Field Report: Archaeological Exploration of Berda 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 Barde Project

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Cover image: plainware ceramic jar excavated as part of the contents of a burnt room at Qaradağ during the September 2015 season. Photograph by Alexis Pantos.
Introduction

The first season of research at Bərđə built upon the results of a short preliminary reconnaissance visit in July 2015. Reviewing existing archaeological and historical literature on Bərđə, it is clear that very little systematic investigation has been undertaken at the city, and its pre-modern history remains relatively unknown. The reconnaissance visit targeted all known archaeological remains within a 20km radius of the town, and several possible sites identified through a systematic analysis of the available satellite imagery. A significant amount of further survey is required to complete the landscape characterisation around Bərđə, but from the initial results it was judged that there were several areas of primary interest that would benefit from further archaeological exploration.

In the town of Bərđə, the main concentration of archaeological findings has been around the centre, as demonstrated by the collections of the local Museum of History and Ethnography and a handful of archaeological reports from the twentieth century. Of these, Torpak Kala (below) has received the most attention owing to the presence of a 14th century tomb tower although excavations in this area have been limited an inconclusive. Given this evidence for a substantially well-preserved archaeological occupation sequence in the centre, one of the first aims was to characterise these remains in greater detail and obtain chronological information for the city’s development. During the reconnaissance work, several areas outside the modern built zone were evaluated for evidence of archaeology. A number of ploughed or fallow fields yielded moderate quantities of surface ceramics and judged as potential zones where field walking and/or test pits might yield archaeological data.
1) **AEB01 – Torpak Kala and the 14th century tower**

The most prominent monument of Bərda is the enigmatic 14th century tomb-tower at the heart of the modern city. Built in 1322, the tower only received academic attention in the 1920s when it was described by Sysoev¹. One of the characteristic features of the tomb is the repeating motif of the word ‘Allah’ around the central section of the building in rectangular turquoise tiles on a plain fired brick background. While an inscription (no longer legible) purportedly gave the date of the tower, no name of the individual intended to be buried there is given in the epigraphic bands that decorate the upper and lower parts of the cylindrical structure. Its anonymous purpose has led some to speculate that it is not intended as a tomb at all, but may have had a decorative or military function. The appearance of the tower today is the product of several restoration projects on the interior and exterior fabric of the building, one of which is ongoing.

![Figure 1: Outline of modern and 20th century Bərda](image)

Around the tower is a small park, surrounded by fragments of an enigmatic earth wall known locally as Torpak Kala. Various dates have been assigned to the wall but close inspection reveals that it appears to have been repaired and rebuilt many times. Aside from the tower and the apparent fortifications there are no further traces of historic structures within this 125m x 125m enclosure. Indeed, only traces of one other medieval monument survive in the town itself, the remains of second similarly dated circular tomb tower.

The main aim of the work at AEB01 was to evaluate the survival of archaeological material from the early urban history of Berde and to establish a sequence for its occupation. The park is unusual in that it is one of the few areas of the modern town which has remained free of building development, seemingly at least since the beginning of the 19th century. Fragments of medieval ceramics in the park suggest that buried beneath the current surface archaeological remains of the early city still survive. The park has undergone several landscaping attempts, and small concrete installations are dotted around the edges of the park, attesting its conversion into a pleasure park at some point in the 1980s. At this time, it appears as though a several rows of trees were added to existing plants, creating a shady place around a central fountain. At the far end of the park from the entrance, a chaikhana still occupies a small concrete plinth, but none of these installations is judged to have had a significant impact on the subsurface archaeology.

Trench 1 (T1) was placed in a relatively open area of the park, free of trees and concrete, where it was possible to locate a 5mx5m trench. The size of the trench was determined by reports of limited previous archaeological work around the tower in the 20th century that found the depth of primary archaeological deposits reached at least 3 metres. In order to allow for at least 2 steps to reduce the height of the baulks while maintaining a reasonable working area. During the process of excavation, the trench size was expanded 7m x 5m to explore features apparent in the section.

