

E. Continuing the excavation of the Lower Town: the Dinka Lower Town Operation 3 (DLT3)

This chapter presents the results of the excavations in the Dinka Lower Town Operation 3, dubbed DLT3, which were undertaken from September 1 to September 30, 2018.

E1. Selecting the excavation area DLT3

Karen Radner

A magnetometer survey conducted in autumn 2016 and annually continued in subsequent years revealed a large lower town that extends between Gird-i Bazar and Qalat-i Dinka, with buildings and roads clearly discernible (**Fig. E1**). The excavation area DLT3 was opened in the southwestern corner of the area covered by the 2016 magnetometer survey. It is situated about 400 m west of Gird-i Bazar and 150 m southwest of the excavation area DLT2.

This particular spot was chosen because of the results yielded by the geoarchaeological trench GA42, which had been excavated there with a digger in August 2015, alongside two more such trenches (GA40-GA41; for their position see **Fig. E1**)⁴⁵. The locations of these trenches were chosen by Mark Altaweel and Karen Radner at regular intervals between Gird-i Bazar and Qalat-i Dinka with the goal to collect environmental samples throughout the Holocene sequence down to the Pleistocene plateau in order to reconstruct the palaeoenvironment of the Bora Plain.

The 2015 geoarchaeological trench GA42 measured 3 × 8 m and was excavated to a depth of about 5 m. At the time of their excavation, the magnetometer survey between Gird-i Bazar and Qalat-i Dinka had not yet been carried out, and the two sites were still thought to be separate, with the position of these trenches therefore assumed to be off-site. While GA40 and GA41 yielded only scanty or no archaeological remains at all, GA42, on the other hand, produced evidence of tumbled walls and a kiln, visible in the sections of this trench⁴⁶. These structures were part of the remains of ancient buildings, which GA42 cut; they later showed up in the magnetogram produced by the

2016 geophysical survey, which was undertaken because of the discoveries in GA42.

In 2018, the research design for the excavation area DLT3 operation focused on re-excavating and extending the geoarchaeological trench GA42. The main reason for the decision to investigate this area more closely was provided by the results of the ¹⁴C analysis of a charcoal sample collected in 2015 from the southeastern section of GA42, around 1 m under the surface and close to a tumbled wall. The probable date range of 830-789 calBC (95.4 % probability)⁴⁷ of this sample represented the first ¹⁴C date from the Lower Town⁴⁸ to unequivocally fall into the time span when the Peshdar Plain (in which the Bora Plain and the Dinka Settlement Complex are situated) was part of the provincial system of the Neo-Assyrian Empire⁴⁹. With this date range in mind, we planned the 2018 investigations in DLT3 with the primary objective of obtaining data on the occupation of the Lower Town during the Neo-Assyrian period.

E2. The grid, the registration system and the new 3D documentation

Andrea Squitieri & Jens Rohde

The DLT3 operation was designed as an 8 × 10 m trench that included the area of the geoarchaeological trench GA42, aligned (unlike GA42) to the usual north-oriented and UTM-based grid used by the Peshdar Plain Project (**Fig. E2**). Following the same method as in the previous excavation campaigns, the squares of this grid were named using the final three digits of the eastern coordinates and the final three of the northern coordinates of their southwestern corner. DLT3 extends across the squares 225922 and 226922, with the north-south border between the two squares passing through GA42.

45 Altaweel/Marsh 2016.

46 Altaweel/Marsh 2016, 27-28.

47 Altaweel/Marsh 2016, Fig. B2.7.

48 Radner 2018, 30-33; Kreppner/Radner 2018, 56-58.

49 Radner 2016, 17-22.

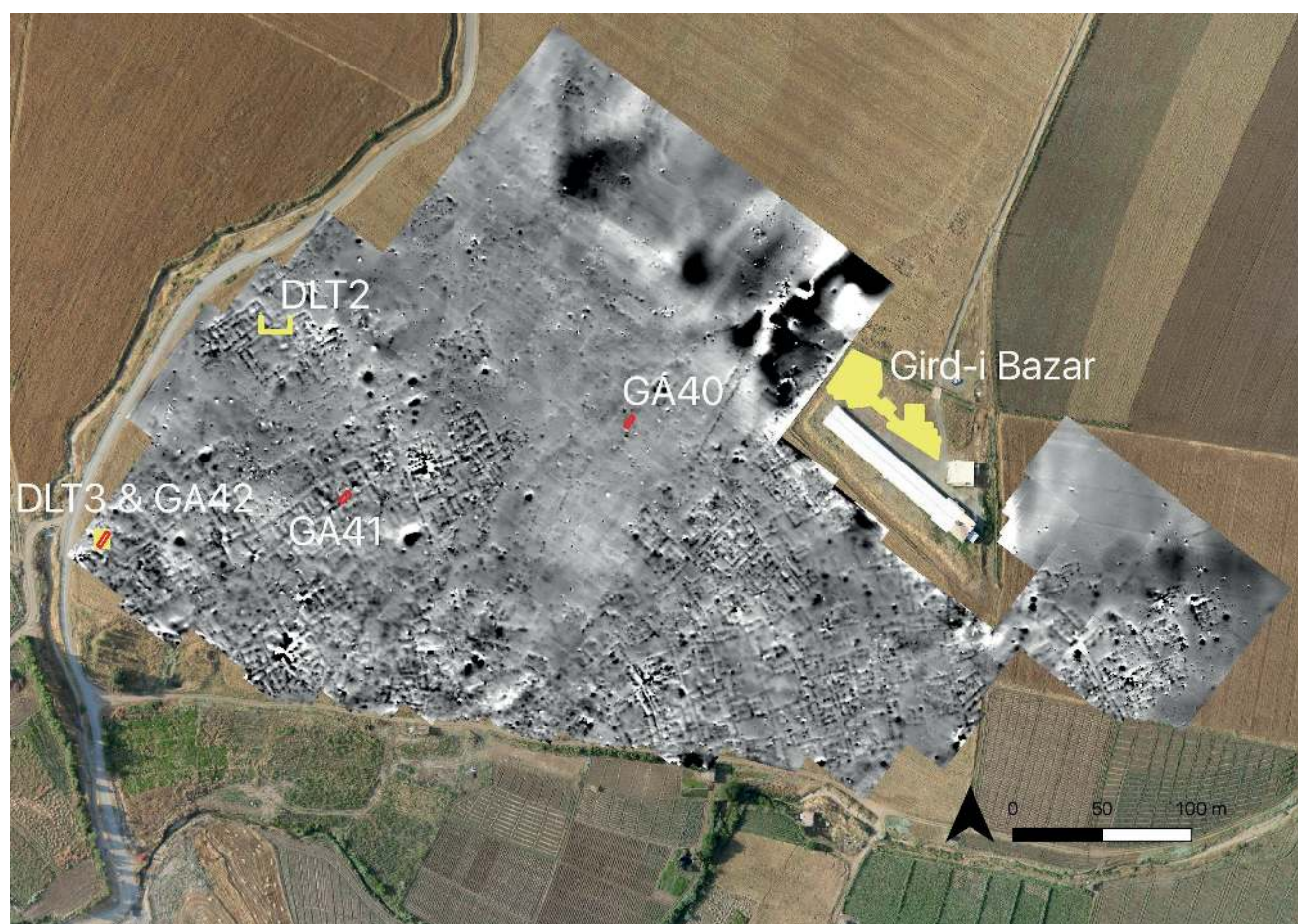


Fig. E1: The excavated areas (in yellow) overlaying the 2016 magnetogram showing architectural features in the lower town between Gird-i Bazar and Qalat-i Dinka. In red, the three geoarchaeological trenches (GA40, GA41 and GA42) opened in 2015. GA42 is positioned within the 2018 excavation area DLT3. Prepared by Andrea Squitieri.

