other contemporaneous contexts will continue in the next years, the assessment presented here should not be considered definitive. The detailed description of each grave and activity is reported in § 7. In what follows, general considerations about the burial practices found in Abu Tbeirah will be presented with a special focus on Area 1 findings. In addressing graves and burial practices of the last phases preserved in Area 1, unpublished information from earlier phases or other areas will be also used. From the chronological point of view the only interesting sequence is represented by Graves 15 and 16 which cut the dump pit in MdXIII5+6+MEXIII5 (see Figs 6.10-11 and § 7.2), that destroyed a part of Building A structure. The relative dating of the other activities cannot be ascertained only on the basis of pottery.

6.2.1 CEMETERY OR SUB-PAVIMENTAL BURLALS?

As stated above (§ 6.1) it is not possible to determine the degree of erosion to which Area 1 was subjected. This implies that the graves discovered immediately under the surface and

²⁰ Effects of manganese post-depositional modifications were studied on glass coming from the Sasanian site of Veh Ardašir, 30 km south of Baghdad (Gulmini *et al.* 2009).

²¹ Bandini *et al.* 1989; Bandini 1994. On the use of ®B.D.G.86 on pottery see: Banegas de Juan 2007.

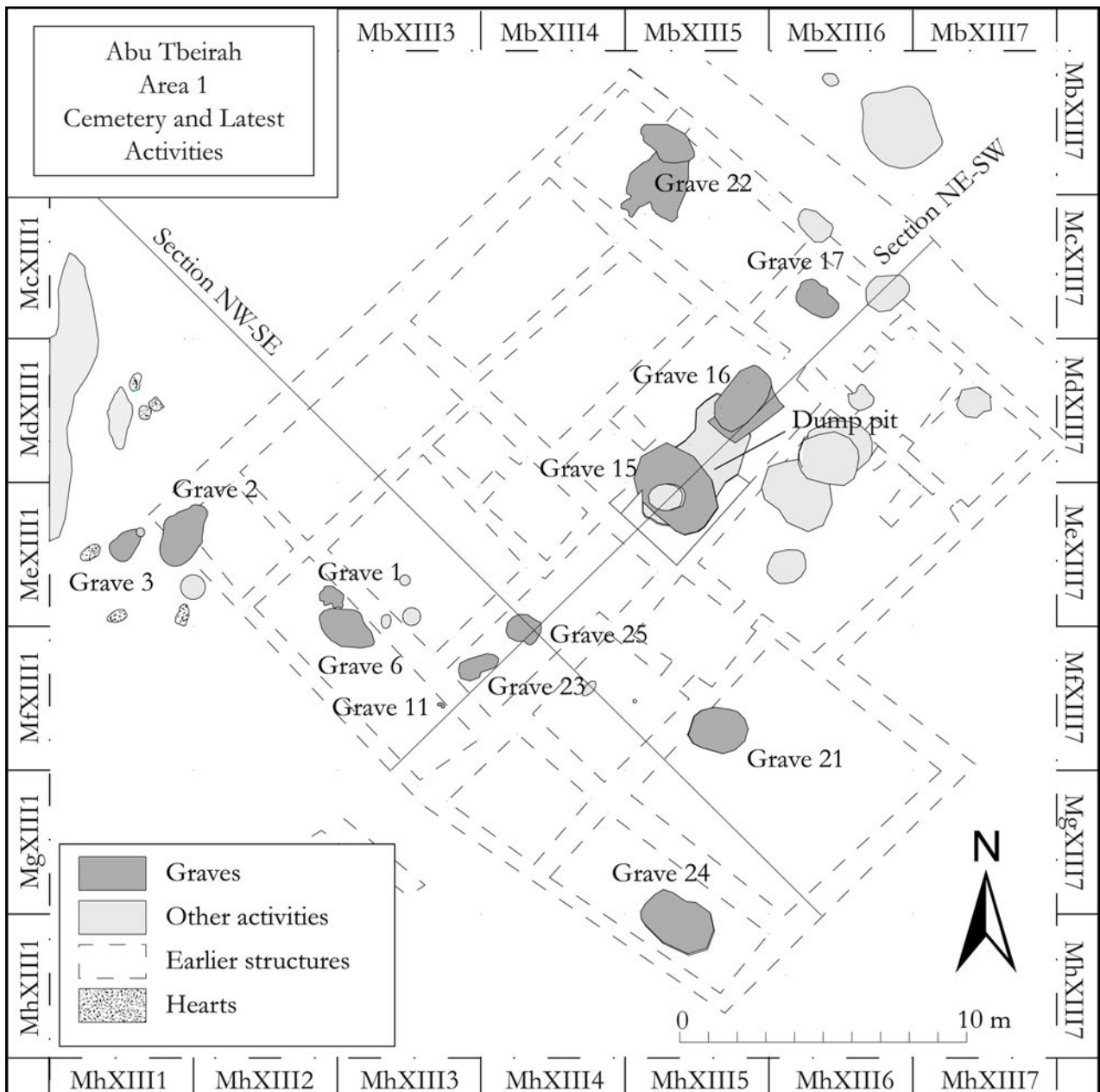


Fig. 6.8 Plan of Area 1 Cemetery and other activities.

cutting Building A - phase 1 (Fig. 6.8) might be part of a later and eroded constructive phase of Building A or another not preserved later structure. At Abu Salabikh the graves found under the surface were attributed to later buildings, not to a proper Cemetery area.²² Though a similar attribution for some of the graves described in chapter 7 cannot be excluded (*e.g.*, Grave 22) it seems that at a certain point Building A was abandoned (see § 6.5).²³ A

²² Postgate 1980. Martin interpreted in the same way the ED Burial from Ubaid (Martin 1982: 146). See on the same problem Almamori 2014.

²³ Abu Tbeirah settlement was reduced to the north-eastern area, where Ur III contexts were discovered. A

step towards this interpretation is the fact that the drain pipe (US 128), located in the north-western outside of Building A, was not reconstructed and raised anymore, due to the abandonment of the structure, and that Area 1 started to be used as dump pit. Some of the graves discovered, such as Grave 21 (§ 7.6.2), clearly cut the building walls or internal structures (*e.g.*, Grave 17 cuts the tannur of Room 8). The huge dump pit discovered in MdXIII5+6+MeXIII5 (§ 7.2.3) shows the change of use of the area, followed by the realization of Grave 15 and 16 (§§ 7.2.1-2).

If the orientation of the graves is considered (Fig. 6.16), the disposition of the bodies under Building A pavements clearly follows the structure, while

the graves of the Cemetery shows a wider range of orientations.²⁴

The similar orientation between Building A rooms and several graves of the Cemetery can also be explained by the presence of preserved structural remains when the graves were first realized (Fig. 6.9)²⁵ or to the difference in soil hardness. It is important not to underestimate the ancient Abu Tbeirah inhabitants' knowledge of the area and its soil. In this regard it is significant to quote a singular discovery made in 2016 in Area 4. In this sector several Bedouin graves were discovered:²⁶ these were realized digging a vertical shaft and then a horizontal chamber. The interesting fact is that the shaft was realized along the walls of a 3rd mill. BC building and the small chamber obtained excavating directly into the ancient wall. Bedouins were probably aware that the areas with a strong brown colour were different in hardness from the surrounding white, richer in salt crystals soil. It cannot be excluded thus that people using Area 1 in its latest phase possessed the same knowledge of the settlement soil.

6.2.2 ABU TBEIRAH'S BURIAL PRACTICES

The excavated graves were always realized as simple pits: their position immediately under the surface makes it impossible to determine, in most of the cases, the original shape and height of the cut. Some graves were apparently covered by a heap of soil, as in the case of one of the inhumation in sarcophagus (Grave 15 - § 7.2.1). A deep cut was realized for Graves 24 (§ 7.7.1) and 16 (§ 7.2.2): in the first case the cut was bigger and probably with a bottom sloping towards north-west.²⁷

Abu Tbeirah funerary practices show a greater variation than expected, and the following typologies of depositions were identified:

1. simple inhumation;
2. double inhumation (Grave 33 – Building A - phase 2 - Fig. 6.13);

²⁴ Grave 22 (§ 7.3.1) is the only one with striking differences.

²⁵ See the state of degradation after 100 years of a mud-brick Bedouin house dated to the 20th century AD in Friesem *et al.* 2011: 1137 Fig. 1.

²⁶ After the identification the graves were filled again with soil.

²⁷ Unfortunately not clearly identifiable.



Fig. 6.9 Partially eroded modern bedouin house on the street toward Umma (photo taken by the author in 2013).

3. double inhumation with secondary burial practice (Grave 6);
4. secondary burial (Grave 3; Grave 201 - Fig. 6.14);
5. in coffin;
6. in jar (Area 6 Ur III - Grave 211 - Fig. 6.15).

Simple inhumations in pit can host both adults and children and can show a great variety of equipment. Sometimes the reed-mat wrapping the body was found preserved in context (*e.g.* in Grave 1 - § 7.1.2). In Area 2, in the north-eastern sector, a grave of an infant, apparently in a sort of cradle, was found.²⁸

Only two double inhumations were found up to now. A couple (Grave 33 - Fig. 6.12) was deposited under the door between Room 16 and Room 9 in Building A - phase 2: the grave was excavated in 2017 and the skeletal elements will be studied in the coming years. In Grave 6 two individuals were discovered, the second one in secondary deposition, deposited at the feet of the main occupant. Recomposing and piling bodies, such as the second inhumed body of Grave 6, is a practice attested also in the northern part of the Tell, where a similar procedure was used to relocate the skeleton of Grave 201, a sub-pavement grave of Building D (Fig. 6.13).²⁹

Grave 6, Grave 201 (Area 4 - Fig. 6.13) together with Grave 3, which contains only part of a skull,

²⁸ D'Agostino *et al.* 2015: 218, Fig. 17.

