# Third Preliminary Field Report:

# Archaeological Exploration of Bərdə Project

**Nizami Ganjavi Programme for the Languages and Cultures of Azerbaijan and the Caucasus, University of Oxford**

**Third Season, 31st July – 9th September 2017**

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**The Archaeological Exploration of Bərdə Project**

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Cover image: Copper *fals* of the Rum Seljuq Suleimanshah (Malik of Tokat – 1186-1192). Excavated in the summer 2017 season. Photograph by Alexis Pantos.

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## ***Introduction***

In 2017 the Archaeological Exploration of Bərdə continued to investigate the medieval city of Bardhaʿa and its surrounding hinterland with a third season of excavation. Trenches that had been established in 2015 and 2016 in the heart of the modern town of Bərdə were expanded and deepened to reveal more of the urban sequence which has so far revealed layers from the modern period back to the 11th century CE, with glimpses of much earlier material culture. Excavation was also conducted at the mound site of Qaratepe, 21km to the southeast of Bərdə, where previous seasons' work had revealed an extensive medieval burial ground on top of a large late Antique building.

The focus of the investigations is to inform a new exploration of the medieval history of this province, stretching from late Antiquity through the arrival of Islam to beyond the conquest of this part of Eurasia by the Mongols. The excavations have so far revealed a much more vibrant history of the city than had previously been imagined; challenging its supposed abandonment in the 10th century CE and uncovering the remains of a highly productive urban centre which was previously unknown. Meanwhile the initial results of survey in the hinterland, combined with the excavations at Qaratepe, suggest that a major reorganisation of the rural zone took place during two distinct periods, once in the 6th century and again in the 11th century. Uncovering further information about these rural-urban interactions is a primary aim of the project and as we move into the fourth year we are starting to draw these threads together into a comprehensive study drawing on all of the archaeological findings thus far.

The report below outlines the core activities of the Project from the summer season in 2017 which ran between the 31st July and the 9th September. They are divided by site, beginning with the two trenches excavated at the central site in modern Bərdə (AEB01) followed by the investigations in Qaratepe (AEB02) and a short presentation of the artefacts found and the ongoing archaeobotanical work. The season also saw a range of other activities which are not detailed here, including extensive conservation work on the finds, further field survey work, and most importantly the on-site training of four students – two from Oxford University and two from Baku State University. Looking forward to our work in 2018 we hope to continue to develop opportunities for training, while further cultivating our links with Baku State University and the Museum of History in Baku.

## *1) AEB01 – Bərdə, Torpaq Qala*

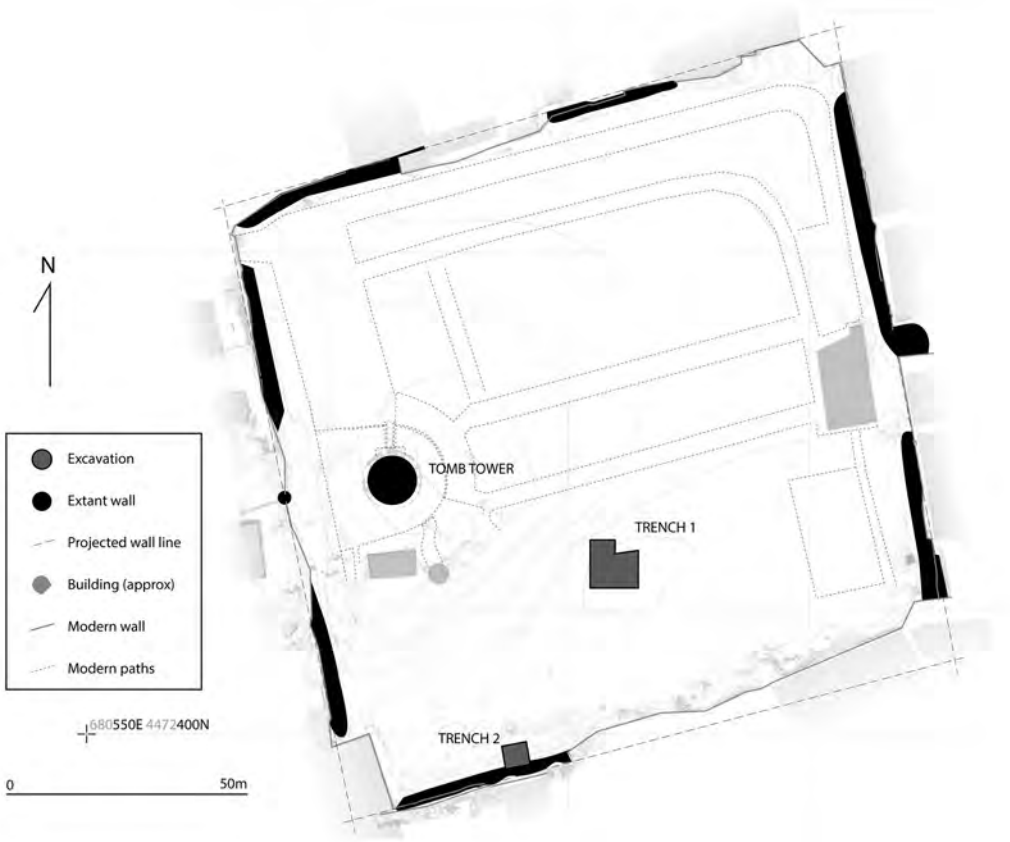



Figure 1: Plan of the trenches in Torpaq Qala (AEB01). [Prepared by Alexis Pantos. After Wordsworth (forthcoming) 'Problematising the shifting capitals of medieval Arran: from Bardhaʿa to Janzain the 10th-12th centuries'. *Iran*]. For a location map of Torpaq Qala, see excavation reports from the first two seasons.

### *AEB01 Trench 1*

*Katie Campbell*

Excavation continued in the trench opened in 2015 and extended in 2016. A stepped shelf was created at 1.5m for safety and access, resulting in a final area of 8m E-W and 6m N-S (Fig. 1). In addition, a 2.5m by 1m sondage (trial excavation) was excavated to the north of the main excavation area in order to characterise the deposits rapidly and aid the excavation of the rest of the trench.

