

THE INTERNATIONAL AL-KHUBTHA TOMBS PROJECT (IKTP): PRELIMINARY REPORT ON THE 2010 SEASON

Lucy Wadeson

Acknowledgements

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Introduction

Hundreds of Nabataean façade tombs are found throughout Petra, carved in the mountains and wadis that surround the city centre. Despite having been looted in the past and used for habitation purposes in the previous century, the author's recent comprehensive documentation and examination of their interior plans in relation to their façades has shed new light on their chronology, the little known Nabataean burial practices, and funerary architecture (Wadeson 2010a, 2010b). Nevertheless, many of the tombs have unclear floors and exterior platforms, limiting what we know about the form of burials and structures carved into the ground that functioned in the funerary ritual. For this reason, the monumental Tombs 779 and 781¹ on the west flank of the al-Khubtha mountain were chosen for clearance and excavation, with the aim of enhancing knowledge of Nabataean burial procedures and the sorts of activities taking place outside the tombs, in so-called 'tomb complexes' (Schmid 2009b). The few façade tombs that have been methodically excavated in the past, such as the Tomb of Unaishu (BD 813), Tomb 64B, the Soldier Tomb (BD 239), the Renaissance Tomb (BD 229) and the tombs beneath the al-Khasneh (62D-E), yielded important information for

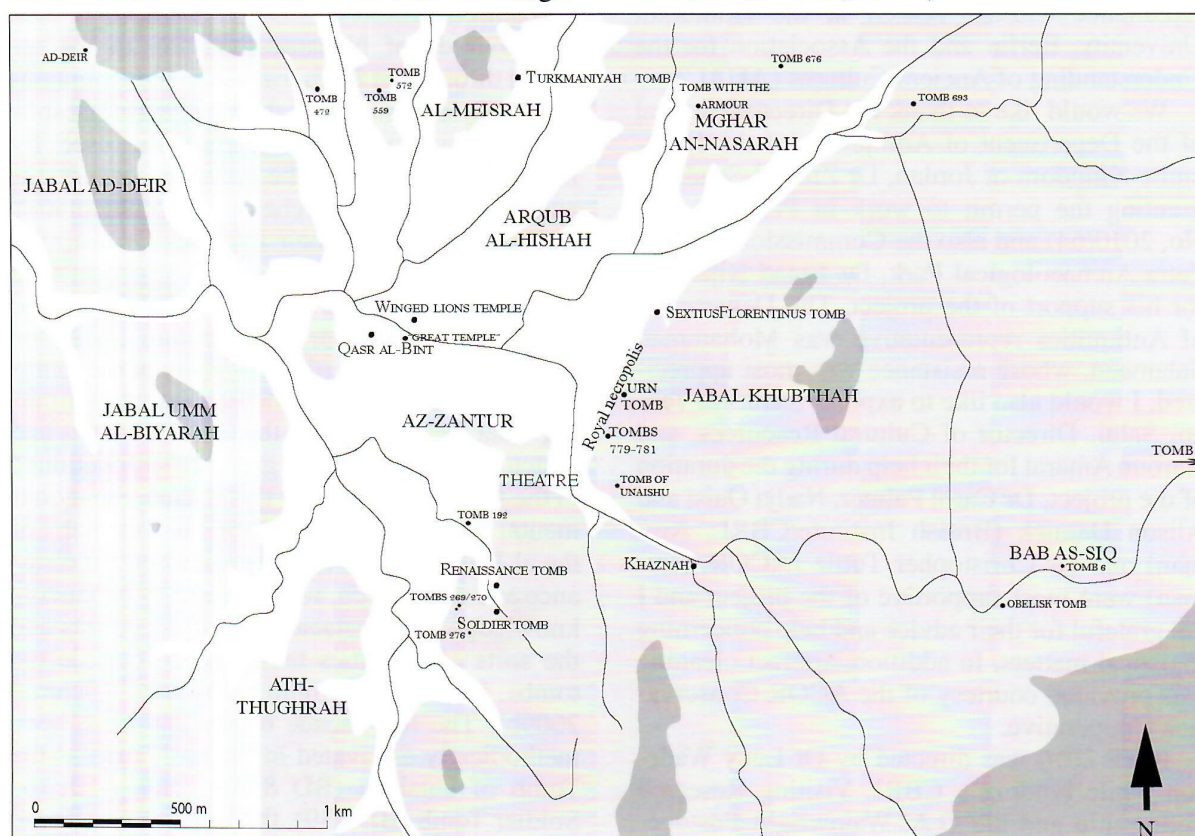
1. The numbering system of Brünnow and von Domasze-

wski (1904) is retained in the author's study of the tombs.

our understanding of Nabataean funerary customs (Zayadine 1974: 142-50, Zayadine 1982: 365-93; Huguenot *et al.* 2004: 204-206; Farajat and Nawafleh 2005: 373-93; Schmid 2009a: 95-105). Thus, we were confident that the IKT project would produce significant results that would advance the field of Nabataean funerary archaeology.

The western flank of al-Khubtha is well-known for having some of the largest and most elaborate of the façade tombs (the so-called 'Royal Tombs'), including the Urn Tomb, the Corinthian Tomb, the Palace Tomb, the Tomb of Unaishu and a large number of Hegr and Double Pylon tombs, which are the most complex types among the non-classical façade tombs (Wadson 2010a: 51-2).² This necropolis lines the Wādī Mūsā as one exits the Sīq and proceeds north, and has excellent visibility from the city centre and the Theatre area (Figs. 1-2). Most of the al-Khubtha tombs lie on an east-west align-

ment and their façades face west. Tombs 779 and 781 (Brünnow and von Domaszewski 1904: 398-99) are located on a terrace to the south of the Urn Tomb and almost opposite the Theatre (Figs. 3-4). They appear to form a complex with Tomb 780, which lies between them, yet this tomb is unfinished and therefore was not the focus of any detailed work in the first season of this project. Tombs 779 and 781 were chosen for clearance and excavation since they both have interior chambers notable for their size, arrangement, tooling, arcosolia burials and decorative elements, and large platforms in front of their façades with traces of accompanying structures forming 'tomb complexes'. Furthermore, Tomb 779 has a façade of the Double Pylon type, while Tomb 781 is a Hegr tomb, meaning that any datable material excavated from the tombs could throw interesting light on the relative chronology of the different façade types at Petra (Wadson 2010a: 48-69, 2011a).



1. Map of Petra (after I. Sachet).

2. For example, among the 35 façade tombs recorded in this area in the 'Funerary Topography of Petra Project'

(FTPP) directed by the author, 29 belong to the Complex Classical, Hegr and Double Pylon types.



2. Tombs at the base of al-Khubtha, Petra (L. Wadeson).

Fieldwork Strategy

In the 2010 season of excavation we divided the interior and exterior areas of Tombs 779 and 781 into sectors, according to the following criteria (**Fig. 5**):

- Sector A – the area outside the façade of Tomb 779, delineated by the enclosing rock walls, and including the small chamber in the north wall and the recessed area to the west.
- Sector B – the area outside the façade of Tomb 781, delineated by the enclosing rock walls on the southern, western and northern sides.
- Sector C – the area behind the façade of Tomb 781, i.e. the interior of the tomb.
- Sector D – the area behind the façade of Tomb 779, i.e. the interior of the tomb.