The registration system follows the same protocol as in previous campaigns⁵⁰, which is here summarised for the reader's convenience. The stratigraphic units (be they deposits or installations) are named loci (pl. for locus). The loci of DLT3 are labelled with a progressive number following either 225922 or 226922, depending on which square they are in (e.g., Locus:225922:002 is the topsoil, Locus 2, in the square 225922). When more loci extend across the two squares, they are grouped into a locus group, abbreviated LGR, and identified by a progressive number (e.g., LGR:0346 is a wall extending across the two squares, made up of Locus:225922:039 and Locus:226922:033). Moreover, when additional loci are recognised as being part of the same stratigraphic unit despite having been separately excavated, they are grouped into the same locus group, even if they were in the same square. **Table E1** shows the correspondence between locus groups and the

relative loci which are part of them. The materials collected from within each locus (e.g., pottery and animal bones) are grouped into collections which are identified by their locus number followed by an additional progressive number. In this case the label is preceded by PPP (for "Peshdar Plain Project"). Therefore, the pottery collection from Locus 2 in square 225922 is labelled PPP 225922:002:001. This registration system is also used for samples and small finds.

During the 2018 excavations at DLT3, we successfully trialled a new documentation method designed to create a three-dimensional presentation of our core stratigraphic units, the loci. In the course of the excavation, the top and bottom outlines of any deposit, such as e.g. a fill, are measured and recorded using a Leica GS18 global navigation satellite system (GNSS) with a Leica CS20 controller, and then exported into Autodesk AutoCAD 2018 in DXF file format. In this computer-aided design (CAD) software toolkit, the deposit's two outlines are connected to each other so that they form a three-dimensional closed body.

⁵⁰ Kreppner/Squitieri 2017b, 57-60.

The 3D closed bodies representing individual deposits are then visualised together with the 3D model of the architecture (i.e., walls and installations) by using the Agisoft PhotoScan photogrammetry software⁵¹. This provides us with an efficient way to control and understand the relative and absolute positions of the deposits in relation to each other and to the architecture (Fig. E3).

The 3D visualisation of deposits makes it possible to assess the entire stratigraphic sequence from different perspectives, not only in the form of 2D vertical sections or 2D horizontal views, as is the classic way to present this data in publications (e.g., Figs. E10, E19). With 3D visualisation, the deposits can be grouped and displayed based on their deposition location, on the time of deposition or on the cause of deposition. In this way, the excavation process can be tracked back from the end to the beginning. At the same time and even more importantly, the formation processes of these deposits, from the oldest to the youngest, can be displayed.

Moreover, we can create virtual sections that cut through the deposits wherever we want. This allows for 3D distribution analyses of objects through the display of the exact positions of the objects collected from within a deposit and therefore goes far beyond the possibilities of the more common 2D distribution analysis.

The 3D documentation also makes it possible to easily calculate the density of finds, e.g. pottery sherds, in relation to the volumes of the deposits. Therefore, we are in a position to compare deposits on the basis of e.g. the number or weight of sherds per cubic metre (“pottery density”), which in turn provides further data in order to reconstruct the processes behind the formation of the deposits. Analyses of the material from DLT3 and future operations in the DSC will be able to fully draw on the possibilities opened up by the 3D documentation method.

E3. The relative chronology and the stratigraphic table

F. Janoscha Kreppner

The relative stratigraphy of DLT3 is offered in Table E2. It follows the same principles as the stratigraphic tables published in the previous volumes of the Peshdar Plain

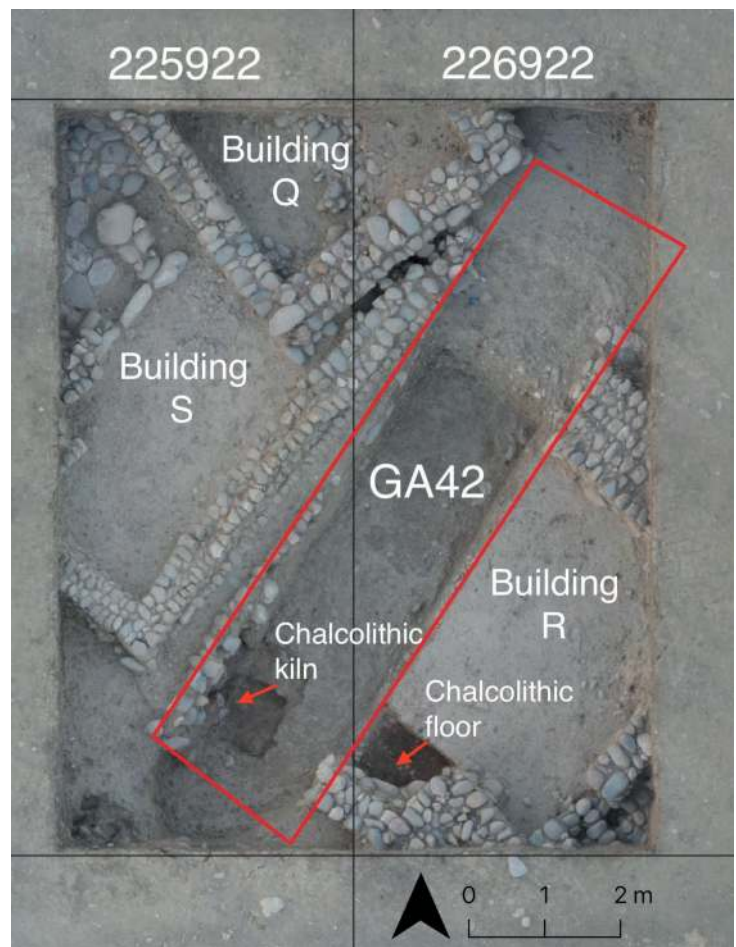


Fig. E2: Orthophoto of DLT3, indicating in red the original 2015 cut of GA42, partially re-excavated during the 2018 campaign. Prepared by Andrea Squitieri.

Project excavations. The information needed to read this table is summarised below:

- The rows of the table follow the timeline spanning from the oldest (bottom) to the most recent (top) periods.
- The columns of the table reflect individual spaces, such as rooms, courtyards and outdoor areas. Consequently, roughly contemporary depositional processes and occupation periods that span across various areas of the site can be read horizontally across the table.
- Each cell contains a locus number (e.g., Locus:225922:035), a Locus Group number (e.g., LGR:0336) followed by a brief description; or a grave number (e.g., G100).
- The background colours of the cells indicate their interpretation and duration. Hence, different shades of pink are used for topsoil, modern occupation, graves, and virgin soil; brown indicates post-occupation periods (non-use/erosion processes), and yellow is used for occupation periods.
- The table follows the principle of the occupation phases. Occupation phases are defined by floors. The occu-

⁵¹ Kreppner/Squitieri 2017b, 57-59.

Locus Group (LGR)	Square	Locus	Locus Group (LGR)	Square	Locus	Locus Group (LGR)	Square	Locus	Locus Group (LGR)	Square	Locus
331	225922	1	337	226922	8	346	225922	39	355	226922	37
331	226922	1	337	225922	17	347	226922	36	355	225922	64
331	226922	4	338	225922	8	347	225922	40	356	225922	44
331	225922	9	338	226922	12	348	225922	42	356	225922	58
332	226922	2	338	226922	13	348	225922	45	356	225922	62
332	225922	2	339	226922	19	348	225922	47	357	225922	60
332	225922	4	339	226922	25	349	225922	30	357	226922	66
332	225922	5	340	225922	27	349	226922	43	358	225922	38
332	226922	5	340	226922	27	350	226922	45	358	225922	48
332	225922	10	341	225922	29	350	226922	46	358	225922	54
333	226922	3	341	226922	28	351	226922	50	359	225922	59
333	225922	7	341	226922	38	351	226922	51	359	225922	61
333	226922	6	342	225922	31	351	226922	52	360	225922	35
333	225922	14	342	226922	29	352	226922	54	360	225922	36
333	225922	43	343	225922	34	352	226922	58	361	225922	28
334	225922	6	343	226922	30	353	226922	11	361	225922	55
334	226922	7	344	225922	33	353	226922	26	362	225922	66
335	225922	3	344	226922	32	353	226922	39	362	226922	65
335	226922	10	345	225922	23	354	226922	61			
336	226922	14	345	226922	31	354	225922	67			
336	225922	16	346	226922	33	355	226922	21			

Table E1: Correspondence list between locus groups and loci of DLT3. Prepared by Andrea Squitieri.