*Aims*

The main aim of the excavation season was to excavate deeper to investigate archaeological deposits of earlier periods and to characterise the sequence of activity

in this part of the city of Bərdə. The work aimed to recover artefacts to refine the chronological basis of the excavations and to provide stratified material to add to the pottery typology both for the site of Bərdə and the wider region. Characterisation of the layout of the city in the medieval period was also a key aim, with the previously recorded architectural remains within Torpaq Qala primarily consisting of fired brick walls constructed from re-used, often poorly-fired brick, to the monumental rammed earth enclosure wall. Further excavations in this area hoped to identify additional structures within the city, both to collect dating evidence and better understand the domestic situation of its inhabitants during the period. More specifically, excavation of the earliest deposits in Trench 1 first aimed to better understand the features and activity area revealed in 2016, in particular tandir ovens, storage pits and other related structures.

*Summary of Results*

Four main activity horizons were discovered in 2017, with a rapid build-up of occupation debris suggesting intensive activity in the area throughout the period. None of these horizons had significant structural remains, suggesting that activity was either open-air or took place under small shelters. The features excavated indicate predominantly domestic or small-scale craft activity and suggests that the area was continually occupied, with no abandonment phases evident, but the occupation was informal and somewhat makeshift. Initial identification of pottery and coins recovered from the excavations suggest that the deposits excavated in the 2017 season mostly date to the thirteenth century, with the earliest deposits encountered, as early as the middle decades of the 12$^{th}$ century. Each horizon will be discussed in detail below, with the major features discussed and characterised. Further work on the material recovered from the excavations, in particular the ceramic and coin assemblages, which is planned for Spring 2018, should provide more precise dating and a better idea of political allegiance and the economic basis for life in Bərdə at this time.

*Phase 5 — Sheltered Work Area*

The latest activity horizon excavated this season was partially revealed in the previous season, before being fully exposed and recorded in 2017. It consisted of an activity area in the centre of the trench, which was likely covered with a shelter consisting of four posts supporting a roof, with postholes [192]/[194], [197], [204] and [207] representing the supports of an E-W aligned rectangular shelter (Fig. 2). The shelter may have had open sides, or some sort of surround that would not leave

archaeological remains, such as wattle or reed. Inside the shelter was a fired brick structure [165], which seems to have at least two phases of use, an earlier two coursed rectangular brick structure which did not have noticeable scorching from use at high temperatures, so may be the remnant of a flue or other ancillary structure. This earlier configuration was remodelled, or possibly partially collapsed, and used as a hearth, with the remnant of its final burning discovered and excavated in 2016. Next to the hearth structure was a small pit [167], which contained a buried pot containing an ashy fill, but not scorched, suggesting that it was used for storage and filled once it ceased to be used by debris from the nearby hearth or tandirs. The use for these structures is unclear, but it seems likely they were used for craft activity in either a domestic or small-scale production context.

Figure 2: Photograph showing the sheltered work area and some associated activity areas, prior to excavation of the postholes.

Associated with the work shelter were a number of brick-built structures or differing uses. Immediately to the northeast of the hearth structure and within the shelter was a rectangular brick structure [169] which may have been used as a small workbench or table, or perhaps the base of a support for the shelter. In the eastern section of the trench two further brick structures were discovered, which are broadly contemporary with the hearth structure.

Activity was certainly more intense in the western half of the trench, and far more material was recovered from this area. Although there was no clear discernible difference in the occupation debris built up during this period of activity, the deposit accumulated around the likely shelter and fired-brick structures was given a separate number (182) compared to the rest of the trench (195). Tandir ovens are a near constant presence in this part of the trench, and seem to have been constantly rebuilt, remodelled and reused, often being dug out and removed in order to provide material and space for a new configuration of ovens. Due to the partially-subterranean nature of these features, and occupation debris likely accumulates around them during their use, the construction level of these features is difficult to ascertain. The multiple phases of rebuilding and reuse do however demonstrate that this type of feature was in use throughout the period of occupation, probably with multiple ovens in around the shelter at the same time. These do seem to vary in use, or at least in construction technique, with some including a brick built flue or chimney in order to suck air into the subterranean part of the tandir, for example the truncated flue structure {201}, which is part of tandir [33] and {154} which is associated with tandir [122].

The eastern half of the trench contains occupation of a different character. The build-up of occupation deposits in this area mirrors that in the more intensely occupied western part of the trench, however the deposit contains more cobbles and larger sherds of pottery to the east. The more ashy layer (182) which has collected around the hearth in the west seemed to contain more in situ occupation debris and more complete vessels such as a small fritware bowl covered in a dark blue glaze and lustre design (Fig. 3). The size and frequency of the fragments suggests that deposit (195) was intentionally laid down to form a surface that might drain more easily and serve as a work or walking surface outside the shelters. Initial observations of this area also suggest that the pottery sherds are from a wide range of periods, and there were occasional fragments of degraded mudbrick material suggesting that this material may have been partially excavated and brought in from elsewhere in the city. A large pit [177] on the eastern edge of the excavation was full of loosely compacted fired brick, which may have been removed from demolition material laid down in the area, or stored for reuse.


Figure 3: Small fritware bowl with thick blue glaze and lustre decoration.

This occupation area, and associated features represents a defined area of activity, either domestic in character or relating to small-scale craft. The remodelling and rebuilding of several features such as the tandirs and hearths demonstrate repeated use of the same features, although this may not have lasted longer than a few years or perhaps decades, depending on intensity of use. The buildup of deposits in the eastern half of the trench was somewhat clearer during excavation as they were layers deposited to create a working or walking surface compared to the steady accumulation of occupation debris in the western side of the trench. An earlier surface (245) was excavated which contained pits, probably dug for rubbish disposal including [218] and [264] as well as posthole [262], although this does not seem to be related to any other structures in the area. In this level several disarticulated pieces of human bone were found, specifically a mandible and parts of an arm mixed with the occupation deposits. These were initially thought to be chance finds, but further discoveries of human bone throughout the excavation suggest that there may be an earlier cemetery in the area which has been disturbed, leading to stray human remains in later deposits.