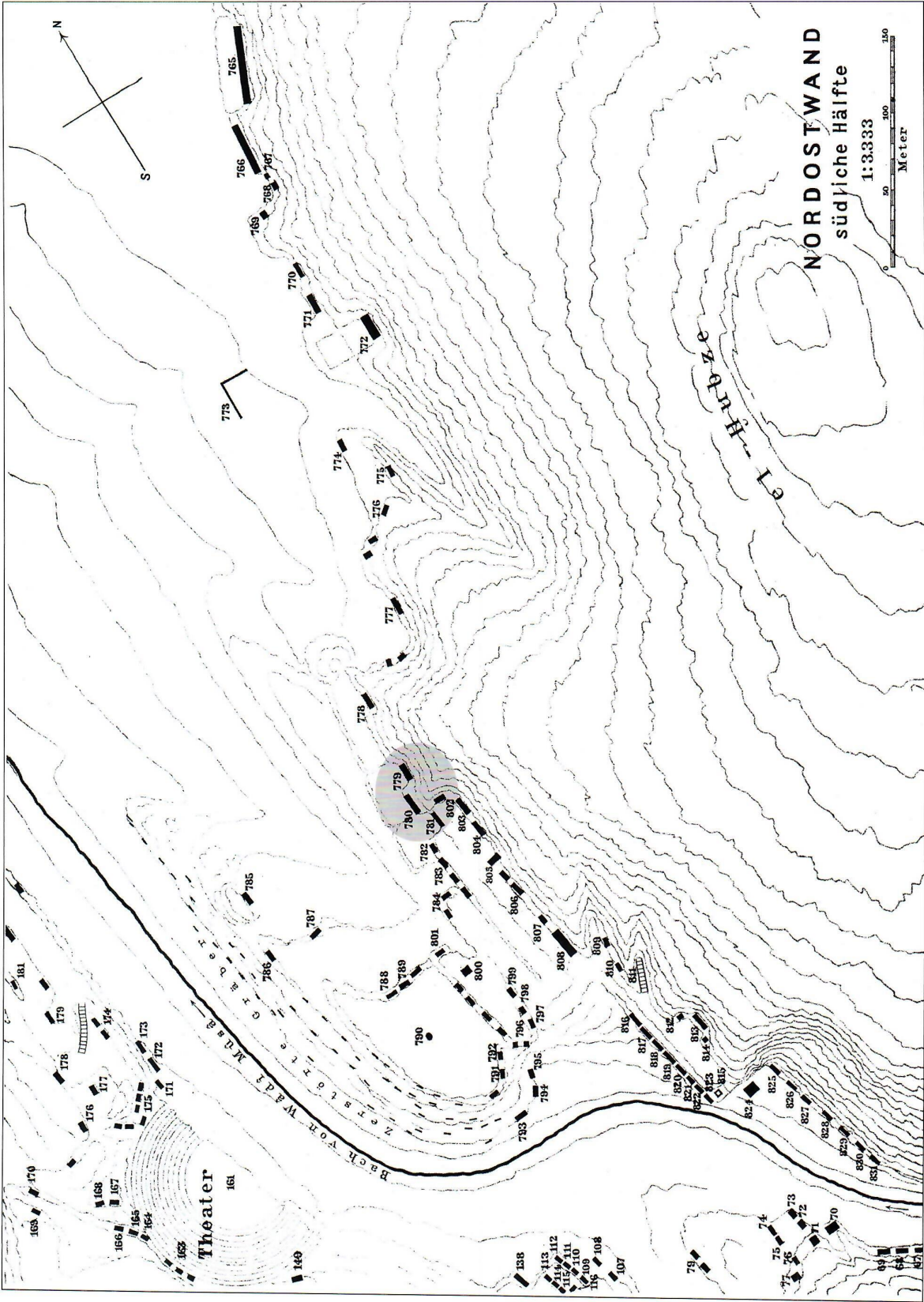
Within Sector A, five trenches were opened: Trenches 1, 7 and 10 covered the north-eastern, north-western and south-western parts of the exterior platform; Trench 8 was inside the small rock-cut chamber to the north-west of the platform; and Trench 2 lay in the recessed area to the west of the latter chamber. In Sector B, Trenches 3 and 5 were opened on the western edge of the platform. Trench 4 was opened in Sector C, comprising the grave cut inside the arcosolium in the back of the subsidiary chamber. Inside Sector D, Trench 6 corresponded to the arcosolium grave in the back wall of the chamber, Trench 9 was located across the threshold of the tomb, and Trench 11 comprised the niche cut in the south wall of the arcosolium. All trenches were completely excavated down to the surface of the rock originally worked by the Nabataeans.

Preliminary Results

Tomb 779: Exterior (Sector A)

Tomb 779 has a 7.57 m wide façade of the Double Pylon type, with two rows of crowsteps (**Fig. 4**). Above the doorway is a carved groove for an inset pediment and on either side is a window, which facilitated the carving of the interior chamber. Either side of the façade are high rock walls, enclosing a platform area in front (l. 11.30 m x w. 8.40 m). Part of the southern rock wall is in fact the northern side of Tomb 780. A small chamber is carved in the northern rock wall, and above its entrance is a carved betyl in a niche (**Fig. 6**). It is unclear whether this betyl relates to the chamber or the quarrying of the rock above, since such votives were commonly carved by stonemasons during the removal of the rock, supposedly as an act of contrition to the gods (Shaer and Aslan 2000: 105-106, **Fig. 37**; Shaer 2004: 403). To the west of the small chamber is a recessed area, enclosed on its west side by a high rock wall. Access to the tomb complex appears to have been from the southern side, leading from Tomb 780 (**Fig. 5**). The western edge is bound by a low rock wall and below is a sheer drop to the wadi below. Before excavation commenced, the only section of bedrock exposed was at the base of the southern wall, on the western edge (**Fig. 7**). In this area a rectangular shaped cutting was visible (Structure/ST 10), immediately at the base of the southern wall.

The clearance of the platform area was undertaken systematically with the opening of Trenches 1, 7 and 10, each of which roughly corresponded to a quarter of the platform (**Fig. 5**). Due to time constraints, the south-eastern corner was not excavated. The fill covering the bedrock was approximately 0.42 m thick in the eastern end of Trench 1 and 0.03 m thick in the western end of Trench 7, since the bedrock sloped down gradually from east to west. The material largely consisted of a reddish-brown sand with some ashy grey patches, indicating the remains of recent Bedouin fires, and inclusions of small to medium-sized stones. A large amount of pottery was recovered from these trenches, consisting of both Nabataean coarseware and fineware, with painted sherds predominantly dating to Phase 3B (AD 75 - 100) (Schmid 2000). However, modern material was found throughout, to



3. Tombs 779 and 781 (shaded) at the base of al-Khubtha (Brünnow and Domaszewski 1904: Pl. 19).

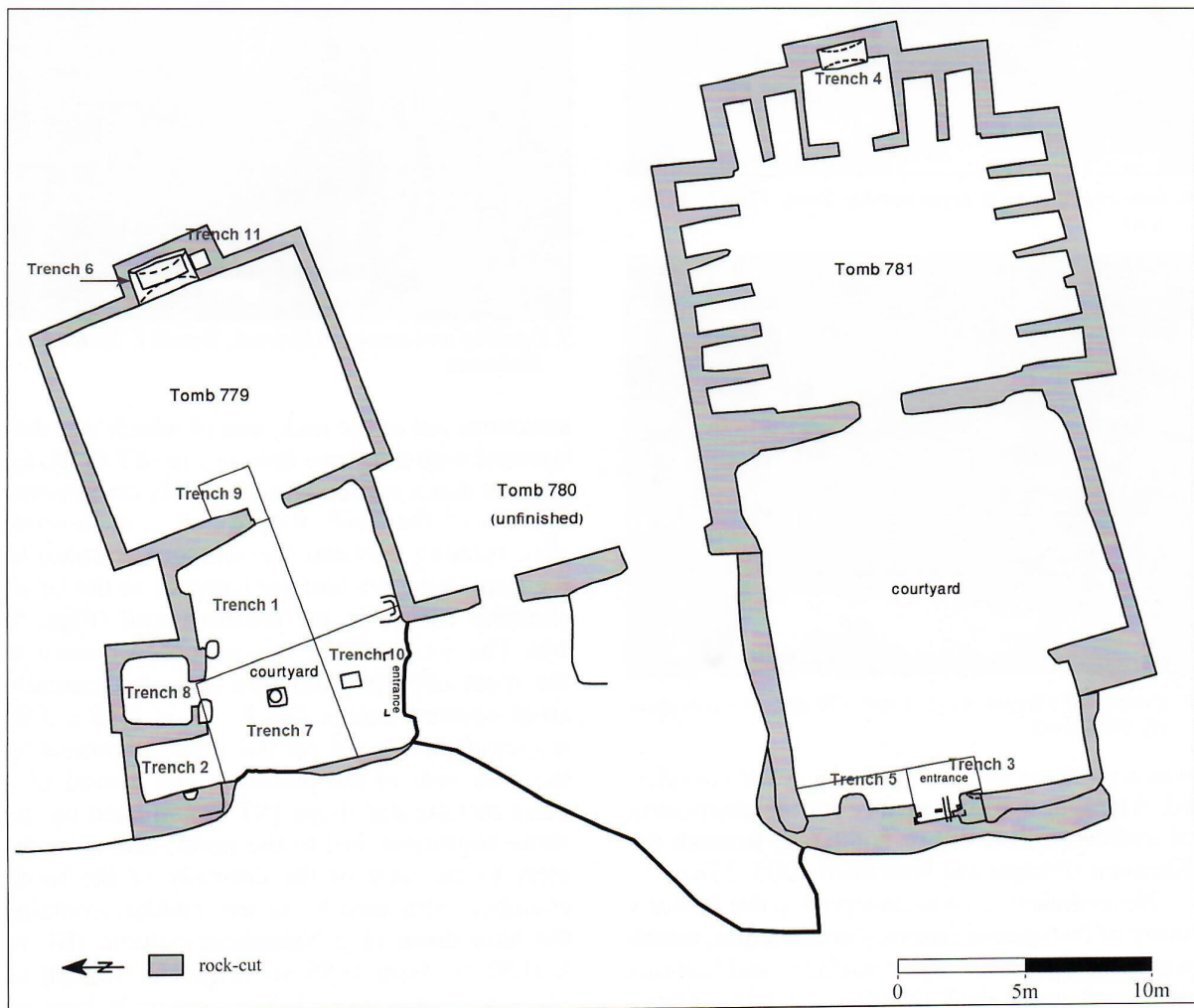
the level of the bedrock, indicating that it was a disturbed layer. Medieval material, such as pottery and ballista balls demonstrate that the area