Fig. E3: Isometric view of deposits inside and below Room 64 of Building R. The colours correspond to the occupation period: red for floor, grey for end of occupation, and yellow-brown for post-occupation period. Prepared by Jens Rohde.

DLT3 STRATIGRAPHY		Building S	
	Outdoor Area (?) 15	Alley 88	Room (?) 66
		Outdoor Area / Courtyard (?) 67	
PRESENT SITE SURFACE			
TOPSOIL	LGR-0331 (Locus:225922.001, Locus:225922.009, Locus:226922.004) LGR-0332 (Locus:225922.002, Locus:225922.004, Locus:225922.005, Locus:225922.010, Locus:226922.002, Locus:226922.005)		
MODERN OCCUPATION	LGR-0336: cut of trench GA42 (Locus:225922.016, Locus:226922.014), LGR-0333 moist friable, loamy, poorly sorted soil (backfill GA 42 trench) few gravel, cobbles and pebbles and some chunks of charcoal (Locus:225922.007, Locus:225922.014, Locus:225922.043, Locus:226922.006)		
SPORADIC OCCUPATION	Pit (Locus:225922.020 fill, Locus:225922.021 cut), Locus:225922.066 pit cut Locus:225922.013 remains of wall		
POST MAIN OCCUPATION 2 PERIOD	LGR-0338 dark brown moist loose, loamy, moderately sorted soil with a few pebbles and some sherds (Locus:225922.008, Locus:226922.012, Locus:226922.013) LGR-0340 dark brown moist friable, silty soil moderately sorted, with some pottery, some burnt clay, ashes (Locus:225922.035, Locus:225922.036) LGR-0341 dark greyish brown moist firm, clayey soil moderately sorted with some few pottery, some pebbles (Locus:225922.027, Locus:226922.027) LGR-0342 dark brown moist friable, moderately sorted silty soil, ashes and few charcoal, pottery and burnt material (Locus:225922.031, Locus:226922.029) LGR-0343 dark brown moist friable, moderately sorted, with several pebbles, common pastiches (Locus:225922.003, Locus:226922.010) Locus:225922.015 dark brown moist friable silty clay, moderately sorted with some pebbles, some pottery, and red patches Locus:225922.016 dark brown moist friable, silty soil moderately sorted with some pottery, some burnt clay, ashes Locus:225922.037 wall collapse (LGR-0341 silty soil, some pebbles and some sherds (Locus:225922.029, Locus:226922.028, Locus:226922.038)		
END MAIN OCCUPATION PERIOD 2	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes LGR-0350 brown moist friable silty soil moderately sorted with pebbles, pottery and white inclusions (Locus:225922.038, Locus:225922.034)		
MAIN OCCUPATION PERIOD 2	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
CONSTRUCTION FOR MAIN OCCUPATION PERIOD 2	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
POST MAIN OCCUPATION 1 PERIOD	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
END MAIN OCCUPATION PERIOD 1	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
MAIN OCCUPATION PERIOD 1	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
CONSTRUCTION FOR MAIN OCCUPATION PERIOD 1	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
FIRST CONSTRUCTION PHASE FOR MAIN OCCUPATION PERIOD	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
POST OLDER OCCUPATION PERIOD	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
END OLDER OCCUPATION PERIOD	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
OLDER OCCUPATION PERIOD	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
CONSTRUCTION FOR OLDER OCCUPATION PERIOD	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		
VIRGIN	Locus:225922.046 brown moist friable, clayey soil, moderately sorted, some pebbles, flat medium-sized stones, pottery, some ashes Locus:225922.051 stone pavement, Locus:225922.052 threshold, Locus:225922.044 door socket, 225922.053 wall / pilaster / pillar base?		

Table E2: DLT3 stratigraphy 2018. Prepared by F. Janoscha Kreppner.

Building Q	Building R	Building S	Building T	Building U	Building V	Building W	Building X	Building Y	Building Z	Building AA	Building AB	Building AC	Building AD	Building AE	Building AF	Building AG
Room 62	Outdoor Area (T) 53	Room (T) 64	Outdoor Area / Courtyard (T) 59													
PRESENT SITE SURFACE																
TOPSOIL																
MODERN OCCUPATION																
SPORADIC OCCUPATION																
POST MAIN OCCUPATION PERIOD																
END MAIN OCCUPATION PERIOD 2																
MAIN OCCUPATION PERIOD 2																
CONSTRUCTION FOR MAIN OCCUPATION PERIOD 2																
POST MAIN OCCUPATION 1 PERIOD																
END MAIN OCCUPATION PERIOD 1																
MAIN OCCUPATION PERIOD 1																
CONSTRUCTION FOR MAIN OCCUPATION PERIOD 1																
FIRST CONSTRUCTION PHASE FOR MAIN OCCUPATION PERIOD																
POST OLDER OCCUPATION PERIOD																
END OLDER OCCUPATION PERIOD																
OLDER OCCUPATION PERIOD																
CONSTRUCTION FOR OLDER OCCUPATION PERIOD																
VIRGIN																

Table E2 (continued): DLT3 stratigraphy 2018. Prepared by F. Janoscha Kreppner.

pation phases can be divided into four sub-phases, to which stratigraphic units of the archaeological record such as earth deposits, walls, or installations can be assigned: firstly, the construction phase preceding the use, including the construction of the walls, floors, and any installations. Secondly, deposits and installations from the time when the floor was in use. Thirdly, the end of occupation, including deposits that indicate the destruction or abandonment of the floor, thus covering finds collected directly from the surface of the floor. Fourthly, the Post-Occupation Period (cell colour: brown) follows each occupation period, representing a period of non-occupation during which erosion phenomena are the main causes for the formation of any archaeological deposits.

- These four phases may repeat cyclically when new floors were constructed, which is why yellow and brown rows alternate in the table. However, not all of these sub-phases are necessarily represented in the archaeological record.
- If a new floor overlying an earlier one is detected, then a new occupation period is defined. It is noteworthy that the term “floor” refers to the purpose-built surface or the trodden surface created through use, which is assigned a specific locus number. On the other hand, deposits found directly on the floor are given their own locus numbers. This allows us to isolate material found on a floor and, at the same time, to gain a better understanding of the formation processes of the deposits associated with the use of the floor.

Reading the table from the bottom up, it is possible to identify the following phases at DLT3:

- The virgin soil.
- A so-called “Older Occupation Phase” so far only represented by a floor and a kiln below and therefore older than the Iron Age structures.
- The Main Occupation Period, indicating when the buildings were in use. The Main Occupation Period 1 represents the period when the buildings were founded and when the oldest floors were laid down. Over time, as the buildings in DLT3 were inhabited, structural changes were made during the main period of use, including a new building (e.g., Building Q) or new floors (e.g., Outdoor Area 69). However, since in some outdoor areas and rooms only a single floor was used from throughout the entire occupation period, we deal with one Main Occupation Period, within which changes are differentiated by the sub-phases Main Occupation Period 1 and 2. In terms of absolute chronology, the ¹⁴C date from GA42 as well as the material culture show that the Main Occupation Pe-

riods 1 and 2 in DLT3 belong to the Iron Age chronological horizon.

- After a chronological hiatus, some pits, a wall, an installation and possibly a grave (G100) are evidence for the so-called Sporadic Occupation Phase in this area, possibly dating to the Sasanian era.
- The geoarchaeological trench GA42, excavated in 2015, and its refill are assigned to the Modern Occupation Period.
- The topsoil represents the ploughing zone formed in more recent years.
- The most recent site surface covering the topsoil.

In the following sections, we present the results of the excavations in DLT3 in stratigraphic order, from the oldest Late Chalcolithic phases through the youngest phases up to the topsoil, in parallel to the stratigraphic table (**Table E2**).

