

Urban defenses at Bīr-koṭ-ghwaṇḍai, Swat (Pakistan). The Saka-Parthian Phases: Data from the 2015 excavation campaign

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Abstract

This article reports on the latest data provided by the 2015 excavation campaign at the Early Historic urban site of Bīr-koṭ-ghwaṇḍai, Swat (N Pakistan). This campaign followed on from an intensive 4-year excavation phase carried out inside the SW quarter of the ancient town (2011-2013), as well as outside the SW corner of the city wall (2014). The new campaign focused on a portion of the external area, and revealed a complex sequence of constructions, collapses and abandonment of the urban defenses of the site. The new data are compared with others from previous excavation campaigns in the same site.

Keywords: *Indo-Greek, urban fortifications, North-West India, Early Historic period*

Introduction

After 31 years and 19 excavation campaigns, the Early Historic urban site of Bīr-koṭ-ghwaṇḍai, identified as the ancient town of Bazira/Vajīrasthāna (e.g. Olivieri 2012), can be considered, along with the Taxila valley sites of Sirkap and Bhīr Mound, and the Charsadda sites of Bala Hisar and Shaikhan-dheri, as the most important excavated historic settlement in the North-West of the Indo-Pakistani Subcontinent.

The site is located west of the modern village of Barikot, and is marked by a steep hill (acropolis) overlooking the Swat River. The area of the ancient town (about 7 hectares), and part of the acropolis were encompassed within a defensive circuit - a massive construction built of pebbles, stone slabs and clay mortar (c. 3 m thick) - (hereafter: 'Wall') featured by massive rectangular bastions every 28 mt, the equivalent of 100 Attic feet (or 1 *plethron*). The Wall was dated on the basis of the results of the previous excavation to the second half of the 2nd century BCE (McDowall and Callieri 2004; Callieri 2007). According to P. Callieri, the Wall of Bīr-koṭ-ghwaṇḍai represents the

only Indo-Greek urban defensive works excavated so far, as well as the easternmost example of Hellenistic military architecture in Asia (Callieri 2007)¹.

Thanks to the extensive excavation program, the benchmarks of the cultural sequence of the town are well known (Olivieri *et al.* 2014). The town was founded as a fortified settlement at the time when the Indo-Greek rulers were extending their control over the Swat valley (mid-2nd century CE = BKG Cultural Phase 3 A). During the construction of the town, a previous village (BKG Cultural Phase 2, culturally linked to periods VII-VIII of the Ghalegai sequence = second-half of the 1st millennium BCE) was totally razed to the ground and the resulting materials re-employed in the early constructions (Callieri *et al.* 1992; Olivieri 2015). After the foundation the town was maintained as a fortified settlement in Saka-Parthian times (BKG Cultural Phase 3 B), and demilitarized only in Kushan times, possibly during the 2nd century CE (BKG Cultural Phase 4 A). Indeed, already in 2nd century BCE (BKG Cultural Phase 4 B) the Wall fell into disrepair, and was then turned into a sort of huge retaining wall encompassing the artificial mound formed by the continuously rising levels of the town (Olivieri 2015). The coincidence between the collapse of the Kushan power and a series of destructive earthquakes eventually marked the end of the town (or its partial abandonment) towards the end of the 3rd century CE (BKG Cultural Phase 5 B), under the rule of the Kushano-Sasanians (Olivieri 2012).

The 2015 excavation focused on the area around the first bastion E after the SW corner of the Wall (trench BKG 12E). The excavation of the area had already started in 2011, when it revealed the full structure of bastion E, and the levels corresponding to the abandonment of the Wall (BKG Cultural Phase 4 A) were reached. The excavation was resumed in the Fall of 2014, when the limits of the new trench were established by L.M. Olivieri and the surface of the BKG Cultural Phase 4 B was reached. A year later, the

¹ On the Hellenistic fortifications, Francfort 1979, Leriche and Tréziny, eds. 1986, still represents the most precious overview. See also Deloche 1992.

excavation of trench BKG 12E was resumed². The excavation was initially aimed at ascertaining the extent to which the pre-Wall settlement was a living settlement at the time of its demolition. On this assumption it was expected to proceed easily through the later layers and reach the layers of BKG Cultural Phase 3 A. However, the focus of the excavation changed during the execution, since the former revealed the existence of an infrastructural complex, belonging to the Saka-Parthian phases of the site (BKG Cultural Phase 3 B), which appeared to be far more complex (and interesting) than expected.

The structural sequence of BKG 12E

Trench BKG 12E is located outside the first bastion E of the SW corner of the Wall, and consequently represents a portion of the area external to the built-up area of the ancient town of Bazira/Vajirasthana. Trench BKG 12E covers an area of about 95 sq mt, and its orientation corresponds to the alignments of the W and S stretches of the Wall (Figs. 1-3).

The following paragraphs present a summary of the major structural events, grouped in phases. The sequence is illustrated in chronological order in Table 1. The tentative correspondence between these phases and the structural Periods documented during the excavation of Trenches 3, 4-5 and 11 is presented in Table 2.

This paper is meant to be the follow-up of a previous one published in 2015 on the results of trench BKG 12 excavated in Summer 2014 (Olivieri 2015).

² The excavation was carried out in the framework of the Archaeology, Community, Tourism-Field School Project (ACT), implemented by the Italian Archaeological Mission (IAM-ISMEO) and the Directorate of Archaeology and Museums (DoAM), Khyber Pakhtunkhwa. The ACT project is financed by the Pakistani-Italian Debt Swap Agreement, a program sponsored by the Italian Development Cooperation body, under the supervision of the Economic Affairs Division, Government of Pakistan. The participation of Ms Elisa Iori was made possible thanks to a grant of the Italian Ministry of Foreign Affairs, Cultural Cooperation (Overseas Italian Archaeological Missions).

The 2015 fieldwork at BKG 12E, which lasted for 5 weeks from September to October, was organized by Dr. L.M. Olivieri, and directed in the field by Ms. Elisa Iori with the collaboration of Mr. Amanullah Afridi (DoAM), and the invaluable assistance of Mr. Abdul Azim, Mr. Abid Khan, and Mr. Naik Mohammad (IAM Field Officers, Barikot).

Phase 1: Construction of the wall (=BKG 12 Phase C, BKG Cultural Phase 3 A)

The earliest phase of occupation identified in BKG 12E is related to the construction of the defensive Wall [303] and the annexed bastion [4], dating to the Indo-Greek period (= BKG Cultural Phase 3 A) (McDowall and Callieri 2004; Callieri 2007). As already stated (Callieri *et al.* 1990; Callieri *et al.* 1992; Olivieri 2015), in its S stretch, the Wall is built in a low stepped longitudinal trench dug into the slope of the preexisting artificial mound. During this phase, the external area included a free flat area adjacent to the Wall, followed by a ditch³, running parallel to the fortification, at about 5 m from the outer face of the Wall, i.e. 2 m from the bastions.

Inter-phase A: Partial collapse of the Bastion (= BKG 12 inter-phase 1, BKG Cultural Phase 3 B) (Fig. 4)

Some time later, a natural event, most probably an earthquake, caused the partial collapse of the bastion (more exactly, the top and the SE corner). Inter-phase A correlates with inter-phase 1 in BKG 12 (Olivieri 2015), Phase 4 in BKG 4-5 (Callieri *et al.* 1992), and Phase IIB in BKG 3 (Callieri *et al.* 1990), with which damage to and partial collapses of both Wall and bastions are associated.

Phase 2: Reinforcement/pit-well/external precinct (= BKG 12 Phase D, BKG Cultural Phase 3 B) (Fig. 5)**Phase 2A**

First, the SE corner of the bastion was reconstructed, and in that point merged with an additional structure, i.e. escarpment [5]. The latter is built abutting the front of the bastion, and only partly joined to the right corner of the same. In order to facilitate the run-off of the rainwater from the area close to the Wall down to the ditch, a drain consisting of three overlapping stones [70] was positioned between the escarpment and a

³ The ditch or moat was previously documented in BKG 3 = Callieri *et al.* 1990, BKG 4-5 = Callieri *et al.* 1992, BKG 12 = Olivieri 2015

new retaining wall [3], parallel to the Wall⁴.

On the same level as wall [3], and parallel to it, a wider masonry structure [28E] also lies, located at a distance of *ca.* 5 m from the Wall and serving as further support for the bastion. The state of preservation of wall [28E] prevented a full definition of the main role of this wall, which probably was not restricted solely to its supporting function, and the continuous restoration to which it was subjected suggest it played quite an important role.