outside this tomb was re-used from antiquity to modern times. A recent *ṭabūn* (ST 1; diam.: 0.80 m; depth in centre: 0.25 m) was discovered in Trench 1, approximately 0.18 m beneath the surface.

The bedrock exposed beneath Trenches 1, 7 and 10 revealed some interesting structures and features. Firstly, the entire surface is not level and has the appearance of being unfinished, with lumps and dips in the rock. In the north-eastern quarter numerous random scratching from tools are found, particularly concentrated around a small trapezoidal receptacle (0.20 x 0.40 m; c. 0.04 m deep) (**Figs. 8-9**). This may have once held water necessary for the sharpening of the tools used in the carving of the tomb, and would indicate that this part of the platform



4. Façade Tombs 779, 780 and 781 at the base of al-Khubtha, Petra (L. Wadeson).



5. Plan of Tombs 779 and 781, including trench numbers (M. Dehner and L. Wadeson).



6. Side chamber with betyl outside Tomb 779 (L. Wadeson).



7. Courtyard (Sector A) of Tomb 779 before excavation (L. Wadeson).

was a working surface that was never completed. A similar working surface for the sharpening of tools was observed in Tomb 62E beneath the Khasneh (Farajat and Nawafleh 2005: 378).

Nevertheless, as was observed in the author's study of Nabataean funerary architecture, tombs were still used even when surfaces and features remained unfinished (Wadeson 2010b: Chapter 4). In the case of Tomb 779, several regular



8. Trench 1 (Sector A) after excavation (L. Wadeson).

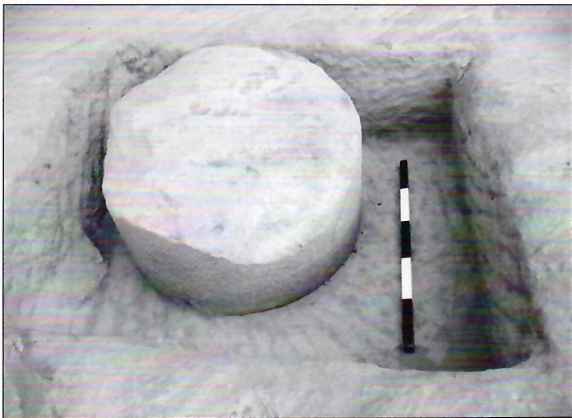


9. Detail of tool-marks on bedrock, Trench 1, Sector A (L. Wadeson).

structures cut in the rock, one of which was discovered with a column base *in situ* (ST 8; BL 8), suggest that a portico was originally constructed in front of the tomb, roughly on a north-south axis, running between the southern entrance to the tomb complex and the entrance to the small chamber carved in the northern wall (Figs. 5, 10). The west side of this supposed portico is the most obvious with two almost identically sized square cuttings (ST 8 – 9; c. 0.80 x 0.80 m) regularly placed on the same alignment in the west side of the platform, and a third of a more rectangular shape (ST 11) situated on the same alignment, but to the north, and immediately to the west of the doorway of the small chamber. Structure 8, in the middle, contains the base drum of a Nabataean column (BL 8; h. 0.30 m, diam. 0.55 m) (Fig. 11). The fill of this structure contained almost solely Nabataean fineware of Phases 3b and 3c (late first century



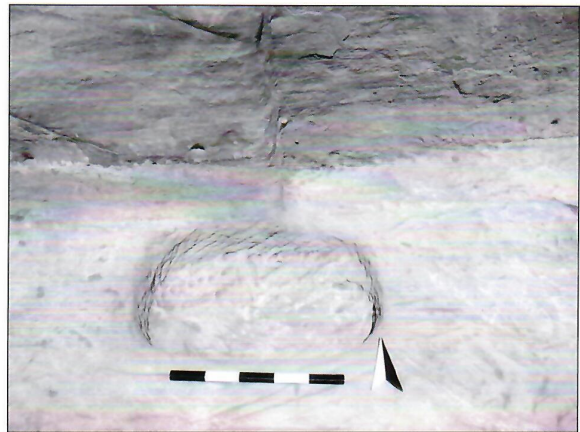
10. Trenches 1, 2, 7, 10 (Sector A) after excavation – courtyard of Tomb 779 (L. Wadeson).



11. Column drum in situ in Structure 8, Trench 7, Sector A (L. Wadeson).

AD-early second century AD), but no modern material, suggesting it is an undisturbed part of the courtyard. Remarkably, although the depth of this cutting and that of those to the south (ST 9) and north (ST 11) are noticeably different due to the slope of the bedrock, their bases are in fact almost exactly the same height above sea level (906.62-906.67 m), which indicates they belong to the same phase and plan as foundations for the portico. The northern-most structure (ST 11) is half the length of the others and abutting the northern rock-wall, therefore it may reasonably have held a pilaster.

The east side of the portico is somewhat harder to reconstruct: the oval-shaped cutting in the north end (ST 3; 0.84 x 0.50 m), east of the entrance to the small chamber, is aligned with Structure 10 (0.58 x 0.45 m) on the southern side (see above) in the unexcavated quarter, but they present different shapes (Figs. 5, 12). Nota-



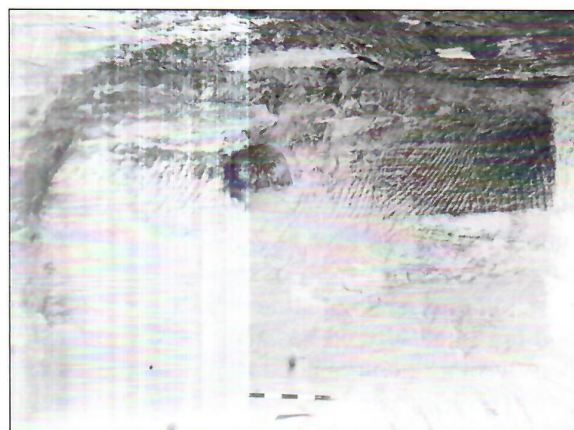
12. Structure 3, Trench 1, Sector A (L. Wadeson).

bly though, they are both situated beneath walls which could have supported inset structures. Porticoes seem to have been a common element of tomb complexes at Petra, and well-known examples are found accompanying the Soldier Tomb, the Urn Tomb, Tomb 4 (*al-Khān*) and the Tomb of Unaishu (Wadeson 2011b: 5-6). Not only did they give architectural order to the funerary space in front of the façades, but also possibly provided a sheltered place for gathering and feasting. Schmid has also noted similarities between these colonnaded tomb complexes and late Hellenistic and early Roman luxury architecture (Schmid 2009b: 160-61).