²⁹ D'Agostino *et al.* *in press a.*

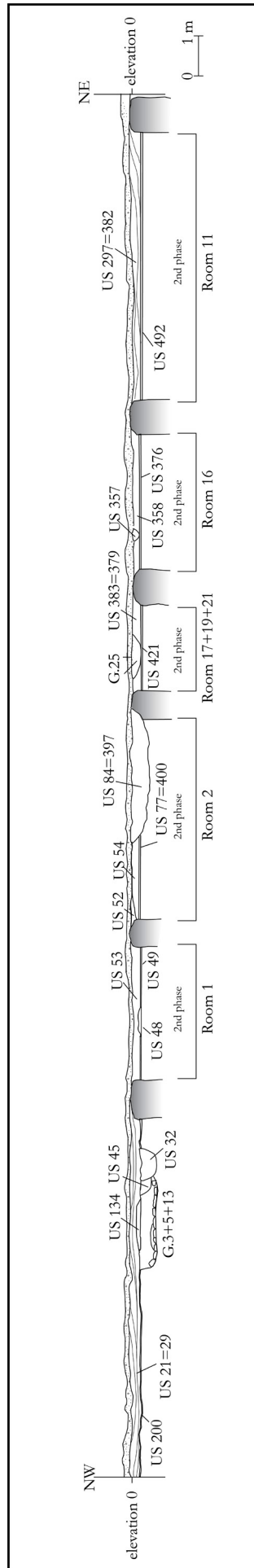


Fig. 6.10 Area 1 north-west/north-east section.

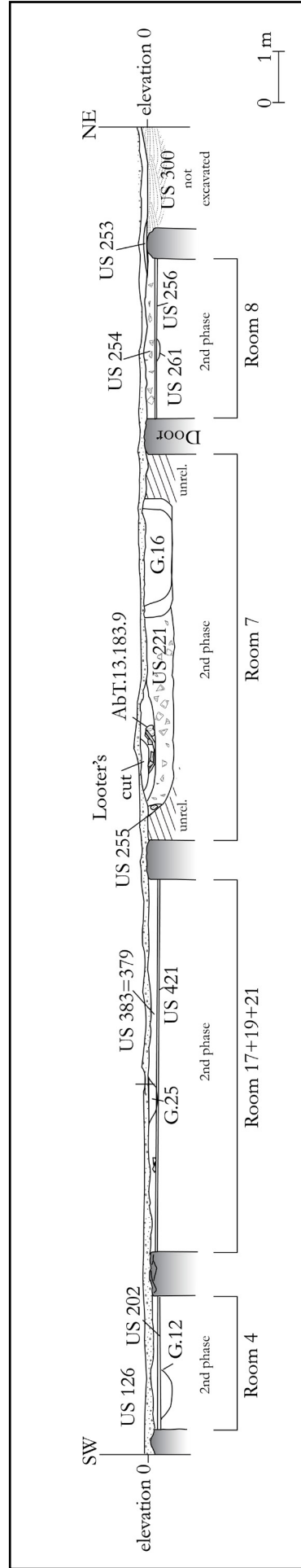


Fig. 6.11 Area 1 south-west/south-east section.



Fig. 6.12 Grave 33, Room 16, Building A - phase 2, Area 1.



Fig. 6.13 Grave 201, Building D, Area 4.



Fig. 6.14 Grave 211, Building E, Area 6.

clearly document practices of manipulation and relocation of the skeletons, seldom discussed and noticed in previous archaeological literature. The missing head of Grave 19,³⁰ under the pavement of Room 5 (phase 2), was the result of an activity that took place while the room was still inhabited, as demonstrated by the heavy residue analyses that showed no gap in micro residue distribution.³¹ Also the pile of bones (Grave 201) placed in the

³⁰ Cereda - Romano 2018.

³¹ Pollock suggests that “the re-excitation and removal of objects may have been part of a more or less accepted practice of reclaiming goods (one’s inheritance?) after ‘a decent interval’” (Pollock 1999: 215).

corner of Building D Room 1 (Area 4) clearly point towards practices of intentional retrieval and re-deposition of skeletal elements, a phenomenon probably underestimated for the 3rd mill. BC.³² In the Diyala region, residential graves and sub-pavement inhumations³³ were clearly opened several times, in order to host multiple bodies,³⁴ thus attesting that skeleton manipulation and displacement was not considered a taboo.³⁵ Probably, some contexts from other contemporaneous sites, described as poorly preserved or disturbed inhumations, might need to be reinterpreted. It seems indeed quite unlikely that this kind of practice was a peculiarity of Abu Tbeirah. Obviously, the ancient looters usually violated the graves removing the upper part of the body but it cannot be excluded that, when missing, the skull could also have been relocated elsewhere like in the case of Grave 3 (§ 7.1.4).

Presently, at Abu Tbeirah coffins in connection with a building pavement have not yet been discovered. The coarse pottery sarcophagi do not show particular decoration, except ridges on the wall and can vary in dimension from bigger examples like Graves 15 and 24 or smaller ones like Grave 17.

A single inhumation in jar (Fig. 6.14) of the latest part of the 3rd mill. BC was excavated in Area 6 during 2016. This context can be preliminarily attributed to the Ur III period.

6.2.2.1 “Burnt Burials”

Based on the archaeological evidence and experience acquired at Abu Tbeirah in these years, it is possible to say something on the so-called

³² This was however a common and widespread practice in the Neolithic Near Eastern funerary practices (see the discussion in Haddow - Knüsel 2017: 54-56).

³³ For a terminological discussion on the definition of “intramural” or “residential” burial see Laneri 2013. Abu Tbeirah graves found until now are never an intentional part of the domestic architecture and thus the definition of “sub-pavement” is here preferred.

³⁴ Pollock 1999: 210.

³⁵ See for example the frequent incomplete bodies or the “dislocated skulls” in the Diyala graves (Delougaz *et al.* 1967: *passim*; see *e.g.* of Grave 124 at p. 115-116 or of Grave 137 at p. 122) or at Abu Salalbikh (Martin *et al.* 1985) or at Fara (Martin 1988: *e.g.* 42 Grave 36-37).

“burnt burials”, discovered by L. Woolley in the lower strata of the Cemetery of Ur.

Woolley admits that these graves show no cremation signs, that the bodies were in the ordinary position and posture, furthermore that the equipment located near the skull usually showed “burning traces” as well. However, the fire that burnt Ur bones did not affect metal objects, or wooden coffins or reed-mats. Thus, Woolley concludes that “the fire could not have been violent and that it was confined to one small part of the grave and did not extend over the whole.”³⁶

Digging Abu Tbeirah burials and findings, the frequent black and reddish stains on the bones (Fig. 6.15) caught our attention and were object of intense discussion among M.A. Tafuri and F. Alhaique and the archaeologists of the group.³⁷ Though the idea of burnt bodies, such those discovered by Woolley, was exciting, there were some clues, common to the Ur contexts, that led us to search another explanation. First of all, the fact that the bones did not show any sign of calcination and that the bodies were in perfect anatomic connection went against the “burning” theory: the severe burning that led to the complete destruction of soft tissues and reached the bones should have caused a dislocation of the latter and would have produced at least signs of partial calcination.³⁸ Nonetheless, the burning process is influenced by bone condition,³⁹ and though de-fleshing procedures can be excluded (no cut marks on the bones were found), the possibility of desiccation, however unlikely, came to our mind. The discovery in 2016 of a Bedouin grave with the same stains on the bones⁴⁰ proved without



Fig. 6.15 Detail of manganese stains on Grave 16 skull.

doubt that Abu Tbeirah “burnt” effect was due to postdepositional transformation. Thanks to E. Peverati experience, it was possible to identify the stains as manganese oxidation (see § 6.1.1.3). Are Woolley’s “burnt burials” the result of a similar post depositional modification or still attesting a singular funerary procedure?⁴¹

6.2.2.2 Equipment Disposition

Apparently, Abu Tbeirah’s graves do not show any normative frame in the deposition of the burial equipment: neither the quantity nor the location of goods seem to follow any precise pattern. However, some general considerations can be drawn from the evidences discovered. With the exception of Grave 11 and Grave 23,⁴² at least one drinking vessel is always associated with the body and often positioned near the head or near the hand. The main occupant of Grave 6 (H1) was found with an organic vessel in its hands, while the skeleton in Grave 16 apparently was grasping something with the right hand (one of the drinking vessels found nearby?). These two graves are also associated by the presence of clusters or piles of drinking vessels at the feet of the deceased. In general, the graves with the highest amount of pottery vessels

³⁶ Woolley 1934: 142-143.

³⁷ What follows is the resumé of our team discussion, for which I thank Mary Anne Tafuri and Francesca Alhaique. Mistakes and errors in what presented are obviously mine.

³⁸ See for an archaeological example Ullinger - Sheridan 2015: 405 fig. 232.2 *sub b*. “As the body is subjected to the conditions of a fire, all of the muscles become affected and contract due to dehydration and protein denaturation” (Fojas *et al.* 2015: 207).