Once this work of reconstruction, reinforcement and prevention was completed, further resources were invested in the construction of masonry structures not involved in the Wall's stability, namely a pit-well and related structures.

The same structural sub-phase of [3], besides a partial reconstruction of [28E], namely [28W], includes a pit-well [61], discovered at about 1.80 m to the S of the bastion. The pit-well (external dim. 2.20 x 2.20 m; internal dim. 0.80 x 0.85 m) was cleared down to a depth of 3 m, after which the excavation was halted for safety reasons. The pit-well is internally provided with a vertical row of four square putlog holes on each face (*ca.* 0.40-0.50 m from each other) and on its external N face displays a drain [91], only partly uncovered, which was probably part of a broader draining system aimed at protecting from water run-off the pit-well and other structures, located at a far lower level than the Wall's terrain.

Phase 2B

Shortly after, two other walls were constructed: [14bis] and [65]. The former abuts on the retaining wall [3] at right angles, while the latter is located at less than 9 m from the

⁴ One significant detail is the inclination of the drain, which gives us an idea of how steep the slope was below the escarpment during this phase.

Wall and runs parallel to it. Unfortunately, the possible corner [14bis]-[65] could not be investigated, because of the presence of a modern drain. Although it cannot be proved that [14bis] and [65] were part of the same structure, it is highly probable.

Perhaps these structures, together with [3] and [28E]-[28W], were components of a defensive precinct of the extramural pit-well [61], a fact that might explain both their imposing nature and the several rebuildings (of [14bis]).

Inter-phase B: Collapse of the external structures (=BKG 12 Phase D, BKG Cultural Phase 3 B) (Fig. 5)

The reinforcements of Phase 2 proved insufficient. In fact, a landslide must have created a deep depression, of which we have some negative evidence in the collapse of [65] at the SW corner of our trench. The landslide caused the destruction of the precinct, as well as the slight downwards slipping of the western part of the escarpment [5]. The collapse of [65] ultimately marked the closure of the pit-well (see below).

Phase 3: Reinforcement/closure of pit-well (=BKG 12 Phase D, BKG Cultural Phase 3 B)

A fresh attempt to arrest the continuous landslips and their consequences for the structures was the construction of a retaining wall [12], running parallel to the Wall at a very short distance from the bastion (*ca.* 1 m) and its escarpment. Wall [12], extending over almost the whole length of the trench, was built in a low stepped foundation trench open to the S. The supporting wall [25] is coeval to [12], and abuts on the S face of the latter, at *ca.* 0.80 m W of the pit-well. It cannot be excluded that wall [25] represented the new western limit of the defensive precinct, now smaller than before in view of the unstable state of the ground level to the SW.

To the S, wall [12] was further supported by an earlier wall [28W]-[28E] and by a new structure, [62]. The latter, abutting the W face of [28W] and the S face of [12], was a low structure, probably meant to act as a sort of junction between the surrounding structures.

Structure [62] was later prolonged by [62bis] which overlaid the pit-well, the latter, at that point, being abandoned and sealed.

Inter-phase C: Collapse and abandonment of the area (=BKG 12 Phase D, BKG Cultural Phase 3 B)

A later landslide swept away part of wall [25], causing also the partial slipping of other structures (negative interface <78>). At this point the depression in area SW was so steep that the area must have been unusable. The depression was later filled by a very thick layer [59].

Phase 4: Construction of retaining wall [11] (=BKG 12 Phase E, BKG Cultural Phase 4 A) (Fig. 6)

By the time of Phase 4 all the preexisting external structures in BKG 12E were covered by a sequence of accumulation layers interspersed with collapsed areas. The main feature of this phase is the construction of a berm, to the W of the bastion. The berm acts as a retaining wall [11] parallel to the Wall and is located at a distance of *ca.* 3.20 from the latter. The retaining wall was built by cutting the sloping ground to create an embankment. The aim of this structure, with only the S face exposed, was both to regularize the external area, also creating a passageway, and to prevent further problems caused to the Wall. However, as pointed out elsewhere (Callieri 1992: 11; Olivieri 2012; Olivieri 2015), the functional role of the Wall at this point in time was about to change, passing from the role of fortification to that of substruction of the raising ground-level of the town.

Later on the retaining wall [11] was provided with a small additional wall [6] (Phase 4 B).

Decorated Pottery and Other Finds

Among the finds of BKG 12E (Inventory in Table 3), chronological indications are provided by two items of numismatic evidence. A coin of Azes II (Inv. 2814) and of Kujula Kadphises (Inv. 2771), respectively found in inter-Phase C and Phase 4, agree with the chronological picture proposed above.

Particularly important is the discovery in inter-phase C, of a fragment of a votive tank decorated with a bird with outspread wings (Inv. 2841). This find has a clear affinity with votive tanks (Marshall 1951: pl. 136, n.155-159) recovered at Sirkap and dated to the early 1st century CE (Marshall 1951: 463-464).

Amongst the pottery (mostly red ware with few gray ware sherds), painted and decorated pottery is particularly significant⁵. As regards the black painted ware, its presence is attested from Phase 2 up to Phase 4 and the decorative motifs include: triangles, simple garlands and leaf patterns between horizontal lines, and a comb-like pattern⁶. Although a certain continuity may be observed in the motifs of the painted sherds, for convenience, sherds have been distinguished on the basis of the chronological sequence: sherds belonging to Phase 2 and Inter-Phase C (BKG Cultural Phase 3 B) and sherds from Phase 4 (BKG Cultural Phase 4 A).

In BKG Cultural Phase 3 B, the painted horizontal lines in most cases follow the path of a single or double incised line turned on wheel by the potter in order to facilitate the work of the painter, a practice that is attested also in painted ware from the Bhir Mound and in some later sherds from Sirkap (Marshall 1951: 431). The range of decorative motifs at Bir-kot includes: row of triangles (empty: Inv. 2832, Inv. 2836; with oblique wavy lines: Inv. 2832, Inv. 2830, Inv. 2836; with oblique hatches: Inv. 2869), diverging leaf pattern between painted or incised and painted lines (Inv. 2829, Inv. 2831, Inv. 2835), simple garland hanging from a line (Inv. 2828) and a comb-like pattern on the neck of the pot (Inv. 2834). Also a row of triangles (Inv. 2804) or a frieze (small fragments from SU53) with cross-hatched pattern appear in Inter-Phase C⁷.

⁵ Black painted pottery and incised, stamped and embossed forms. All these forms are red slipped and wheel-turned.

⁶ The fragmentary state of the sherds does not afford any understanding of the original shape of the painted vessels, although it should be noted that neither dishes nor bowls with everted rim, which are the forms typically provided with black painting on the rim and on their inner part in the Indo-Greek and Saka-Parthian periods (Callieri 2000: 859), were found.

⁷ See also Inv. 2803 from the same context (Tab. 3).

Decorated sherds of BKG Cultural Phase 4 A are not quantitatively representative since they consist of only two fragments from the same layer. However, it is interesting to note the appearance in Phase 4, as well as of a zig-zag pattern (in some ways similar to the wavy lines) on a spout (Inv. 2794), of a slightly different type of garland (leaf pattern ?) below a painted rib⁸ on a red sherd with an external dark-red slip (Inv. 2793).

The lasting tradition of black painted ware at the historic Bir-kot was clearly highlighted by Callieri (2000: 859-863) who called it 'Black-on-Red Ware'. In particular, the painted motifs of triangles with wavy lines and cross-hatching from BKG 12E parallel three specimens previously found at Bir-kot. The first motif is attested both in BKG 4-5 (Fig. 7a; Callieri 2000: fig 1a) and BKG L (Fig. 8; Filigenzi 1985: 437, fig.16), in layers respectively dated to the Indo-Greek period and to the Saka-Parthian period (?). The fragment from BKG 4-5 also reveals the use of horizontal incised double lines under the painting, as attested in sherds of BKG 12E Cultural Phase 3B. The better preserved specimen from BKG L under the row of triangles with wavy lines displays two registers with animal figures in relief⁹. In addition, a comparable painted decoration appears on the upper body of a red deep bowl from Bala Hisar (Wheeler 1962: fig.22, 128), found, together with tulip bowls¹⁰ and carinated bowls with S-shaped rims, in Ch.I layer 27 which Wheeler dated to the 3rd century CE (see also Vogelsang 1988: 104; *contra* Dittman 1984: 189)¹¹.