*Phase 6 — Tandirs and Rubbish Pits*

An earlier phase of occupation was revealed underneath Phase 5, consisting of tandirs and rubbish pits, but no evident shelter or fired-brick structures. The occupation is of a similar character, in that the features excavated were predominantly tandirs, storage and rubbish pits, but the lack of structural evidence suggests that it was more ephemeral, before developing into a sheltered work area with more intensive activity. Continuing occupation in the same areas, for example tandirs rebuilt on top of earlier tandirs suggests that the activity was likely continuous, rather than witnessing phases of abandonment during the period excavated.

Activity was again concentrated in the western part of the trench, with several tandir ovens attesting to domestic or small-scale craft activity. Tandir [227] was particularly well preserved and may have had an ancillary structure to its east (Fig. 4). The tandir structure, which survived to 60cm in height, was unusual as it was not built on a brick foundation, but its excellent preservation is due to the solid clay lining and likely because it was a mostly subterranean structure, at least by the time it was abandoned. The tandir, seems to have had a flue to its east, which was robbed out by pit [255], partly destroying the tandir lining in the process. It is likely that the flue was constructed of fired bricks, like other tandir flues discovered in both trenches 1 and 2 and this is what has been robbed. However, unusually this tandir also seems to have an additional structure (251) associated with it, to which is may have been connected via the flue or chimney-unfortunately the relationship in unclear due to the robbing activity. This structure consisted of discoloured greyish green mudbrick blocks, perhaps caused by scorching which was badly degraded but seemed to form a sub-rectangular structure next to the tandir. It is possible that this was some sort of ancillary structure to pump air into the furnace, or perhaps for some other related purpose but the preservation and lack of any comparative structure so far excavated at the site makes it difficult to fully understand.

Figure 4: A well-preserved tandir over from Phase 5 [227].

In additional to the tandir activity, a number of storage or rubbish pits were excavated—the most notable of which was [210] which contained the remains of an upturned coarseware storage pot (Figure 5). The neck of the vessel was at at the base of the pit, and the base broken off, partially collapsed into the pit and was filled with mixed ashy occupation debris. It was initially thought to have been used as a storage jar, but as it was upside down seems more likely to have been used as a soakaway or drainage feature, or perhaps as a storage feature for something that does not need to be kept clean, such as fuel. These features were associated with a thick buildup of occupation and levelling deposits (232) which seems to have been the result of continuous occupation and the laying down of informal surfaces in a similar manner to layer (195) in the later phase, especially east of the trench. To the west of the trench, lenses of ash within the deposits suggest that the tandirs were cleared out into this area.


Figure 5: Upturned storage ware pot installed as a possible soakaway/drain.

*Phase 7*

Below layer (232) was another layer which consisted of sparse occupation, with significantly fewer features compared the two later phases excavated in 2017. There was a single tandir identified in this phase, on western edge of the trench, which compared to the multiple tandirs in later phases perhaps marks a gradual change in the use of the area. Instead of intensive tandir activity, a series of small pits, of unclear use but likely rubbish pits. The most notable feature of this layer was a deep undercut pit [290], with a discoloured green material fill similar to the material in structure (252) above. The use of the pit [290] was unclear, as the discolouration was initially thought to be a result of scorching, but it could also be as a of cess-like refuse in the pit. Below this was a thick layer (267), which seemed to consist of demolition deposits and other dumps

*Phase 8*

The earliest layer encountered in the 2017 was much more intensively occupied, and although it was not fully excavated, hints at further intensive urban activity below. Several large pits were revealed, and three [285], [287] and [289] excavated. These were around 0.5-0.6m deep and might have been robber pits, searching for building material, as pit [289] appears to have encountered a mudbrick and stone-built wall in

the base of the feature and the other two have been dug into what seems like degraded mudbrick material which may be building collapse. Two small pits or potential postholes [292] and [296] were also excavated at this level, but they do not seem to be related or have any coherent structural function, so this phase does not have any identified structural features.

The most notable feature in this phase was a raised area or platform (305) in the north-western section of the trench (Fig. 6). Although extending out of the trench, this platform appears to be broadly rectangular in shape and has a clear south east corner consisting of a mudbrick structure faced with large river cobblestones. This was originally thought to be a wall, but does not seem to have an interior face so it may be a platform of foundation, perhaps for a brick or wooden building, or perhaps further excavation will reveal it to be the compacted collapse of a mudbrick building. Several other pits were identified at this level, but not excavated and further excavation would be a priority for a further excavation season.

Figure 6: Raised 'platform' (305) on the western side of the trench.

*The northwestern sondage*

A 2.5m x 1.5m sondage was excavated in the north west of the trench, in order to better understand the sequence of deposits in this area (Fig. 7). Slightly surprisingly, the deposits do not closely mirror those excavated in the main part of the trench, perhaps suggesting that the northeast-southwest running walls {155}, {36} and {37}

mirror an earlier divide. However, the excavation area was too small to get a clear picture of the types of activity in this area and the mixed nature of the deposits excavated in the main part of the trench mean that the layers in the sondage may constitute a similar pattern of activity. A number of layers representing the build-up of levelling and occupation deposits (175), {178), (208), (216) and (252) spread across the trench, with few features identified within these layers. A large well-preserved tandir [188] was located in the northwest corner of the sondage, which had a well-built flue consisting of two vertical brick supports with a 0.15m space between them for air to be pulled into the clay-lined tandir oven. It seems this would have drawn air through the gap into the base of the tandir oven, perhaps with additional bellows, or perhaps without help as the burning action in the tandir might draw in fresh air. Below these occupation layers, there were a number of pebbley dumps which might be more formalised surfaces, or used to increase drainage in the area. At the base of the sondage, which was excavated to a depth of 1.4m (80.95 OD) further disarticulated human remains were found, again indicating the possible presence of a cemetery below the current layers.

Figure 7: Post-excavation view of the east-facing section of the Trench 1 sondage.

*Conclusions*

Finds suggest that the deposits excavated in 2017 date to the 12th and 13th centuries with the archaeology indicating several phases of occupation during this period. The general character of this part of Bərdə suggests that this part of the city was used for small-scale craft or domestic activity, possibly similar to a bazaar or outdoor food preparation area. The earliest phase (Phase 8), consisting of the mudbrick platform and probable robber pits hints that earlier phases likely contain more formal structures in this area. The robbing of these ruined buildings and the relatively sparse occupation in the layers above (Phase 7) suggest that the city may have experienced an economic decline in the early 13th century, before activity became more intense in the later period (Phase 6).