³⁹ Whyte 2001: 440. “Hard tissues can be damaged on a macroscopic, microscopic, chemical, or molecular level, depending on numerous variables, such as the type, duration, and intensity of the fire, the physical, biological, and pathological condition of the body itself” (Chrysostomou 2015: 189).

⁴⁰ After the identification the graves were filled again with soil.

⁴¹ Molleson and Hodgson (2003: 123) state indeed: “Woolley considered that most of the bones had been lightly burnt and, from the nature of the breaks, fragmented subsequently, whereas recent tests of some of the bones (PG1573, LG154) show them not to have been burnt, only heated. Gypsum (CaSO₄·2H₂O) had formed as a very fine creamy white powder in small patches on the bones. The gypsum could have formed at any time since burial; it would not, however, have survived heating.”

⁴² Grave 23 has instead a reed basket in front of the body.

show group of jars and conical bowls (used as lids?) around the body or the coffins.

With the exception of the already discussed presence of drinking vessels near the head, the position of the rest of the pottery assemblage in relation to the body can vary, being placed near the body back (e.g. Grave 16; Grave 24), in front of it (Grave 6) or partially covering the body (Grave 1 and Grave 25). In the case of coffin inhumation, the equipment is usually deposited around the sarcophagus, though no peculiar pattern was detected. In particular, inside Grave 24 and in Grave 17 some pottery vessels were deposited also inside the coffin.

Some of the graves discovered show peculiar findings: Grave 1 has a limestone spouted vessel; Grave 6 H1 was deposited with a small vase with holes, probably for hanging (AbT.12.56.12 - Fig. 10.15); Grave 23 has a small reed basket⁴³ and Grave 25 is rich in miniaturistic vessels, all placed near the head; the stemmed-dish inside Grave 16 could probably be in secondary deposition, originally deposited in a destroyed grave or thrown in the dump pit later cut by the grave.

Though apparently burning traces found on pottery equipment are the results of manganese oxidation, in two cases the use of bitumen and burning seem to be attested. It is the case of the conical bowl and small bottle with bitumen in Grave 22⁴⁴ and of jar AbT.13.195.6 showing many manganese stains but also apparent external soothing traces (Figs 7.41 and 10.15).

The pottery equipments of the graves do not tell us more about the chronology and the sequence of the inhumations: the ceramic horizon does not differ from equivalent contexts of Building A phases, including the earlier one (phase 2) not discussed in this volume.⁴⁵

⁴³ See Montorfani 2019.

⁴⁴ See however the doubts about this context (§§ 7.3.1 and 8.14).

⁴⁵ Jars with the tall neck were found in sub-pavement graves of the second phase, as well as spouted vessels and trumpet based jars. See Nishimura 2015.

6.2.3 INSIGHTS INTO THE ED III - AKK. FUNERARY PRACTICES

In the last decades a consistent number of studies on ED funerary rituals and practices has focused on the impressive exhibition of the Royal Cemetery of Ur. The funerary propaganda of the Cemetery excavated by Woolley surely cannot be compared with the Abu Tbeirah evidence. Though funerary practices of the second half of the 3rd mill. BC are ethno-historically known, cuneiform sources tell us about the rituals concerning a restricted portion of the society, surely not the same highlighted at Abu Tbeirah. Ur private graves, and Abu Salabikh, Kish, Fara and Diyala graves surely constitute the main reference of comparison for our record. The general picture of the funerary practices explained for Area 1 Cemetery does not differ from the frame outlined by previous researches, but some new hypotheses and further evidences can be drawn from our record.

Abu Tbeirah Cemetery once again testifies the absence of a particular ritual behaviour regarding the position and posture of the bodies, that can be in a more or less contracted position, on the left or on the right side. Wrapping in reed-mat is the only evidence of the preparation of the body. If the orientation of the bodies is considered (Fig. 6.16), an extreme variety is attested, in particular if compared to the sub-pavement burials of Building A, that are clearly oriented following the structure. Looking at the orientation of the bodies in the Cemetery in Fig. 6.16, it seems singular that, with the exception of Grave 22, all the studied individuals have the head in the left part of the schema, with the upper part of the body never pointing towards east. It is early to propose a clear interpretation of this evidence, but it might be tentatively supposed that the bodies were deposited towards west, following the setting of the sun or of the moon: sun and moon settings along the western horizon change position northward or southward during the year. The same interpretation of a similar pattern was proposed for Oman EBA tombs.⁴⁶ After all, the precision of the ancient looters in making holes exactly over the deceased head could be based on a clear knowledge of the orientation of the graves.

⁴⁶ Belmonte - González-García 2014 (from which the graphic representation of Fig. 6.16 was derived and adapted).

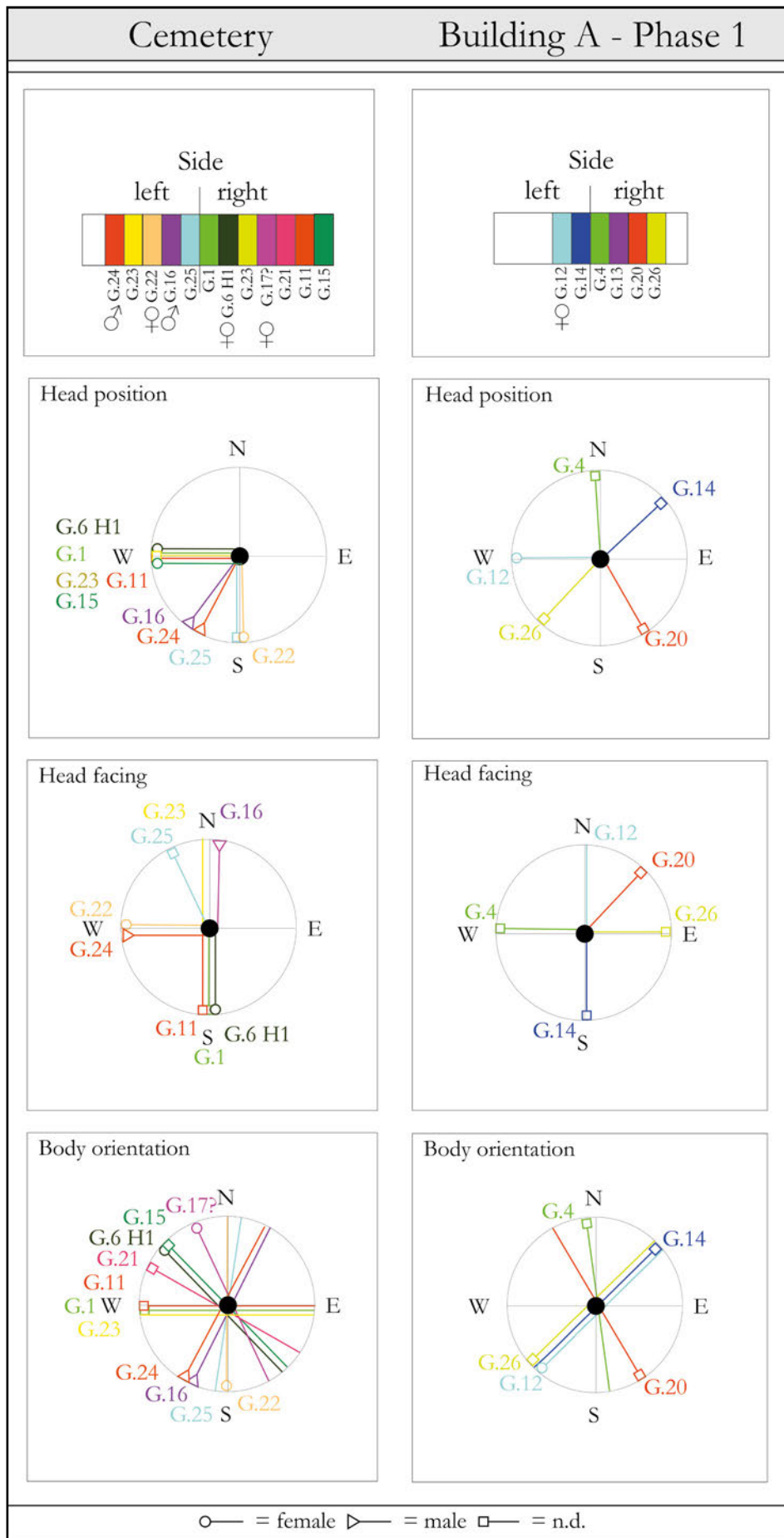


Fig. 6.16 Orientation and head position of the inhumations recovered in Area 1 (Cemetery and Building A - phase 1).

Indeed, no clear indication of the presence of the graves on the surface were found.⁴⁷

From the isotopic analyses (§ 12) it is clear that all the individuals belonged to the same region. Moreover, the osteological traits show, for the adult individuals, stress signs connected with hard labour (*e.g.* teeth used for extra-masticatory purposes). The part of the adult population inhumed in the Cemetery was thus directly involved in the productive activities of the settlement. Distinctions in quantities of pottery deposited with the body or the presence/absence of a coffin cannot be at present attributed to differences in status or be due to chronological variation.