A second trench (T2) was started in Torpak Kala, in order to investigate the relationship of the interior occupation sequence to the enclosure wall and
understand the date of the wall’s construction. An initial area of 5m x 3m was started to ascertain the potential for preservation of remains in this area.

In addition to the excavation of these two trenches, the team began to compile a comprehensive topographic model of Torpak Kala, as a basis for mapping and interpreting the archaeological remains of this area and to ascertain the level of preservation of different elements of the historic fabric (the wall in particular). The topographic survey combined high resolution ground photography and 3D photomodelling with precision differential GPS (DGPS) survey, so as to establish a detailed georeferenced plan for AEB01. Reference benchmarks for future work were also laid out using the DGPS as a control network for future topographic work.

Below are short reports detailing the methodology and results for the three activities at AEB01.

_Trench 1_

The following outline of the archaeological findings is based on the field report of the trench supervisor at AEB01, Katie Campbell.

Trench 1 was opened with the aim of characterising the archaeological deposits in central Berde, to ascertain at what depth and how well the archaeology is preserved. The archaeological deposits at AEB01 could also prove key to understanding the foundation and development of Berde, so the excavation aims to retrieve stratified material culture to provide further information about past economy of Berde and create a pottery type sequence for the area, which will aid dating of deposits for this and other archaeological projects in the region.
Four main phases of activity were identified within trench 1. The latest phase was a layer of modern overburden, which was around 0.3m thick, up to 0.45m in places. Below was a 0.4m layer of mixed up occupation debris, probably a levelling layer to create the park judging by the accounts of local residents. Closer analysis of the pottery would help clarify whether this can be attributed to one episode, but material throughout the layer is indicative of a date within the 20th century.

The levelling layer sealed a number of features cut into the layer below (007), which was up to 0.45m thick and consisted of mixed occupation and erosion material, probably representing a period of abandonment. These features were either cut features, most likely robber pits, or built using reused bricks—probably from nearby robbing activity. Brick platform <011> was constructed from reused red fired brick and survived to a maximum of 2 courses, measuring 1m (N-S) x 2.18m (E-W) (Figure 3). It is possibly a pathway or sitting platform associated with earlier activity than the main 20th century redevelopment of the park. It could also be the remnant of the foundation for a small structure. Nearby, a sub-circular feature [010] (0.78m (N-S) x 0.74 (E-W) x 0.43m) was lined with red fired brick, and likely to be a sump or drain.
(Figure 4). Pit [013] was overlain by platform <011> and at 0.65m x 0.55m x 0.47m could be a robber pit or perhaps rubbish disposal pit. The other two pits in this phase are similarly dug with a small step left in the side to allow easy access.

Figure 3: Brick Platform in the upper levels of AEB01 Trench 1

Figure 4: Excavation of sump/drain [010]
Below layer (007) was a similar layer (020), which was up to 0.4m thick and similarly consisted of mixed erosion deposits and occupation material, suggesting it represents a period of abandonment at the site. Cut into layer (020) and sealed by (007), were a series of features which represent temporary occupation or squatting at the site, during this phase of abandonment. These consisted of small tandoor ([023], post hole [017] and a small part of a pit on the northern limit of excavation [019] which could be a robber or rubbish pit.

Layer (020) seals the earliest phase of occupation in uncovered in trench 1, which may pre-date the mausoleum, as it is significantly lower than the base of the structure. This phase consists of two walls (<036> and <037> - Figure 5), a pottery-rich layer (026), tandoor [033] and pebbly dump (025) which seals pot-lined hearth [029]. Layer (025) and the construction cut [031] of walls <036> and <037>, are the latest events in this sequence and may be related. Layer (025) is a dump of river pebbles on the eastern edge of the excavation, it may be some sort informal surface external related to the building of which walls <036> and <037> form the southern boundary.

