Second Preliminary Field Report:
Archaeological Exploration of Bərdə Project

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

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The Archaeological Exploration of Bərdə Project

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Cover image: fragment of polychrome slip-painted glazed-ware ceramic with the inscription "ʿ*aml hamād*" "made [by] Hamād" (12th-13th century). Excavated in the summer 2016 season. Photograph by Alexis Pantos.

Introduction

The second season of research of the Archaeological Exploration of Bərdə Project (AEB) continued the investigations of the medieval city of Bardhaʿa[1] and its surrounding rural hinterland, which began in 2015. At the heart of the modern town, excavation was carried out in the enclosed area known as 'Torpak Kala', the site of the unnamed 14th century tomb tower. Broadly speaking, the aim of the AEB this year was to work through the so-called 'high-medieval' period of the city, tracing the transformations of Bardhaʿa in the 11th-14th centuries. The level of archaeological remains from this period is surprising given the lack of historical documents of the period, and it clearly demonstrates that the city of Bardhaʿa is flourishing at this time – both before, and seemingly after the Mongol conquest of the Caucasus. Furthermore, fragments of material culture from an early medieval past, offer tantalising glimpses into the substantial remains that lie beneath, still to be excavated in the future. Outside the urban area, as well as conducting field survey, further excavation was undertaken at the site of Qaradəpə elucidating the plan of a medieval building uncovered there in the first season.

The report below outlines the work undertaken this year in each section of the project, and summarises the broad results for each so far. It is submitted with a view to continuing the ongoing work of analysis and excavation, and thus the opinions expressed here are subject to revision as further data comes to light.

[1] The names Bərdə and Bardha'a are used interchangeably in the text,

1) AEB01 – In the centre of the city of Bərdə

As with the previous year's excavation, work in the centre of the city continued in two trenches ('Trench 1' and 'Trench 2'), within the site known as Torpak Kala.

Figure 1.1: Monochrome glazed ceramic oil lamp, excavated from the lower layers of AEB01 Trench 1 in 2016

AEB01 Trench 1

Report by Area Supervisor Katie Campbell

Introduction

The 5m x 7m trench, opened in September 2015 was extended to 10m x 10m at the start of the 2016 season, which began on the 1st of August 2016. The trench was expanded to fit around trees in the park and so was slightly irregular in shape (Figure 1.2). As with the trench excavated in 2015, the excavation area was stepped in by one metre at a depth of approximately 1.4 metres below ground level for safety.

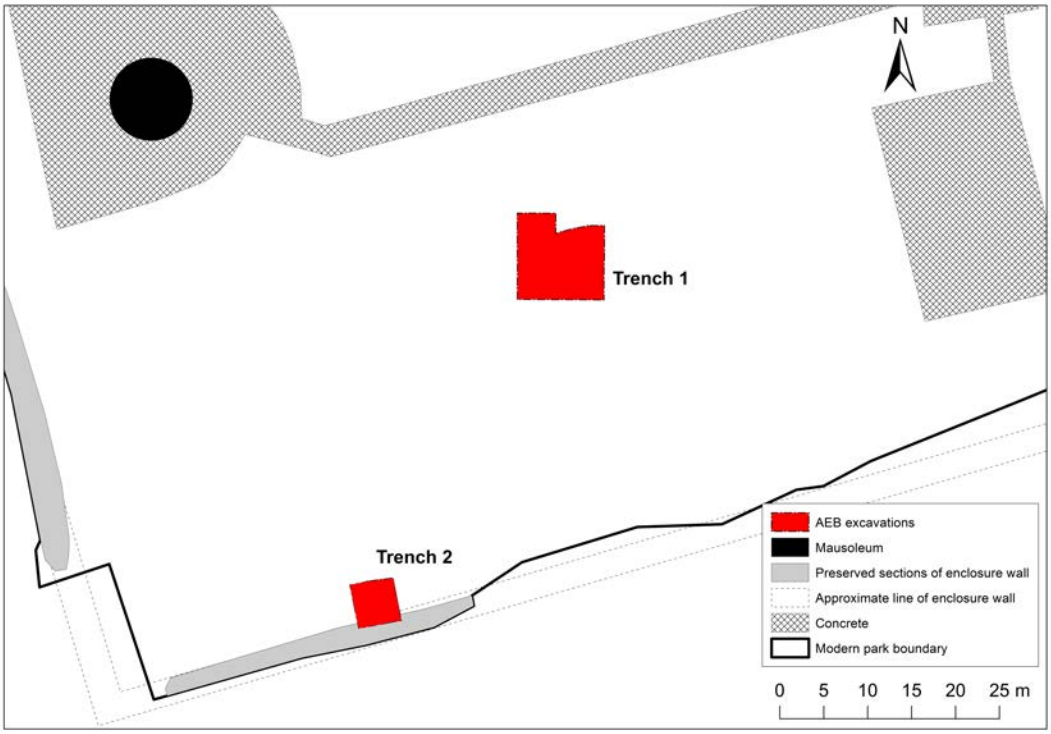

Figure 1.2 Outline of the trenches in excavated in Torpak Kala (AEB01)

Aims

The primary aim for the 2016 season was to better understand the deposits revealed in 2015, as well as to collect further material from securely sealed and understood features to gain evidence for dating and environmental analysis. In particular, the excavation would examine the layout of the city in this area.[2] The excavation also investigated the original situation of the mausoleum within the park (dated 1322 CE), the character of the area before it was built, and occupation within this enclosed area of the town in the centuries following its construction.