The small side chamber in the exterior northern wall of Tomb 779, to which the portico leads, did not take long to clean, since it was only covered by a 1.5 cm layer of sand and modern rubbish. The rock floor is uneven but contains five curious holes (c. 0.10 m diam.) carved in the southern half, the function of which remains undetermined (Fig. 13). The walls of this small chamber are not straight and roughly carved (w. 3.20 m, l. 3.70 m) presenting an unfinished appearance, although there is a small rounded niche in each of the lateral walls located c. 1.11-1.14 m above the rock floor (Fig. 14), suggesting that the chamber was in use. Small chambers lacking burial installations are common elements of tomb complexes at Petra, such as those accompanying Tomb 253 in Wādī Farasa West, Tomb 192 in Wādī Farasa and also the Turkmaniyah Tomb, according to its inscription (CIS II 350; McKenzie 1990: 58 n. 30, 167-68; Healey 1993: 238-42). Possible functions include a storage or food preparation area for the funerary activities



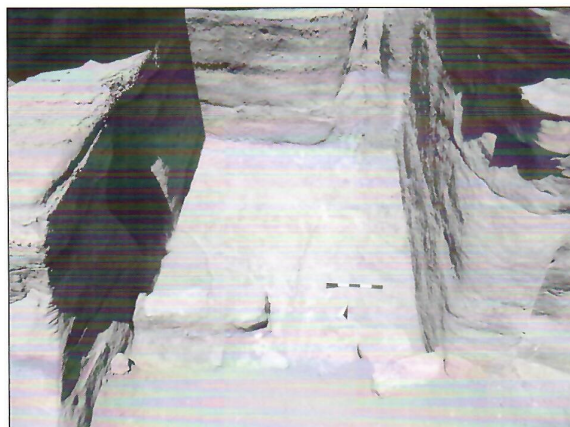
13. Floor of side chamber outside Tomb 779 (L. Wadeson).



14. Niche in west wall of side chamber outside Tomb 779 (L. Wadeson).

taking place at the tomb (Wadeson 2011b: 9).

Trench 2 in Sector A was opened in the north-west corner, in the recessed area to the west of the small chamber (**Fig. 5**). Measuring 3.50 m long by 2.40 m wide, it is bound by rock walls on the north, east and west sides and has an eroded/broken niche in the west wall. The area was filled with a thick layer (0.91 m at the north) of reddish sand that was higher in the northern end due to the debris that would have washed down from the water channel in the rock above. The water running down caused erosion in the northern rock wall and natural channels formed over time. After the removal of ca. 0.04 m of material from the southern end, the remains of a possible built wall emerged, consisting of two worked blocks lying on a thin layer of sand (**Fig. 15**). While the first 0.73 m of material in the northern end of this trench contained Nabataean, Medieval and modern findings, the last 0.20-

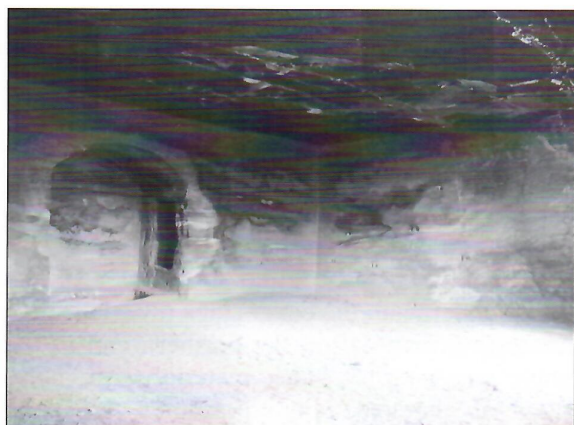


15. Trench 2, Sector A, with remains of wall (L. Wadeson).

0.30 m of the southern and northern ends contained exclusively Nabataean and late Roman pottery. It is therefore possible that this wall was constructed in antiquity as a means of closing the southern end of this recess. The idea of this space as a reservoir serving the tomb complex is an attractive one, given that sources of water are commonly found in funerary complexes to serve the ritual activities (Wadeson 2011b: 8). However, no remains of hydraulic mortar were noted on the walls of this recess and thus its function remains unknown.

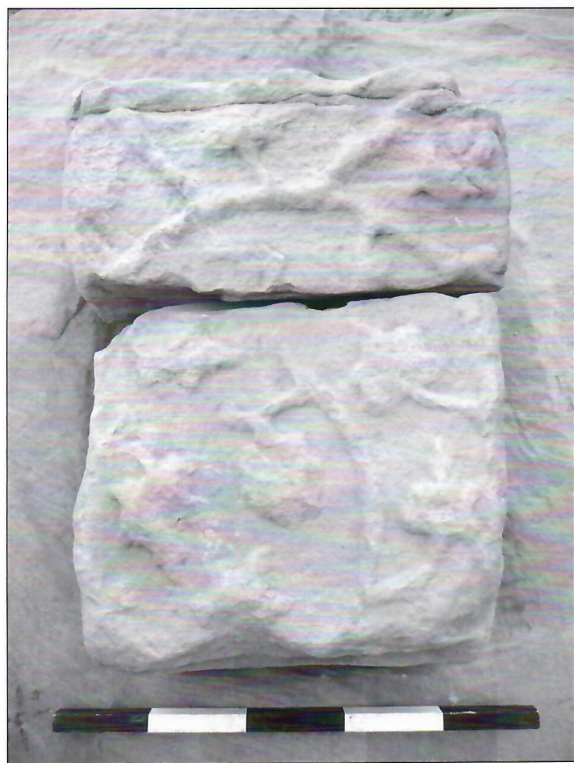
Tomb 779: Interior (Sector D)

The burial chamber of Tomb 779 is approximately 12.2 m wide and 10.2 m long. Its walls are straight and neatly carved with fine line dressing tilted on a 45 degrees angle from the horizontal, and bands of horizontal lines below the ceiling and vertical lines down the corners. This tooling style is notably similar to that found in the Obelisk Tomb and Bāb as-Sīq Triclinium (McKenzie 1990: 44). Several 'loop-holes' are carved both high and low in the walls of this chamber and the only visible burial place is the pit grave carved inside the arcosolium in the back wall (**Fig. 16**). The chamber floor is blocked with approximately 0.40 m of goat dung and sand, which became evident with the opening of Trench 9 in the threshold of the tomb. Thus, the full height of the chamber is 4.52 m. Trench 9 was connected to Trench 1 in Sector A and extended 0.70 m across the southern half of the threshold, 2.5 m inside the chamber to the north and 2.5 m to the east (**Fig. 5**). The pottery within this fill was mostly Medieval, indicating



16. Chamber of Tomb 779 (Sector D), view towards south-eastern corner (L. Wadeson).

later reuse of the tomb. Approximately 0.10–0.13 m below the surface, large stone blocks appeared in the threshold area (LO 93), most likely placed there in the Medieval period to block the entrance to the tomb. One of these blocks (BL 7), now broken in two pieces, was decoratively carved with what appears to be a vine motif, typical of the first century AD (Fig. 17). It may have once formed part of the decoration of this



17. Carved block (BL 7) from threshold of Tomb 779 (Trench 9, Sector D) (L. Wadeson).

tomb, before being reused at a later period. After removing the stones from the threshold area, the rock-cut holes for the frame and bolts of the tomb door became evident (Fig. 18). No rock-cut stairs were found leading to the tomb chamber, nor were there burials in the section of the chamber floor that was cleared.

The other work inside the chamber involved clearing and excavating the pit grave (Trench 6) carved in the floor of the arcosolium in the back wall. The first 1.26 m of the fill of this grave was disturbed material, including Medieval pottery, animal bones and modern rubbish. It then became clear that the grave had been looted from the south end, which contained a number of disturbed stones, sand and more modern material. A common tactic of looters was to cut down into the supposed head area of the burial where the most valuable grave goods were usually located (Schmid and Barmasse 2006: 221). However, the north end of the grave was undisturbed and it was possible to observe the original sealing layers of the burial in section (Figs. 19–20). The top layer consisted of a hard and compact grey mortar (0.15 m thick) with inclusions of small stones, charcoal, bones and pottery. The painted sherds embedded in the mortar date to Schmid's Phases 3a and 3b (Fig. 21), giving the sealing of the burial a *terminus post quem* of AD 75–100. Below this was a 0.45 m thick layer of large stones embedded in the same mortar, with numerous potsherds of the same phase as those in the layer above. Underneath the layer of large stones and mortar was an empty space of ca. 0.43 m, and below this large covering slabs rest-



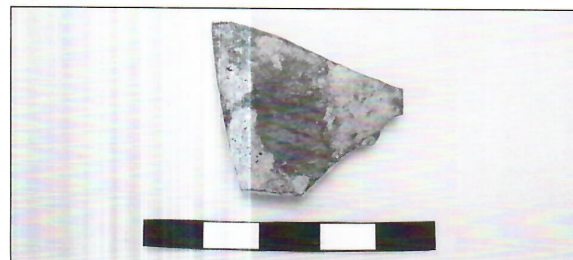
18. Exposed threshold (Trench 9) of Tomb 779 (L. Wadeson).