Regarding the motif of the cross-hatched triangles pointing downwards, which were found from inter-phase C on, one example is provided by the upper external surface of a

⁸ The presence of a painted rib and garlands on sherds with dark red slip is documented also by three other small fragments from the same layer.

⁹ A very similar moulded figure of a bird, appearing here on the upper register, is found on an unpublished fragment from Udegram Bazar from early strata.

¹⁰ Tulip bowls were found together with NBPW in layers associated with the first occupation of the Wall in BKG L (Filigenzi 1985: 436).

¹¹ For an updated overview of the considerations put forward on ceramic material from Charsadda see Petrie 2013.

bowl found in BKG 4-5 and dated to the Indo-Greek period (Fig. 7b; Callieri 2000: fig.1b)¹². It is worth mentioning also two unpublished red slipped sherds from the Bhira Mound (Taxila Museum): one with a row of hatched triangles between two incised and painted lines, the other with a cross-hatched frieze between two incised and painted lines. Both sherds seem very similar to those recovered from the BKG 12E Cultural Phase 3B. It is likely that they are specimens belonging to the ‘local red-and-black painted ware’ which Marshall asserted were characterized, at the Bhira Mound, by simple motifs such as “parallel bands, chequered triangles, network patterns and vandykes” (Marshall 1951: 431). Also belonging to the ‘Local red-and-black painted ware’ is certainly a black painted sherd with a cross-hatched frieze between two incised and painted lines (one is missing) (Sharif 1969: fig.24, 10) and another sherd with a row of hatched triangles between two incised and painted lines (Sharif 1969: fig.24, 11) dated to the second half of the 2nd century CE¹³.

The painted garland motif appears both in BKG Cultural Phase 3B and BKG Cultural Phase 4 A in trench BKG 12E. The motif is well documented at Sirkap: a specimen published by Marshall (1951: Pl.127, 221-222) is from *stratum* IV (Saka period). Out of the four sherds published by Ghosh, three (Ghosh 1948: fig.15, XXI, XXII, XXX) are dated between the 1st-2nd century CE, while one (Ghosh 1948: fig.15, XXVIII) is dated to the first half of the 1st century BCE. In the specimens from Sirkap the garland is often associated with a cross-hatched frieze, while there is no trace of the rib found on the example from Phase 4 at Bir-kot (Inv. 2793).

¹² In particular, the decoration on this bowl recalls the hanging hatched or cross-hatched triangles which appear on bowls belonging to the so-called ‘Triangle-Ware’ from West and Southwest-Iran dated from the late 6th century CE till the end of 2nd/1st century CE (Haerinck 1978: 84-85, Fig.6; Burney 1962: Pl.XLV, 36; also Stronach 1978: fig.111, 5). For a discussion about Eastern-Triangle-Ware at Charsadda see Dittman 1984: 189, fig.10. Besides Bir-kot (Callieri 2000: fig.1) see also Charsadda (Wheeler 1962: fig.27, 206-207, fig. 28, 237), Shaikhan Dheri (Dani 1965-6: fig.21) and Sirkap (Ghosh 1948: fig. 3 1c-d, 1m-n, 2a; Marshall 1951: Pl. 127, 218-219).

¹³ A small red bowl, slipped outside, with a painted cross-hatched frieze between two incised and painted lines was dated to 3rd-2nd century BC (Bahadar Khan 2002: figs. 45, 20).

As regards the other decorative techniques, besides a stamped (Inv. 2859) and an incised leaf decoration (Inv. 2868) on the internal base of dishes, it is worth mentioning the discovery in an accumulation layer SU59 (inter-phase C) of the bottom of a bowl featured by an embossed *emblema* representing a female bust in naturalistic style (Inv. 2861). At Bir-kot, Hellenistic embossed decoration in the form of *emblema* is attested in the Saka-Parthian period (Callieri 2000: 870), although the image of a female bust represented an *unicum*. The comparison comes from trench BKG 4-5 where a layer dated to Period V (= Phase 4-5 in BKG 12E, see Tab.2), revealed an *emblema* with a female figurine in bas relief (Fig. 9; Callieri *et al.* 1992: Pl.XVI. 3)¹⁴.

Another fragment of embossed ware comes from SU37, BKG Cultural Phase 4 A. It is a red slipped sherd preserving the lower part of a bird and an elongated ‘egg’ cornice¹⁵ below (Inv. 2763), which probably belongs to the ‘Early historic embossed ware’ decorated with animal or human figures framed in superimposed registers attested at Barikot in the Indo-Greek and Saka period (Callieri 2000: 869-870). Their relation with examples from Sirkap (Marshall 1951: 435, 131b) and Charsadda (Wheeler 1962: 102, pl. XIX) has already been stressed by Callieri (2000: 870). In particular, in the rendering, this figure recalls the figure of a bird on embossed ware found at Bir-kot and dated between the 1st century CE and the 1st century CE (Callieri 1990: fig.3; Callieri 2000: fig.4, j).

The pottery evidence clearly shows that decorated pottery from BKG Cultural Phase 3 A, 3 B and 4 A can be positively compared with ceramic material from Bala Hisar, Bhir

¹⁴ Outside Bir-kot, embossed *emblema* on the bottom of bowls bearing female images were recovered at Shaikhan-dheri (Dani 1965-6: Pl. XXXI) and Ai Khanoum (Lecuyot 2013: pl.XLIX, 2-4; Guillaume et Rougeulle 1987: 64, 1153-1158). Also worth mentioning is the fortuitous discovery at Akra of a small sherd with a female bust with a very similar style of decoration (Khan *et al.* 2000: 80, fig. 8b). This specimen differs from those found at Bir-kot, Shaikhan Dheri and Ai Khanoum, as the figurine seems to be in full relief, and is thus not embossed but appliqué. However, the common Hellenistic influence is clear.

¹⁵ Elongated ‘egg’ cornice along with embossed animal figures is found also on another sherd from an Indo-Greek layer in BKG 4-5 (Callieri 2000: fig. 6).

Mound and Sirkap dated to the Indo-Greek and Saka-Parthian periods, thus evidencing the existence of a pottery tradition shared between these sites.

Considerations on the Saka-Parthian external structures (= BKG Cultural Phase 3 B)

The evidence provided by the excavation of BKG 12E sheds new light on the organization and functions of the external area of the Wall (S stretch) during the BKG Cultural Phase 3 B.

The extramural sectors investigated so far have revealed little evidence beyond the defensive functions (BKG 3 = Callieri *et al.* 1990; Trench BKG L and M = Filigenzi 1985: 436, 437-438; BKG 4-5 = Callieri *et al.* 1992; Olivieri 2003; BKG 12 = Olivieri 2015), the draining system (BKG 4-5, Callieri *et al.* 1992), and the external passageway network (BKG 12 = Olivieri 2015). Notwithstanding the value of this information, our understanding of the relationship between the town and the immediately surrounding area is incomplete. In this regard, an interesting issue is represented by a series of extramural structures identified during the survey of the Bir-kot plain, that, judging from the masonry technique used, date to historic times (Olivieri 2003: 34-35). It has been hypothesized that “a built-up area existed *extra moenia* for dwelling purposes” (Olivieri 2003: 35), and that the structures identified were in some?? way involved in the defence of a city gate¹⁶.

Obviously, this is a different matter, and the evidence emerging from BKG 12E offers the opportunity for a closer examination of the use of the extramural area, showing that already in the Saka-Parthian period (as indicated by the earlier results of trench BKG 12 = Olivieri 2015) the necessities urban life led to the ‘outside’ becoming the natural prosecution of the urban ‘inside’.

Since the very short distance of the pit-well from the Wall is an obvious indication of the connection of the former with the urban center, the question of why not to build the well

¹⁶ For a possible location of the city gate see Olivieri 2003: 36.

inside the town thus seems legitimate. Most probably, at the beginning of this phase (BKG Cultural Phase 3 B) the inner built-up area had already reached saturation point so that the inhabitants were prompted to construct the pit-well in an extramural area, where, moreover, it would have been easier to reach the water table as the ground level was far lower. In such a framework, the reconstructive hypothesis of a defensive precinct encompassing the pit-well gains strength. Consequently, the intensive building activities and the frequent restoration work on the structures, can be conceived of as taking place in the context of an external service area of that part of the city¹⁷.