E4. The Late Chalcolithic occupation of DLT3

E4.1 The Late Chalcolithic floor under Building R

Jens Rohde

A portion of a Late Chalcolithic floor was intercepted in a sounding opened below the Iron Age floor of Building R Room 64 (**Figs. E2, E4-5**), in the southwestern corner of the room. That there was a floor older than the Iron Age occupation was clear from the observation of a natural accumulation of pebbles in the eastern section of GA42 on which some pottery sherds dated to the Late Chalcolithic period (c. 4800-3100 BC⁵²) were noted (**Fig. E6**).

This Late Chalcolithic floor (Locus:226922:055) showed as a dark brown trodden surface with some pebbles on it (**Fig. E7**). This floor represents the oldest feature excavated in DLT3 (**Table E2**). The floor slopes slightly towards the southwest. Several Late Chalcolithic-period pottery sherds were found lying horizontally, embedded in the dark brown soil (Locus:226922:056) that also contained traces of burning and some flints.

This floor layer was covered by a moist, loose, brown silty-clayey soil (Locus:226922:057), with sherds, flints and a few obsidian remains in it. This was part of an accumulation that formed after the occupation period of the floor. This accumulation layer was in turn sealed by the Iron Age floor (Locus:226922:042) of Room 64, which belongs to Main Occupation Period 1.

⁵² Stein/Alizadeh 2014, Table 1.

It is possible that the Late Chalcolithic floor (Locus: 226922:055) is directly connected to the kiln (Locus: 225922:056; §E5) that was found in the southwestern part of DLT3, although no physical relationship could be proven because of the deeper 2015 geoarchaeological trench, which cuts through the area. The floor in the northeastern section of DLT3 (Fig. E6) seems to cut the naturally accumulated layer of pebbles, and this could indicate a relationship between the floor and the kiln because the bottom part of the kiln also cuts a layer of pebble, as observed in the southwestern section of DLT3, at the other side of GA42 (Fig. E8).

E4.2 The Late Chalcolithic kiln

Alessio Palmisano

The Late Chalcolithic kiln (Locus:225922:056) is located in the southwestern corner of DLT3 (Figs. E2, E5, E8). In 2015, remains of this kiln were visible in the western section of GA42 as a red burnt area⁵³. The excavations conducted in autumn 2018 confirmed that this structure was indeed a kiln, and approximately half of it was excavated.

The upper part of the kiln was destroyed by the Iron Age wall LGR:0346 (Figs. E4, E8). The kiln lining is visible on both sides of the structure and made of burnt clay, 3-4 cm thick (Fig. E9). The kiln's fill (Locus:225922:049) is composed of a soil characterised by discolorations ranging from black to red, the result of contact with fire. The fill also yielded two types of fragmentary architectural elements: one of plano-convex shape, light reddish on the outside and black on the inside; and the other of cylindrical, slightly curved shape, red in colour, showing wide grooves on the surface in a kind of „tortile“ pattern. A few bones, some of which look burnt, and a small number of pottery sherds dated to the Late Chalcolithic period were also collected from the fill, which became richer in ash towards the bottom. From the section, it is possible to see that the bottom part of the kiln cuts a layer of pebbles which likely formed naturally and is paralleled by the pebble layer described above (§E4.1) that was excavated in the northeastern part of DLT3, on the opposite side of the geoarchaeological trench GA42 (Fig. E9).

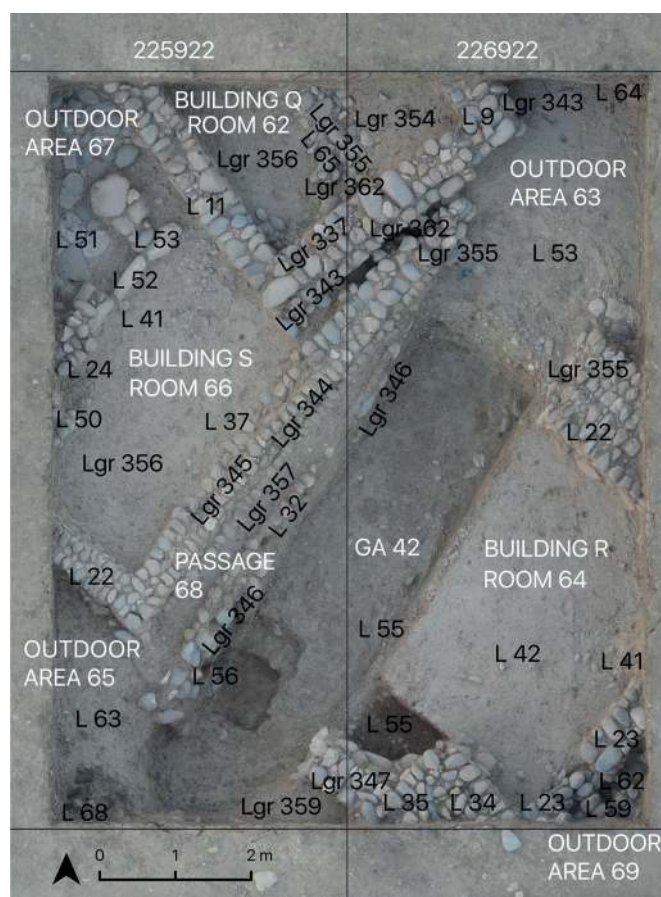


Fig. E4: Orthophoto of the excavation area DLT3. Prepared by Andrea Squitieri.

While removing the kiln fill, a vertical cylindrical structure was found still in situ in the centre of the kiln, made of brownish-greenish clay, 3-4 cm thick, with a diameter of 30 cm (Fig. E9). This structure continues westwards into the section underneath the Iron Age wall, and down towards the bottom of the kiln. It is interpreted as the central column that supported the kiln floor, a feature typically found on many Late Chalcolithic round kilns⁵⁴.

In April 2019, the excavation of the kiln was continued and completed (cf. §E8).