***AEB01 Trench 2***

*Davit Naskidashvili*

Excavations continued in Trench 2, which was first opened in the 2015 season, located against the southern wall of the enclosure known as Torpaq Qala (Fig.1). The initial investigations in 2015 revealed later phases of occupation within the trench including several very large pits, which were created after the Torpaq Qala wall had been severely eroded. These pits were dated from the 14$^{th}$-15$^{th}$ century onwards. The excavation season of 2016 expanded the trench and yielded the remains of collapsed fired-brick walls below the pits that indicated more intense occupation at the site.

*Aims*

The main aim of excavations was establish an understanding deeper and earlier stratigraphy of the trench, recovering artefacts and samples to date the enclosure wall and features discovered within the trench. Excavation also aimed to determine the phasing of the fired brick walls uncovered in 2016, and their possible relationship to the substantial pakhsa wall of Torpaq Qala.

*Summary of Results*

The investigations in 2016 clarified the date of the pakhsa wall and its relationship to the other building foundations in the trench. An earlier occupation sequence pre-dating these walls was uncovered, including an exceptionally well-preserved tandir oven. At the lowest level further pakhsa walls were exposed, which appear to represent an earlier phase of building. In the present the phases of occupation have been numbered according to the corresponding sequence in Trench 1 although because the stratigraphy is very different this can only be done based on comparative artefacts at present and is subject to later revision.

*Phase 3*

In combination with the substantial excavations of the last two years, the 2017 season afforded a detailed reassessment of the stratigraphy relating to the Torpaq Qala wall which appears to be later than all structural remains in the trench. It lies above the destruction/levelling layers (48) and (50) and the lower pakhsa blocks are placed directly on the compacted surface (see reports from 2015-2016 for details of the wall itself). Owing to the large number of ceramics and coins retrieved from the layers below this wall and running underneath it (in particular the fragments of

assemblage (60)) it is possible to assign the wall a *terminus post-quem* to the end of thirteenth or beginning of the fourteenth century. Our assertion is therefore that the construction of the wall, and the clearance of the area prior to this event, is in fact contemporary with the building of the mausoleum and part of creating an enclosure for this space. The comparative chronology and the basis for these interpretations will be presented in a longer discussion elsewhere.

*Phase 4*

Below the destruction and levelling layers (48), (49) and (50) the latest occupation remaining in Trench 2 following the 2016 excavation season was the remains of a room in the northwest corner of the trench (Space 1) — the room extends to the north and west beyond the excavated area (Fig. 8). The building was constructed from re-used irregular fired bricks, which were arranged to create a neat face on the interior (masonry contexts: 053-054-055-062-064). 13 distinct courses of brickwork (using bricks 5-7mm thick and a range of fragment sizes) were recorded for the better preserved lower part of the interior {55} and the fact that the exterior is by comparison very coarse indicates that the room was partially subterranean, constructed within a large cut. The internal space of the room, with the walls reaching to approximately 1.30 metres was filled by brick collapse from the surrounding walls, and although no definitive internal floor level was found it may have been a simple beaten earth surface—the base of the wall cut. A small posthole void was found in the corner of wall {55}, which was dug into the foundation and may have originally been intended either to lay out or strengthen the wall. The foundation itself comprised a shallow cut into solid clay or eroded mudbrick deposits, in which the masonry was directly placed.

Figure 8: Subterranean room in the northwest corner of Trench 2.

It appears as though the doorway of Space 1 led in from the south, but it is was unclear which exactly which outdoor level its use was connected with. The threshold has been interpreted as a lower stair of a staircase leading down into the room, because the room was cut in the ground, and would therefore be accessed by stepping down from the contemporary ground level. It is possible that Space 1, via the stair and ramp {61} was connected to the area where smashed *in-situ* pottery was found in 2016 (60), which it would therefore be associated with. The western part of the disused wall {056} (through which the basement is cut) seems to have been re-used to pass between an outdoor ramp (061) and threshold (064) which is keyed into the basement walls.

*Phase 5a and 5b*

This phase relates to the construction, use and abandonment of two walls, {056} and {070} where only the foundation remains (Fig. 9). They are both made in the same style as the other walls revealed in later phases, from reused fired bricks supplemented with very occasional large pebble stones. Wall {56}, however, has some remaining mudbrick superstructure, on top of the fired brick foundation, visible in the east-facing section of the trench. Meanwhile, the use of much more complete fragments of bricks for the foundations, particularly in the case of wall {70}, is indicative of their slightly earlier date, as presumably the upper courses of these wall

would have been reused once again in the creation of the room described in Phase 4. The misalignment of the two sections suggests that they should be considered as two distinct phases of building, with the east west running wall {56} apparently later (with a 10cm gap of a makeup layer between them – Phase 5a and 5b respectively). The relationship between the two is slightly obscured by the fact that wall {70} seems to have been modified to create an abutting wall to {56}. While neither has been fully exposed, the lack of floor surfaces and interior finishing makes it likely that these may have originally acted as partition walls to delineate plots of land or external spaces. The contemporary surfaces in the trench are compacted layers of clay, rich in bone material and some ceramics, but do not seem to represent an easily definable surface *per se*.

Figure 9: Walls {56} (horizontal, rear) and {70} (vertical, fore) defining Phase 5a and 5b respectively.

*Phase 6*

This phase of the trench relates to the tandir [71], which was found in the northeast of the trench directly underneath wall {56}, and associated surfaces. The top of the tandir was partly collapsed, but curves inwards in the shape of a dome. The cut of

the oven is about 20 cm wider than clay lining and the latter was likely part-fired somewhere else and later set in the construction cut. The tandir lining is set on a circular platform constructed from re-used fired bricks and similar materials were used to make a vertical flue pipe against the eastern side. The eastern half of the fired brick foundation rests on a firm mudbrick wall (see below), while the western part was constructed on softer deposits and has therefore partially slumped into the layer below. Within the tandoor, a lime-rich mineral deposit was found which does not seem to relate to the primary use of the tandir, but likely a later dump deposit after the oven ceased to be used. A number of tandirs have been found in AEB01, of slightly differing construction types, this was relatively well built and preserved, and may have been used as a bread oven, probably in an open-air setting. In the same phase of occupation, surrounding the tandir oven, were five irregular-shaped, shallow pits or postholes. The use of these was uncertain but they may have formed some sort of shelter or support relating to cooking activities. The contemporary occupation surface for this activity area was formed from the erosion of buildings uncovered in Phase 7, and consists of trampled occupation and erosion debris rather than formalised surfaces.