19. Arcosolium grave (Trench 6) with original sealing layers in the north (looters' hole in the south), Tomb 779 (L. Wadeson).



20. Section of original sealing layers in arcosolium grave, Tomb 779 (L. Wadeson).



21. Painted pottery of Phase 3b embedded in mortar, from arcosolium grave, Tomb 779 (L. Wadeson).

ing on the rock-cut shoulders of the grave. These were sealed with a chalky white mortar that was more brittle than the grey mortar and had inclusions of small pebbles and no pottery (**Fig. 22**). Unfortunately, this level had been disturbed by the looters, who presumably reached in and under the grey mortar layer (in the empty space) from the southern end.

Although disturbed, the final layer of the burial underneath the cover slabs revealed some interesting material: at the northern end of the grave was a gritty black material with inclusions of charcoal, small potsherds and bone fragments. Within this layer a circular lump of bronze was recovered. After cleaning, this turned out to be the foot of a camel (2.5 x 2.5 cm), most likely broken off a small bronze figurine originally placed with this prestigious burial (**Fig. 23**). Camel imagery is of course appropriate for Petra, considering the role that camels played in trade and the wealth this brought the Nabataeans. The Nabataean terra-



22. Covering slabs embedded in white mortar in north end of arcosolium grave, Tomb 779 (L. Wadeson).



23. Bronze camel foot from arcosolium grave, Tomb 779 (L. Wadeson).

cotta camel figurines (el-Khoury 2002: 189-96) and the camel caravan carved in the Sīq (Ruben 2003: 40-43) provide further examples of this imagery. The ashy black material lay over a fine sand that contained disturbed and fragmentary human remains, and therefore may indicate the deposition of burnt material over the burial, a practice that has been noted in other Nabataean burial contexts (Perry 2002: 266). Small skull fragments were found in the north end of the grave, indicating the orientation of the burial. The grave robbers had mistakenly presumed the head was at the south end when they looted this grave. Among the disturbed bones at the bottom of the grave were large sherds of cooking pots, a base fragment of an inscribed Nabataean lamp, and painted fineware of Phases 3a-c (**Fig. 24**), indicating the variety of objects deposited with the burial. In addition, small pieces of charcoal and small chunks of the greyish mortar that was used to seal the burial were noted.

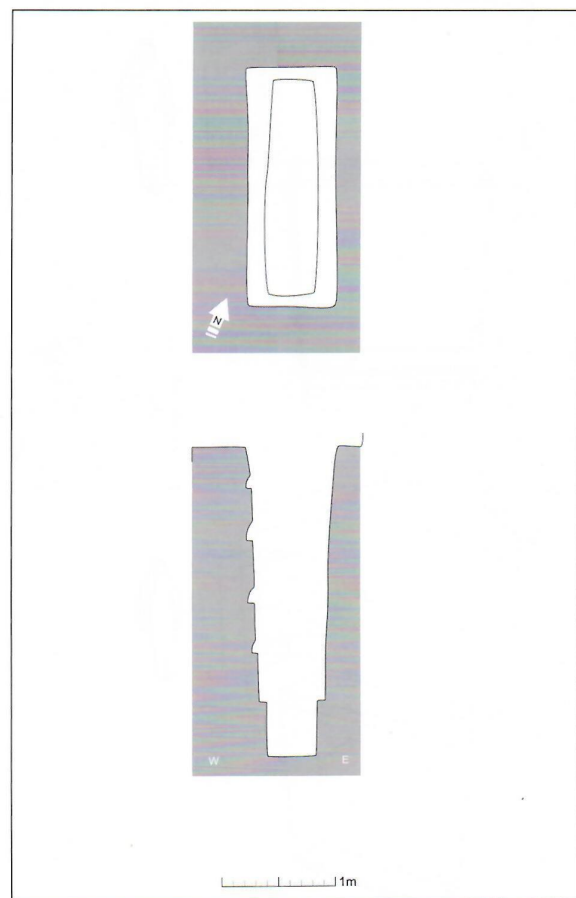
Despite its disturbed state, the excavation of this burial provides new information on Nabataean burial practices, such as the careful way the burials were sealed with various types of mortars used at different levels (of which samples were taken for analysis), and the possible deposition of burnt material at the bottom of the grave. In addition, the fragmentary human remains collected will be studied by an anthropologist, providing further insight into the Nabataeans' treatment of their dead. This data can then be compared with that from the few excavated pit grave burials from the Tomb of Unaishu, the Renaissance Tomb and the Soldier Tomb Complex in Wādī Farasa to enhance what we know



24. Painted fineware of Phases 3a-c from arcosolium grave, Tomb 779 (LÖ 59) (L. Wadeson).

of Nabataean funerary customs (Zayadine 1974: 144-45; Huguenot *et al.* 2004: 204-6; Schmid and Barmasse 2006: 220-27).

Although it shares similarities with other pit graves in Petra, the structure of the grave in Tomb 779 is noteworthy: the complete depth of the grave is 2.90 m and the rock-cut shoulders for supporting the covering slabs appear at a depth of 2.40 m (**Figs. 25-26**). To provide access to this deep grave, four toe-holes were carved in a vertical line in the western wall (**Fig. 27**), a feature which is usually only observed in shaft tombs at Petra. The dimensions of the top of the grave are 2.25 m long and 0.88 m wide, whereas at the bottom they are 2.03 m long and 0.52 m wide, indicating the significant narrowing of the walls. This deep grave was for a single burial, clearly of an important individual given its size, the complex sealing system, the accompanying grave goods, and the elaborate arcosolium carved above (**Fig. 28**), which is located in the

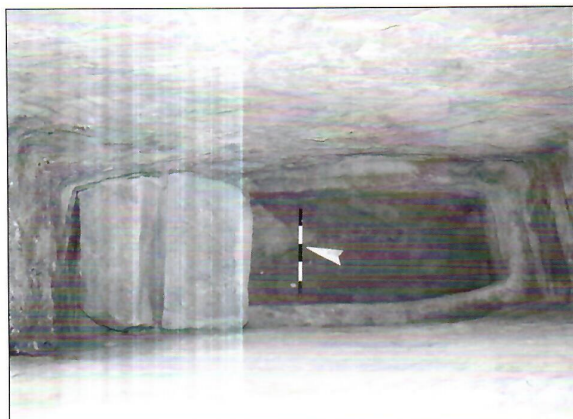


25. Plan and section of arcosolium grave in Tomb 779 (Q. Tweissi and L. Wadeson).

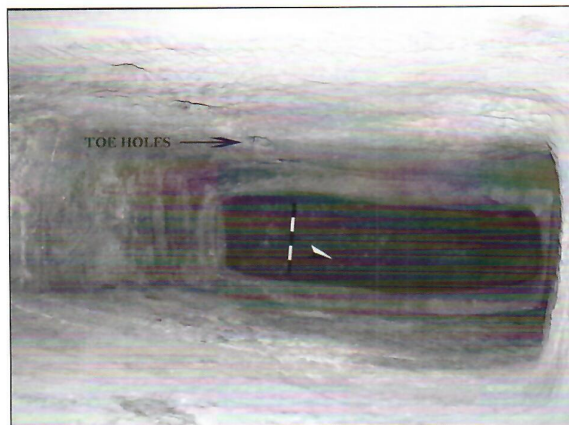
most prominent position of the chamber usually reserved for the tomb owner (Wadeson 2011a).