Summary of Results

Five main phases of activity were identified within Trench 1, four of which correspond to phases identified during the 2015 excavation, and substantially build on our understanding of these layers, as well as providing secured, well-provenanced material for further environmental studies and scientific analysis.

[2] In conjunction with the investigation of Trench 2, which was situated against the mudbrick boundary wall of Torpak Kala (see below)

Modern-20th century

There is clear evidence of landscaping and general refuse dumping in this area during the twentieth century. The highest and latest layer uncovered in the excavation likely dates to the twentieth century, relating to levelling activity within the current park. The only feature revealed by the removal of this layer was an irregular-shaped rubbish pit (045)[3], with a fill that contained modern rubbish, measuring 1.8m (E-W) and 1.5m (N-S) and located in the northeast corner of the trench. The layer below was a 0.4m deep levelling deposit or rapid build-up of erosion material, consisting of relatively sterile soil, which contained Soviet-period material and likely relates to landscaping of the park in the middle decades of the twentieth century, possibly corresponding with conservation of the mausoleum.

Post-medieval 15th/16th-19th century

The post-medieval occupation of the area is characterised by temporary occupation and abandonment events, consisting of a later phase of rubbish pits and cesspits, with a possible temporary market constructed from reused brick in the later phase. An earlier phase is sealed by a thick layer that likely represents a period of abandonment in between the two. It revealed similar activity, including one particularly well-made tandir oven.

Underneath the modern makeup layer mentioned above ((043)=(002)) were several features, likely dating to the 16th-19th centuries. These included a prominent brick path or platform (048)[4], which survived to two courses and another similar brick feature (049) to the south, which survived to one course. The brick-built linear feature was constructed from reused, orange and orangish-red fired brick and was aligned E-W, extending out of the excavation area to the west. Both (048), and (049) were constructed with an irregular rubble core, surrounded by more neatly coursed brick facing. Between and around these E-W aligned features were brick rubble deposits which were initially thought to be collapse but are perhaps more likely to be rubble levelling or a rough surface for various activities as they lie within a shallow cut and at least one small post or stakehole was cut into rubble (046). Likely activities include the periodic use of this area as an informal market/bazaar within the mudbrick enclosure.

[3] Throughout this report, numbers in brackets refer to original 'context' numbers, assigned to features and layers excavated, in order to provide the possibility cross-referencing with the original archaeological record. The use of the '=' symbol refers to contexts which match with the excavations from the previous year.

[4] Corresponds to feature (011) from the 2015 excavation.

Figure 1.3 Overview of the informal brick features in the upper layers of AEB01 Trench 1

At a similar level to these brick features are a number of pits which likely post-date this construction (although they may be contemporary with its use). These features include four likely cesspits ((053), (057), (067), (061)), which vary in size from diameters of 0.7m-0.82m and depths from 0.45m-0.63m. Each of these features contained a characteristic bricky fill at the base of the cut with ash and frequent bone fragments. Additionally, several smaller features, including shallow rubbish pits and postholes were found at this level. Further activity is represented by a fire pit, which preserved the remnants of a brick surround and a burnt ashy fill. A shallow rubbish pit, and several post/stakeholes also attest to temporary use or occupation of the area. These features are all cut into a thick dilapidation/abandonment layer 0.5m deep[5] (maximum) that consists of silty clay occupation/erosion debris, likely including episodes of dumping or levelling - a period of abandonment and modification before the informal reoccupation described above.

Sealed by this abandonment layer was a further phase of occupation, which again predominantly consists of cooking features, rubbish and cesspits, a horizon of relatively sparse occupation, which dates to after the construction of the mausoleum.

[5] Layer (071)/(078), which corresponds to layer (007) excavated in 2015

The features suggest that the open area around the mausoleum was not in use continuously but possibly for occasional public events, or perhaps sporadic domestic occupation.

The most prominent feature was a large, well-constructed oven in the northern part of the trench, with an inserted ceramic flue pipe, and two visible phases of use. The tandir-style oven, was likely built partly underground, the first phase consisted of the initial construction cut (095), into which was placed a circular brick foundation, constructed from reused, irregularly sized fired bricks, onto which was laid a firm mid orange/brown slightly sandy clay lining. A compacted clay base was laid within the brick footing, and had been cracked and heat affected from burning, containing grit and charcoal inclusions. A fine, light grey ashy layer (093) approximately 0.05m thick was associated with the use of this earlier phase of the oven. A ceramic flue pipe (SF. 61[6]) enters the oven to the south, which was laid within shallow cut forming part of the primary construction of this oven. A secondary, lining was then added after this primary phase went out of use, with an additional, more compact, smoother orangish-brown clay lining, which is 0.02m thick, overlying the earlier lining.