*Phase 7*

Phase 7 was the earliest occupation layer found in 2017 and was only partially revealed. The main occupation features comprise two well-preserved walls of a large mud-brick room. Owing to the position of the walls on the edges of the excavation area, their full width cannot currently be gauged, but it is at least 0.7m wide. Likewise, the bricks are too degraded at this level to gain a full impression of their size and coursing, but it is anticipated that this will become clearer lower down. The southern wall runs partially beneath the large pakhsa enclosure wall associated with the tomb tower (see Phase 3). In addition, a possible north wall has been identified, but would have been heavily truncated by the tandir and basement constructions in the phases above. As these walls have only just begun to be exposed, it is not yet apparent what the occupation history of this building/room is, and this forms a primary aim for further excavations next season.

*Conclusions*

The construction phases and preliminary dating of finds suggest that the Torpaq Qala wall was built at the same time as or for the Mausoleum, much later than had originally been suggested. Given the finds of late-twelfth and early-thirteenth century ceramics found in association with the layers between the fired-brick structures in

Phase 5 and the construction of the pakhsa wall in Phase 3, it appears as though this occupation dates around the very end of the twelfth century, in line with Trench 1, although this requires further confirmation from ongoing finds analysis. Prior to Phase 5, the area was used for cooking activities and may have had a temporary shelter, again mirroring the sequence in Trench 1. The discovery of a large mudbrick structure in the earliest phase of 2017 demonstrates that earlier occupation in this area was more substantial, and may represent a more condensed urban character. It is anticipated that further investigation will elucidate the nature of this building and reveal a window into the earlier phases of city life that lie beneath.

## 2) ***AEB02 – Qaratəpə***

*Cordelia Hall*

The purpose of the excavation this year was to reveal more of the architecture of the large building exposed in 2016 and to understand more about the life of the structure by excavating a 1 x 1 m test pit in the southern end of one of the rooms (Space 11). The dimensions of Trench 1 are 10 x 10 m with a height above the Ordnance Datum (WGS 84 spheroid) on the topsoil at 21.28m and the lowest depth excavated to this year at the bottom of the test pit at 19.73m (Fig. 10).

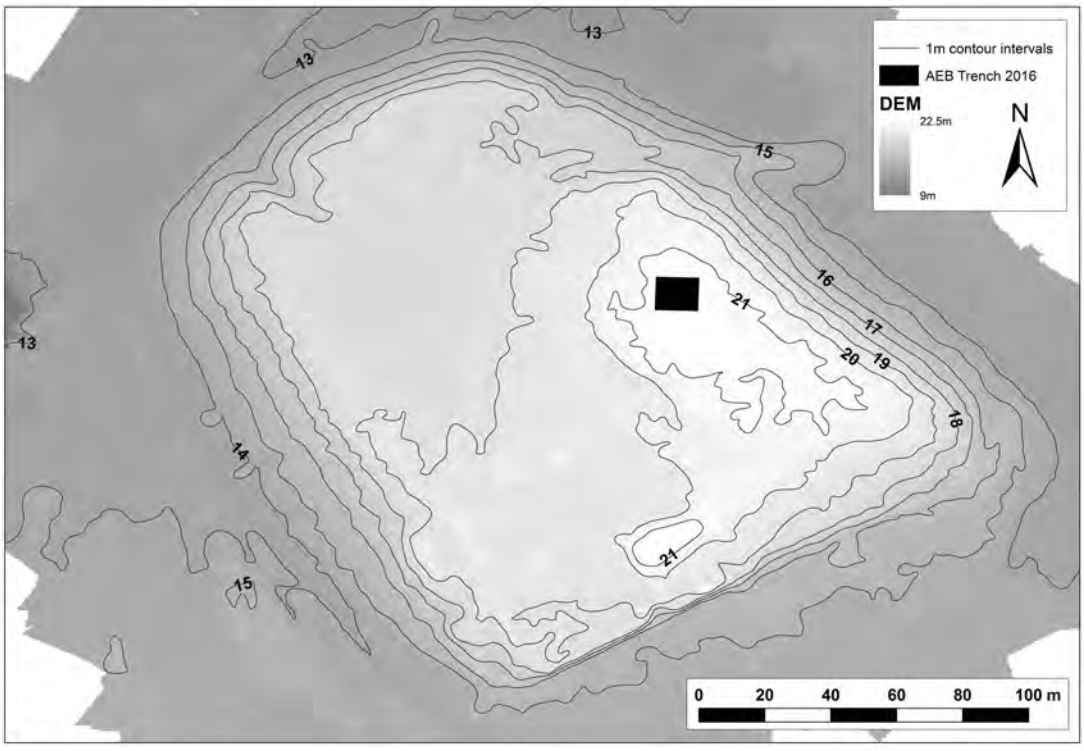



Figure 10: Qaratepe – Topographic map of Qaratepe showing the location of AEB02 Trench 1 [After Wordsworth and Wencel (2018) 'The dramatic abandonment of a late-Antique settlement in the south Caucasus: report on the first archaeological findings from Qaratəpə, Bərdə Rayon, Azerbaijan' *Journal of Field Archaeology* 43 (4): page numbers not yet confirmed].

*Phase 1: disuse deposits, domestic activity and burials*

The occupation of Qaratepe after the abandonment of the main large building excavated is represented by a series of eroded mudbrick deposits as time and weather have washed away what was remaining of any upstanding mudbrick walls

that survived the fire. The initial deposits contain larger fragments of mudbrick and other fragmented parts of the building whereas the later deposits are more like mudbrick wash with interfaces that are hard to differentiate due to the common natures of the deposits.