The arcosolium, which measures 2.96 m

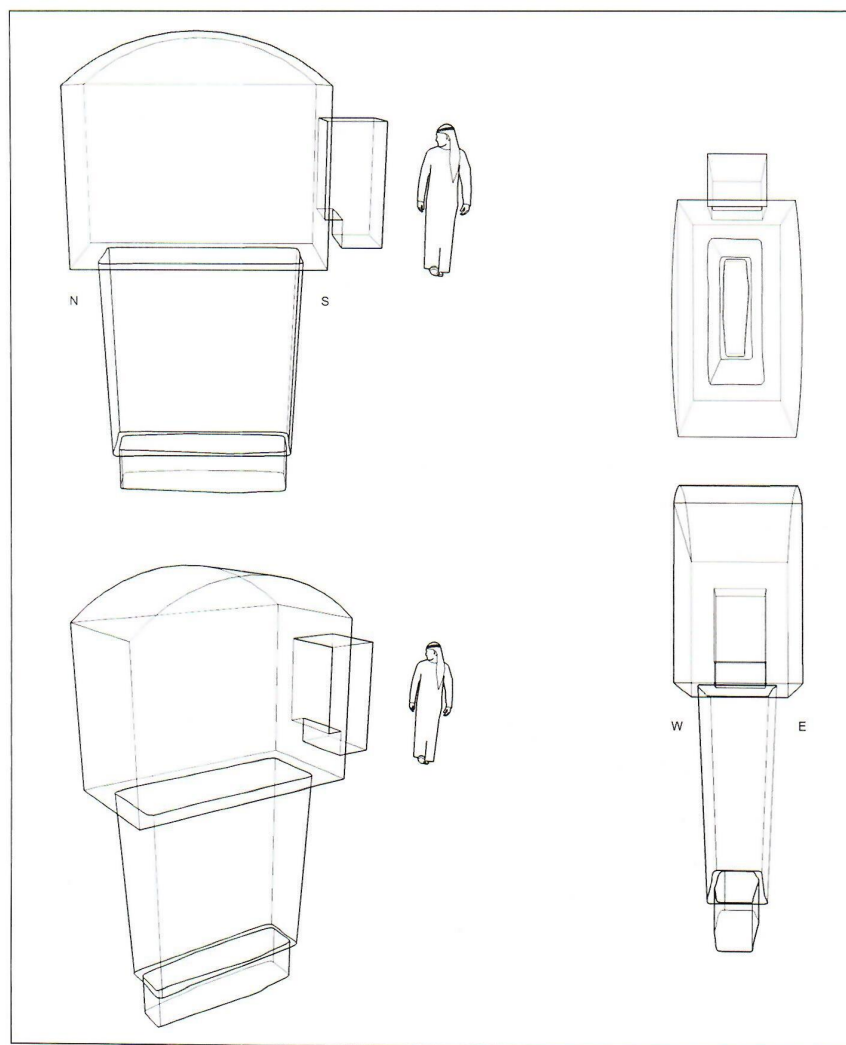
wide, 1.69 m long and 2.92 m high, has abundant traces of plaster, indicating that it was left open (**Fig. 29**). This type of burial structure is



26. Covering slabs on rock-cut shoulders in arcosolium grave, Tomb 779 (L. Wadeson).



27. Bottom of arcosolium grave in Tomb 779, with toe-holes in west wall (L. Wadeson).

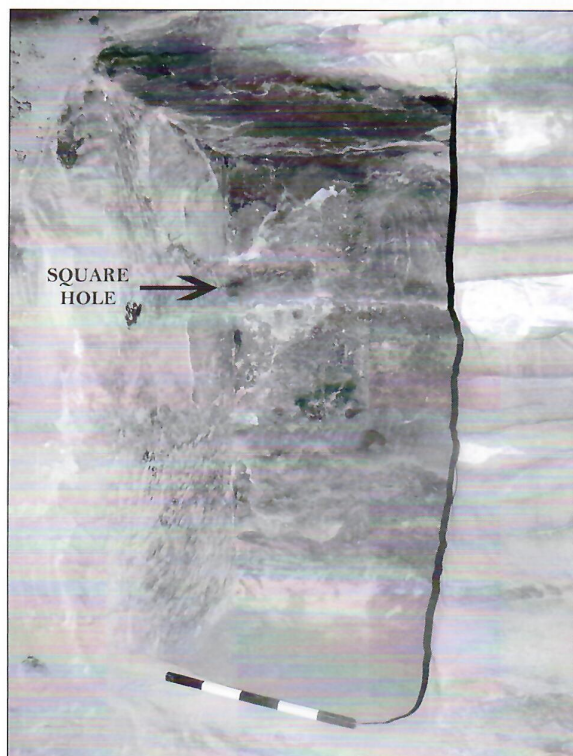


28. 3-D reconstruction drawing of arcosolium and grave in Tomb 779 (Q. Tweiissi).



29. Arcosolium in Tomb 779 (L. Wadeson).

rare in Petra, being observed in only a handful of other tombs, such as Tomb 781, Tomb 825, the Obelisk Tomb and the Soldier Tomb. In further research a comparative study will be made of all the arcossolia in order to shed light on the chronological relationship between these tombs. Even more uncommon is the peculiar niche carved in the southern wall of the arcossolium in Tomb 779, measuring 1.57 m high, 0.86 m wide and 1.02 m deep (Figs. 16, 30). We cleared the bottom of this niche to discover that it extends



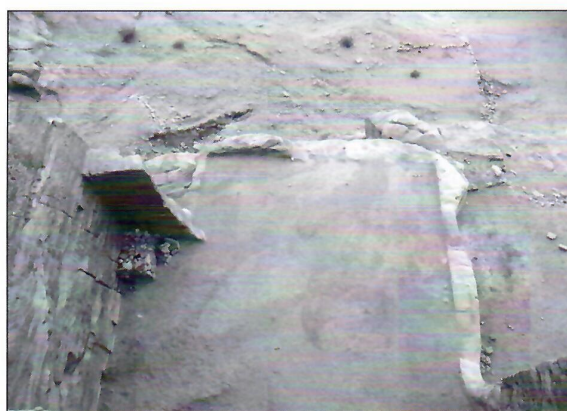
30. Niche in south wall of arcossolium, Tomb 779 (L. Wadeson).

0.23 m below the rock edge. Traces of a greyish hydraulic mortar at the base indicate that it may have held water. However, the walls were once plastered, and two regular sets of two small square holes (0.05 m x 0.05 m) in the back wall may have been used to support wooden shelving. This would suggest that it was a storage area, perhaps for cult implements or offerings to the dead. The entire niche was decorated with architectural framing, as inset grooves at the top and bottom reveal.

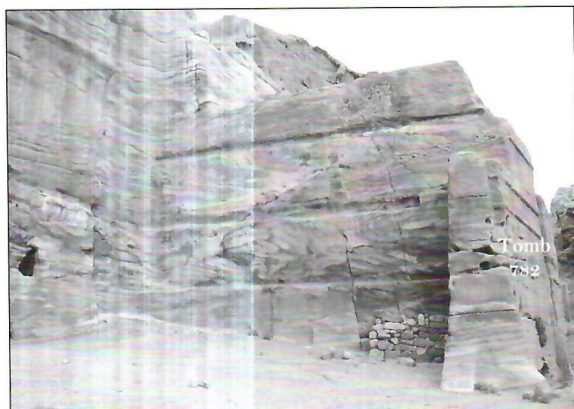
The interior of Tomb 779 appears to be finished, unlike parts of the exterior, and its size and original decoration would have been an impressive sight to visitors to the tomb. It remains to be seen if further burials are carved in the floor of this massive chamber, the clearance of which is planned for the second season of excavation.

Tomb 781: Exterior (Sector B)

Tomb 781, to the south of Tomb 779, has a façade of the Hegr type that measures 10.45 m in width (Fig. 4). The surface of the façade is heavily eroded, but one can make out a shallow niche high above the doorway. Either side of the doorway are windows, and above is a groove for an inset pediment. The platform in front of this tomb is much larger than that of Tomb 779, measuring c. 16.70 m long by 13.30 m wide (Fig. 31). On the northern and western sides, the platform is enclosed by a low rock wall. On the southern side is a high rock wall with a series of carved grooves, possibly to support a roofed structure in this area, to the side of the façade (Fig. 32). At the base of this wall, but blocked



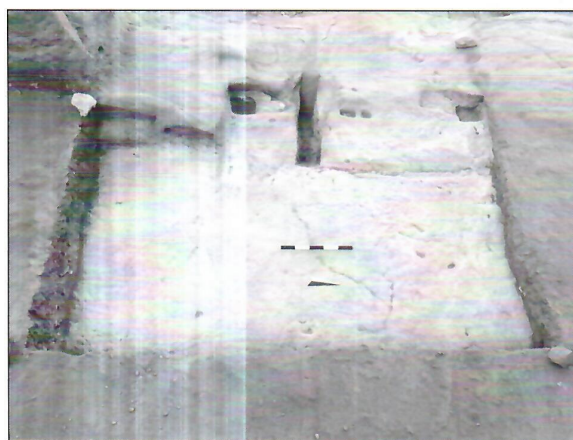
31. Courtyard (Sector B) of Tomb 781 before excavation (L. Wadeson).



32. Southern exterior wall of Tomb 781 with rock-cut grooves (L. Wadeson).

by sand, the tops of two niches are visible, perhaps once used as a support for vaulting, as commonly observed in Nabataean cisterns. The southern wall cuts the façade of Tomb 782 to the south, and thus postdates this tomb.