An interesting comparison with the hypothetical defensive precinct comes from BKG 3 which yielded a rectangular structure built to the S of the bastion, parallel to the Wall, and stretching eastwards, creating a large room, BKG310, interpreted as a blockhouse (Olivieri 2015: fig. 10). The reconstruction of the bastion (Period IIB) and the subsequent construction of the external room BKG310 (Period III) can be included in the same chronological frame as the service area in BKG 12E. Therefore, the masonry structures of BKG 3, far better preserved than those of BKG 12E (namely [14 bis] and [65]), represent a good example of an extramural room abutting a bastion in Saka-Parthian period, despite the possible different functions (Callieri *et al.* 1990: 171-172)¹⁸.

Coming back to BKG 12E, another point which needs to be stressed is that of the accessibility to the service area. It goes without saying that the possible presence of a city gate in the immediate surroundings, appears to be a sensible explanation for the location for the pit-well. Even if the location of BKG 12E, so close to the SW corner of

¹⁷ The fact that wells ascribed to subsequent phases have been discovered inside the city (Callieri *et al.* 1992: 18, 20; Callieri *et al.* 1990: 177; Olivieri *et al.* 2014) can be explained by the reorganization of the urban spaces in Kushan time.

¹⁸ For Saka-Parthian phases outside the city wall see Filigenzi 1985: 436-439 (trenches L-M), Callieri *et al.* 1990: (BKG 3), Callieri *et al.* 1992: 10-11 (BKG 4-5), Olivieri 2015: 191 (BKG 12); for Saka-Parthian phases inside the city wall see Callieri *et al.* 1990: 170-174 (BKG 3), Callieri *et al.* 1992: 15-19 (BKG 4-5).

the S side of the Wall, does not seem the most suitable point for a main gateway¹⁹, nothing prevents us from proposing the presence of a secondary gate nearby²⁰.

However, the presence of a pit-well outside the Wall, and maybe close to a secondary gate, may to some extent compared to function of the so-called ‘water-gates’. The latter were meant for water to be drawn in security, and have been hypothesized at Sirkap (Marshall 1951: 115; Ghosh 1948: 42)²¹. Within this overall picture the choice to locate a defensible service area with a well here does not seem unreasonable.

¹⁹ With regard to the gateway, it is again worth mentioning the result of the 1992-1993 survey during which, in the present village of Barikot, a large downward slope has been observed which creates a gap in the continuity of the level of the ancient perimeter of the fortification wall. The reasonable explanation given for such a gap is the presence of a gateway, which at this point would also benefit from a central position on the S side of the Wall (Olivieri 2003: 36).

²⁰ Indeed, in the unexcavated area immediately adjacent to the E limit of BKG 12E, along the continuation of the Wall (which is clearly detectable underground), a small downward slope was found corresponding to an inner area?? which seems to be interestingly free of structures. This speculation should be taken into account when planning future investigations. For another possible location of a secondary gate see Olivieri 2003: 35.

²¹ At Barikot, since the course of the Swat river borders the steep hill (citadel), it must have been easier for the inhabitants to draw water from the Bir-kot *khwar* which flows on the E side of the site. Here structural remains have actually led to the presence of a secondary gate being proposed (Olivieri 2003: 35). Hence, the S side of the city, where BKG 12E was excavated, proved to be the side that is less served by water supply. With regard to the citadel, difficulties of water supply, and the different solutions found by the inhabitants of Bazira (a hilltop pit-tank as well as underground passages) have already been previously discussed (*ibid.*: 43).

References

- Khan, F., Knox, J.R., Magee, P. & Thomas, K.D. with a contribution by Petrie, C. (2000) Akra: the Ancient Capital of Bannu. North West Frontier Province, Pakistan, Reprint from *Journal of Asian Civilizations*, XXIII, 1 (Islamabad).
- Bahadar Khan, M., Hassan, M. Habibullah Khan Khattak, M., Rehman, F. & Aqleem Khan, M. (2002) *Bhir Mound: The First city of Taxila (Excavations Report 1998-2002)*. Government of Pakistan Department of Archaeology and Museums and National Fund for Cultural Heritage (Islamabad).
- Burney, C. (1962) The excavation at Yanik Tepe. *Iraq*, 24: 147-151.
- Callieri, P. (2007) Barikot, An Indo-Greek Urban Center in Gandhāra. In D.M. Srinivasan (ed.), *On the Cusp of an Era. Art in the Pre-Kuṣāṇa World* (Leiden, Boston): 133-164.
- Callieri, P. (2000) Decorated Pottery from the IsIAO Excavations at Bir-kot-ghwandai (Swat, Pakistan, 2nd cent. B.C.-15th cent. AD). In M. Taddei & G. De Marco (eds.), *South Asian Archaeology 1997*, Serie Orientale Roma, XC, 2 (Istituto Italiano per l’Africa e l’Oriente, Rome): 857-876.
- Callieri, P., Brocato, P., Filigenzi, A., Olivieri, L.M. & Nascari, M. (1992) Bīr-koṭ-ghwaṇḍai 1990-1992. A Preliminary Report on the Excavations of the Italian Archaeological Mission, IsMEO. *Annali dell’Istituto Orientale di Napoli*, 52, 4, Suppl. 73.
- Callieri, P., Filigenzi, A. & Stacul, G. (1990) Bir-Kot-Ghwandai, Swat: 1987 Excavation Campaign. *Pakistan Archaeology*, 25: 183-192.
- Callieri, P. (1990) Archaeological Activities at Bīr-koṭ-ghwaṇḍai, Swāt: a Contribution to the Study of the Pottery of Historic Age from N.W.F.P. In M. Taddei (ed.), *South Asian Archaeology 1987*, Serie Orientale Roma, LXVI, 2 (Istituto Italiano per il Medio ed Estremo Oriente, Rome): 675-692.

- Dani, A.H. (1965-6) Shaikhhan Dheri Excavation 1963 & 1964 Seasons (In Search of the Second City of Pushkalavati). *Ancient Pakistan*, 2: 17-214.
- Deloche, J. (1992) Études sur les fortifications de l'Inde. *Bulletin de l'École Française d'Extrême-Orient*, Tome 79.1 (Paris): 89-131.
- Dittman, R. (1984) Problems in the Identification of an Achaemenian and Mauryan Horizon in North-Pakistan. *Archaeologische Mitteilungen aus Iran*, 17: 155-193.
- Erdosy, G. (1990) Taxila: Political history and urban structure. In M. Taddei (ed.), *South Asian Archaeology 1987*, Serie Orientale Roma, LXVI, 2 (Istituto Italiano per il Medio ed Estremo Oriente, Rome): 657-674.
- Filigenzi, A. (1985) The Italian Archaeological Mission in Pakistan. *East and West* 35, 4: 436-439.
- Francfort, H. P. (1979) *Les fortifications en Asie Centrale de l'Age du Bronze a l'Epoque Kouchane*. Travaux de l'Unite de Recherches Archeologiques, n.10, CNRS (Paris).
- Ghosh, A. (1948) Taxila (Sirkap), 1944-1945. *Ancient India*, 4: 41-83.
- Guillaume, O. & Rougeulle, A. (1987) *Fouilles d'Aï Khanoum VII. Les petits objets*. Mémoires de la Délégation Archéologique Française en Afghanistan, Tome XXXI (Paris).
- Haerinck, E., (1978) Painted Pottery of the Ardabil style in Azerbaidjan Iran). *Iranica Antiqua*, XIII: 75-92.
- Lecuyot, G. (2013) *Fouilles d'Aï Khanoum IX. L'Habitat*. Mémoires de la Délégation Archéologique Française en Afghanistan, Tome XXXIV (Paris).
- Leriche, P. (1986) *Fouilles d'Aï Khanoum V. Les remparts et les monuments associés*. Mémoires de la Délégation Archéologique Française en Afghanistan, Tome XXIX (Paris).