In the south-eastern corner of the trench a series of small pits and tandirs are evident. These were revealed at the end of the season and only one, a possible pit cut for a tandir [128], was partially excavated. These features represent a later domestic use of the site once the building is out of use as they visibly cut a truncated mudbrick wall and a possible surface associated with the destroyed structure. These features had been in turn truncated by a large pit [91] that contained 11$^{th}$-14$^{th}$ century pottery.

There are two intact graves present in this area. However, due to a lot of bioturbation from root and animal burrowing their exact relationships with the pit and are difficult to determine as the relationships have been disturbed. In one scenario, the east-west adult burial [94] is cut by the later pit [91]. One of the reasons for this is that the grave was not visible until the last fill (81) of the pit had been removed. Another factor is a large worked stone that could be interpreted as a headstone that had fallen away when the grave was disturbed by the pit, as it lies about 0.40cm south of the head of the grave within the basal pit fill. The animal burrowing has damaged the skeleton and is evident in the post-depositional damage of the skull, right humerus and femurs. Another scenario is that the adult grave cut the pit making it a later feature. The presence of the possible headstone in the earlier pit fill could be explained by the extensive animal activity which caused subsidence and the subsequent collapse of the headstone. A later infant burial [70] cut the edge of the pit and the northern side of the adult burial.

In the north-east of the trench, a larger tandir [88] was present cutting an eroded mudbrick deposit (Fig. 11). The rake out for this tandir had been cut by grave [78]. This grave and another to the south-east of it, [105], were empty. Presumably they were grave cuts that were prepared in advance but for some reason were never used. These empty grave cuts are associated with several possible phases of burial across the excavated area. Those excavated this year include; two infant burials [70] and [74], a juvenile burial [86], adult burial [94] and the partial remains of an adult [65]. The fact that they are cut into and are backfilled with eroded mudbrick material and contain very few diagnostic artefacts have made them complex to date and

stratify. They also vary in a range of depths and orientations though most are on a northeast/southwest alignment with heads facing to the southeast. The shallower graves are presumably horizontally truncated by later erosion and modern activity on the site as evidenced by the remains of an old antenna base to the south of the excavated area.


Figure 11: Tandir 88 in the northeast of the trench.

*Phase 2: Destruction of building and post-destruction activity*

It is evident that a fire contributed to the destruction of the large building. The deposits excavated previously in Space 11 (see reports 2015 and 2016) already attest to this. Excavations this year found a large deposit of burnt roofing material (87) in the north-west of this space. This deposit lay on top of the storage pits cut into the final surface in this area and consisted of roof tiles, heavily burnt mudbrick pisé and large pieces of charcoal that presumably were part of roof beams.

There was also activity post destruction. In the large storage pit [121] there was evidence of a recut on the south-eastern facing edge on the south-western side. This recut had cut through the mud plastered side of the earlier pit and the burnt roof collapse revealing earlier deposits in its section. The backfill of the storage pit was also well-mixed containing a lot of similar sized charcoal fragments and broken roof tile with no evidence of its original contents.

In Space 12 the large linear slot cutting across the south-western end of this room was also filled with burnt roofing material in the upper fill. In the section it was evident that this material had tipped in down the back of whatever was contained in within it. Floor surface (135) showed evidence of irregular scorching and the plaster visible on two of the interior faces of the space also showed signs of heat damage (Fig. 12). Here it is apparent that items were retrieved from the space post destruction as indicated by the nature of the deposits. The primary layer (90) that filled the space and lay on top of the last surface (135) was very homogeneous and contained a lot of regular charcoal fragments and some intact mudbricks that had not been heat damaged which had to have been introduced after the fire. It is also apparent that four posts supporting perhaps a roof (see post-retrieval pits below) had been retrieved at this time and possibly other items as the surface was clean of any artefacts.

Figure 12: Space 12, showing the floor surface and unburnt mudbricks at its northern end.

In the eastern side of the trench, along the north eastern side of the building, it looks like there are the remains of a collapsed burnt wall. This was only revealed in the post-excavation plan and needs further investigation.

*Phase 3: Final phase of building use*

In Space 11 there was some extensive remodelling. Two thirds up the room a shallow construction cut [117] was cut into surface (102) for internal partition wall {69}. This internal wall provided a partition for the north-western part of this space and was probably contemporary with the creation of a large storage pit [121] which cut across the width of the room and two other storage pits to the north-west of it; the smaller storage pit [97] and larger storage pit [99] with its storage jar still in situ.

The large storage pit [121] was mud plastered and halfway down the south-eastern facing section contained three moulded round cuts of varying depths. These could have been used for structural purposes such as post and stake holes or as little storage niches. The large size of the rest of the pit could suggest that large storage jars were also placed here.

In Space 12 there were four post holes in a square formation cut into packed mud floor (135), recorded as post-retrieval pits, and there was a deep linear cut [127] along the southern edge of the space (Fig. 13). This linear cut could be for a beam slot for a timber partition. On the south-western face of the space there was wall plaster (134) still partially surviving on wall {133} with the remains of a basal plaster lip. The postholes also suggest some kind of support for a superstructure in this space, and combined with the level of the plaster lip, this could suggest a raised timber floor.

Figure 13: Linear beam slot in Space 12.

*Phase 4: Second phase of building use*

The test pit in Space 11 shows that there is another remodelling of the building. In the south-eastern end of Space 11 a layer of make-up (106) is put down for the final surface (102). This surface is probably the same surface as (136) in the north western end of the space but the relationship has been removed by the construction of a later pit [121] (see above).

Excavation this year also revealed another room (Space 12) adjacent to the south-west of Space 11, divided by north-west/south-east internal wall {133}. The latest surface (135) in this space is probably also contemporary with surface (102).

*Phase 5: Initial construction and first phase of building use*

A foundation cut [131] for wall {133} (the southern wall of Space 11) was associated with a make-up layer of mud bricks (129) and primary floor surfaces (118) (Fig. 14). The foundation cut also had a repair, evident in the test pit section where two mudbricks (130) has been laid on end and used to fill in a gap between the edge of the cut and the built wall foundation. This gap could have occurred due to the soft nature of the deposit that the foundation cut though at this point. The layer of mud brick (129) which caps the foundation cut and the top of the midden/pit fill could also provide a firmer more compact layer over this softer deposit, prior to the laying of the

first packed mud surface (118). It seems that this floor (118) was resurfaced in this phase of use.