A 3 x 3 m trench (Trench 3) was opened at the western limit of the platform, in alignment with the tomb entrance (**Fig. 5**). After the removal of a c. 0.26 m layer of sand and stones, the bedrock was reached. The pottery from this layer was mostly Nabataean, of Phases 2c and 3 (first century AD). The bedrock surface was smooth and well-worked, but the most notable features were the holes for a doorframe and locking system at the western edge (**Fig. 33**). This reveals that an exterior doorway provided access into the whole complex from the west (on the same axis as the tomb entrance). A comparable example in Petra is the monumental entrance-building providing access to the Soldier Tomb Complex in



33. Threshold of external platform of Tomb 781 (Trench 3, Sector B) (L. Wadeson).

Wādī Farasa East, although this is perpendicular to the tomb (for the latest report on the IWFP, see Schmid 2009a: 95-105). Monumental gateways are also found leading into the complexes of Tombs 269/270 and Tomb 572. Control of access into the funerary area was clearly required, perhaps due to issues concerning the legal property of the tomb or its sanctity (Wadeson 2011b: 6).

In the case of Tomb 781, it is difficult to reconstruct how this external doorway was accessed from the west, since the rock edge has broken off into large boulders which now lie in the wadi below. Notably, a channel (1.10 m long, 0.20 m wide) is carved beneath the level of the threshold (and between the post-holes) perhaps to conduct water accumulated in the platform (which slopes down from east to west) over the edge of the rock. However, it is not connected to any drainage system and seems to be unfinished since it slopes down from the east end and rises up again on the west end. It is possible that this is a later structure, but the pottery inside the channel was exclusively Nabataean, of Phase 3a-b (AD 20-100), without any later material (**Fig. 34**). A channel is also carved into the threshold of the Painted Room (BD 849) in as-Siq al-Bārid, but this is related to a complex hydraulic system (Twaissi *et al.* 2010: 36, Fig. 8).

Trench 3 was extended to the north by 5 metres with the addition of Trench 5, which reached the northern rock wall (**Fig. 5**). The pottery findings were similar to those of Trench 3, yet there were also some Medieval sherds at the northern



34. Painted pottery of Phases 3a-b from channel in Trench 3, Sector B (L. Wadeson).

end, where there were traces of later fires. Nothing of significance was noted in the bed-rock, apart from a carved protrusion on the western side that may have been the support for a wall separating this area into two rooms (**Fig. 35**).

The large platform of Tomb 781 may have further notable structures carved in the rock, given the discovery of the external gateway. In future seasons we aim to complete the clearance of this external area, starting with the south-eastern corner beneath the high rock wall. However, this will take some time due to the large amounts of sand that have accumulated over the eastern half of the courtyard.

Tomb 781: Interior (Sector C)

The main burial chamber of Tomb 781 measures 11.47 m in width and 11.14 m in length. There are 16 loculi carved in the back and side walls and a small subsidiary chamber (w. 4.11 m; l. 3.44 m) carved in the middle of the back wall, the entrance of which is elaborated with a carved entablature and pilasters (**Figs. 5, 36**). In the back wall of the subsidiary chamber is an arcosolium with a pit grave carved in its floor



35. Bedrock floor of Trenches 3 and 5, Sector B (L. Wadeson).



36. Chamber of Tomb 781 (Sector C), view towards north-eastern corner (L. Wadeson).



37. Arcosolium of Tomb 781 (L. Wadeson).

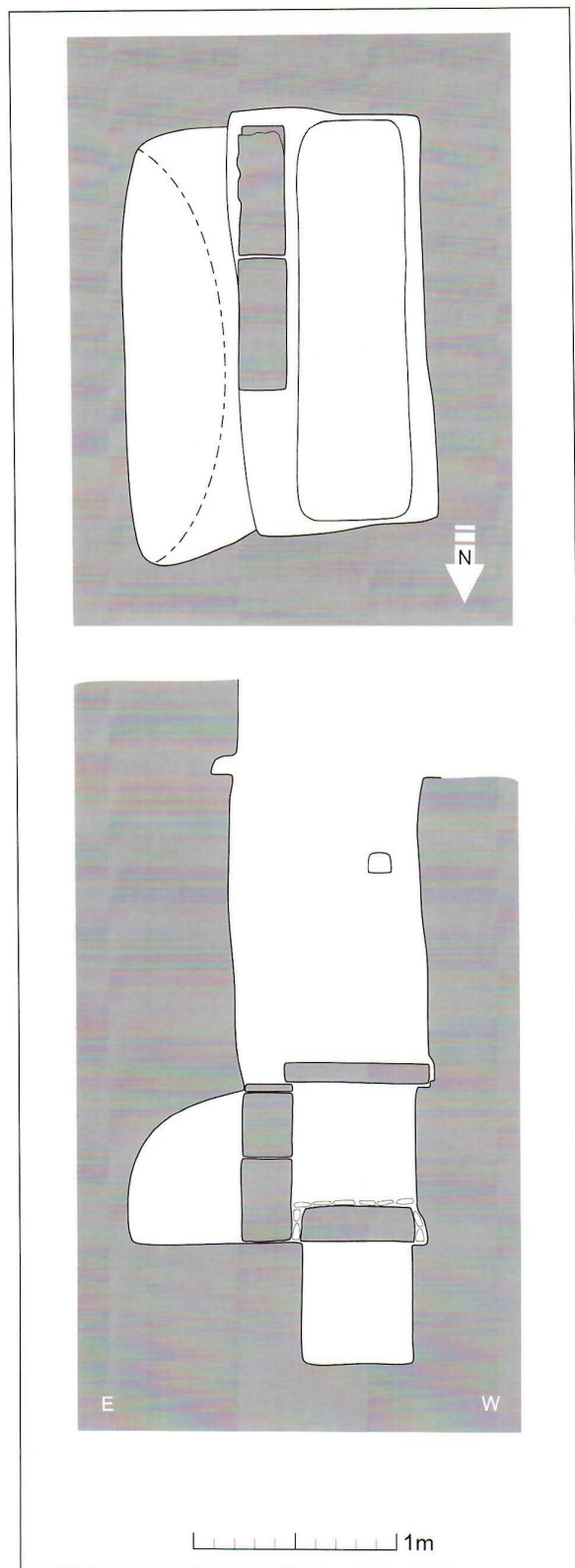
(**Fig. 37**). The floor of the main chamber is fully blocked with sand and animal dung, while the floor of the subsidiary chamber is only partially blocked and the outlines of two pit graves are evident. The height of the ceiling to the blocked floor is 4.12 m. The carving of the main chamber is neat with stippled tool-work. Overall, the burial structures in this tomb are neatly arranged and symmetrical, as is typical for Hegr tombs (Wadeson 2010a: 61-5).

It was decided to clear the grave (Trench 4) inside the arcosolium, seeing as this was obviously the most important burial of the tomb, being aligned with the tomb entrance and main entrance to the complex, and having the most elaborate burial structure. The first 0.70 – 1.00 m of the fill of this grave was an accumulation of animal dung, sand and rubbish, giving an indication that the burial was disturbed. In the northern end, a looters' hole became evident, filled with a large number of disturbed stones that were once used to seal the grave. However, the southern end of the grave retained the original undisturbed sealing layers, which could be studied in section.

The first original layer *in situ* comprised large sandstones embedded in a reddish sandy mortar of about 0.65 m in thickness (Fig. 38). Beneath this were two courses of covering slabs resting on a rock-cut shoulder on the west wall of the grave and a built wall on the east side, consisting of two courses of three carefully worked stone blocks (Fig. 39). The covering slabs turned out to be reused cornice blocks with very finely carved mouldings, though it is unclear



38. Section of original sealing layers in arcosolium grave of Tomb 781 – facing south (L. Wadeson).



39. Plan and section of arcosolium grave in Tomb 781 (Q. Tweissi and M. Haufe).

from where they originated (**Fig. 40**). They were sealed with a whitish, chalky mortar with inclusions of small pebbles (similar to that found in the arcosolium grave of Tomb 779). Beneath the slabs was an empty space of *ca.* 0.15 m, then a fine, silty sand with inclusions of small animal bones and potsherds (including two Nabataean painted sherds of Phase 3b – AD 75-100). Some human bones were recovered, but the burial was clearly disturbed by the looters from the northern end.