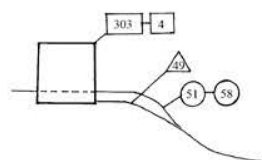
- Leriche, P. & Tréziny, H., eds. (1986) *La fortification dans l'histoire du monde grec*. Acte du Colloque International “La fortifications et sa place dans l’histoire politique, culturelle et sociale du monde grec, Valbonne, Décembre 1982”, CNRS (Paris).
- MacDowall, D.W. & Callieri, P. (2004) A Catalogue of Coins from the Excavations at Bīr-koṭ-ghwaṇḍai 1984-1992. *Bīr-koṭ-ghwaṇḍai Interim Reports II*, IsIAO Reports and Memoirs, New Series, III (Rome): 27-90.
- Marshall, J. (1951) *Taxila*, I-III (Cambridge).
- Olivieri, L.M. (2015) Urban Defenses at Bīr-koṭ-ghwaṇḍai, Swat (Pakistan). New Data from the 2014 Excavation Campaign. *Ancient Civilizations from Scythia to Siberia* 21: 183-199.
- Olivieri, L.M., with others (2014) *The Last Phases of the Urban site of Bir-kot-ghwandai (Barikot)*. ACT Field School Project Reports and Memoirs, 2 (Lahore): 1-387.
- Olivieri, L.M. (2012) When and why the ancient town of Barikot was abandoned? A preliminary note based on the last archaeological data. *Pakistan Heritage* 4: 109-120.
- Olivieri, L.M. (2003) *The Survey of the Bir-kot Hill. Architectural Comparisons and Photographic Documentation*. *Bīr-koṭ-ghwaṇḍai Interim Reports I*, IsIAO Reports and Memoirs, Series Minor, IV (Rome).
- Petrie, C. A. (2013) Charsadda. In D.K. Chakrabarti & M. Lal, M. (eds.), *History of Ancient India, Vol. III. The Text, Political History and Administration till c. 200 BC*. (New Delhi): 512-522.
- Sharif, M. (1969) Excavation at Bhīr Mound, Taxila. *Pakistan Archaeology*, 6: 6-69.
- Stronach, D. (1978) *Pasargadae: A Report of the Excavations Conducted by the British Institute of Persian Studies from 1961 to 1963* (Oxford).

Vogelsang, W. (1988) A Period of Acculturation in Ancient Gandhara. *South Asian Studies*, 4: 103-113.

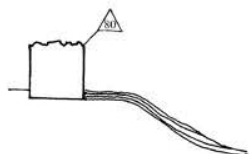
Wheeler, R.E.M. (1962) *Chārsada. A Metropolis of the North-West Frontier* (London).

Tables

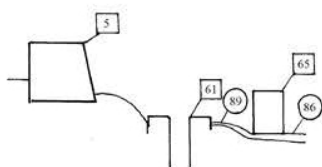
Table 1. The occupation sequence (Sketch drawings by F. Martore; not to scale).



1) Construction of the Wall [303] and its Bastion [4];
Artificial cut <49> into the proto-historic mound.
External setting: (51) to the W, (58) to the E of the Bastion.

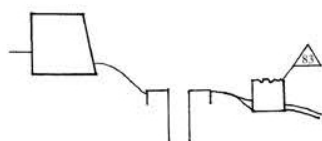


A) Partial collapse of the Bastion <80>.

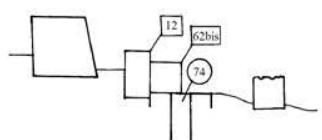


2) Reconstruction of the Bastion and construction of the additional structure, encarpment [5].

Construction, on floor-level (89), of pit-well [61] encompassed by structures, among which wall [65] resting on layer (86).

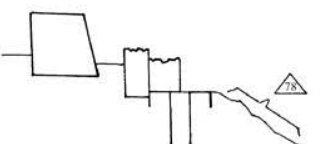


B) Collapse of the external structures here testified by the collapse of wall [65], namely <83>.

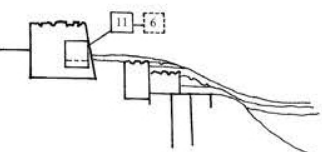


3) Construction of retaining wall [12].

Once the pit-well was filled (74), structure [62bis] closed and sealed the pit-well.



C) Another landslide <78> determines the partial collapse of the external structures.










4-5) The external structures are now covered by a sequence of accumulation layers and collapses.









Construction of retaining wall [11] in Phase 4, and of an additional wall [6] in Phase 5.





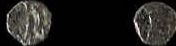
Table 2. Tentative correspondence between the BKG 12E Phases/Inter-phases and the periodization of trenches BKG 12, 3, 4-5 and 11.

Cultural Phases (After Olivieri et al. 2014)	Macro-periods (After Colliva 2011)	BKG 4-5 BKG 11	BKG 4-5 outside the city wall	BKG 12 outside the city wall (After Olivieri 2015)	BKG 12E outside the city wall	BKG 3 outside the city wall	Relative Chronology ABSOLUTE CHRONOLOGY (14C) (from trenches BKG 1, 3, 11)	
Cultural Phase 7	BKGCS VIIIb	Period X		Inter-phase 3		Period VI	5th-6th CE?	
Cultural Phase 6	BKGCS VIIIa	Period IX				Period V	4TH CE (BEGINNING)	
Cultural Phase 5	BKGCS VII	earthquake		Phase F		Period IVB		3RD CE (SECOND HALF)
		Period VIII	Phase 8					
		earthquake	Phase 7	Phase E		Period IIIB	3rd CE (first half)	
		Period VII	Phase 6					Period IIIA
Cultural Phase 4 B	BKGCS VI	Period VI				Phase 5	Phase 4	
Cultural Phase 4 A	BKGCS V	earthquake	Phase 5	Period IIB				1st-2nd CE
Cultural Phase 3 B	BKGCS IV	Period IV	Phase 4	Phase D	Inter-phase C	Period IIB	1st BCE	
					Phase 3			
Cultural Phase 3 A		earthquake	Inter-phase 1	Inter-phase B	Inter-phase A			
				Phase 2				
	BKGS III	Period III	Phase 3	Phase C	Phase 1	Period IIA	2ND BCE (SECOND HALF)	
Cultural Phase 2	BKGCS II	Period II	Phase 2	Phase B		Period IA	Periods V to VIII of the Ghalegai sequence (1300-300 BCE)	
		Period I	Phase 1	Phase A				
Cultural Phase 1	BKGCS I						Period IB	Period IV of the Ghalegai sequence (1700-1400 BCE)

Table 3. List of inventoried objects cited in the text, and grouped according to their Phases/Inter-phases (Photos by Aurangzeib Khan)

Inv. No	SOURCE	DESCRIPTION	CONDITIONS	DIMENSIONS	MATERIAL	PHASE	
2828	BKG 12E (77)	Sherd. Painted in black. Simple garlands hanging from line below the neck. Line painted along the body.	Fragment. Wheel-made.	h. max. 6.3 w. max. 7.5 t. 0.4	Red slip Ware	Phase 2	
2829	BKG 12E (77)	Sherd. Painted in black. Simple diverging leaves' pattern between two lines incised and painted below.	Fragment. Wheel-made.	h. max. 6.9 w. max. 5.8 t. 0.6	Red slip Ware	Phase 2	
2830	BKG 12E (77)	Sherd. Part of a spout (missing). Painted in black. Horizontal line to the left, and, to the right, horizontal frame decorated with a pattern of wave-like lines.	Fragment. Wheel-made.	h. max. 5.7 w. max. 3.0 t. 0.6	Red slip Ware	Phase 2	
2831	BKG 12E (77)	Sherd. Part of a spout (missing). Painted in black. Horizontal painted and incised line along the body (diverging leaves' pattern?).	Fragment. Wheel-made.	h. max. 6.5 w. max. 5.3 t. 0.7	Red slip Ware	Phase 2	
2832	BKG 12E (77)	Sherd. Painted in black. Triangles with oblique wave-like lines below along the neck. Sinuous discontinuous line between two lines (incised and painted) along the body.	Fragmentary, recomposed from three fragments.	h. max. 4.6 w. max. 8.1 t. 0.5	Red slip Ware	Phase 2	
2834	BKG 12E (77)	Sherd. Painted in black. Line with comb-like pattern open below.	Fragment. Wheel-made.	h. max. 2.6 w. max. 2.8 t. 0.5	Red slip Ware	Phase 2	
2835	BKG 12E (77)	Sherd. Part of a spout (brocken) with knob below. Painted in black. Simple diverging leaves' pattern between two painted lines (upper missing).	Fragment. Wheel-made.	h. max. 6.7 w. max. 6.8 t. 0.5	Red slip Ware	Phase 2	