Figure 1.4 Detail of tandir [95] (including flue pipe if possible)

Of the several tandirs excavated in the area, (095) was one of the best preserved and most instructive as to how these were constructed and used. The ceramic inflow

[6] SF. Numbers correspond to 'Small Find' artifact numbers.

pipe may have been reused from elsewhere, and was initially thought to be a water pipe when revealed in the northern section of the trench excavated in 2015, before it was extended to reveal that it formed part of this oven. The flue pipe also indicates that the tandir was likely completely sealed and tapering of the clay lining indicate that this would have formed a bell-shaped structure, possibly with additional lid, similar to tandirs still in use in Azerbaijan today. The oven is large, with a diameter of 0.98m and survived to a height of 0.35m - the portion of the feature which would have been underground when constructed, with a significant superstructure destroyed when the oven was abandoned. In spite of the flue pipe, it seems it was used to cook at low temperatures, as there was no sign of high-temperature impact or industrial residues. Further study of the environmental samples taken from within the feature may be able to clarify its exact use.

The rest of this construction horizon across the trench was representative of temporary occupation including a number of stakeholes and firepits.[7] In addition to these features was a small (0.40m x 0.38m) tandir oven (117) with a mid brown-orange clay lining and well burnt, ashy fill and a large, shallow rubble filled pit in the east of the excavation area (1.1m x 0.27m) which may be a rubbish pit. A large brick filled pit (086), likely a cesspit or rubbish pit was found on the southern edge of the trench which was distinctively large (1.1m diameter) and so deep that it was not fully excavated.

The features mentioned above are all cut into a thick (0.5m maximum depth), grey-brown, silty clay levelling deposit (098), a very large volume of material within the excavation area. The layer consists largely of degraded mudbrick and other building material, sporadic cobbles, fired brick and a large quantity of ceramics. The seemingly purposeful deposition of this layer represents a significant remodelling of the area, which may correspond with construction of the nearby mausoleum. Lack of evidence for mudbrick buildings at the site in this period, or immediately before suggest that it may have been brought from the surrounding area. Certainly it indicates a change of use of this area from one of consistent occupation (which will be described below) to a predominantly park-like, open area with little evidence of continuous use.

[7] Consisting of several post or stakeholes across the whole trench, but with no discernible pattern including (090), (097), (102) and (108), two shallow, ovoid, ash filled fire pits (084) and (088) and a cess pit or toilet with a primary bricky fill (100).

Figure 1.5: Excavating the extensive levelling layer (098). Features visible are later informal occupation cut into this deposit.

Later Medieval/Ilkhanid Period (c. 13th/14th centuries)

Sealed by this thick levelling layer were several features, a layer which likely represents a destruction and remodelling horizon, with the remnants of features belonging to before this transition, as well as deposits and features relating to this process. The latest layer in the underlying sequence was a large spread of cobblestones (121) measuring approximately 7m N-S and 4.4m E-W with a maximum depth of 0.25m and appears to fill a dip in the deposits below, for the purpose of levelling the area.[8] The interface between the above layer (098) and this surface (121) was noticeably rich in artefacts, containing a large volume of ceramics, as well as coins and other glass and metal objects, with a particular concentration in the south west corner of the trench, near a sequence of tandir ovens.

A well-preserved oven (122) was uncovered in the south-west corner of the excavation area, with a notable largely-complete rim at the top of the lining, which suggests that this was an open-topped oven or fire setting, rather than the bell-shaped one excavated in the upper levels. The remarkable preservation of the relatively delicate lining also indicates that it was rapidly buried, rather than being left

[8] This layer corresponds to layer (025) excavated in 2015.

open to erosion, suggesting it dates to just before the deposition of layer (098). This tandir was probably built on the site of an earlier tandir or oven structure.

Figure 1.6: Tandir (122)

Other features at this level included a number of pits in the south-west of the trench ((130), (132) and (134)), likely rubbish pits and cesspits, which echo the nature of the temporary occupation recorded in later layers in this trench. A deep rubbish pit with numerous ceramics (157) was also found in the north-west corner of the excavation area (0.87m diameter and 0.9m deep [minimum]). It contained several large, well-preserved vessels and may provide closer insights into the date of this demolition event.

Pre-dating these features that relate to the site's remodelling into an open space, there are numerous structural remains. Due to the uneven nature of the destruction, the snapshot of the occupation has likely revealed features which are not exactly contemporary, but as the relationships have been destroyed by this demolition, they will be considered together. Analysis of environmental evidence and material culture may be able to draw out chronological distinctions between different features, but as they are likely very close in date, this might be problematic.

The oven described above (122) seems to have reused an earlier cooking facility, consisting of a brick foundation (145), a very compact clay lining and a use-layer of fine ash. Surrounding this feature were a number of small post- or stakeholes, which probably represent structures relating to the oven installation. The continuous use of this area as a location for cooking activity is also demonstrated by the build-up of a localised occupation layer that was associated with the remnants of two brick features (apparently flues possibly associated with the oven (122)). The poor preservation of these features, which were likely at least partly subterranean during use, demonstrates the depth of the destruction in this area.

Figure 1.7: Flue feature associated with oven (122)

The other major features, truncated during this demolition phase are walls: (137) in the south-western corner of the trench and (036), (037) and (155) in the north. All the walls are of similar construction, built from reused orange to orange-red fired brick, with an insubstantial, gritty, mud and lime mortar bond. They are also all on the same northeast-southwest alignment and because of their position, at the edges of the excavation area, no returns have been found. None of the walls seem to have any occupation deposits associated with them, although the wall in the northwest was excavated to its construction level, and partially removed. However, in this example, the deposits on each side have different characteristics, demonstrating that they do form some sort of boundary. To the north of the wall, the deposit was a

rubble-filled layer around 0.2m deep and may relate to destruction of the wall. It overlaid a distinctive silty layer, characteristic of a steady build-up of erosion material during abandonment and dilapidation of a building.