![Figure 5: Masonry walls exposed in AEB01 Trench 1 (looking North)](image-url)
The construction trench in which the two walls are built truncates the tandoor [033] and the associated layer (026). Wall <036> is constructed from irregularly-coursed fired red bricks, most of which seem to be reused, with some other material in the wall’s core such as reused roof tile and large river pebbles. The wall is 3.14m long x 0.76m wide and 0.68m (11 courses) tall, around 3 courses survive above the upper limit of the foundation cut. The substantial wall foundation and reused material suggest that this may be the foundation of large structure, possible the fired brick damp-course for an unfired mudbrick wall. Built onto the southwest end of wall <036>, and within the same construction cut—which becomes far shallower in this area, is short wall or platform <037>, built from reused fired red bricks and measuring 0.72m x 0.6m x 0.21 (4 courses). Wall <036> runs SW-NE, with a clear corner at the NE end which suggests it may form the southern wall of a building orientated SW-NE. The small masonry installation <037> may therefore be a post pad or base for an archway, indicating an iwan-style entrance or colonnade on the SW end of the room. Further excavation would be required to confirm this theory.

The two earlier deposits (026) and (040) and their associated features [033] and [029] suggest a mixture of in-situ occupation and rapidly accumulated deposits-perhaps levelling, dumping or rapid build-up of rubbish. Deposit (026) was characterised by a substantial amount of burnt ashy material and a large amount of pottery, some of which seems to have been broken in situ. A pot-lined pit [029] was cut into this deposit, and used as a hearth or tandoor. At least one of the other pots recovered from this area seems to have been part of a similar installation, but the feature was very disturbed.

Tandoor [033] almost certainly pre-dates deposit (026), but was excavated from this level due to the problematic nature of being able to identify the construction phase of standing features such as tandoors. It is a substantial and well-constructed tandoor, with a diameter of 0.64m and depth of 0.7m, and a rubbly, brick built foundation for the hard orange baked clay tandoor lining. The lining had a clear ridge half way up the structure which indicates
that it was constructed in two phases, perhaps a repair/renovation, but more likely to be a deliberate construction technique as there is no change in the lining material. Ashy burnt material (035) was recovered from the base of the tandoor for sampling, but the tandoor was in very good condition with very little heat damage to the lining, suggesting that despite its careful construction, the tandoor was not in use for a long period of time.

Figure 6: Tandoor [033] which is truncated by the construction cut for walls <036> and <037>, note the ridge halfway up the baked clay lining and protruding brick foundation.

The excellent survival of tandoor [033] indicates that deposits (026) and (040) accumulated rapidly around this structure. This seems likely to be levelling or the dumping of occupation detritus. (026) and (040) are very similar deposits and may well represent a single phase of accumulation, another (unnumbered) tandoor is visible in layer (040), but this could have been constructed earlier in the sequence.
Recommendations for further Work

In depth analysis of the pottery and environmental samples from this trench would enable the attribution of a better chronology to the excavated deposits as well as an understanding of the past agricultural economy of Barda. Further excavation work would benefit from targeting the earliest phase of occupation revealed in 2015, at around 1.2m below the current ground surface or 82.65m OD, and opening up a large excavation area to investigate the earlier medieval deposits. Based on the quantity and chronological diversity of the pottery recovered from this trench, the deposits may be of a considerable depth. The trench could be extended for 4-5 metres to the south without disturbing trees-this would also minimise root disturbance to the archaeology, which was found to at least a depth of 1.4 metres below the ground surface. This would give a new trench dimension of around 7-8m (N-S) x 5m (E-W) after stepping, which would enable of broad view of the archaeological deposits. However, a larger area could be considered if a machine is made available, and the area could be stripped of the later deposits, under archaeological supervision in order to open up a larger area of the earlier archaeology, which could be investigated and recorded, before
targeting certain areas for excavation. If this approach is adopted, backfilling may also have to be partly carried out by machine.

**Trench 2**

A 5m x 3m trench was opened against the Southern boundary wall of Torpak Kala. The excavation area was selected for a stretch of the wall which contains little or no modern alterations and where the excavation would have minimal impact on neighbouring properties. Before excavation began the ground height was 86.66m OD in the south of the trench. Deposits were removed to a depth of approximately 84.6m, with the base of the deepest pit 83.60m.