Inv. No	Source	Description	Conditions	Dimensions	Material	Phase	
2869	BKG 12E (89)	Sherd. Painted in black. Triangles with oblique like lines between two incised painted lines.	Fragment. Wheel-made.	l. max. 7,2 w. max. 5,4 t. 0,7	Red slip Ware	Phase 2	
2836	BKG 12E (69)	Sherd. With horizontale handle (partly preserved). Painted in black. Triangles with oblique wave-like lines below along the handle (external side). Below, row of empty triangles pointed down between two painted lines.	Fragment. Wheel-made.	h. max. 4,5 w. max. 3,5 t. 0,5	Red slip Ware	Phase 3	
2803	BKG 12E (57)	Sherd. With handle. Painted in black. Geometric pattern.	Fragment. Half handle preserved.	l. 7,1 t. 0,8	Red Slip Ware	inter-Phase C	
2804	BKG 12E (57)	Sherd. Painted in black. Row of triangles with oblique wave-like	Fragment. Wheel-made.	l. 8,8 t. 0,6	Red Slip Ware	inter-Phase C	
2814	BKG 12E (59)	Coin. Azes II. Obv.: King mounted r. Rev.: Zeus standing l. Göbl 1976 nos. 46-56.	Worn, corroded, heavily oxidized.	D. 1,9 2,0 gr	Æ	Inter-phase C	
2841	BKG 12E (59)	Part of a rectangular votive tank. Bird with outspread wings perched on the rim (Marshall 1951: n.155-159).	Fragment. Hand-made.	h. max. 2,5 w. max. 5,5 t. 0,5	Terracotta Red	Inter-phase C	
2859	BKG 12E (59)	Sherd. Part of a dish with decorated bottom. Stamped decoration. Leaves around a central circle (two concentric depressions).	Fragment. Only one leave is preserved. Wheel-made.	l. max. 6,4 w. max. 4,4 t. 0,25	Red slip Ware	Inter-phase C	
2861	BKG 12E (59)	Sherd. Bottom of a bowl. Embossed <i>émbiema</i> with Roman-style image. Female bust wearing a tunic and overtunic. The figure wears necklace (row of pearls) and earrings. Hairdress featured by a row of curls over the forehead (or crown?). Cf. BKG 1516 (Callieri et al. 1992: Pl.XVI 3).	Fragment. the right part of the body is missing.	l. max. 3,8 w. max. 3,2 t. max 1,8, t. 0,7	Red slip Ware.	Inter-phase C	

Inv. No	SOURCE	DESCRIPTION	CONDITIONS	DIMENSIONS	MATERIAL	PHASE	
2868	BKG 12E (59)	Sherd. Base of a dish. Internal base decorated with pattern of incised leaves.	Fragment. Sharp breaks.	l. max. 8.9 w. max. 4.0 t. 0.6	Red slip Ware	Inter-phase C	
2793	BKG 12E (38)	Sherd. Painted in black. Line with comb-like pattern above. Garlands hanging from central rib (painted).	Fragment. recomposed from two fragments. Wheel-made.	l. 11.4 t. 0.5	Red Slip Ware	Phase 4	
2794	BKG 12E (38)	Sherd. Spout. Painted in black. Zigzag lines	Fragment. Wheel-made.	l. 5.8	Red Slip Ware	Phase 4	
2763	BKG 12E (37)	Sherd with impressed linear image of bird; row of pointed ovoli below. Shoulder.	Sherd.	7.8 6.0 0.9	Red Ware Slipped	Phase 4	
2771	BKG 12E (24)	Coin. K Kujula Kadphises (?) Rev.: King standing frontal. Göbl 1976 nos. 129-132?	Worn, corroded, oxidized.	D. 1.6 3.9 gr	Æ	Phase 4	

Figures

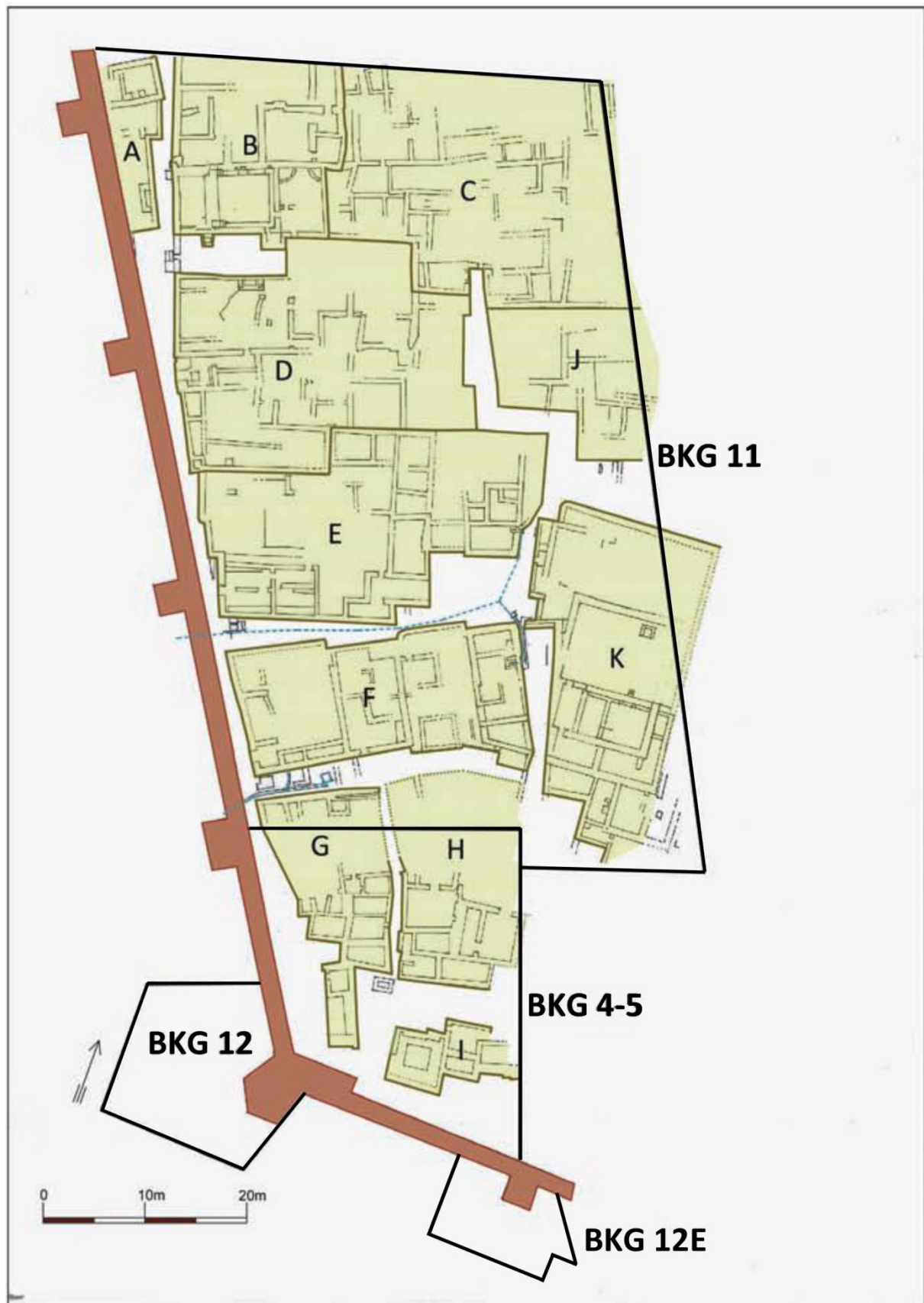


Figure 1. Position of trenches BKG 11, BKG 4-5, BKG 12 and BKG 12E (Modified by EI after Olivieri 2015: fig. 1)