Faunal remains (§ 13) showed the association of *sus scrofa* with the individual of Grave 16: the bones scattered in the filling might be related to the sex of the individual (male) and with his activities, though the presence in secondary deposition cannot be excluded. Sex differentiation are otherwise not present.⁴⁸

The only case of possible familiar grouping in the Cemetery are the Graves 1-6. Grave 1 partially cut Grave 6 and thus can be considered more recent. The relationship between the two graves was previously highlighted.⁴⁹ However isotopic analyses performed on the bones (§ 12) show a difference in the protein intake of the diet of the individual (H2) of Grave 6, if compared to the 6-year-old child in Grave 1. The difference in nitrogen values between the adult and the child could be due to a elevated nitrogen values in the infant due to breastfeeding.⁵⁰ However, given the age of the child we could also argue in favour of prolonged breastfeeding or high-protein diet due to status difference between the two individuals and thus the absence of familiar liaison. This few data do not allow further conclusions. Nonetheless, it should be interesting if, in a familiar group, children were given a higher protein ratio than adults. The

high mortality of children, also attested at Abu Tbeirah, might justify the supplementary feeding reserved to them.⁵¹

Infants at Abu Tbeirah are indeed clearly regarded as members of the society and are object of inhumation practices that also include the deposition of grave goods. The only exception is Grave 11, a simple inhumation of a child of perinatal age: in later cuneiform sources the foetus is not considered as human and this can justify the absence of a “proper” inhumation.⁵²

The function of the equipment of 3rd mill. BC burials is uncertain and a unique interpretation for all the context seems improbable. Pottery vessel assemblages, other than being considered personal belongings, could also be connected with the everyday life and thus intended to sustain the deceased in the netherworld, or being deposited as offering for the deities, or, again, as provisions for the deceased to travel to the underworld.⁵³ Traces of funerary banquet, discovered in Grave 4-5-13 of Building A - phase 1, are not evident in the Cemetery: only the presence of clusters of drinking vessels, as in Grave 6 or 16, usually at the feet of the body might be interpreted as evidence of this practice. The low amount of animal bones connected to the Cemetery graves (§ 13) seems to point towards the predilection of liquids, fish and bread, foods that do not always leave evident archaeological traces.⁵⁴ The frequent presence of one vessel near the head or the hand can be quite confidently interpreted as a personal belonging of the deceased.⁵⁵ The spouted vessel in Grave 1 could be connected with libations, a practice often considered part of the ED funerary ritual.⁵⁶ Due

⁴⁷ Obviously Grave 15 heap should have been quite visible.

⁴⁸ See Building A Grave 14 for a “female” equipment. The only two secondary inhumations (Grave 23 and Grave 6 H2) are of two male individuals.

⁴⁹ D’Agostino *et al.* 2013: 72 and Fig. 1.

⁵⁰ However, according to Stol “there is abundant evidence in the ancient and traditional modern Near East that children were nursed for two or three years” (Stol 2000: 181 quoting an OB text BM 16950).

⁵¹ This practice is attested in traditional society with intensified agricultural production activity (Bentley *et al.* 1993: 276). See moreover the study by Valk (2016) on the material and textual evidence concerning infant loss in Mesopotamia, showing “the scale of the efforts that ancient Mesopotamians channeled into the warding off of infant loss”. See also Brereton 2013.

⁵² Valk 2016: 725.

⁵³ Postgate 1980: 77; Winter 1999; Nebelsick 2000: 216; Selz 2004: 186-188; Cohen 2005: 84-85.

⁵⁴ In TSA 9 bread loafs and beer are distributed by Šaša, Uru’iningina’s wife, in the occasion of Barnamtara death. Selz 2004: 198-199.

⁵⁵ A practice widely attested in coeval sites. See Postgate 1980: 68 with other references.

⁵⁶ Winter 1999; Selz 2004: 196; Cohen 2005: 29, 43.



Fig. 6.18 View of Building A from south-east.



Fig. 6.19 Mud-bricks set as header and stretcher in the wall between Room 6 and 20 (2nd phase highlighted).

6.3 BUILDING A

Building A (Figs 6.17-18) is located in the south-east part of the Tell and was identified thanks to satellite imagery kindly granted by E. Stone. In the satellite imagery it was possible to recognize a huge “L” shaped complex of structures. Our first 5 years of excavations focused on the south-western part of this complex: its dimensions and the satellite evidence (Fig. 6.4), showing whitish (and thus presumably empty) areas surrounding it, probably indicated a certain independence of the structure. The area immediately adjacent to the Building was only scraped in order to have some hints on the connection to the other complex of rooms north-east to it.

Building A occupies a surface of 560 m² ca. and at the present state of investigation of the area it seems surrounded by open spaces north-west⁵⁹ and south-east. In the north-eastern part, the scraping revealed the presence of a possible street

⁵⁹ Nevertheless, in the north-west corner of the section exposed by the excavation in square McXIII1 (immediately north-west of the drain pipe US 128), it is visible a mud-brick wall belonging to another structure. Moreover, thanks to the autumnal rainfalls, when the soil dries it is possible to recognize the outline of other buildings in this direction.

(or corridor) dividing Building A from the other structures of the “L” complex. After the scraping, a series of narrow spaces were outlined under the surface. Moreover, south-west of Room 4 some other structures, hardly recognizable from the satellite, were highlighted. The excavation indeed revealed the partial reliability of the satellite imagery. The traces of the mud brick structures visible in the satellite imagery are due to the strong salinization of the soil: salt crystal easily reach the surface in the empty spaces, while the compact clay of the mud-bricks slow the spreading of the salt crystal down creating these darker lines (§ 6.1.1).

The picture derived from the satellite might be distorted by a series of factors. First of all, they show a synchronic picture of structures that might belong to different phases: *e.g.* from the satellite imagery Room 11 (Fig. 6.4) seems divided in two parts, while during the excavation it appeared clear that this subdivision was probably due to the presence of a lower and earlier structure, causing the post-depositional transformation of the soil to transpire to the surface. Moreover, mud-brick structures could be invisible on the satellite imagery due to recent activities that evened the Tell surface. At the beginning the hypothesis was that Building A rooms were organized around a bigger central court and a second open space to its south-east. A modern encampment, traces of which were revealed by the excavations, probably contributed in evening the surface of this part of the site. Hence, it cannot be excluded that the peculiar position and the same “L” shape of the complex are the illusory effects of salinization. Further investigation in the area will clarify the nature of this complex and confirm or dismiss the presence of an effective connection of Building A with the structures at north-east.

The excavation brought to light at least two phases of the structure without noticeable changing in the internal organization of the building. In what follows a general interpretation of the Building and of activities carried out in its last phase will be presented. A detailed description of each action recognized in the Building rooms are found in § 6.

Building A was abandoned during its last occupational phase and the low dispersion of artifacts on the floors does not yet allow a clear indication of the functions of all the rooms, though future studies of the sampled pavements

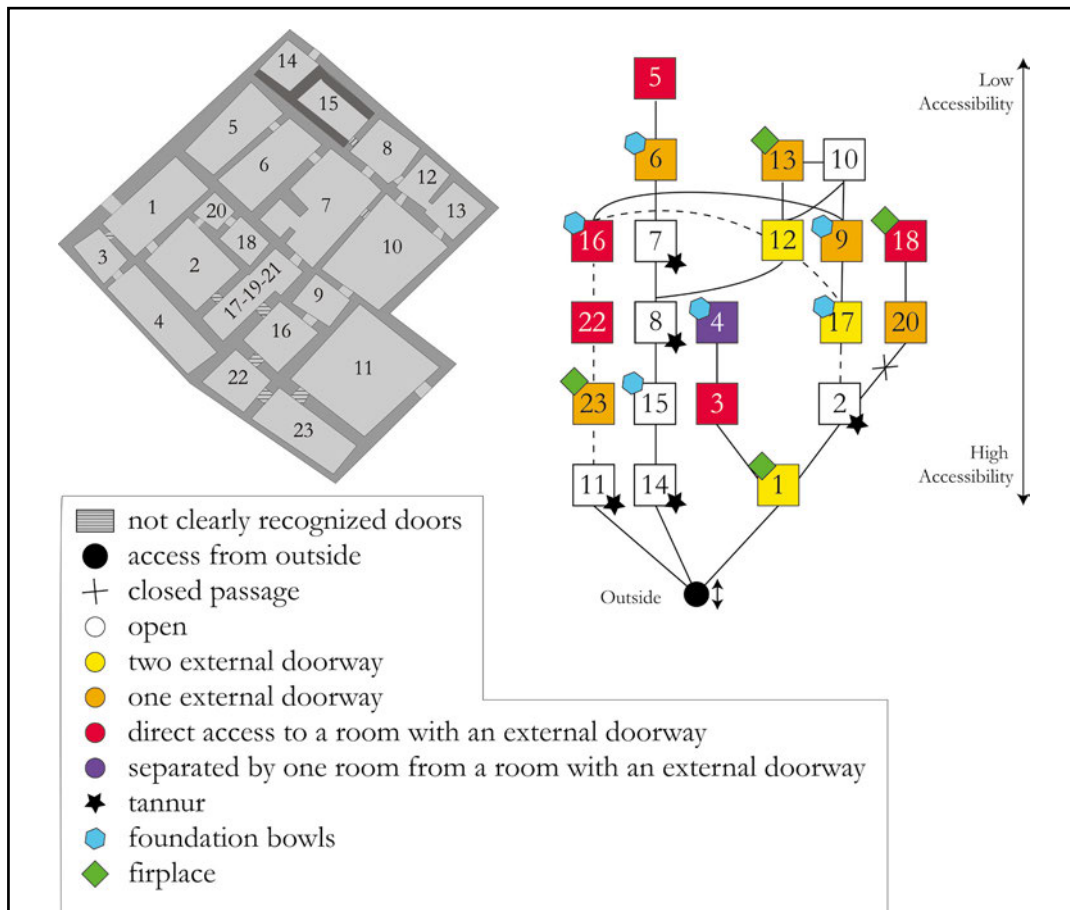


Fig. 6.20 Permeability diagram of Building A - phase 1.

are promising (see below and § 9). Nonetheless the available information (structural elements such as movable structures, tannur and hearths and the presence of sub-pavement depositions) that can contribute in understanding the functions of the Building will be presented in what follows.