Masonry segments (036)/(037) and (155) seem to form a continuous wall, despite (036) having a much deeper foundation that the other two sections, which each survive to only four courses, again indicate a large-scale destruction/demolition of this area prior to the levelling. However, the differing deposits on the northern and southern side of the wall present a number of options to interpret this structure. Firstly, it is possible that this brick-built wall is the continuation of a less formal boundary, perhaps constructed in wood or mud, which was then formalised in brick and so preserved distinctively different occupation on each side. It is also possible that there is a sunken or raised element to this feature, either that it represents terracing or revetment in the area, and so the occupation on each side relates to different periods, or that there is a sunken, yet to be discovered floor to the north of the wall, or a raised, perhaps wooden floor which was destroyed in the demolition process.

Figure 1.8: The lower section of the walls destroyed before the levelling layer (098) sealed them (loo

Medieval Occupation (Pre-13th century)

The earliest occupation horizon uncovered during the 2016 excavation was sealed by the layer (135) and pre-dates the walls described above.[9] The features revealed demonstrate well-preserved occupation deposits: another tandir oven (161) with a 'standard' brick foundation, compacted orangish brown clay lining, and filled only by a disuse deposit rather than showing any evidence of use. This level also revealed a hearth (165) constructed from large reused orange fired brick or floor tiles, which preserved the ashy remains of its last use and a nearby buried pot, which was likely also used as a feature for cooking, or perhaps storage. Two brick structures ((169) and (170)) in orangish-red fired brick were only partially exposed. One (169) may represent the base of a pillar, a wall remnant or footing, but further excavation should clarify its exact use.

Figure 1.9: Photo of the brick hearth/buried pot occupation area

Summary and future recommendations

The excavations in Trench 1 have revealed more than eight hundred years of occupation within Torpak Kala, demonstrating that it has been used as a park or open area for several hundred years. For the later period there is evidence of only sporadic or temporary occupation including markets, communal domestic activities

[9] The construction ditches for these walls cut through the earlier features.

such as cooking and occasional 'informal' construction represented by rubbish pits and cesspits.

The major repurposing of the area, represented by the deposition of the 0.5m thick and destruction below may correspond with the construction of the mausoleum[10], perhaps changing this area from an area of domestic occupation into an open area park. However, the comprehensive destruction of the archaeological deposits below this have rendered them incomplete and difficult to interpret, but it does seem that this represents a change of use in the area. The earliest features in the excavation area suggest domestic occupation, and activities that might typically take place in yard or other external domestic setting. Based on a preliminary analysis of the ceramics, these layers have been dated to between the 11th-early 13th centuries.

Further studying the chronological sequence of the material culture and environmental samples collected from each layer should help to refine the date for periods of activity at the site as well as providing further insight into the destruction and remodelling event. Excavation in future years should focus on reaching earlier deposits, now that the later sequence has been clarified in this area.

AEB01 Trench 2

In 2015, a trench measuring 3m x 5m was excavated against the southern wall of the enclosure known as Torpak Kala. This trench revealed that in the later phases of the use of the enclosure (from the 14th-15th century onwards) the area immediately adjacent to the wall had been dug into – several very large pits were excavated, seemingly either for use as rubbish pits or to remove material from the layers below. Owing to the size of the trench, it was becoming difficult to excavate the lower levels safely and so in 2016, the excavated area was first widened to form a trench [5m x 5m] and the deposits excavated to the level that had been reached the previous year (Figure 1.2). Subsequently the whole trench was excavated to a maximum depth of 3.24m below the top of the wall, which represented 1.17m below the ground surface in the northern end of the trench.[11]

[10] 1322 CE.
[11] Considerably lower away from the wall, towards the general level of the open park.

Modern and early modern periods (15th-20th century)

The modern period in this trench is represented by two distinct phases, both characterised by circular pits, dug into the sloping eroded mudbrick wash from the enclosure wall (Figure 1.11). Immediately underneath the topsoil layer, a single tandir oven had been recorded in the 2015 season, and with extension of the trench, a further three pits were excavated ((028), (026) and (024)). Overall, these irregular shaped pits range from 0.4m-0.8m in diameter and reach to a depth of 0.15m (pit (024) in the south is deeper at 0.5m). Their function is unclear, but most likely they serve as rubbish pits as they are filled with a homogenous backfill of mixed broken ceramics and soil. The material within the pits was most likely residual as it relates to a broad range of dates from the 12th century onwards, but comparing the stratigraphy it is likely that these features relate to the modern period, from the 19th and after.

Figure 1.11: Upper layer of features

A second set of pits was excavated from a lower level, separated from the upper phase of occupation by a thin layer of erosion deposit (029) (representing disuse and erosion of the wall over some time) (pit numbers (031), (033), (035), (037), (039) and (044) – Figure 1.12). These were larger than the later pits in general (between 0.7m and 1m diameter), and certainly deeper, reaching to a maximum of 1.19m. Between the two seasons (2015 and 2016) a total of 10 large pits were excavated from this level. All of the fills of these pits (in some cases with multiple fills) consisted of loosely compacted soil with numerous fragments of ceramics and a limited amount of animal bone, similar to those above. Some preserved more complete vessels towards the base of the pits, including an exceptional example (Figure 1.13), which suggests that these may have been deliberately used for storage before being backfilled with general waste.