Figure 14: Section of test pit showing the construction cut for the main walls.

It is also evident in the very north-western end of Space 11 that there was an earlier surface which contained a pit for a storage jar. This was revealed upon excavation of the later storage pit [99] which was cut above this earlier one, evident from the latest storage jar sitting on top of an earlier broken jar. This is recorded in the post-excavation plan but not excavated this year.

*Phase 6: Use of the site prior to construction of the building*

It appears through the small window of the test pit that the initial foundation cut [131] for the building cut through a midden/pit fill (123) (Fig. 14). This could suggest that this area of the mound was being used for waste disposal prior to the construction of the building. It is worth noting that this deposit was not fully excavated in 2017 and it would be necessary to carry out further excavation to confirm this theory.

*Further work*

Space 12 needs further investigation of its surrounding walls to determine the exact nature of the space. Removal of the latest surface (135) and the material below would show more light on the initial construction of the space and its subsequent remodelling. The nature of the mudbrick construction to the south east of the space

is interesting. Is it part of wall {133} and has been remodelled for the possible raised timber floor or is it some form of platform? There are also two possible postholes, unexcavated this year, which could be related to the last phase of use in this space. To the south of Space 12 and by the north-eastern edge of the trench are also two possible features that could be graves.

The collapsed burnt mudbrick deposit and unburnt mudbrick deposits to the north-east of the building need to be investigated to determine whether the eastern north-west/southeast wall of Space 11 is an external wall. There is also a lot of disturbance here from animal burrowing along what looks to be the edge of the wall and the collapsed burnt mudbrick. The removal of these deposits will reveal either an external space associated with the building or more internal spaces.

To the south-east of the building the tandirs and pits revealed at the end of the season need excavating along with the large deposit of eroded mud brick. This will then allow the excavation of the earlier deposits and features that are associated with the building.

## *3) Small Finds, Bulk Finds, and Conservation*

*Timothy Penn*

### *Bulk finds*

The 2017 field season continued to provide strong evidence for the rich material culture of Bərdə during the medieval period. Efficient excavation across all trenches led to recovery of large quantities of bulk finds (summarised in Table 1), with just under 24,000 ceramic fragments (total weight: 587.12kg) cleaned, photographed and inventoried, and the recovery of 171 bags (total weight: 132.94kg) of animal bone, A substantial quantity of glass (80 small bags weighing 0.39kg) and ceramic building material (25 bags, 99.1kg) were also found.

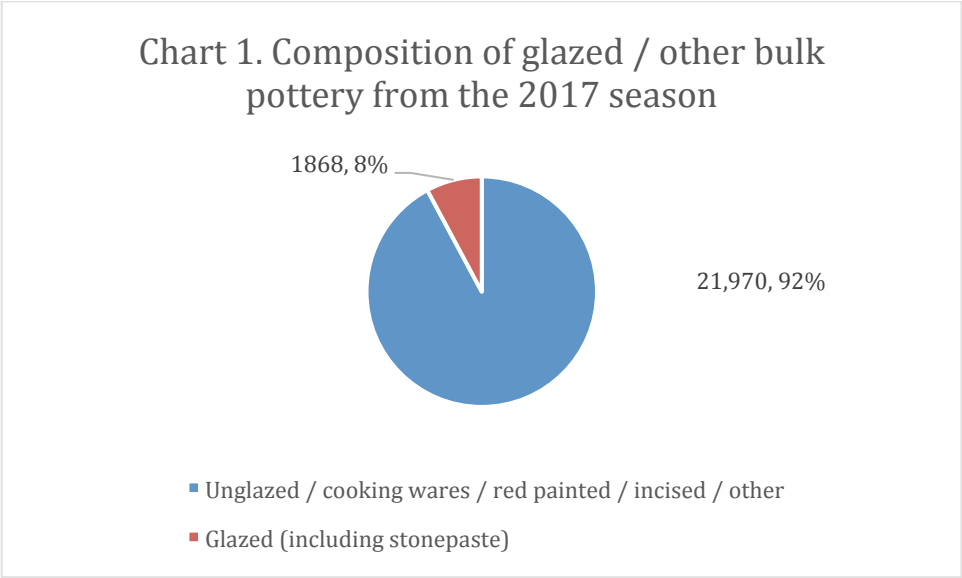
We have now uncovered an impressive sample of medieval material culture: as a result of the expanded excavation team, we recovered considerably more material this year than in both other field seasons combined (see Table 2, breakdown of glazed pottery in chart 1.). Our fieldwork therefore offers exciting possibilities to develop a detailed, stratigraphically-indexed typology for the late Antique and medieval ceramics of the Eastern Caucasus. A study of this kind will help to fill a major gap in current research and provide an important point of reference for future work on the archaeology of Azerbaijan.

| **Category of bulk find** | **Total number** | **Weight (kg)** |
|---|---|---|
| Ceramics | 23,838 (fragments) | 587.12 |
| Animal Bone | 171 (bags) | 132.94 |
| Glass | 80 (bags) | 0.39 |
| Ceramic Building Material | 25 (bags) | 99.1 |

Table 1: Quantity and weight of bulk finds from the 2017 field season.

| **Category of bulk find** | **Total number** | | **Weight (kg)** | |
|---|---|---|---|---|
| Ceramics | **2015 & 2016** | **2017** | **2015 & 2016** | **2017** |
| | 21,185 (fragments) | 23,838 (fragments) | 443.5 | 587.12 |
| Animal Bone | 131 (bags) | 171 (bags) | 67.17 | 132.94 |

Table 2: Comparison of quantity and weight of bulk finds from the 2015-2017 field seasons.