Beneath this burial, at a level of *ca.* 2.30 m down from the top of the grave, were two layers of mortar – the first being a yellowish mortar with small inclusions of pottery and pebbles, and the second being the white chalky mortar noted above. These mortars were sealing another layer of covering slabs that consisted of roughly worked stone blocks. The blocks were not quite wide enough to cover the space of the grave, therefore the gaps between them and the wall were filled with small pieces of cut sandstone (**Fig. 39**). This layer rested on a further set of rock-cut shoulders, 2.45 m down from the top of the grave. The shoulders on the western wall were cut back into the rock, as opposed to protruding out from it. The shoulders on the eastern wall supported the built wall, mentioned above. The space below was for another burial, of which considerably more bones were recovered. There was a high concentration of pottery with this burial, with painted sherds ranging from Phases 2b-c – Phase 3b (25 BC – AD 100), some of which were embedded in mortar (**Fig. 41**). There were also several small chunks of greyish mortar containing charcoal, however it is unclear whether these were placed there intentionally or fell from the sealing layers above when the grave was disturbed. On the bedrock, at the bottom of the grave, were the remains of a brown organic material that may indicate a wooden coffin. Samples of this substance were taken for analysis. Wooden coffins have been



40. Reused cornice block (BL1) from sealing layer in arcosolium grave of Tomb 781 (L. Wadeson).



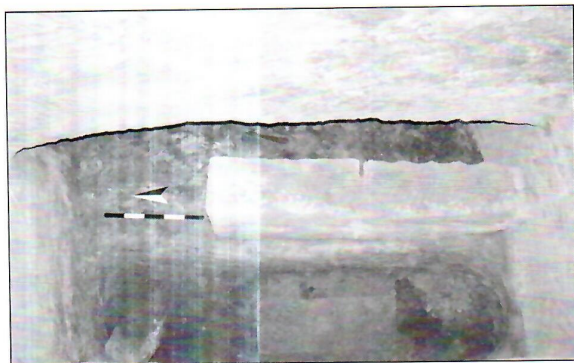
41. Painted pottery from arcosolium grave (LO 74) in Tomb 781 (L. Wadeson).

noted in other tombs at Petra (for e.g. see Bikai and Perry 2001: 60; Farajat and Nawafleh 2005: 375), therefore it would not be surprising to find them in use in Tomb 781.

Besides the new information gained on the sealing system of Nabataean burials, and the bone and four different types of mortar taken for analysis (**Fig. 42**), this grave reveals an entirely new form not previously recorded in Petra: the built wall in fact originally sealed a vaulted niche, carved to the side of the grave shaft in the eastern wall (**Figs. 39, 43-44**). This side-niche contained a third burial, with part of the legs and feet intact in the northern end. The orientation of the head to the south was surprising as the looters had entered the grave from the north end. The looters had reached this burial by removing the northernmost blocks of the wall. It seemingly had been robbed twice – both in the Medieval period and in modern times according to the recovered material. The remains of this burial were consistent with those found in the main shaft of the grave, and again possible wooden



42. Four different types of mortar from sealing layers in arcosolium grave of Tomb 781 (L. Wadeson).



43. Arcosolium grave in Tomb 781 – remains of built wall blocking side niche (L. Wadeson).



44. Side niche for burial in arcosolium grave, Tomb 781 (NB: built wall on right) (L. Wadeson).

coffin traces were observed on the surface of the bedrock. The discovery of an iron nail in the southern end supports the hypothesis of a coffin burial (**Fig. 45**) (see Zayadine 1979: 185, 189 for the discovery of a nail in Shaft Tomb B1 at Petra). The pottery recovered from this burial ranges from Schmid's Phases 2a – 3c (mid first century BC – early second century AD), but the later material may have reached this lower level when the grave was looted.

The use of the hidden side-niche, sealed by the massive wall underground, suggests that an important individual was buried here, possibly the tomb owner or head of the family. Close family members were maybe buried in the other spaces of the grave shaft, but this can only be confirmed when the bones are analysed. Similar side-niche burials in pit graves are found in the Nabataean tombs at Mada'in Salih, such as in the Qasr as-Sane Tomb, a Hegr tomb dated to AD 8 (Jaussen and Savignac 1909: Fig. 178). The form is also reminiscent of the Nabataean



45. Nail from side niche burial in arcosolium grave of Tomb 781 (L. Wadeson).

burials at Khirbat Kazūn (Politis 1998: 612), however these are on a much smaller and simpler scale.

The arcosolium is smaller than that in Tomb 779, measuring 2.96 m wide, 1.69 m long and 2.92 m high (**Fig. 37**). The walls have neat tool-marks suggesting that the arcosolium space was left open, unlike the walls of the grave which are roughly worked. Both the southern and northern walls each have a small niche just below the arch, possibly to hold a lamp, while the eastern wall contains a row of three niches at the level of the opening of the grave. Their function is not clear, but they may have supported wooden beams which were used to close the top of the grave shaft. In future seasons, we plan to continue clearing the graves and loculi in the chamber of Tomb 781 and will hopefully be able to shed light on the chronology of the burials and the identity of the deceased individuals.

Concluding Remarks and Future Work

Tombs 779 and 781 on the west flank of al-Khubtha at Petra must have belonged to prominent members of Nabataean society in the first century AD given their elaborate façades and interiors, prominent positions, and the accompanying structures found outside the tombs. The two most important burial places in the back of both tomb chambers were likely those of the tomb owner(s) given their prominence and the evidence from the Mada'in Salih tomb inscriptions, which indicates that the tomb owners were usually buried at the back of the chamber (Wadeson 2011a). The burials inside these arcosolia graves are roughly contemporary, having taken place towards the end of the first century AD and the

beginning of the second century AD, according to the pottery. However, the tombs themselves could have been carved much earlier. This hopes to be verified by a second season of excavation, in which further burials inside these tombs will be cleared. Although the burials are likely to be disturbed, as was the case with the arcosolia burials, the material recovered is valuable for reconstructing the little known Nabataean funerary customs. For example, from the first season of excavation we can propose that the effort invested by the Nabataeans in sealing their burials so thoroughly speaks against the supposed custom of secondary burial, which has often been attributed to them in the past (Negev 1986: 74-75; Healey 1993: 8, 39; Wright 1998: 160-64; Nehmé 2000: 177; Perry 2002: 265). Analysis of the bones, mortar, burnt deposits and organic material will also shed light on burial practices and bring us closer to understanding how the Nabataeans treated their dead. Furthermore, in Tomb 781 we discovered an entirely new form of rock-cut burial structure consisting of a deep shaft and side niche for burial, sealed by an underground wall.

The excavated areas outside Tombs 779 and 781 revealed that they were both part of 'tomb complexes,' which included large enclosed platforms, porticoes, additional chambers, and possible sources of water. All these structures aided the funerary ritual that took place outside the tomb, including gathering, feasting and honouring the dead. The portico discovered in front of Tomb 779 would have ordered the space in front of the façade and added to the aesthetic effect, even though the platform surface appears to be unfinished. In addition, it would have directed the visitor towards the side chamber in the north wall, perhaps where the first funerary rites took place. The discovery of an external doorway leading into the complex of Tomb 781 suggests that access into the funerary area was controlled. The alignment of this external entrance with the tomb entrance, burial chambers and arcosolia burial is reminiscent of Alexandrian funerary architecture, particularly the Ptolemaic-period Mafrousa Tomb (McKenzie 1990: 65-66, Pl. 186), and highlights the possible use of the external platform for the focus of the funerary activities in honour of the deceased within the tomb. In the second season, we plan to continue excavat-

ing outside Tomb 781, particularly beneath the southern wall, in order to determine what structures were associated with it. The last quarter of the courtyard of Tomb 779 will also be cleared.

In terms of the chronology of the façades, by studying the architectural relationship between Tombs 779 and 781, and unfinished Tomb 780 it could be concluded that the massive Double Pylon Tomb 780 was the first to be carved. The rock removed for the carving of the latter tomb allowed access and visibility to Tomb 779, proof that the smaller Double Pylon tomb was carved later (**Fig. 4**). This accords with the patterns revealed in the author's study of the chronology of the façades, i.e. the largest façades were the earliest in Petra, and the smaller versions (even of the same type) were carved later (Wadeson 2010a). It is hoped that through further seasons of excavation, the IKT project will be able to elucidate the reason that Tomb 780 was left unfinished, and its relationship to the neighbouring Tombs 779 and 781.

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