Figure 1.12: Pits (main layer)

Figure 1.13: Large vessel at base of pit (031)

12th-14th century use and abandonment

The pits described above are dug into a sequence of surfaces that attest alternating use and disuse of the area immediately adjacent to the Torpak Kala wall. Most of the layers seem to comprise a mixture of eroded wall material and accumulated rubbish becoming trodden into a makeshift surface. At least once (layer (048)) the area was deliberately levelled with a compact floor made river cobbles and compacted clay, but it is unclear what this use is associated with, as it tails off towards the northern part of the trench where the mudbrick erosion is lower. Perhaps at this time a walkway was created around the edge of the wall or there were contemporary buildings that were not uncovered during the excavations. Finds in this layer broadly correspond to the 12th-14th century, possibly dating towards the latter end of this period.

Surface (048) overlies yet more mudbrick erosion, which in turn seals the remains of a collapsed building with a complex series of walls ((055), (056), (061), (062)). The building was constructed from re-used fired bricks, forming a rubble core and a more formal facing made from the straight sides of the fragments (although the coursing is irregular) (Figure 1.14). The form of the building appears to comprise two rooms, with a third enclosed space towards the Torpak Kala wall. No internal floors were found, however, and so the occupation surfaces of these rooms are as yet unclear. The

external space appears to have been a trampled earth surface which was rapidly abandoned, possibly with the collapse of the wall, evidenced by the extraordinary number of semi complete vessels smashed *in situ* (Figure 1.15). It is not certain how the outdoor space relates to the rooms inside the building, but at least in its final phase it appears as though a small ramp was made to connect to a break in the wall. The chronological phasing of this building will be clarified once the walls have been excavated further. On a level with the external surface the top of another wall N-S is visible, appearing as a brick path on an oblique alignment to the others, but almost certainly an earlier foundation or wall that has been reused.[12] This is at the bottom of the sequence excavated thus far and it abuts the Torpak Kala wall, meaning that the latter pakhsa construction (that encloses the whole modern park) is at least earlier than the dates of this occupation phase.[13]

Figure 1.14: Walls in the lowest phase in AEB01 T2.

[12] This wall is currently unnumbered as it has not been fully exposed.
[13] 12th-13th century according to the ceramic material.

Figure 1.15: Vessels broken in situ at the lowest level of

2) ***AEB02 – Investigating Qaradəpə***

Unlike in the centre of Bərdə, the investigation of the archaeology at Qaradəpə has so far revealed remains very close to the surface. In 2015 the remains of substantial unfired mudbrick walls were uncovered on the highest area of the mound, approximately (0.2-0.3m) beneath the current ground level.[14] The focus of the project in the first season was to excavate a central room that showed signs of being destroyed and abandoned in a catastrophic fire. As the building was left hastily and the remains heavily charred, a number of well-preserved artefacts indicated domestic use for this room. The building as a whole, while also seemingly burnt, remained unclear, and so the first aim of the 2016 season was to try and ascertain a wider plan of how this room related to the rest of the structure. In order to do this, the trench was widened, rather than excavating deeper for the time being, to a total area of 10m x 10m (100m^2) (Figure 2.1).[15]

Figure 2.1 AEB02 Trench 1 – overview

[14] See Wordsworth, P. 2015. *Field Report: Archaeological Excavation of Bərdə Project 2015* (unpublished) for details. Available at: http://www.orinst.ox.ac.uk/research/nizami-ganjavi/AEB_Season1.

[15] The trench was re-aligned slightly to coincide with grid coordinates on the projection WGS84 UTM Zone 38N.

Phase 1 & 2 – Final abandonment and human graves

In the previous year the uppermost layers beneath the surface of the mound had been deemed heavily disturbed, and it is evident that roots of small shrubs and burrowing from rodents and other small mammals has churned up the topmost archaeological deposits significantly. In several places burrows could be outlined, which often contained fragmentary skeletons of small rodents confirming this process. The remaining portions of the upper layers, which pertain to gradual erosion of the mound, were nonetheless removed carefully as just beneath them, shadowy outlines of possible graves were detected. Human remains had also been recovered in the last season, but owing to the fact that they were heavily disturbed, they had not been securely placed within the sequence of occupation. In 2016, after removing the topsoil and the upper layer of erosion, a total of six burials were excavated ((038), (041), (044), (048), (052), (055), (060)).[16] Four were infant burials and two belonged to adults.[17] It should be noted that in several places, disarticulated fragments of skeletons were also found, relating to the aforementioned post-deposition disturbance.

Figure 2.2 Excavating burials on the mound

[16] Not all were immediately visible under the topsoil.
[17] It should be noted that both of the partially-preserved burials excavated in 2015 were also infants – so a total of 6 out of 8 (75%).