***Small finds***

*General remarks*

Alongside the bulk finds, 256 small finds were recovered from AEB01, comprising worked bone, coins and other metal objects (both iron and copper alloy) and glass (both bracelets and vessel glass), as well as whole vessels (summarised in Table 3). The 28 small finds from AEB02 (see also Table 3) were considerably less numerous from the new rooms excavated in 2017 than in other years, perhaps due to items being purposefully reclaimed after the abandonment of the building or being robbed later on. Nevertheless, small finds from both sites provide ample prospects for future scientific research.

| Material | Quantity | |
|---|---|---|
| | AEB01 | AEB02 |
| Metal objects | 87 | 12 |
| Coins | 26 | - |
| Glass | 78 | 7 |
| Ceramic | 48 | 5 |
| Other (organic, cowrie shells, worked bone, amber, lapis lazuli etc) | 17 | 4 |

Table 3: Summary of small finds from 2017 season.

Figure 15: Examples of a glass bracelet excavated in 2017

*AEB01*

The ongoing study of small finds from AEB01 helps us to understand activities undertaken at the site. For example, in Trench 1, the recovery of iron blades (e.g. AEB01 SF 381, 399, 404, 409) and tools (e.g. AEB01 SF 406) from a range of contexts indicates that craft activities were likely taking place in this area of Bərdə over an extended period. This interpretation is also supported by the recovery of possible products of these activities: reworked glazed ceramics (e.g. AEB01 SF152), a range of beads (including objects made from faience e.g. AEB01 SF 151, 158, 184, 189, and Cowrie shell e.g. AEB01 SF 243) and a worked bone handle (AEB01 SF

156). A second scale pan (AEB01 SF 243, for weighing goods during trading),[1] alongside the 21 coins recovered during the past two seasons, suggests that trading transactions were also taking place in the same location. Ongoing analysis of the small finds from both trenches, with careful reference to stratigraphy, may permit us to drawn more detailed conclusions about the activities taking place on this site during more circumscribed time periods.

*AEB02*

The more limited range of small finds recovered from AEB02 still provide valuable opportunities to better understand the site. In particular, 9 out of 12 of the metal objects recovered during the 2017 season were iron or copper alloy nails. At least three of these were recovered in the context of a roof collapse; careful examination of their findspots may aid understanding of the roofing system employed at Qaratepe in late antiquity.

Ongoing work on the finds from previous seasons have also helped to highlight the fascinating material culture of the site. For example, the plaque discovered during the initial season, but more recently re-examined may provide opportunities to find parallels with late Antique art from other late Antique sites in the wider region. The same may be the case for the late Antique glass studied and published by the present author in collaboration with Leslee Michelsen: particular reference needs to be made to similarly dated glass vessels currently on display in the local civic museum in Bərdə.

***Prospects for future work***

In preparation for the proposed monograph, future work might include:

- Illustration of the most important small finds across all sites, building on the work started during the 2017 season. In particular, full illustration of the whole ceramic vessels would be valuable.
- A more detailed study of the vessel glass from AEB02, following up on the forthcoming *Journal of Glass Studies* note and also presenting the possible Sasanian material from the museum in Bərdə.
- A study of glass bracelets from AEB01, with the addition of materials on display in the Bərdə Museum and finds from earlier excavations kept in the Museum of History in Baku. Ideally this will incorporate data gathered by

[1] In addition to the one recovered during the 2016 season.

Melina Smirniou (UCL) on the composition of the glass samples exported to Oxford between the 2016 and 2017 field seasons. This should function as a standalone article, but might then be synthesised and combined with the various beads, metal bracelets etc for the final monograph under the heading of ‘dress accessories’ (or similar).

- A study of the vessel glass from AEB01.
- Further study of metal tools/blades from AEB01 with a view to more detailed identifications where possible.
- A study of the stamped designs on tandir lids.
- A study of the coins now that they are cleaned.
- Pottery studies (underway).
- Work on animal bones (planned 2018).

## *4) Archaeobotanical analysis*

*David Stone*

Following from the last two seasons successful environmental sample strategies in 2015 and 2016, a combination of systematic and judgement approaches targeting pits, tandoors and general occupation deposits was continued. In total 113 samples were taken in total, 70 from Torpaq Qala (47 from T1, and 23 from T2) and 43 from Qaratepe, an increase of approximately 82% on the previous two seasons combined. Samples were processed onsite at Torpaq Qala, where a flotation station was set up adjacent to trench 1 (Fig. 16). Preliminary analysis of samples from previous seasons demonstrated a very low degree of post depositional fragmentation. It has been observed, damaged seeds may indicate that there is a problem with the flotation system (Wagner, 1982, 128). This low degree of fragmentation would therefore suggest that the constructed floatation tank did not cause damage to the archaeobotanical material in the matrix and a similar flotation system was employed this season. This simple and inexpensive Siraf-type flotation tank processed approximately 873l of soil samples during a three-week period. Flotation was conducted by the author and Elshan Salayev of Baku State University (Fig. 17) producing 23kg of archaeobotanical flots. Almost all archaeobotanical material was preserved through charring, however some desiccated (dried) material was extract from several mudbricks sampled. Fragments of mudbrick were also retained with the possibility of pollen analysis being explored. Samples have now been exported and now await examination at the University of Oxford.

Figure 16: Siraf-type flotation tank. Source: Elshan Salayev, 2017

Figure 17: Əlşan Salayev bucket floating archaeobotanical sample. Source: David Stone, 2017.

***2015-2016 Samples***

100% of the 62 samples exported from the previous 2015 and 2016 field excavations have now been processed with identifiable material extracted. Preliminary analysis of the Qaratepe samples have identified the presence of cereal grains of Tritium sp. (Wheat) and Hordeum sp. (Barley) and weed/wild species such as Chenopodium/Atriplex sp. (Goosefoot/Orache) and Rumex sp. providing insights into the diet of people living at Qaratepe and the environment the settlement was locate in. Good preservation conditions have also allowed cereal chaff in the form of rachis (Fig. 18) to be discovered which will allow identification of cereals to species level. At Torpaq Qala, charred Tritium sp. (Wheat), Vicus sp.(Grape) and Ficus sp. (Fig) along with plum like fruit stones and possible nut fragments were identified. Desiccated Sambucus (Elder) and Chenopodium/Atriplex sp. (Goosefoot/Orache) were also present in small quantities. The samples also contained molluscs, insect and large amounts of identifiable charcoal allowing for other aspects of environmental archaeology to be explored.

Figure 18: Cereal chaff (rachis) from Qaratepe. Source: David Stone, 2017.