53 Altaweel/Marsh 2016, Fig. B2.6.

54 E.g. at Tell Abada: Hansen Streily 2000, 77-78, Figs. 13 and 15.

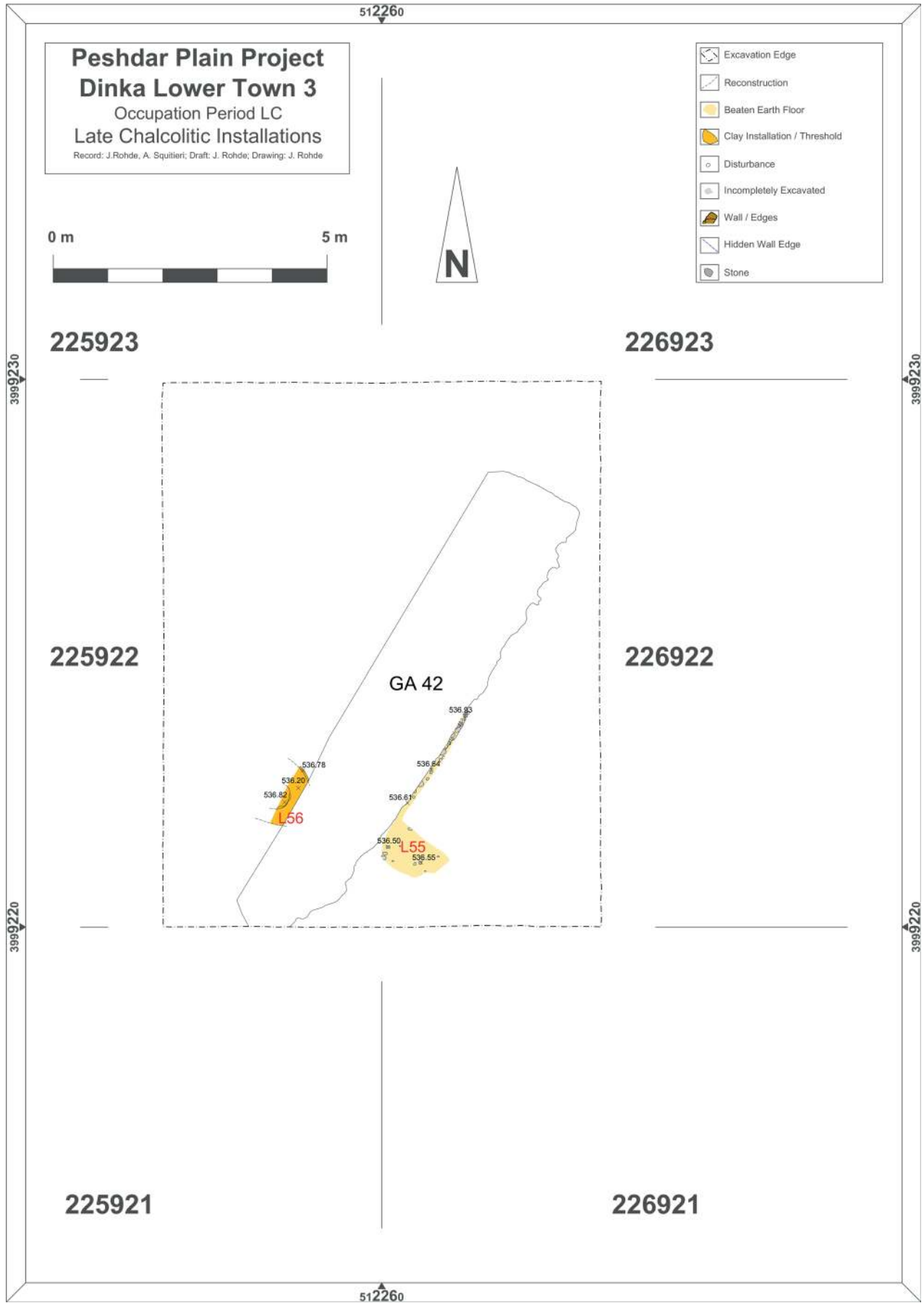


Fig. E5: Plan of the Late Chalcolithic levels found in DLT3. Prepared by Jens Rohde.

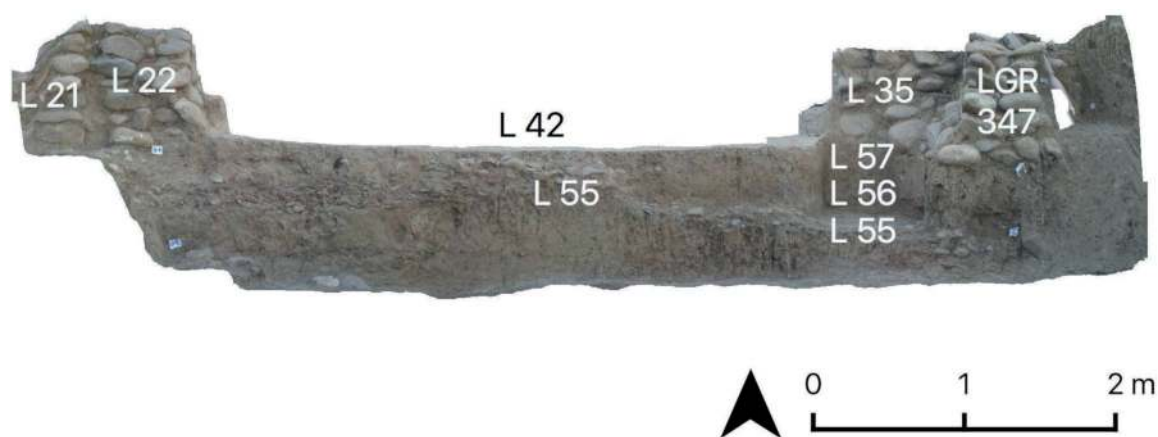


Fig. E6: Orthophoto of the eastern section of GA42, as re-excavated in 2018. Note the Late Chalcolithic floor on the right continuing in the section towards the left, below Locus:225922:042. Prepared by Andrea Squitieri.



Fig. E7: The Late Chalcolithic floor Locus:226922:055, intercepted within a sounding under the Iron Age floor of Room 64. Photo by Jens Rohde.



Fig. E9: The Late Chalcolithic kiln at the end of the 2018 excavations. Note the remains of the Iron Age wall LGR:0346 above the kiln structure. Photo by Andrea Squitieri.



Fig. E8: Orthophoto of the western section of GA42, as re-excavated in 2018. Note the Late Chalcolithic kiln feature on the left. Prepared by Andrea Squitieri.



Fig. E10: DLT3's northern section (= section G) and eastern section (= section H). Prepared by Andrea Squitieri and Nikola Wenner, based on field drawings by Jens Rohde and Sophie Pietsch.

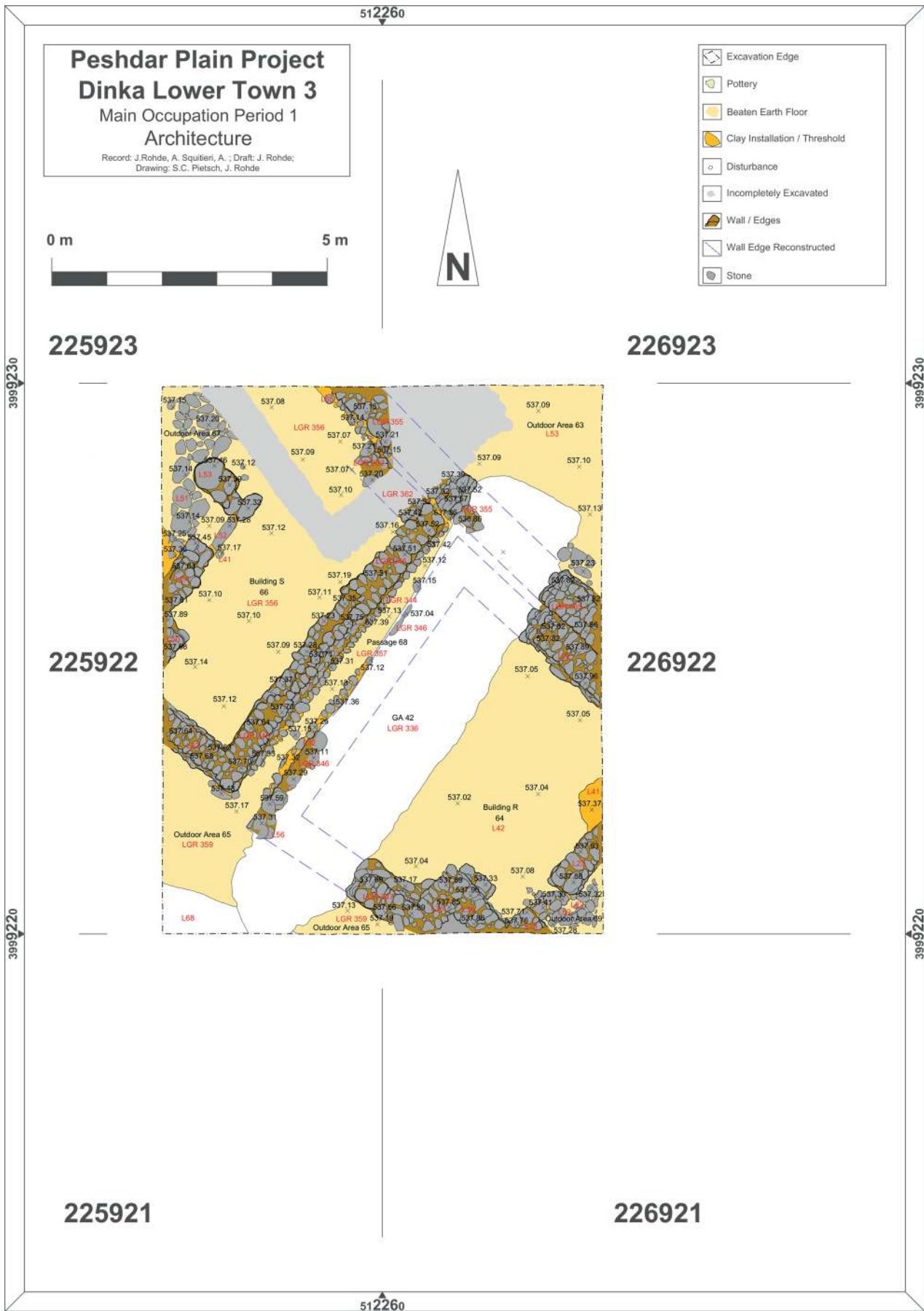


Fig. E11: Plan of the Main Occupation Period 1 levels in DLT3. Prepared by Jens Rohde.