6.3.1 BUILDING TECHNIQUES AND MATERIALS

Building A - phase 1 mud-brick walls were poorly preserved due to their proximity to the surface (Fig. 6.19).⁶⁰ In general, only a few centimetres belonging to a single course of mud-bricks were found preserved, and this did not allow the recording of the dimensions of the building elements in all cases, and the identification of doors was not always possible. The mud-bricks were shaped with extremely pure dark yellowish brown clay possibly mixed to vegetal temper.⁶¹ The dimensions of the best preserved mud-bricks were 30/35 x 30/35 x 15/20 cm, usually set as header in clay mortar of

the same colour. In some cases, in particular in the perimeter walls, mud-bricks seem to have been set as header and stretcher (Fig. 7.19). A difference in the used mud-bricks was noticed in the small walls inside Room 7, where the mud-bricks were 15x20 cm of dimensions and apparently set on a loose thin stratum of sand. Walls were never covered with plaster and their thickness ranges from 70-60 cm (2 lines of bricks for perimeter and main walls) to 30 cm ca. for the internal divisions of the spaces, though the poor state of conservation could have biased our analysis. The width of the recognized doors usually ranges from 70 to 50 cm.

The living surfaces inside the rooms of the building were not clearly recognized in all cases due to the extreme difficulty of discerning the clay pavement from the filling of the rooms. No plastered pavements was found at Abu Tbeirah up to now. Nonetheless, in some cases the ground surface was identified due to its particular hardness⁶² and thanks to the presence of some

⁶⁰ See D'Agostino *et al.* 2013: 73-75.

⁶¹ Small black traces in the fabric might indicate the presence of vegetal temper

⁶² Always associate to the presence of a firing structure or hearth on the living surface.

elements like tannur, fireplaces or the so-called “foundation bowls”. The relative elevation of the pavements vary from -0.1 to -0.2 m ca.

In abandoned buildings, such as Building A, findings *in situ* in the rooms are quite rare and there is the risk of describing the building as empty. However, the presence of past activities are embedded in these hard soil pavements. Since 2014, with the collaboration of S. Cereda, heavy residue analysis of the identified pavements started, aimed at gaining a clearer picture of the activities carried out in Abu Tbeirah’s structures. This volume presents the results of the analyses carried out in Room 23 (see § 9): as far as it is possible to see from the first results this research will surely contribute to a better understanding of the function(s) not only of the single rooms but of the Building in its complex.⁶³

As far as roofing is concerned, the extremely poor state of conservation of the 1st phase walls does not allow any hypothesis regarding the covering of the structure. However, it could be possible to hypothesize a sort of movable or light cover - a kind of “pole and thatch” structure - at least for some rooms, like the one supposed for the Room 1 - phase 2: here a post-hole was found on the pavement covered by a reed-mat, probably used to host one of the poles that sustained the cover.⁶⁴ A post-hole inside Room 16 might point towards the same interpretation and furthermore the probably unroofed Room 10 showed - though not clearly - traces of a movable structure.

6.3.2 PLAN, CIRCULATION SYSTEM AND NATURAL LIGHTING

Building A is oriented according to the cardinal points, as is usual for Mesopotamian architecture. The orientation of Building A should be seen in relation with the surrounding structures that, though not necessarily coeval, shaped Abu Tbeirah’s settlement layout. Both in the south-western and south-eastern part of the site, the dense settlement seems invariably organized on

the basis of streets running diagonally north-east/south-west. M. Shepperson recently showed how city and buildings layouts and orientations played an important role in developing a thermal comfort in southern Mesopotamia hot arid region. The orientation with corners at the cardinal points reduce indeed the area subjected to direct light during the day, in particular in summer period. As stated by Shepperson for Ur contexts, the reason behind the cardinal points orientation of Building A (and the other Abu Tbeirah visible buildings) should be linked to practical rather than ritual reasons.⁶⁵

As far as the plan and the internal circulation system is concerned, Building A’s most direct comparisons are the structures excavated at Abu Salabikh.: in contrast with Diyala domestic buildings, these houses were clearly huge, abandoned domestic units.

The unclear identification of all the doors unfortunately does not give us a perfect picture of the internal circulation system. Nonetheless, a reconstruction of the possible paths inside the building is attempted, indicating the identified doors and the uncertain ones. The picture that will be presented should be thus considered as hypothetical or at least partial. Fig. 6.20 uses the graphic representation from Hillier and Hanson regarding the permeability degree from the outside.⁶⁶ In addition, the diagram was enriched with the indications on lighting, according to the scale elaborated by Shepperson.⁶⁷

As said above the poor state of conservation of Building A structure does not allow a precise reconstruction of the walls and roofing. Nonetheless, Shepperson convincingly argued that in ED Mesopotamian houses the main light sources were doors: small passages and few windows are indeed a good compromise between light and insulation from hot air for houses located

⁶³ For an example of the results obtained at Abu Tbeirah with the heavy residue analysis see Cereda - Romano 2018. The results of the analyses in the other rooms will be published separately.

⁶⁴ See the ethnographic comparisons in D’Agostino *et al.* 2013: 79-82.

⁶⁵ Shepperson 2017: 78-81, 94-96.

⁶⁶ Hillier - Hanson 1984. The Room position in the diagram is related the number of doors that have to be passed through in order to reach the space from the outside. The same methodology was already used for the description of Mesopotamian domestic space by Brusasco (2004; 2007) on later contexts and on 3rd millennium households by Salvin 2018.

⁶⁷ Shepperson 2017.

in hot-arid regions.⁶⁸ Hypothesizing a similar situation for Building A, the presence of tannur and similar firing structures of great dimensions were considered as an indication of an open space.

From Fig. 6.20 the presence of less accessible areas of the Building seems evident: though part of the diagram has a high degree of uncertainty, it however shows the presence of rooms less accessible from the outside, that can be thus interpreted as more private spaces inside the building.

The access from outside was provided by three doors located in Rooms 3, 11 and 14.⁶⁹ The subdivision between Room 14 and 15 was realized with a reed structure and it is one of those “invisible boundaries” present inside buildings but usually not recovered in the excavations.⁷⁰ Rooms 2, 7, 8, 11 and 14 were characterized by the presence of at least one tannur (or another firing structure) and thus could plausibly be interpreted as open spaces. Room 10, with its big dimensions, could be a kind of courtyard too. It is worth noting that the main open spaces of Building A were located on the south-eastern side, that received more light during the day, while the innermost chambers (in particular Room 5 see below) were instead located in the opposite direction.

The distance between a room and an open space (and light source), combined with the number of doors separating it from an external access (its permeability degree), could be an indication of the more or less private vocation of the space. All the rooms in the higher part of the diagram show a lower permeability from the outside, but Room 5 should be considered the least accessible spaces of the Building.⁷¹ If the lighting is considered, Room 4 is the room with less available light.⁷² The presence of internal courtyards or open spaces, not directly connected with the outside of the building, allowed not only an adequate lighting

provision of the internal chambers, but also to carry out activities (like cooking inside tannur) in a more private environment.

Salvin’s recent study on 3rd millennium households shows similar results for Abu Salabikh and Fara, with permeability diagrams comprising several steps from the outside to the inner and more private rooms of the buildings.⁷³ The permeability diagram of Building A should also be compared with the “ideal” early Mesopotamian Building plan incised on the RTC 145 tablet, dated possibly to the Ur III period.⁷⁴ A direct comparison cannot be drawn due to the difference in dating. However, it is interesting to notice the clear distinction between public and private spaces in the sequence of rooms reported on the cuneiform tablet: outside, entrance room, courtyard, reception room, living room, inner chamber.⁷⁵ In the tablet the private section of the house is separated from the outside by 4 doors: in the same way, the fourth row of Building A rooms from below should be considered as private. The only incongruence is Room 4, its private character is derived on the basis of light provision: Room 4 received light through Room 1, a closed space connected both with an internal courtyard and to the outside.⁷⁶

6.3.3 FIRE INSTALLATIONS AND ARTIFICIAL ILLUMINATION OF THE BUILDING

Tannur and hearths are the main types of fire installations found at Abu Tbeirah.⁷⁷ Open hearths of Building A are usually found as fire-hardened rounded clay areas.⁷⁸ The tannur vary from 60 to 70 cm in diameter (taken at the base). Though most of them were preserved only at base level, it can be supposed that they were coiled, like other bread ovens found in the north-eastern part of the site. Abu Tbeirah’s tannur usually lack a built pavement or floor, and they generally consist of

⁶⁸ Shepperson 2017: 120-125.

⁶⁹ The accesses were recognized on the basis of the upper part and the internal face of the wall.

⁷⁰ See on this problem Salvin 2018: 17.

⁷¹ This remains true even assuming the presence in Room 10 of an unidentified doorway to the exterior of the building.

⁷² Perhaps to contrast the higher sun-light rate to which it was exposed during the day, being located on the southwestern side of the Building (see Shepperson 2017).

⁷³ Salvin 2018: *e.g.*, Figs 5.7 and 5.13.

⁷⁴ Gruber - Roaf 2016.

⁷⁵ Gruber - Roaf 2016.