Owing to the relatively small number of burials, it is difficult to establish a definitive pattern for their orientation, given that they are certainly not uniform. There is a general trend (four of the six examples excavated and at least a further two identified but not yet excavated) towards alignment with the head in the northwest and the feet in the southwest, which would correspond with modern Muslim burial practice. Furthermore, where undisturbed the head was tilted on its side facing roughly south-west (i.e. the *qibla* direction (approx. 200° from north). Only one was definitely orientated in a completely different fashion – perpendicular to the others with the head in the southwest (055), and an unclear cut may possibly originally have represented another example. It is not certain whether this difference represents a cultural difference or a chronological one, or whether indeed it is mere chance. If in the future it were deemed worthwhile, further exposure of the graveyard over a wider area would certainly elucidate these questions.

The preservation of the bone across the burials was poor, resulting in all of the skeletons being fragmentary. Many of the bones would have been particularly fragile in their original condition as they belonged to very young children, and thus were only partially formed. Only in burial (052) was it possible to gain some idea of burial practice, as the body seems to have been placed in a narrow cut underneath a reed mat or bier, resting within the grave but on a higher ledge (Figure 2.3). The preservation of the woven reed matting is exceptional (albeit also very fragile) and with further analysis may reveal the plant type used and possibly the original shape of the matting. While comparisons could be made with similar modern practices in northern Uzbekistan, we are currently seeking historical comparanda for this practice more locally to explore the tradition further.

Figure 2.3: Reed matting over grave (052)

The burials appear to represent more or less a single phase of activity – that is to say in all but one instance they are separate graves and have not been dug through one another. This is not to say that the individuals were necessarily buried simultaneously. It is likely that the graveyard expanded gradually, but possibly grave markers (no longer visible, possibly original made from wood) would have indicated existing inhumations. In the case of burial (052), a child burial cut the grave of this well-preserved adult. This indicates the infant inhumation was indeed later, but we have no idea at present by how much. That burial (052) represents one of the best-preserved human skeletons may indicate that the poor state of the others is due to their closeness to the surface of the mound, and thus the probability of disturbance. Overall, the date of the burials remains unclear, as there were almost no finds associated with the fills of the graves. The limited number of ceramic fragments recovered is non-diagnostic and could relate to a broad period from the medieval period onwards. It is hoped that with the firmer dating of the abandonment of the mudbrick structure (into which these burials are cut) it will be possible to assign at least a *terminus post quem* for the burials, and in the future radiocarbon dates would give a better idea of the broad time window into which they fit.

It is not an uncommon practice for graveyards to be established near or on archaeological sites, in the Caucasus, Central Asia, but also in the Middle East. In a

basic and pragmatic sense former towns often represent unusable land, too high above the plain for irrigated agriculture, and thus graveyards are a useful purpose for these areas. On a more subtle level, however, there is some indication that the visual prominence of high mound sites (formed from ruined settlements), as well as their direct link with the past, gives them meaning as sites of memory. This theme has been expanded on elsewhere in academic writing, but it serves to indicate that the phenomenon observed at Qaradəpə is not unusual and does not relate to a specific time period or markedly local tradition.

Phase 3 – The burnt building (9th-10th century?)

The large walls identified in the first season surrounded a partially excavated room (Space 11) and they continued in the newly exposed area to form other rectangular rooms in a 'cellular' arrangement. As indicated above, one of the primary aims for this season was to elucidate something of the plan of the building, in order to understand what its function might be. It was also anticipated that the rest of the room uncovered in 2015 would be excavated, in order to have a complete assemblage from that burnt room (Space 11).

Figure 2.4: Post-excavation photograph of AEB02 showing the exposed mudbrick walls

The walls exposed in 2016 broadly correspond in size and construction to those around the room – they measure 1.5m-1.7m thick. In the majority of instances the erosion of the unfired mudbricks is such that individual brick outlines are unclear, although in places they can be identified and appear to measure approximately 0.4m x 0.4m.[18] The building is oriented NE-SW, intriguingly on a similar alignment to the burials, and indeed the direction of the *qibla*. A total of four rooms were identified, although only one (Space 11) could be outlined completely within the excavation area. At least two of the open spaces appear to be affected by fire damage and possibly all of them.

Three walls of Space 11 were traced in the 2015 excavation, and the remainder of the room was exposed this year – measuring 2.3m x 4.8m (11m^2). The burnt ashy abandonment fill, which covers the entire room, was removed in three layers (seemingly corresponding to secondary burning and ash (057), collapse (058), and initial burnt remains (059)), with the lowest of these matching the *in situ* burning observed previously. The remains of complete or almost-whole terracotta roof tiles confirmed the existing suspicion that this structure supported a substantial roof that collapsed in the fire. Fragments of the charred framework were also recovered. All small finds, including glass, were given three-dimensional coordinates, as a study of the breakage of the finds from this lowest level is currently underway (see below). Analysis of the glass alongside the ceramic evidence, points to a 9th-10th century date for the latest occupation of the building. Of the artefacts recovered, the number of sherds from ceramic vessels is surprisingly small and they are ubiquitously unglazed, relatively 'coarse' wares. Two whole examples were retrieved in 2015, but the total number of sherds from the layer of the burning event (Contexts 019 and 059 – excavated in 2015 and 2016 respectively) is just 112 – considerably lower than occupation levels in AEB01 at the centre of the city, and many of these relate to a single cooking pot vessel. This likely reflects, however, that the room was maintained as a clean interior space and the sherds recovered come from vessels smashed within the room during the fire event (with the exception of a handful of fragments mixed in from elsewhere post-abandonment).[19] Samples of seeds from the burnt fill of the room and charred beams have been submitted for C^{14} analysis to confirm the date of the fire event and the results should be made available in 2017.