![Figure 8: Recording sections in trench 2](image)

The aim of trench 2 was to expose a section of the wall to reveal more about its construction and use. Characterisation of the deposits abutting the northern (interior) face have the potential to date the phases throughout which it was used, and enable a better understanding of how Torpak Qala developed, for example in relation to the mausoleum.
Thus far the excavations in AEB01 Trench 2 have revealed 3 phases of activity. The latest of these consisted of a thick layer of modern overburden (001) - up to 0.6m thick in places, in particular in the area closest to the Qala wall. This disuse sealed a compact layer of degraded mudbrick and erosion material, which although disturbed by burrowing, seems to contain very little or no modern material, making it likely that was deposited before the 20th century.

Underneath this layer (002) was the earliest phase uncovered in trench 2. Four pits had been dug against the Qala wall ranging in size from 1.25m X 1.1m X 1.1m (deep) to 0.7m X 0.68 X 0.94m (deep). The pits are characterised by loose silty fills, with frequent inclusions of ash and charcoal, in some cases including separate fills of ash within the pit. The pits are all sub circular in shape and have been undercut to various extents. All the pits have been heavily affected by burrowing activity, and although care was taken to retrieve environmental samples from the least affected parts of the feature, it is possible that these are contaminated. The use of these pits in unclear, but they may be robber or looting pits, searching for building material (such as fired brick foundations/damp course) along the Torpak Qala wall. It is also possible that they were dug for use as a rubbish pits but it seems unlikely that these would be purposefully dug through the hard mudbrick of wall <015>. A probable architectural feature and archaeological deposits visible in the bases of all pits suggest a considerable depth of deposits in this part of the site which will be exposed as the excavation.
Figure 9: Post-excavation shot of trench 2 showing pits [008], [011], [014] and [019] as well as tandoor construction cut [005]

Also cut into the lowest layer excavated (020), but sealed only by the modern overburden (001) was a tandoor, situated to the north of the four pits. The tandoor's location near the surface, and the problematic nature of establishing the level from which such features are cut means that it is hard to be sure that it is part of the same phase of activity as the pits. Analysis of the ceramics from the fill may help to identify more closely whether this tandoor is of the same phase as the pits.
A three metre wide section of the north face of wall was exposed within Trench 2. The face is heavily eroded, although it appears to have been built in a single phase. Feint lines can be seen in some places suggesting that the wall was built using rammed earth blocks, made using shuttering. The blocks range in size from c. 0.3-0.45m in width and around 0.5m high. However this interpretation is offered with caution given the high level of erosion of the face. Further excavation should reveal better-preserved sections of the wall to clarify whether these initial observations are accurate.
All of the deposits recorded in trench 2 post-date the construction of the wall, and it seems likely that deposits contemporary its construction will be
considerably deeper than the level reached during excavation in 2015. The south face of the wall backs onto residential properties, which are significantly lower than the ground level in the park; in this area the wall survives to a height of 4m, and is at least 2m thick. Therefore, in spite of the significant erosion of the wall, it was originally a considerable structure.

**Recommendations for Further Work**

Processing and analysis of the finds and environmental samples taken from the tandoor and ashy pit fills will provide valuable evidence for their use and reveal more about the later phases of the occupation of Torpak Qala. In order to gain a secure date for when the wall was constructed, further excavation is recommended to investigate earlier deposits in this area, as well as to retrieve additional dating material for the pottery type-sequence. In order to reach lower levels safely Trench 2 would have to be widened and stepped, given the depth of deposit already removed. The best option would be to extend the trench 2 metres to the East and to the West to create a 7m x 5m trench, which would then be stepped in.

**Conclusions - AEB01**

Excavations at both trenches at AEB01 have revealed that the site has significant archaeological potential. The large number of finds, as well as the diversity and broad chronological range of the pottery found in the upper levels, suggest that these layers seal significant, largely undisturbed archaeological deposits relating to the earlier city. Trench 1 has demonstrated that stratified occupation deposits are sealed by around 1.2m of levelling and abandonment activity in this area, and further investigations would be best served by pinpointing this horizon of activity and excavating from here into the earlier phases. Trench 2 has already revealed information about the construction of the boundary wall at Torpak Qala, but further excavation could contribute valuable information about the use and dating of the structure and the area it encloses.
2) **AEB02 – Qaradəpe**

The following outline of the archaeological findings is based on the field report of the trench supervisor at AEB02, Cordelia Hall.