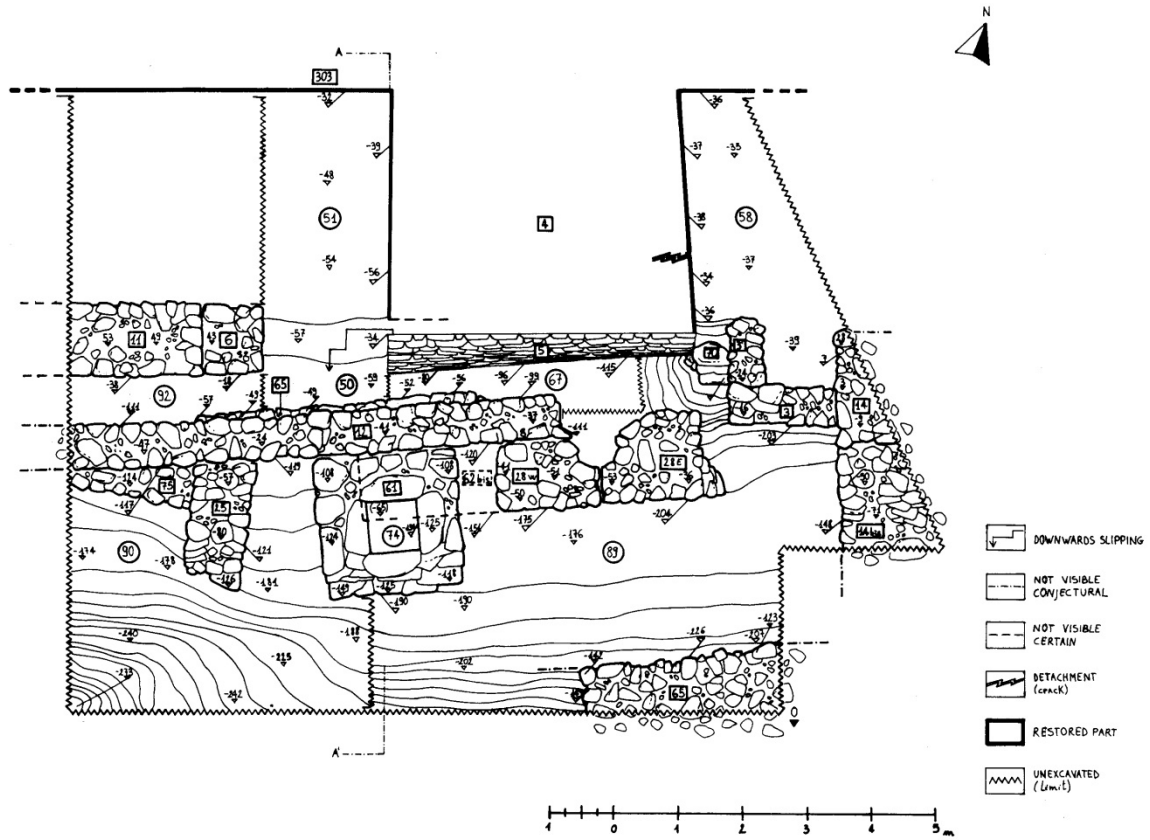


Figure 2. Trench BKG 12, final plan (Drawings by EI)

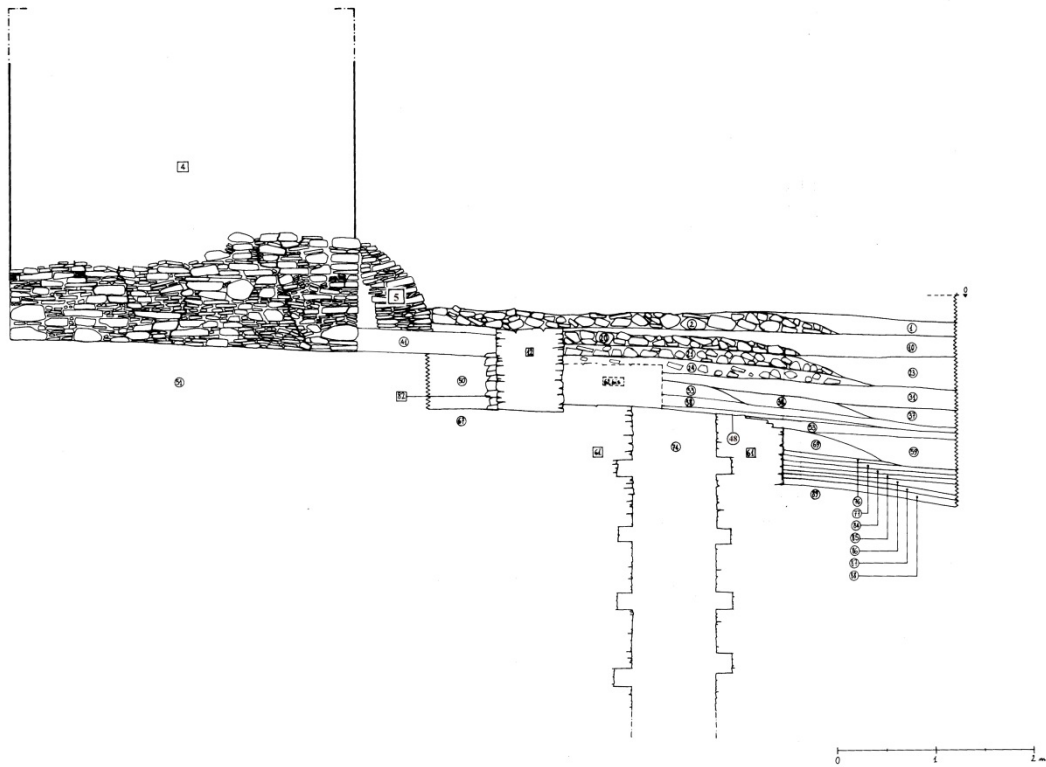
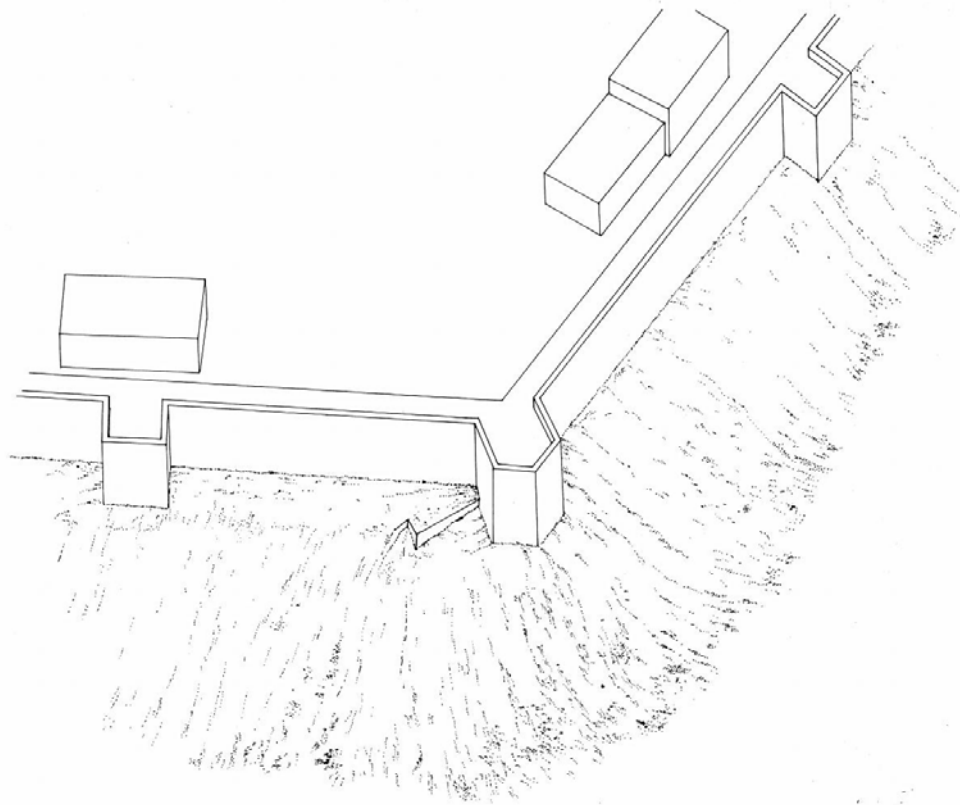


Figure 3. Stratigraphic section AA' (Drawings by EI)