[18] There was considerable irregularity of size noted, but it is hoped that better-preserved sections of the walls will provide a clearer overview, as the excavation progresses.
[19] The whole vessels and in situ smashed glass also relates to the use of the building rather than its abandonment.

Future work at AEB02

It is crucial that further excavation is undertaken of the building at AEB02 to ascertain its function and the history of its occupation – excavating through the layers of use which pre-date the remains of the catastrophic event so far recorded. The building is but the latest phase in a seemingly deep sequence of inhabitation at the mound, and once a secure date is obtained for the fire event, it will be possible to trace the history of this settlement further back in time into the late antique and early Islamic period. The artefact assemblages recovered offer a unique opportunity to investigate the material culture of the building, as the remains are unusually in site. It is hoped that alongside the results from Bərdə, these well stratified artefacts will enable a refined chronological type-series to be developed over the coming years. Furthermore, by investigating the parallel histories of this rural site in conjunction with the urban centre and the wider regional survey, it will be possible to create a comprehensive overview of the provincial settlement structure within the Islamic period.

3) Small Finds, Bulk Finds, and Conservation

Prepared by Timothy Penn

Summary of 'Small Finds'

The 2016 field season continued to provide evidence of the rich material culture of Bardhaʿa and its surrounding territory. To date, 147 small finds have been recovered from AEB01 and 72 from AEB02.[20] These comprised a wide range of metal, ceramic, glass, stone and worked-bone objects. Among the exceptional individual finds were a number of coins (totalling 20);[21] whole and near-whole pots (15); epigraphic ceramic fragments (3) and other sherds of highly decorated ceramics (for example one particularly fine example of polychrome incised and carved ware, SF AEB01 no. 8, depicting a goat pursued by a predator, perhaps a lion (Figure 3.1). Numerous fragments of glass vessels and bracelets were recovered, as well as a smaller range of other interesting sundry finds (including, for example a kiln tripod used in ceramic production (SF AEB01 no. 48) and a metal scale pan (SF AEB01 no. 92) for measuring in a marketplace setting, attesting to both productive and commercial activity in the vicinity of the sites under investigation).[22] Of additional interest was the unexpected find of a gold pendant (SF AEB02 no. 55), with a glass setting and a linked chain of alternating carnelian and freshwater pearl beads (Figure 3.2). Although recovered from a probable disturbed context at Qaradəpə, it may be possible that this pendant was originally from one of the graves excavated at that site, or another archaeological context in the vicinity and subsequently redeposited. However, this hypothesis awaits further confirmation. The date of the object is likewise uncertain at present, but given the style of workmanship it is likely to be from the somewhere between the 11th and 14th century.

[20] References given henceforth are to the small finds list as compiled by the end of the 2016 season.

[21] All of which were found at AEB01. It is noteworthy that the processing of environmental samples by David Stone resulted in the recovery of a number of the coins found this year. This attests to the value of this work, both in terms of the palaeobotanical evidence from Bərdə, and in helping to recover and develop a strong understanding of the

[22] It is hoped that subsequent study of the pottery and other dating elements found in association with these items will allow for a more defined understanding of their dating in the near future.

Figure 3.1: Fragment of an incised and champlevé polychrome glazed ceramic bowl.

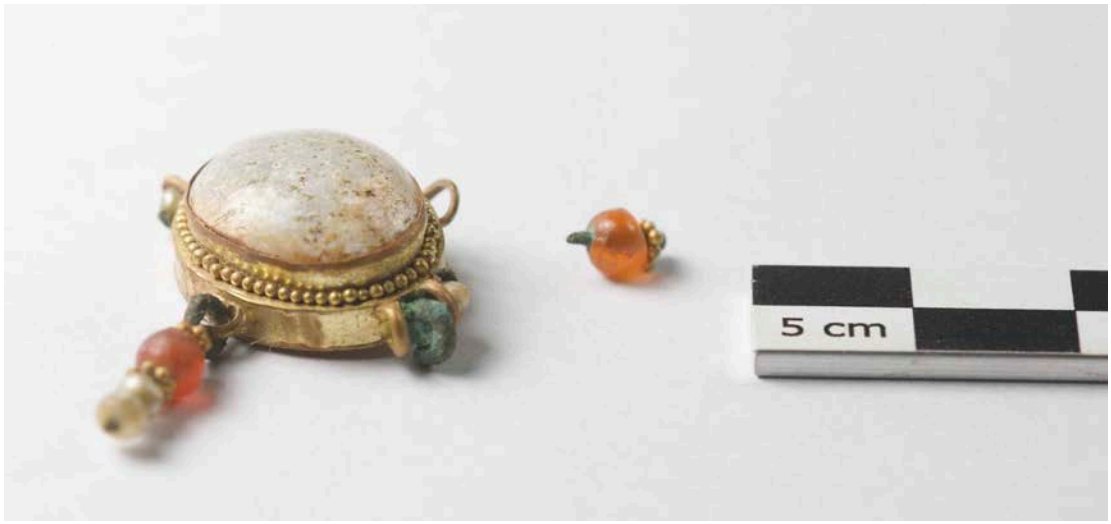

Figure 3.2: Pendant of a glass cabochon in a gold setting, with freshwater pearl and carnelian beads, attached with copper wire

Bulk finds

Exceptional quantities of fragments of ceramics, bone and building material (tile and brick) were retrieved from the excavations in 2016. The total number and weight of all categories of bulk finds is given in Table 3.1. While all artefacts were photographed, considerable work remains to build a robust typology of the ceramics in particular. Work on a definitive type series for forms and fabric has begun but only when a greater quantity of material is processed will it be possible to use this data for statistical purposes and to refine the chronology of the stratigraphy excavated. The

animal bone, meanwhile, is awaiting division by taxa and detailed analysis, which will hopefully be undertaken in the coming year and reveal more about the diet and economy of Bardhaʿa.