E5. The Iron Age Main Occupation Period of DLT3

Following the stratigraphic sequence of DLT3 shown in **Table E2**, the contributions to this section describe the architectural units and features dating to the Iron Age.

E5.1 Outdoor Area 69

Jens Rohde

Outdoor Area 69 is located at the southeastern corner of DLT3 (**Figs. E4, E10**: section H, **Fig. E11**). Most of it runs under the western and southern baulks. On the northwest, Outdoor Area 69 is limited by wall Locus:226922:023, while its other limits are not known.

Some flattish cobbles formed a paved floor (Locus:226922:059; **Fig. E12**). These cobbles, about 25 × 25 cm in size, are set in rows aligned with the wall Locus:226922:023. Within this floor, there is an area without cobbles, where a moist, friable, silty soil, with some bones and sherds, was found (Locus:226922:062). This material is interpreted as the preparation layer for setting the cobbles. Both this layer and the floor belong to the First Construction Phase of Main Occupation Period 1.



Fig. E12: Flat cobbles forming the oldest floor (Locus:226922:059) of Outdoor Area 69. Photo by Jens Rohde.

Directly above the floor is LGR:0352 (**Fig. E10**: section H), a brown, moist, friable and silty soil, containing a few sherds and some pebbles, that formed after the Main Occupation Period 1. Above this layer, the Construction Phase for the Main Occupation Period 2 was identified based on the presence of a threshold (Locus:226922:049) set into wall Locus:226922:023. A pebble floor (Locus:226922:048, younger than floor Locus:226922:059; **Fig. E10**: section H) was found connected to this threshold. This floor had a substructure (LGR:0351), understood to be a preparation

layer, made of a greyish-brown, moist, loose, silty soil that contained only a few bones.

The younger floor (Locus:226922:048) seems to be connected via the threshold (Locus:226922:049, **Fig. E13**) to the only floor (Locus:226922:042) found in Room 64 of Building R.



Fig. E13: The younger floor (Locus:226922:048) and the threshold (Locus:226922:049) of Outdoor Area 69. Photo by Jens Rohde.

A post-occupation layer made of moist, friable, clayey and moderately sorted soil with some pebbles and pottery (LGR:0350; **Fig. E10**: section H) covers the floor Locus:226922:048 and the threshold Locus:226922:049. It formed as a result of erosion processes after the Main Occupation Period 2. This was then covered by a brown, moist soil, containing some pottery and bones (LGR:0338: Locus:225922:008, Locus:226922:012 and Locus:226922:013), which covers the wall Locus:226922:023 and the walls of Building R (**§E5.2**). Above it lay the topsoil LGR:0332.

E5.2 Building R and Room 64

Jens Rohde

Building R is located in the eastern part of the excavated area of DLT3, to the east of the geoarchaeological trench GA42 (**Figs. E4, E11, E14**). Its complete layout is not known, because it has only been partially excavated and because it is partially cut by GA42, which obliterated the northwestern portion of this building. Of Building R, only Room 64 is hitherto known.

The walls of Building R are Locus:226922:022 on the northeast, Locus:226922:023 on the southeast, the walls Locus:226922:034, Locus:226922:035 and LGR:0347 (Locus:226922:036, Locus:225922:040) in a zigzag shape on the southwest, and LGR:0346 (Locus:226922:033, Locus:225922:039) on the northwest. The latter wall is badly pre-



Fig. E14: Room 64 / Building R, view from the northwest. Photo by Jens Rohde, annotated by Andrea Squitieri.

served because it was cut by GA42 and is only partially visible in its northwestern section (**Figs. E8, E11**).

West of the wall Locus:226922:023, Room 64 is located, connected to Outdoor Area 69 through a doorway in wall Locus:226922:023. Outdoor Area 63 is located to the north and separated by wall LGR:0355 (Locus:226922:021 and Locus:226922:037), but not accessible from Room 64 within the excavated area. To the northwest, wall LGR:0346 (Locus:226922:033, Locus:225922:039) separates Room 64 and Building R from Passage 68, northwest of which lies Building S (**Fig. E4**). Thanks to the presence of Passage 68, Buildings S and R can be securely attributed to the same usage phase, namely Main Occupation Period 1. Southwest of Building R is Outdoor Area 65.

The limits of Room 64 coincide with the known limits of Building R (**Figs. E4, E10**: section H, **Figs. E11, E14**). On the northwestern limit, that is wall LGR:0346, only a few remains are preserved, whereas the inner wall's face is not preserved at all. The lowest course of the wall is visible in the section of GA42 and it is set at an elevation of about 536.90 m above sea level, that is a few centimetres below the other known walls of Room 64, including LGR:0347 (536.97 m) and Locus:226922:022 (537 m).

This lowest course of wall LGR:0346 is made of longish cobbles, measuring 30–45 cm in length, oriented according to the wall alignment. On the outer face of this wall, towards Passage 68, a row of longish cobbles is set vertically (Locus:225922:032). The height of the stone base of wall LGR:0346 is unknown, but an original elevation of about

the same height as walls LGR:0347 and Locus:226922:022 is most likely.

Room 64's northern wall Locus:226922:022 was also cut by the geoarchaeological trench GA42, and the corner with wall LGR:0346 is therefore not preserved. Wall Locus:226922:022 consists of two rows of medium-sized cobbles of c. 20 × 20 cm, with smaller ones in between. The cobbles are perpendicular to the wall, except in the lower area where the cobbles follow the wall's alignment. The wall is about 60 cm wide, with a well-constructed façade facing towards Room 64. The stone base of the wall is leaning against wall LGR:0355, but in the lower part there is a gap between the two walls. Six courses of the wall Locus:226922:022 are visible in the northeastern section of GA42 (**Figs. E5, E14**). It is likely that the wall's currently preserved height is its original height, firstly because it is similar to wall LGR:0355, and secondly because the wall's top surface is quite flat.

The northeast corner of Room 64 is underneath the baulk and most likely formed by walls Locus:226922:022 and LGR:0355. The southeastern limit of wall Locus:226922:023 in this room has two stratigraphic phases: an older one belonging to the construction phase of the Main Occupation Period 1, and a younger one with a new upper part of the stone base added during Main Occupation Period 2.

Little is known about the wall's older construction phase, although it is safe to assume that the width of the wall was almost the same as that of the younger phase,

that is approximately 60 cm. At least two courses of this phase are partially visible from Room 64. From the other side of the wall, from the Outdoor Area 69, and below the younger doorway connecting this area with Room 64, the older phase of the wall could not be found, possibly because it lies too close to the baulk or under it.

The wall of the younger construction phase is made of cobbles of two basic sizes (30 × 40 cm and 25 × 20 cm), with smaller ones in between. They are mostly set perpendicularly to the alignment of the wall, except at the corner of the doorway. To the southwest, the younger phase of wall Locus:226922:023 seems to connect with wall Locus:226922:034. Because the upper part of wall Locus:226922:023 is disturbed by a later pit (Locus:226922:016), there is no clear limit recognisable between these two walls. Wall Locus:226922:034 has a younger phase connected to wall Locus:226922:023, which was built on soil. An older phase of this wall could not be identified. Therefore, further investigation of the walls Locus:226922:023 and Locus:226922:034 is needed to better understand their relation and construction phases.

Wall Locus:226922:034 is about 55-60 cm wide, and has two rows and four courses of longish cobbles of a size of about 30 × 20 cm with smaller cobbles set in between the larger ones. The cobbles are oriented at right angles to the alignment of the wall. The construction of the faces of walls Locus:226922:034 and Locus:226922:023 seems quite rough.

Connecting with wall Locus:226922:034, wall Locus:226922:035 is about 70 cm wide with an irregular surface and consists of 5-6 courses of cobbles. The longish cobbles of the wall reach a size of up to 30 × 20 cm, while the rounded cobbles are a little smaller. The stones are placed perpendicularly to the alignment of the wall.