**Figure 4. Phase 1: Axonometric restitution of the SW corner of the Wall with external area
(Drawings by F. Martore).**

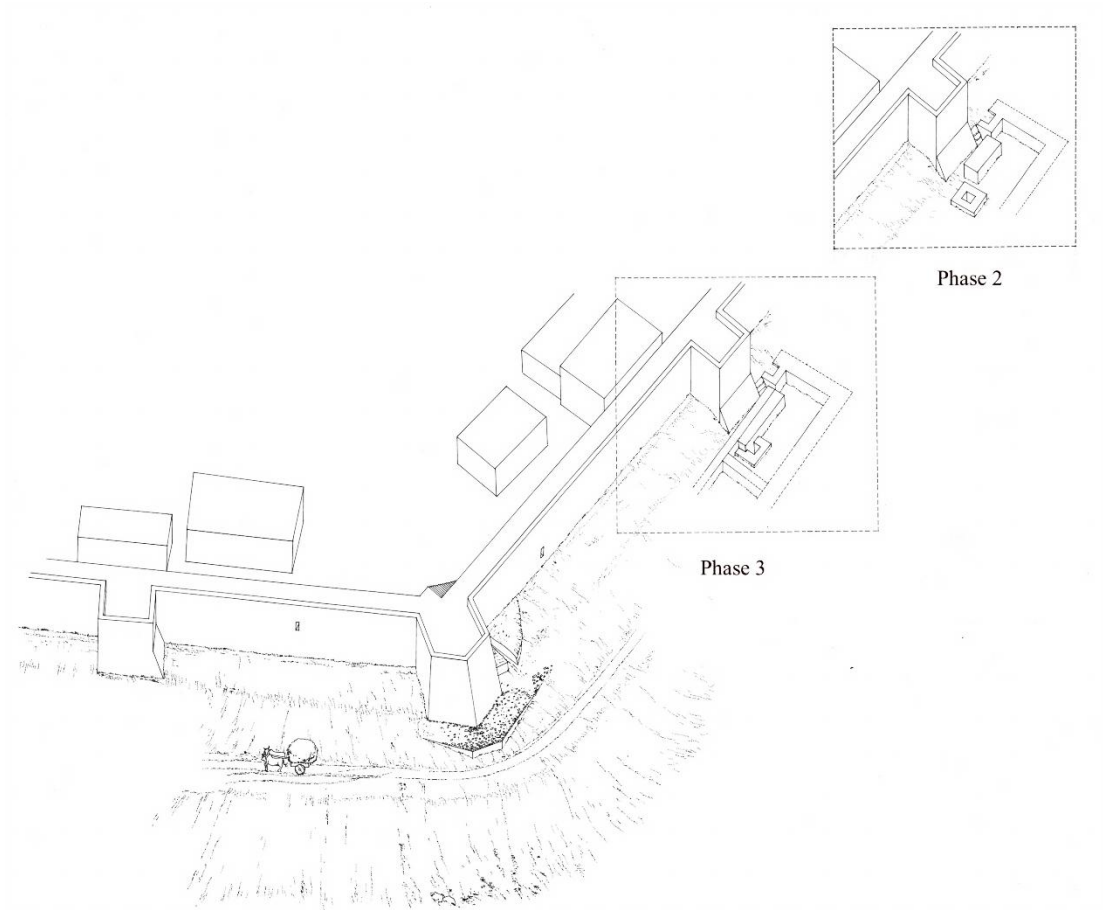


Figure 5. Phases 2-3: Axonometric restitution of the Wall with external area (Drawings by F. Martore).

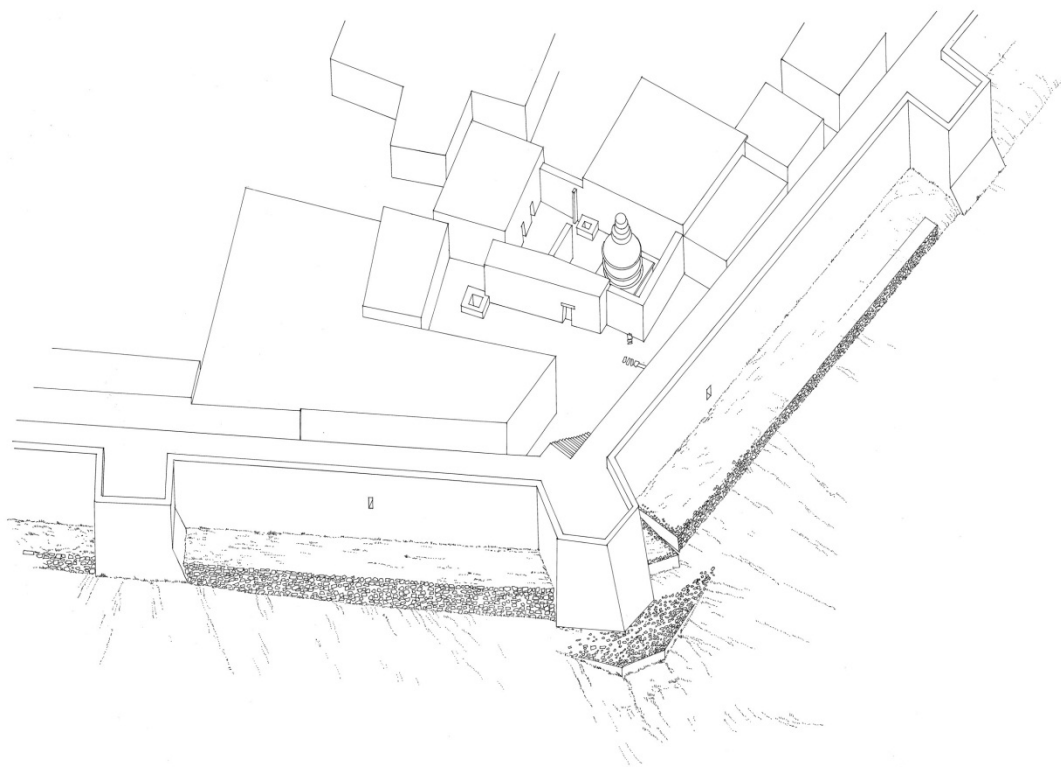


Figure 6. Phase 4: Axonometric restitution of the Wall with external area (Drawings by F. Martore).



Figure 7. Black-on-red painted pottery from BKG Cultural Phases 3 (After Callieri 2000: fig. 1 a-b)

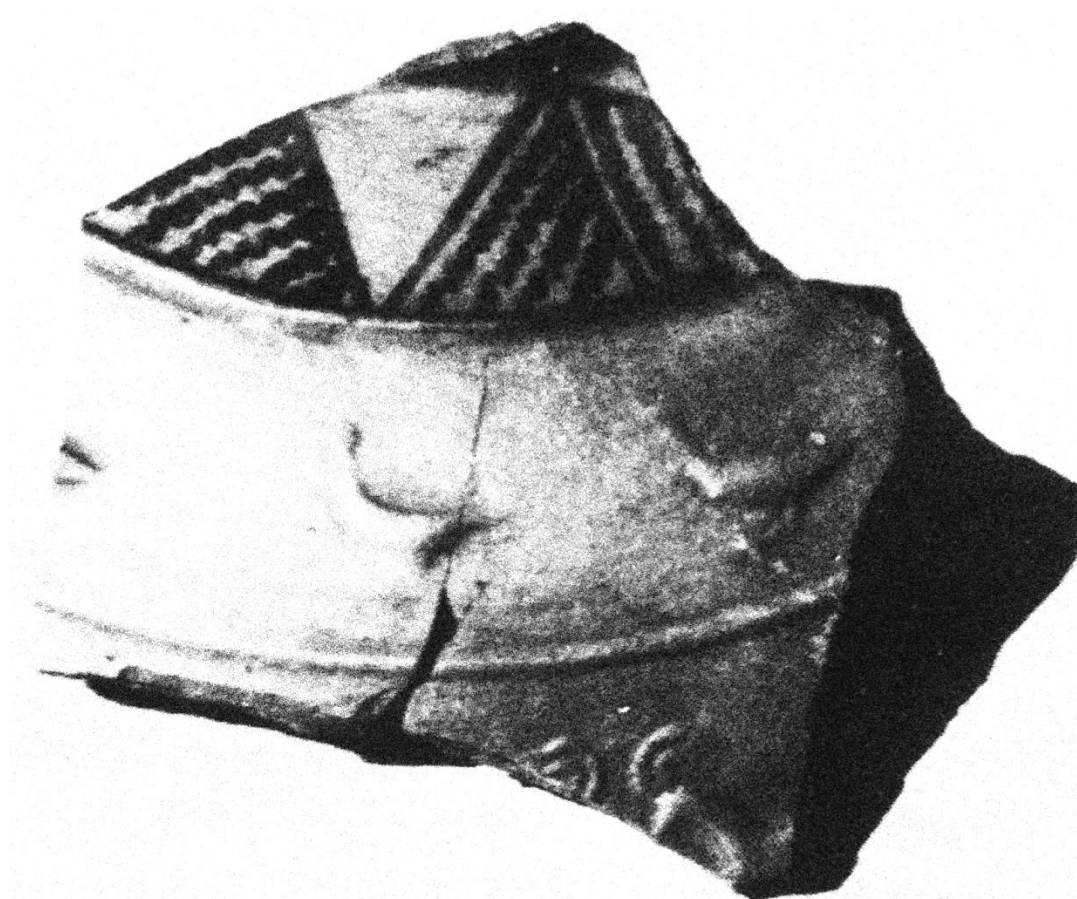


Figure 8. BKG 988: BKG L (10), BKG Cultural Phase 3 B (?) (After Filigenzi 1985: fig. 16).



Figure 9. BKG 1516: BKG 4-5, BKG Cultural Phase 3 B (After Callieri *et al.* 1992: fig. 3).



Figure 10. The Bastion, escarpment [5] and wall [12], seen from W: Inter-phase B (Photo by EI).



Figure 11. Trench BKG 12E, view from NNE, Phase 3 (Photo by EI)



Figure 12. Detail of Trench BKG 12E, view from S, Phase 2 (Photo by LMO)