⁷⁶ The presence of tannur and of a huge multiple inhumation (Grave 4-5-13) following the Building orientation might indicate a more private connotation of the north-west external area. At present it is not possible to know if the outside was in some way divided from other buildings.

⁷⁷ As well as in other Near Eastern sites. See Crawford 1981; 1983.

⁷⁸ With the exception of the almost oval fireplace of Room 18.



Fig. 6.21 “Foundation bowl”. Room 4, Building A - phase 1.

ground clay hardened by fire. Only Room 2 tannur showed the use of pottery fragments to reinforce the lower part of the firing structure.⁷⁹

Two tannur were found side by side in Room 8 (though strongly damaged by a later grave), while in Room 7 two tannur were located in different corners of the space. The contemporary use of two different facilities is largely attested both ethnographically and archaeologically.⁸⁰ However, it is also possible that the second tannur was built after the first one was no longer in use: in the seasonal Bedouin encampment near Abu Tbeirah a new tannur is, indeed, built every year (Fig. 8.8). The presence of six tannur inside a single building, even if not all in use simultaneously, indicates that a huge number of people lived and was fed in it.⁸¹

It is however clear that Abu Tbeirah’s fire installations were probably multifunctional, used in different stages of food preparation (cooking, roasting and baking).⁸² At Abu Tbeirah, indeed, cooking pottery is rarely found in the excavation and it is possible to suppose that most of the cooking activities took place directly on the fire, inside the tannur⁸³ or thanks to the use of light movable structures in connection with the hearths. In association with tannur open shapes are usually found, in particular beakers, whose role in food

preparation is still unknown: were they used for the water needed in bread preparation?⁸⁴ Or were the beakers particularly suitable for emptying the firing structures from the ashes in between uses?

The peculiar firing structure found inside Room 14-15, a vaulted oven built with the same clay used for tannur and connected to a movable structure made of reed panels and bundles, seems to be a *unicum*, showing a mix of features of *taboon/tandir* and pit oven typologies. The use of the facility for cooking activities is testified by the ashy heap recovered inside the Room, full of animal bones⁸⁵ and pottery fragments. The larger faunal assemblages were recovered from Room 14, followed by Room 8 with its two tannur and Room 1.

As far as combustible is concerned, ethnographic comparisons with the Marshlands seem to point towards a use, not only for tannur, of dried dung patties and reeds.⁸⁶

Fire installations were in general located both in courtyards or enclosed open spaces and in roofed rooms. While usually tannur were found in courtyards or open spaces, hearths were probably located in roofed rooms⁸⁷ and were used not only for food preparation but also for heating and lighting closed spaces. Smoke from the hearth could escape through a window or a hole in the roof or side of the wall which could be closed during rainy weather.

If the spaces of Building A in which tannur were found are considered, while it is certain that Room 6 and Room 11 were unroofed⁸⁸, the reduced dimensions of Room 2 and Room 8 surely allowed the presence of a roof.⁸⁹ A seasonal use of the

⁷⁹ On the experimental reconstruction of a tannur see Mulder-Heymans 2002; Parker 2011.

⁸⁰ Crawford 1981: 105-107; Smogorzewska 2012: 246.

⁸¹ Crawford (1981: 114) counts 16 tannur in all Abu Salabikh Area E.

⁸² See for example Cereda - Romano: 2018 on charred seeds and post-holes in connection with a hearth. Moreover see Crawford 1981 and Smogorzewska 2012 on household firing installations.

⁸³ See Alhaique *et al. in press* a on Abu Tbeirah “Ray-Fish” recipe. In Room 2 tannur also bivalve shells were found.

⁸⁴ Crawford 1981: 108. On the use of water in bread preparation see Ochsenschlager 2004: 50-51.

⁸⁵ See § 12.15.

⁸⁶ “The reeds burn quickly and hotly, thoroughly igniting the dung patties and quickly raising the inside temperature. Hot coals from the dung patties will then maintain the heat in the tannur’s walls for a considerable length of time” (Ochsenschlager 2004: 50, 141).

⁸⁷ See also the Marshlands evidence compared to Abu Tbeirah’s findings in D’Agostino *et al.* 2013: 80-82.

⁸⁸ The soil found inside Room 11 was clearly created by the seasonal accumulation of soil.

⁸⁹ The evidence connected to a peculiar structure made of reed screens found inside Room 14 in connection with the

rooms and their installations might be supposed, whereas covered tannur were used in winter.⁹⁰ A tannur was also found outside Building A, along the perimeter north-western wall, plausibly indicating that this external space was considered as belonging to the household.⁹¹

Fig. 6.20 shows the distribution inside the building of tannur, fireplaces and the so-called “foundation bowls”. The conical bowls found in connection with the pavement of the rooms are usually associated with foundation rituals of the building itself.⁹² Nonetheless another interpretation is possible, at least for Abu Tbeirah contexts.⁹³ The “foundation bowls” in Building A are usually found along the walls or in the corners, in pairs, one over the other, sometime slightly inserted in the ground and often containing burnt substances.⁹⁴ Going back to Fig. 6.20, it is singular that the “foundation bowls” are never associated to an open space⁹⁵ or to the presence of a firing structure. It is thus possible that these bowls were instead lamps used to light the rooms.⁹⁶ In the evening an artificial light source was surely necessary, considering that in a house the light is less than 1/100 of that available outdoors. Surely the hearths on the room floor were used to lit the space, radiating a diffused and shifting light.⁹⁷ On-going analyses on the content of the bowls will contribute in clarifying this issue, also yielding information regarding the kind of used fuel, apparently bitumen.⁹⁸

built oven does not allow to make hypothesis about the presence of a cover.

⁹⁰ See Crawford 1981: 108.

⁹¹ The presence of a perishable fence dividing this space was not recovered during the partial excavation of this area.

⁹² McMahon 2006: 13, fn. 11.

⁹³ As noticed by A. McMahon (*pers. comm.*) a ritual function should be preferred for those contexts in which foundation bowls were found containing burned bones and residue and located under clearly identified pavements.

⁹⁴ No fish-bones or animal bones were found inside them.

⁹⁵ With the exception of Room 15, in which a movable structure divides the space from the firing structure in Room 14. It cannot be excluded the presence of a movable cover for this part of the space.

⁹⁶ A similar interpretation was given for the Larsa conical bowls by Thalman 2003: 50.

⁹⁷ Torches were likely in use too, as attested from later cuneiform sources (Kertai 2015: 189).

⁹⁸ Sesame oil was suggested as fuel in lamps, but it is also possible that liquid bitumen was used for this purpose (for

6.3.4 SUB-PAVEMENT GRAVES

Seven graves were found in connection with Building A - phase 1. Four of these were sub-pavement simple inhumations. With the exception of Grave 12, all the inhumed bodies were children and infants.

In striking contrast with the graves of the Cemetery, all the bodies found in connection with Building A were located near the corners or along the walls and following the orientation of the mud-brick structure. Apparently only Grave 26 was void of equipment⁹⁹, while the others were characterized by the deposition of some pottery vessels (in Grave 12 some stone tools and a small reed basket with a cosmetic shell were also found). Leaving aside the complex of Graves 4-5-13, the number of vessels vary in the graves from the poorest one, Grave 26, to the richest one, Grave 12. As in the Cemetery, the common characteristic of the equipment is the presence of at least one drinking vessel and one jar (miniaturistic jars were found in Grave 20).

Grave 12, the only sub-pavement adult grave, contained objects probably connected with the sex (a reed basket with a cosmetic shell) and with the activities carried out during life by the female adult (the stone tools recovered inside the grave had pounding, abrading and polishing use-wear), and with her status (copper alloy ring). The presence of the grave inside the Building could be related to a particular role played by the woman inside the community.

The complex formed by the inhumations of Graves 4-5-13 stands out: it is clearly a multiple grave, re-opened several times or disturbed by later activities and with evidence of a funerary banquet. The location of this grave is outside the Building but is aligned with it, hence it might indicate that the courtyard was considered as attached to the household (as the presence of a tannur

a history of the bitumen use see Glassford-Speight 2009: 144).

⁹⁹ There is the possibility that the conical bowl AbT.14.274.1 was connected to Grave 26 (§ 8.9), but the context of the pottery was not clarified: the day after the discovery the context was damaged by some Bedouins. Nevertheless the elevation seems to point towards the absence of any connection with the grave.

testifies - see above). The heaps of pottery and shells discovered above the grave can be related to commemorations following the closure and filling of the grave. It is not clear if this part of the funerary practice was performed immediately after the inhumation but surely it was not an act that was repeated several times on the same spot. The presence of the decorated jar (AbT.13.143.1 - Figs 8.127 and 10.42 *sub p*) on the ground surface, almost on the same line of the grave, as well as the presence of burnt and ashy areas could be significant. If compared with the ceremonies, well known from the cuneiform texts, as reminded by Alhaique (§ 13.2.21), the faunal remains of the funerary banquet points towards a ritual among a relatively restricted number of individuals. Though Grave 4-5-13 banquet is surely a more “familiar” event than the funerals well known from the Lagash texts, if the enormous quantity of vessels found in connection with the three bodies is considered,¹⁰⁰ it could be supposed that the ritual act related to these multiple inhumations involved a wider group of individuals connected to Building A household.¹⁰¹ If the deposition of the three bodies is considered as a unique event or as the result of different interments,¹⁰² the peculiar location could indicate a single and specific tragic event that led the people of Building A household to perform a ritual practice different from the common one attested inside the building.¹⁰³

If the sub-pavement graves of the second phase are considered (Tab. 6.1), there is no striking difference in Area 1 between the number of adults

Context	Adults	Infants/Children
Cemetery	6	4
Building A - phase 1	1	6
Building A - phase 2	5	5

Tab. 6.1 Adult and infant graves recovered in the Cemetery and in Building A - phase 1 and 2.

and children/infants buried in the Cemetery and in Building A - phase 2.¹⁰⁴

The table, nevertheless, shows a decreasing number of adults buried in the later phase 1 of the Building, a fact that could possibly be related to the gradual (see below) abandonment of the structure.¹⁰⁵

The short chronological span between the Cemetery and Building A sub-pavement burials indicates the coexistence of two ritual practices. S. Pollock suggests that this difference, already noticed in coeval sites, could be connected to the presence of kin-based household alongside more institutional *oikoi*,¹⁰⁶ an interesting theory that needs to be further verified.