Category of bulk finds	**Total number**	**Weight (kg)**
Ceramics	21,185 (fragments)	443.5
Animal Bone	131 (bags)	67.17
Ceramic Building Material	26 (bags)	146.92
Glass	70 (fragments)	0.42
	Total	**658 kg**

Table 3.1: Number and weight of bulk finds by category

Conservation and storage

The valuable presence of conservator Margrethe Felter enabled the careful consolidation, cleaning and repacking of all finds recovered in both field seasons undertaken to date, as well as training other team members, so that future finds will be packaged to archive standards (Fig. 3.3). Particular effort was made to place metal finds in dry storage with silica gel to ensure their continued preservation for further study. Time constraints meant that the work undertaken by the conservator had to be strictly prioritised: once repackaging was complete, consolidation primarily focused on metals and glass to prevent further deterioration. It was also possible to clean five coins,[23] greatly increasing their legibility and their usefulness as evidence for both economic activity and as chronological markers in the development of a dated pottery series for the region.

[23] Several other coins proved too delicate to mechanically clean at present.

Figure 3.3: Conservation work on the excavated finds.

Ongoing and future work

The assemblage in the burnt room (Space 11) at AEB02 (Qaradəpə) provides a unique opportunity for understanding the in situ remains of the building when it was abandoned. Timothy Penn has begun the analysis of the material, starting with the numerous glass fragments[24], found smashed on the floor of the room. The first task is to refit, draw, photograph the glass vessels, in order to analyse both the forms present and the way in which they smashed. This will also be accompanied by chemical composition analysis of the vessel and bracelet glass, to be carried out by Melina Smirniou (UCL) as part of a broader research programme she is conducting into medieval glass production across the Caucasus and Central Asia. It is hoped that this will provide opportunities both to further contextualise some of the material recovered from Bərdə.

[24] Artefacts for analysis were kindly exported by Lomonsov Baku Branch of the Moscow State University and will be returned in their original state.

4) Archaeobotanical analysis

Prepared by David Stone

Archaeobotanical study is paramount to the understanding and interpretation of many aspects of life in past societies including diet, agricultural practices and subsistence strategies and can also reveal insights into the function of archaeological structures, food production and processing techniques and the evolution of societies and their hierarchies. However, archaeobotanical remains are not necessarily distributed homogenously throughout a site. Therefore, an appropriate sampling strategy is required to collect material from diverse ranges of contexts to ensure a representative sample. As part of the Archaeological Exploration of Bərdə project, an integrated environmental strategy was implemented at both Torpak Kala and Qaradəpə using a combination of systematic and judgment approaches targeting features such as pits, tandoors and general occupation deposits. Climate and soil conditions prevalent in the Bərdə region are most conducive to the survival of charred remains with research therefore focusing on charred or carbonised material such as grains, chaff, other seeds and charcoal.

Charred and mineral-replaced remains are usually recovered by flotation, which involves the placing of a soil sample into water. When agitated, organic material such as charred and mineral-replaced plant macro-remains, wood and insect remains will be released from the soil matrix and float to the surface, or be suspended in the water, whereas inorganic material will sink to the bottom of the container. 10l – 30l samples were collected from deposits resulting in over 1000kg of soil samples amassed during the first two seasons of excavation. These were processed on-site using the flotation technique. This resulted in the retrieval of approximately 21kg of archaeobotanical material and 80-90kg of retent. Initial screening of these samples identified charcoal material, charred seeds, wood fragments in the flot samples with mollusc and insect remains contained within the retent material.

The primary contribution of archaeobotanical research to the AEB is through the recovery of plant material from archaeological excavations and the identification and quantification of the plant species discovered. This approach will create the first archaeobotanical dataset for medieval Azerbaijan, enabling investigations of human-plant interactions in the region. Through identification of changes of concentrations in different plant groups and the introduction of new species, it will be possible to reconstruct patterns in diet and agricultural practices through space and time. Central

to this project is the investigation of arable weed species for the application of phytosociological, autecological and functional approaches to understand specific growing conditions, husbandry practices and ecological factors. Comparisons with archaeobotanical evidence elsewhere in the wider region will be undertaken to understand activities in medieval Bardhaʿa in their broader context. The archaeobotanical data will also be integrated with archaeological evidence to develop new understandings of social and political developments in the region. Analysis of these remains will reveal new insights into diet, economy, land-management practices, political administrations and use of plants during the development of Bardhaʿa.

Figure 4.1: Typical charred archaeobotanical remains – seeds and charcoal

Figure 4.2: Typical processed flotation sample from an archaeological context in Qaradəpə