The name Qaradəpe refers both to a mound or *tepe*, clearly created as the result of historical settlement, and the nearby modern village. The *tepe* is sub-ovoid in shape and set on a N-S axis. The southern edge of the mound has been truncated away and the remains of concrete foundations from a Soviet era tool store are still evident. There is modern detritus from this building and other modern agricultural use across the site. Within this season of work the initial goals were to complete a topographic survey of the mound, establish ground control points for future work and to excavate a small test trench (5m x 5m) to evaluate the level of preservation of the archaeological remains and gain some preliminary dating material for occupation of the site. Arable fields surround the mound on all but one side, which is currently given over to grazing. In some areas recently ploughed it was possible to identify a small amount of surface ceramics, but systematic field walking still needs to be undertaken to determine whether this is merely residual from the mound, or whether occupation extended across a wider area.

Trench 1 was placed towards the eastern edge of the mound, on a plateau of higher ground which appeared undisturbed on the surface by modern activity (Figure 12). Although like the rest of the mound, surface vegetation was formed of dense bushes that had to be removed from the area before excavation began. It was laid out orientated along cardinal points.
The topsoil was removed as a layer (001) followed by a thin layer of overburden, which represents abandonment and erosion material from the site (002). This was a compact mixed deposit with a depth of up to 0.49m in places. In these upper layers there was substantial evidence for bioturbation through root and animal action.

The removal of (002) exposed an area of mud bricks with evidence of cut features and other deposits in the NW corner, which upon later examination proved to be the abandonment infills of an internal room or space (011), and similar looking deposits in the SE corner which were not excavated this year. The final phase of activity, before the erosion deposit (002) was laid down, were two pits [008] and [016]. They both cut through the abandonment infills of space (011) but due to the friable, loose nature of these fills and the
similarity of the pit fills they were not immediately visible. One was centred roughly in the middle of the trench and the other extended into the northern limit of the excavation. The function of these pits was not obvious, possibly they could be robbing pits for building material to reuse. Upon excavation it was apparent that [016] had cut through an earlier burial of an infant.

Prior to the pits being dug there had been a phase of burials, although after abandonment of the structures as both graves identified were cut into the demolition and burnt building remains that infilled the abandoned room (space 11). The first skeleton identified had been severely truncated by pit [016] making its original cut indistinguishable. The remains (012) were orientated roughly north-south, but sloping, following the edge of the pit, with the left arm higher up than the rest of the remaining bones. The upper left side of the rib cage remained but the spine was missing and the proximal ends of the ribs had been neatly sliced away. The whole right side of the body and much of the skull was missing. Of the legs only the femoral head of the left leg was extant and it had been displaced.

The second burial was to the east of the first grave and not only cut through the abandonment infills but also the north-eastern mudbrick wall of the building. It was another infant, but orientated east-west, with its head at the west end and slightly tilted down facing southeast. This skeleton had also been disturbed, with bones from the pelvis down missing due to animal activity at the eastern end of the grave. No secure dating material was found in either burial. A better idea of dating will come from dating the pits that are later and the earlier infill of the building they are cut into.
“Space 11” refers to a room aligned northwest-southeast, in the northwestern part of the trench. It was not fully exposed because it extends beyond the northwestern limits of the trench. The infill of the room, associated with its abandonment in several episodes, was removed to expose a severely burnt floor surface. This burning is consistent with the nature of three of the main fills which were full of carbonised material including burnt mud brick fragments, burnt matting, burnt roof tiles and soft, ashy deposits. This all points to a burning event at the end of the life of the building which meant that all of the building material destroyed was left *in situ* to fill up the building that had been abandoned. Other evidence of this was the in situ remains of two whole, small pots (small finds 4 and 5) displaying signs of burning and another area in the north-western part of the structure where the scorching was heaviest and where there was a concentration of smashed, burnt pottery which can probably be associated with coming from one or two vessels,
charred wood remains and fragments of glass, again from one or two vessels. There were also a couple of heavily corroded iron objects within this assemblage.