6.3.5 DOG (RITUAL?) DEPOSITION

The discovery in Room 22, under the pavement, of an almost complete skeleton of a dog, found in connection but missing the head (see § 13.2.20 and Figs 8.91-92), opens some interesting questions.¹⁰⁷ The absence of a pit and its deposition under the supposed ground surface, suggest a particular ritual practice. Textual sources attest a wide range of attitudes regarding dogs, based on the role of these animals in the domestic context or on their healing aspects connected to the cult of Gula.¹⁰⁸ Dogs are moreover present in Mesopotamian sources and frequently quoted in proverbs and

¹⁰⁰ E.g. more than 250 bases of drinking vessels were recovered in the three clusters. Though a multi-functional nature of these shapes is evident at Abu Tbeirah (see § 10.5), it is however an exceptional number and it can be plausibly supposed that at least a good percentage was used for consuming food or beverages.

¹⁰¹ Or at least this ritual led to a higher archaeological visibility of the performing group.

¹⁰² The peculiar “seated” position of Grave 5 skeleton (§ 12.3.1.2) might point towards this hypothesis, as if it was deposited from above through a hole smaller than the limits of the grave.

¹⁰³ Ethnographically, in the community of Birifoh-Sila Yiri (Ghana, Upper West Region), still performing sub-pavement burial practices, ‘communal graves’ in front of the house or the compound limits are used as “back-up” in emergency cases (Rattray 1969: 445).

¹⁰⁴ The excavation of the second phase is not complete.

¹⁰⁵ For a discussion of the mortality profile see § 12.4.

¹⁰⁶ Pollock 1999: 206-210.

¹⁰⁷ See Alhaique *et al. in press* b. Dogs remains were rarely found in 3rd mill. BC contexts. J. Clutton-Brock and R. Burleigh (1978: 90) justify the absence of dog skeletons at Abu Salabikh hypothesizing they were disposed outside the settlement. See also the dog skeleton found at Tell Brak (Clutton-Brock 1989).

¹⁰⁸ The 1st mill. BC dogs’ Cemetery discovered at Isin (see Ramos-Soldado 2016: 27 for a recent assessment) was realized in the ramp leading to the Gula temple.

fables that recall their multifaceted relationship with man, emphasizing both the positive aspects (guarding, shepherding, hunting etc.) and the negative ones.¹⁰⁹ Though the seated dog became clearly a divine symbol only in the Old Babylonian period, 3rd mill. BC iconography depicts dogs also in very diverse attitudes. A ED votive plaque from Nippur¹¹⁰ represents a dog in a typical domestic scene under the chair of a banqueting character, while Sargon Stele SB1 shows domestic dogs and vultures devouring and dismembering enemies' bodies.¹¹¹

The dog skeleton recovered in Room 22 surely represents an intentional interment: the articulated body, missing the head, points towards a sacrifice. This practice is widely attested in the ancient Near East¹¹² and in all the Mediterranean region and it is clearly connected with the nature of the relationship between human and dog, and it might be interpreted both as offering and/or protection of the house.

The choice of the location inside Building A is probably not casual, though at present there are not many hints towards an explanation on the position of the interment. However, some considerations can be drawn on the basis of the discoveries of Building A first and second phases: most of the adult sub-pavement graves were found in this part of the Building,¹¹³ distinguishing, as for Abu Salabikh (see above), this section of the structure. Moreover, Room 22 is one of the perimeter spaces of the structure: though it would be extremely interesting to identify this room as the access to the Building from south-west,¹¹⁴ the poor state of conservation of the walls did not allow us to detect any passage. In addition, the absence of a clear ground surface complicates

the interpretation: was the dog deposited during the life of the Building, as a sort of foundation deposit? Or is its presence to be connected with the abandonment of the building and thus as a ritual deposition?¹¹⁵ The relative elevation of the dog¹¹⁶ and the absence of a clear cut hosting the skeleton might point towards the first hypothesis.

6.3.6 ROOMS FUNCTION(S) AND BUILDING A HOUSEHOLD

The evidence presented above, together with the findings described in detail in the following chapters, allow us to sketch a preliminary outline of the activities performed inside the Building.

The most clear situation is that described by the HRA for Room 23 (§ 9), a space with a strong workshop connotation in which food was consumed, bitumen melted, tools and objects stored and repaired/assembled. Among these objects a sickle with three hafted chert elements (AbT.14.144) and the other chert blades found in association tell us that people living inside Building A also performed agricultural tasks (cutting of cereals and other siliceous plants) and that some of them might have been also able to repair or create their tools.

More indications regarding food production come from the open spaces with tannur and other facilities, such as the oven in Room 14. The presence of tannur inside small rooms or connected with structures that can sustain a cover might point towards a use of these structures depending on the external temperature and weather conditions. The other open area, Room 10, with its probable movable structure demonstrates with its findings that in ED III/Akk. houses open spaces and courtyard should not be considered simply as passages but as a fulcrum of several activities.¹¹⁷ Indeed a huge jar AbT.14.278.1 (Fig. 8.55) with a pierced convex base in connection with two small walls was found. The position of the jar on a raised structure (of which only the lateral walls were found) is probably linked with the hole at its base, and its elevated position allow pouring or pressing

¹⁰⁹ See for example the proverbs and fables in Gordon 1958 or the incantations against the bite of a rabid Dog in Wu 2001, or the role of dogs in Ur III army as described by Tsouparopoulou 2012.

¹¹⁰ Boese 1971: 182, N3 Pl. XVI, 1.

¹¹¹ Nigro 1998: 99.

¹¹² See Ramos-Soldado 2016: 12 Figs 6, 38.

¹¹³ Grave 12 inside Room 4 - phase 1, Grave 28, and the double inhumation Grave 33 from the earlier phase (Fig. 6.12).

¹¹⁴ The dog crouching on the threshold or behind the door is one of the recurrent pictures depicted by cuneiform texts (e.g. Gordon 1958: 56; Wu 2001: 33).

¹¹⁵ Schiffer 1985: 29.

¹¹⁶ The dog position is indeed deeper than the usual elevation of the other Building phase 1 ground-surfaces and higher than the pavements of the second phase.

¹¹⁷ See also on this matter Shepperson 2017: 127.

out of its content through the pierced base: it thus represents evidence of food preparation and/or storage.

As far as the other internal rooms of the Building are concerned, the multifunctional nature of Room 23 could probably be extended also to the other rooms of the complex. Pending further information on HRA analyses of the pavements, some provisional indications will be given on the basis of the findings. Room 1 showed both food processing and consumption activities: a reversed plate with fish-bones was on the pavement together with a multifunctional tool, a grinder and a grinding stone. A grinder was also found on the pavement of Room 13. The other findings inside the fill of the rooms, thus not in direct association with the occupation of the Building, seem to confirm that in most of the rooms activities connected with food processing and consumption were performed. The occurrence of loom-weights might also be indication of textile production.

Room 5 stands out for the peculiar finding of two complete stone vessels on its pavement and of a crystal rock bead. The more private vocation of the Room was already highlighted on the basis of the permeability diagram and by the discovery of one sub-pavement inhumation. It is interesting that these elements (stone vessels *in situ* and sub-pavement grave) characterize the macro-finds of the earlier phase of the Room. Here the HRA revealed a subdivision in four zones devoted to burial-related practices, food preparation and cooking, domestic production/maintenance activities and a probable sitting/gathering area.¹¹⁸ Thus, it cannot be excluded that a similar variety of activities was also performed in the later phase. A more private vocation could be supposed for Room 4, which is the room with most indirect access to the external daily light and its innermost part hosted the only adult grave found in the Building. The same could also be said for Room 22 and its dog deposit and Room 9 with the two sub-pavement inhumations. The presence in the earlier phases of the aforementioned rooms of several inhumations (an adult and a child in Room 22, two adults under the door between Room 10 and 16) testifies a continuity, at least for the ritual

aspects, of some of the activities carried out in this sector of the Building.

Abu Tbeirah Building A evidences can be directly compared to Abu Salabikh buildings where the same range of activities were performed.¹¹⁹ The pattern in the location of the sub-pavement graves identified at Abu Salabikh might help in future to understand Abu Tbeirah's evidence. At Abu Salabikh, indeed, the location of the graves inside the building seems to be regulated by the age, role and sex of the deceased.¹²⁰ At present, the only evident factor considered by Building A inhabitants in choosing the grave location is the complexity of access routes (at least three rooms need to be crossed) from the outside of the Building.

The evidence presented indicates that Building A was a big domestic unit, a household whose residents, probably joined by kinship ties, took part to the harvesting and other productive activities, at least finalized to the satisfaction of their primary needs. The huge number of firing structures and the direct connection of Room 14 and its peculiar fire-structure with the exterior might indicate also an exchange (with the outside? with the rest of the supposed "L" shaped complex?) of food but also of other more or less ordinary goods: from the chert blades, probably only assembled and not realized inside the building, pottery, copper alloy tools and ornaments, luxurious objects such as stone vessels and beads. The participation of Abu Tbeirah household to a more complex frame of administrative tasks is not attested, though its association to a larger institution cannot be excluded.

6.4 AREA 1: TOWARDS AN ABANDONMENT TIME-LINE

In his article on the "Pompei Premises"¹²¹ regarding the interpretation of the archaeological record, M.B. Schiffer warns against a simplistic analysis of the dynamics of abandonment of a settlement or building, emphasizing the importance of the "cultural and non-cultural formation processes" that led to the composition of the floor

¹¹⁸ See Cereda - Romano 2018: 27.

¹¹⁹ See Matthews *et al.* 1994; Matthews 1995; Pollock 1999: 139; Salvin 2018.

¹²⁰ Pollock 1999: 210 quoting Steals 1990: 158-159, 186.

¹²¹ Schiffer 1985.

assemblages.¹²² The activities discovered in Area 1 and Building A

can indeed shed light on the duration and on the mechanism of the abandonment process of this part of Abu Tbeirah's settlement. The materials recovered inside Building A - phase 1, analysed in the previous paragraphs and described in detail in the following chapters, should not be considered *in toto* as an expression of the original distribution of the findings inside rooms.

Few findings can surely be attributed to the actual occupation of the rooms of this phase: firing structures and hearths, "foundation bowls", floor assemblages of Rooms 10, 23, 14-15, 17-19-21 and few other sparse artifacts indicated in the plans in § 8. Moreover, only the "primary refuse", embedded in the floors and recognizable through the heavy residue analysis, can be considered as expression of the activities actually carried out in the Building,¹²³ and help to understand if the macro-artifacts discovered on the floors are indication or not of an activity carried out on that precise spot. The sub-pavement burials and the dog deposit should also be considered as part of the activities carried out during the life of the Building.

Following Schiffer's study, the quantity of "*de facto* refuse", still usable objects left behind by the inhabitants of the building, is connected with the duration of the same abandonment process. First of all, it is important to stress that the abandonment of Building A and then of Area 1 did not coincide with the abandonment of the settlement, which, in its northern part, shows an occupation until at least the Ur III period. Though the reasons why people inhabiting Building A moved elsewhere cannot yet be hypothesized, it is not necessary to suppose a sudden and critical event at the origin of this decision.

The only evidence of a critical abandonment event connected with the life of the Building comes from Room 14-15, where the reed structure was found burnt and collapsed. Nevertheless, the signs of a

violent destruction by fire are limited only to this space. It is not possible to say in which moment of the life of the Building Rooms 14-15 were burnt down but, at the same time, it cannot be excluded that after this destruction, other spaces continued to be used.

Building A, as a structure within a settlement, was probably in "a constant state of construction, repair, abandonment and reuse",¹²⁴ as demonstrated by the closure of the wall between Room 2 and Room 20. The passage between the two spaces might have been closed either to create a new circulation system or simply to re-define/re-purpose the inhabited space, limiting, *e.g.*, the access to a chamber no longer in use: this would indeed in both cases justify the presence of a tannur almost blocking the passage.

If the specific case of the closure of the passage between Room 2 and Room 20 is considered or not as evidence of a gradual abandonment of certain sections of the building, a similar process might justify the scarce "*de facto* refuse" of Building A and, above all, its concentration in few rooms. The limited number of sub-pavement burials, in comparison with that attested for the earlier phase (Tab. 6.1), could also be related to this gradual process. The tendency to "draw down" or reduce the household inventory during the abandonment period was highlighted by the same Schiffer¹²⁵ and it is influenced by numerous factors. For example the huge jar found in fragments inside Room 10 might have been too heavy to be moved and/or any effort in this sense might have been deemed not convenient, given the availability of this kind of artifact.¹²⁶

Moreover, the rooms with the "*de facto*" refuse found *in situ* might be either the last spaces occupied before the complete abandonment of the structure or evidence of a re-occupation of the chambers for specific purposes (*e.g.*, bitumen melting in Room 23). It is thus possible that, in a moment in which the Building was already abandoned, Abu Tbeirah inhabitants decided

¹²² Schiffer 1985: 19. See also the reconstruction of the "missing equipments" related to the activities originally carried out in the private houses of Tell Bazi (Otto 2015).

¹²³ For a definition of the primary refuse see Schiffer 1985: 25 and the discussion at § 9.

¹²⁴ Cameron 1991: 155.

¹²⁵ Schiffer 1985: 27.

¹²⁶ Nevertheless, Abu Tbeirah's evidence demonstrates that pottery was not disposal (see § 10), and thus it seems plausible that still usable vessels were, when possible, moved for further uses.

to re-purpose the available spaces for specific activities or for short-term re-occupation.¹²⁷

In the abandonment process described by Schiffer, after the “post-abandonment uses”, structures can undergo a new phase and be used as trash disposal (“secondary refuse”),¹²⁸ such as the huge dump pit realized inside Room 7 demonstrates,¹²⁹ and finally as a graveyard.¹³⁰

These considerations regarding the possibility of a complex time-line in the abandonment can help to better define the reliability and limits of our record. First, the function of Building A rooms cannot be further specified in absence of an HRA of the pavements and it is necessary to rely on the general considerations carried out above. Secondly, the pottery fragments considered as belonging to Building A - phase 1 in the preliminary analysis of the pottery sequence in § 10 might be later intrusions in the post-abandonment filling layers of the rooms. However, in the light of the current knowledge of 3rd mill. BC pottery sequence and on the basis of the similarity of the assemblages recovered in the Building, in the graves, and in the other Area 1 activities, the analysis of the pottery should not be particularly biased by the absence of a distinction between floor assemblages and shards in secondary deposition. The separate publication of each activity will however allow a future revision, as our knowledge of this aspect increases. Nonetheless, the uniformity of pottery production in 3rd mill. BC Mesopotamia will probably never allow to chronologically distinguish activities differentiated during such a short time span. Lastly, notwithstanding the difficulties due to the bitumen contamination, ¹⁴C measurements combined with the stratigraphy through Bayesian statistics might give more precise hints but plausibly no datings would be so accurate as to clarify our doubts on the entire abandonment sequence.

¹²⁷ See for example the tannur highlighted after surface removal near the southern corner of Room 7, evidence of an occupational layer later than phase 1.

¹²⁸ Schiffer 1985: 29.

¹²⁹ Secondary refuse might be also at the origin of the pottery intrusions in the layers filling the rooms. Nevertheless, in our case there is a striking difference in the quantities of materials brought to light.

¹³⁰ *E.g.* the Royal Cemetery of Ur cut in the *SIS* layers testifies that this was a common practice in southern Mesopotamia.

6.5 FUTURE PERSPECTIVES

The overall target of the Abu Tbeirah project is to understand, with a bottom-up perspective, how the Southern Mesopotamian population faced the dramatic political, cultural and environmental changes that occurred during the last centuries of the 3rd mill. BC. Our interdisciplinary research team is trying to incorporate as much diversified information as possible in order to create the most inclusive and comprehensive account of the interests and motives of all ancient Mesopotamian agents. In our research the efforts of the team are aimed at combining the fine details of the archaeological record and the complex dynamic of its formation inside the environmental frame, linking the statics of the archaeological remains with past dynamical and dialectic happenings between cultural and biological structure and individual agents. Abu Tbeirah is a paradigmatic site for understanding this period because of its liminal characteristics, that make the settlement extremely sensitive to not only cultural and political but also environmental changes.

Abu Tbeirah is located almost in the lower part of the Southern Mesopotamian flood plain, at the southernmost edges of Sumer, in a semi-arid and thus sensitive zone. The site was connected to at least three different ecological zones: the irrigation zone of the alluvial plain, the steppe/desert areas of the interior, and the coast of the Gulf sea at the time located near the city. Its position allowed the exploitation of several subsistence strategies (*e.g.*, plant cultivation, pastoralism, fishing). Though the area is located near the 30th parallel north, inside the semiarid zone, agriculture was possible thanks to the presence of a rich irrigation system. This peculiar position makes the area still today extremely sensitive to climate change also involving the surrounding areas. Abu Tbeirah was initially chosen for its medium size in order to understand its relationship with the main city of Ur, and its nature and function inside the regional system. Abu Tbeirah, given its size, is not a specialized settlement, as for example an agricultural one, that thus can be strongly affected even by minimal change. At the same time, Abu Tbeirah is neither a Southern Mesopotamian capital, able to survive major, different and contemporaneous threats. Thus, the shift which occurred during the end of the 3rd mill. BC affected Abu Tbeirah inhabitants, but leaving them the opportunity, at least for a long

period, to face the incoming problems through their resilience skills.

As several scholars have pointed out, the past focus on élite contexts and institutional households makes it impossible to reconstruct in depth the social life and changes of ordinary and archaeologically almost invisible people.¹³¹ The description of Abu Tbeirah Area 1 last phases, together with the other aspects analysed in this book, aims at representing a first step in filling the gap in our knowledge of 3rd mill. BC southern Mesopotamian communities.

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¹³¹ Pollock 1999: 223; Matthews 2003; Ur 2012.

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