![Figure 14: post excavation photograph of AEB02 Trench 1, looking south. This view shows the excavated room (Space 11) in the foreground, surrounded by a wall on the southwest and southeast sides. An unexcavated pit is also apparent in the southeast corner of the trench.](image)

*Recommendations for Further Work*

Further excavation is needed to examine the nature of the walls surrounding this space. To date they have been recorded in elevation with respect to their extant internal faces but the exact nature of their build is still to be determined. This would become more apparent with the excavation of the other features in the trench, which would in turn expose the mud brick architecture. The southwest corner has a deposit which is very similar to that of the room abandonment and could possibly be the infilling of another space on the same NW-SE alignment.

In summary, three phases of activity have so far been determined; the destruction and abandonment of a building, post abandonment use of the
mound as a cemetery and then a final phase of pit cutting. The recovery of iron objects in the lowest fill of the abandonment deposit gives an initial idea of a *terminus post quem* for these archaeological deposits and those above but more precise dating will come from the ceramic assemblage and C14 samples. There is a considerable scope for further work to examine the layout of the buildings and the nature of their construction.
3) Conclusions

The AEB excavation season in September 2015 highlighted the rich archaeological material preserved in Berde and its hinterland. In the city, the excavations in Torpak Qala have thus far mostly identified the late medieval landscape, which can be considered broadly contemporary with, or shortly post-dating the construction of the mausoleum tower (13th-15th century). At this time the wall was clearly extant around the square area and seems to have been actively repaired on a frequent basis. It is striking that in both trenches at AEB01 occupation appears to be largely ‘informal’, with relatively ephemeral structures, and a high number of what are thought to be waste pits. This would suggest that although Berde was inhabited in the late medieval and early modern period, this area was not at that time a dense urban core. Neither was it apparently used as a graveyard, which might be expected for the area immediately surrounding the mausoleum (and indeed is the case for its substantially ruined counterpart, to the south in the town).

The presence of earlier, more substantial masonry features in AEB01 Trench 1 suggests that occupation at this site was more intensive before the 14th century, although the exact nature of this occupation will only become clear at lower levels. A preliminary assessment of the ceramic evidence gathered, tying it to comparative regional examples, suggests that there is considerable activity at the site between the 11th-13th centuries, and the prospects for understanding further the character of this major period in Berde’s history are exciting. At the same time, the assemblage from the recently excavated layers contains substantial quantities of residual early medieval and possibly pre-Islamic sherds indicating that the stratigraphy at the site likely continues well below the present excavated level. It is almost certain that this sequence in the centre of modern Berde will eventually reveal the history of the town from the late antique period onwards, through numerous phases of reoccupation and remodelling.

At Qaradəpa, the remains of a structure with substantial walls gives a glimpse of what is probably part of a much larger medieval complex. Dates for the
layers excavated (based on preliminary ceramic stylistic analysis) are in the region of the 11th-12th centuries for the building, although given the extensive animal activity this close to the surface, and the presence of later burials, these dates should be considered with caution – the building could be earlier. The maximum extent of the building will only become apparent through excavation of an extensive area, which may be infeasible in the short term. While geophysics, specifically resistivity or GPR might offer further insights into the layout of this area in the last phase of building, the ground conditions, the vegetation on the mound and the building materials used (unfired mudbrick) mean that overall conditions are not ideal for this type of investigation. Furthermore, the aim of the excavation at present is to understand the occupation sequence of the site, which will be most easily understood through continuing the excavation of a small area through to the lower levels. Given that this material is placed at the very highest point of the mound, it would suggest that occupation at the site continued intensively at least throughout the medieval period, although the earliest dates of inhabitation are entirely elusive at the time being. As with AEB01, the depth of well-preserved stratigraphy also means that larger trenches will be necessary to safely step in the sides of the excavation areas.