Wall LGR:0347, which connects with wall Locus:226922:035, leads towards the northwest, where it should meet wall LGR:0346 in the southwest but the connection was disturbed by the geoarchaeological trench GA42. The stone base of wall LGR:0347 is six courses high and constructed of two or three rows forming two faces with a rather flat top surface. The cobbles used have irregular shapes and include longish ovoids of 30 × 20 cm or rounder stones of a diameter of approximately 25 cm, with some smaller cobbles in between.

Room 64 has a greyish-brown, beaten mud floor (Locus:226922:042; **Fig. E15**), characterised by a few pebbles, sherds, reddish remains and traces of ashes. The floor abuts the walls, with the exception of walls Locus:226922:023 and Locus:226922:034 where the older phase of these walls was only partially excavated. Embedded in this floor, stones from older structures are partially visible, especially close to wall Locus:226922:023.



Fig. E15: Floor of Room 64. Photo by Jens Rohde.

Above the floor, a dark brown, moist, friable, clayey soil (Locus:226922:040) is present, with some pebbles, pottery, ashes and burnt reddish brick fragments, which marks the end of the Main Occupation Period 2. Some items were collected from this layer, in particular a polisher (PPP 226922:040:050, **SH**, no. 25), a perforated stone (PPP 226922:040:053, **SH**, no. 26) and a pottery stand (PPP 226922:040:052, **SG1**). There was much pottery lying on the floor, including a carinated bowl PPP 226922:040:006 (**SG1**).

An installation (Locus:226922:041) with several red traces of burnt clay was found. It was only partially excavated because it extends underneath the baulk. Due to its incomplete excavation, the shape of the installation is not clear, and its interpretation as an oven or possibly a kiln is therefore preliminary. It is abutted by the floor Locus:226922:042 and represents remains of the usage phase of the floor (**Fig. E10**: section H).

Above the layer Locus:226922:040 that covers the floor Locus:226922:042 lies as the room's fill a brown, moist, friable, clayey soil (LGR:0339: Locus:226922:019 and Locus:226922:025), in which some pebbles, pottery, ashes, and a few bones had accumulated. This fill was formed by erosion processes after the end of the Main Occupation Period 2. Above it is LGR:0338, which covers the walls of the room.

Three pits were found inside LGR:0338. The first pit cut (Locus:226922:017) was almost in the centre of Room 64 and was filled with a very dark, greyish-brown, moist, friable and silty soil with much charcoal, ash and a few pebbles and sherds (Locus:226922:015). To the south, partly within the baulk, the second pit cut (Locus:226922:018) was found. It was entirely filled with a moist, friable, very dark greyish-brown, silty soil with many shells, ashes, charcoal remains and sherds (Locus:226922:016). The third pit cut (Locus:226922:024) was filled with a moist, friable, silty/loamy, dark greyish-brown soil, with some bones and spots of ashes and a few pebbles and sherds

(Locus:226922:020). This third pit cuts precisely the corner of the walls LGR:0347 and Locus:226922:035, so that one can assume that the remains of the walls were still visible at the time the pit was dug. These pits are stratigraphically younger than the Iron Age structures and have been assigned to the Sporadic Occupation Phase (§E6).

E5.3 Outdoor Area 63

Jens Rohde

Outdoor Area 63 extends north of Building R (Figs. E4, E10: section H, Fig. E11). The complete layout of this space is unknown due to the limitations of the excavation and because its southern portion was damaged by the geoarchaeological trench GA42. The only known limit of this space is wall LGR:0355 on the south, whereas the other boundaries should be found under the eastern and the northern baulk. Whether a doorway or any other connection to the south existed is unknown.

The eastern part of wall LGR:0355 has a height of 6-7 courses of stones. The wall's top surface is quite flat although the edges are slightly higher. The wall was erected by placing three medium-sized cobbles of 20 × 20 cm next to each other in order to form a width of about 70 cm wide, with smaller cobbles set in between. The wall was built prior to the construction of wall Locus:226922:022, although the two were used at the same time.

The western part of LGR:0355 is separated from the eastern part by the 2015 geoarchaeological trench GA42. In its western part, the wall is preserved up to 5 courses high and is about 70 cm wide. The cobbles are either flatish and roundish with 20-30 cm in diameter, or they have an ovoid shape of 20-30 × 10-20 cm.

An extension to wall LGR:0355 continues in north-western direction beneath the younger Room 62 (§E13) as Locus:225922:064 (also part of LGR:0355). The physical connection with Locus:225922:064 has been lost because of the construction of the younger room, but both the extension's alignment and characteristics suggest that it was part of LGR:0355.

In the eastern section of Outdoor Area 63, the floor Locus:226922:053 (Fig. E16) abuts wall LGR:0355. This is a beaten mud floor, with pebbles, reddish spots and pottery lying flat on it, which runs underneath the younger walls LGR:0337 and Locus:226922:009 of Room 62. This floor also continues to the east and north underneath the baulk. In the southeastern corner, in front of wall LGR:0355, some flat cobbles are set as part of the floor.

Right above the floor Locus:226922:053, a brown/dark-brown, moist, loose, clayey soil with pebbles, some sherds,



Fig. E16: Floor of Outdoor Area 63. Photo by Jens Rohde.

charcoal and burnt reddish remains was excavated (Locus:226922:047). This layer contained an iron object (PPP 226922:047:023; §H, no. 24) and an assemblage of pottery typical of the Main Occupation Period (§G1), plus some intrusive Late Chalcolithic pottery dispersed from the older layers below (§E4).

During Outdoor Area 67's second phase, the walls belonging to the younger Room 62 LGR:0337 (Locus:225922:017, Locus:226922:008) were built, and this partially destroyed Wall LGR:0355. Based on the construction of Room 62's walls and of the protective installation LGR:0343 (formed by Locus:225922:034 and Locus:226922:030, a series of cobbles set vertically against the wall; discussed below, §E5.4), there is no doubt that there should have been a younger floor in Outdoor Area 63, abutting the bottom of the protective installation LGR:0343, which has not been preserved in the centre of the area. This floor is clearly recognisable in the northern section of the trench (Locus:226922:063; Fig. E10: sections G-H). In this section, it appears as a beaten mud floor which abuts the protective installation LGR:0343 at the lower part of wall Locus:226922:009 and, in our reconstruction, must have also abutted wall LGR:0355. Because this floor has not been preserved in the centre of the area, the fill above this floor, LGR:0353, was excavated down to Locus:226922:047, that is the layer directly above the older floor (Locus:226922:053).

Right in the northeastern corner of the trench, an installation made of baked bricks (Locus:226922:064) was found. It was connected to the younger floor of Outdoor Area 63, but it could not be completely excavated as it runs underneath the baulks.

Above the younger floor Locus:226922:063 was fill LGR:0353 (Locus:226922:011, Locus:226922:026 and Locus:226922:

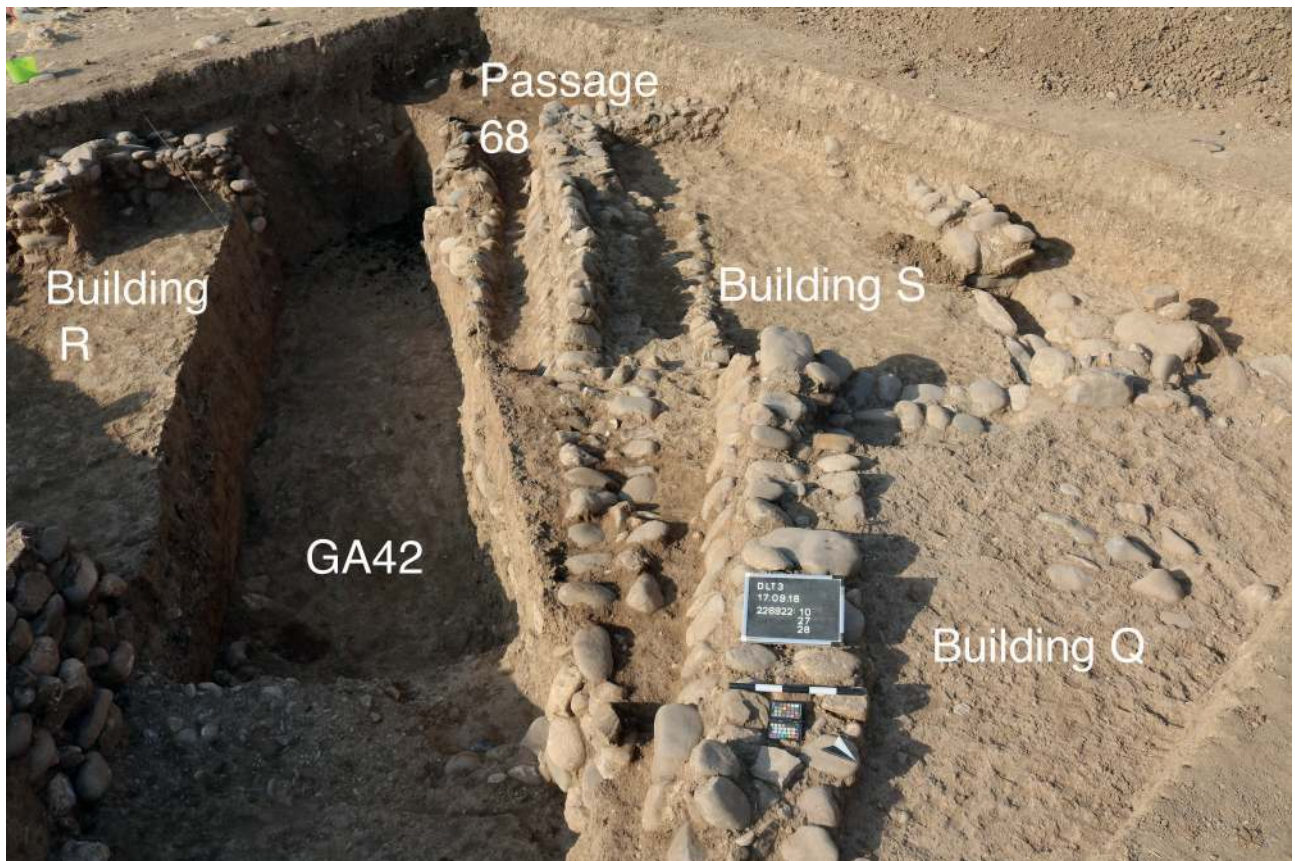


Fig. E17: Passage 68 (in the centre), bordered by Buildings R and S, as seen from the northeast. Building R is cut by the 2015 geoarchaeological trench GA42. Photo by Jens Rohde.

039), made of a brown/dark brown, moist, loose, clayey soil, containing a few pebbles and some sherds. LGR:0353 formed during the Post-Main Occupation Period 2 and is in turn covered by the topsoil (LGR:0332).

E5.4 Passage 68

Jens Rohde & Alessio Palmisano

Passage 68 (Figs. E4, E11, E17) is a narrow passage, c. 20 to 30 cm wide, between Building R on the southeast and Building S on the northwest. It is called a “passage” rather than an “alley” because of its narrowness, which would not allow a person to walk easily through it. It is clearly different from the several alleys set between buildings that have been previously excavated at Gird-i Bazar⁵⁵.

Passage 68 is bordered on the northwest by wall LGR:0345 (Locus:225922:023, Locus:226922:031). Of this wall, three courses of cobbles are preserved. It is also

equipped with a protective installation (LGR:0344, composed of Locus:225922:033 and Locus:226922:032) formed by a row of medium-sized cobbles set vertically against the wall (Fig. E18).

Wall LGR:0345 is about 55-60 cm wide, with its cobbles up to 30 × 20 cm in size. It leans slightly towards the northwest. To the northeast, it joins wall LGR:0362 and forms a corner, which was obliterated by the construction of the younger wall LGR:0337 of Room 62 (§E5.8). This wall LGR:0362 forms a double wall with wall LGR:0355, which also runs underneath Room 62.

To the southeast, Passage 68 is limited by wall LGR:0346 (Locus:225922:039, Locus:226922:033), equipped with a protective installation (Locus:225922:032) that is very similar to the above-described LGR:0344. Some of the stones of this wall visibly jut out of the northwestern section of GA42. To the southwest, the passage gives access to Outdoor Area 65.

Passage 68 has a beaten mud floor (LGR:0357: Locus:225922:060 and Locus:226922:066) (Fig. E18), which abuts the two protective installations LGR:0344 and Locus:225922:032 on both sides of the passage. A dark brown, moist, friable, silty soil, with ashes, a few charcoal

⁵⁵ Radner *et al.* 2018, 53-101.



Fig. E18: Passage 68, with vertically-set cobbles leaning against both sides of the passage. Photo by Alessio Palmisano.

remains and burnt material and some pottery (LGR:0342: Locus:225922:031 and Locus:226922:029) covers the floor and marks the end of the occupation.

Above it, there is a dark brown, moist, friable, clayey-silty soil, with pottery and some pebbles (LGR:0340: Locus:225922:027 and Locus:226922:027), which is interpreted as a Post Main Occupation Period deposit. Above it, the layer LGR:0335 (Locus:225922:003, Locus:226922:010) was excavated, in which a fragment of a fired brick with the remains of a cuneiform inscription was found (PPP 226922:010:004; §I). The soil of LGR:0335, which covers walls LGR:0345 and LGR:0355 completely, is dark brown, moist, loose and silty and contains a few pebbles and some sherds. The topsoil (LGR:0332) covers LGR:0335.

E5.5 Outdoor Area 65

Alessio Palmisano & Jens Rohde

Outdoor Area 65 extends to the south of Room 66 (Fig. E4, E11, E19: sections I-J), in the southwestern corner of the excavated area. It is bordered on the northwest by wall

Locus:225922:022 and to the northwest by wall LGR:0347 (Locus:225922:040 and Locus:226922:036), the latter being only partially preserved because of the excavation of the geoarchaeological trench GA42. To the north, Outdoor Area 65 is connected to Passage 68 although no threshold or socket door marks the entrance.

The oldest deposit excavated in Outdoor Area 65 is Locus:226922:063, a dark yellowish-brown soil containing some small pebbles and some scant traces of ash. It lies below the floor (LGR:0359), which consists of a beaten mud surface extending across both sides of GA42 that represents the southern continuation of Passage 68's Floor LGR:0357. This floor was laid down during Main Occupation Period 1 and used until the end of Main Occupation Period 2.

Since it had not been properly preserved in the plan, the western part of floor LGR:0359 was reconstructed based on the southwestern section of square 225922 (Fig. E19: section J). From this section, it was possible to see that the floor abuts wall Locus:225922:022. Floor LGR:0359 is preserved east of GA42 where it abuts wall LGR:0347 (Fig. E19: section I). Above the floor, a dark, greyish-brown, moist, firm and clayey soil containing some pottery (LGR:0361: Locus:225922:028 and Locus:225922:055) was excavated; this is considered to be a Post Occupation deposit. Because floor LGR:0359 was only reconstructed, but not observed in the western corner of the excavated area, we were only able to excavate a mixed deposit (LGR:0360: Locus:225922:035 and Locus:225922:036) in the middle of the space, which combines material from both above and below this floor, including some material from the fill of the large pit (Cut Locus:225922:068) located in the southern portion of the trench (Fig. E19: sections I-J).

Above the fills of Outdoor Area 65 (LGR:0360 and LGR:0361) are LGR:0338 (located east of pit cut Locus:225922:068) and LGR:0335 (west of that pit cut). Another pit was excavated (cut: Locus:225922:021, fill: Locus:225922:20), located south of wall Locus:225922:022 (Fig. E19: section I). These pits surely post-date the Main Occupation Period features and likely belonged to the Sporadic Occupation Period, as did the other pits found in Room 64 (§E6). Finally, all of these deposits and the pits were covered by the topsoil (LGR:0332).

E5.6 Building S and Room 66

Alessio Palmisano

Building S may be composed only of Room 66 (Figs. E4, E11, E19: section J), which seems to be enclosed on all four sides. However, it is presently not possible to reconstruct

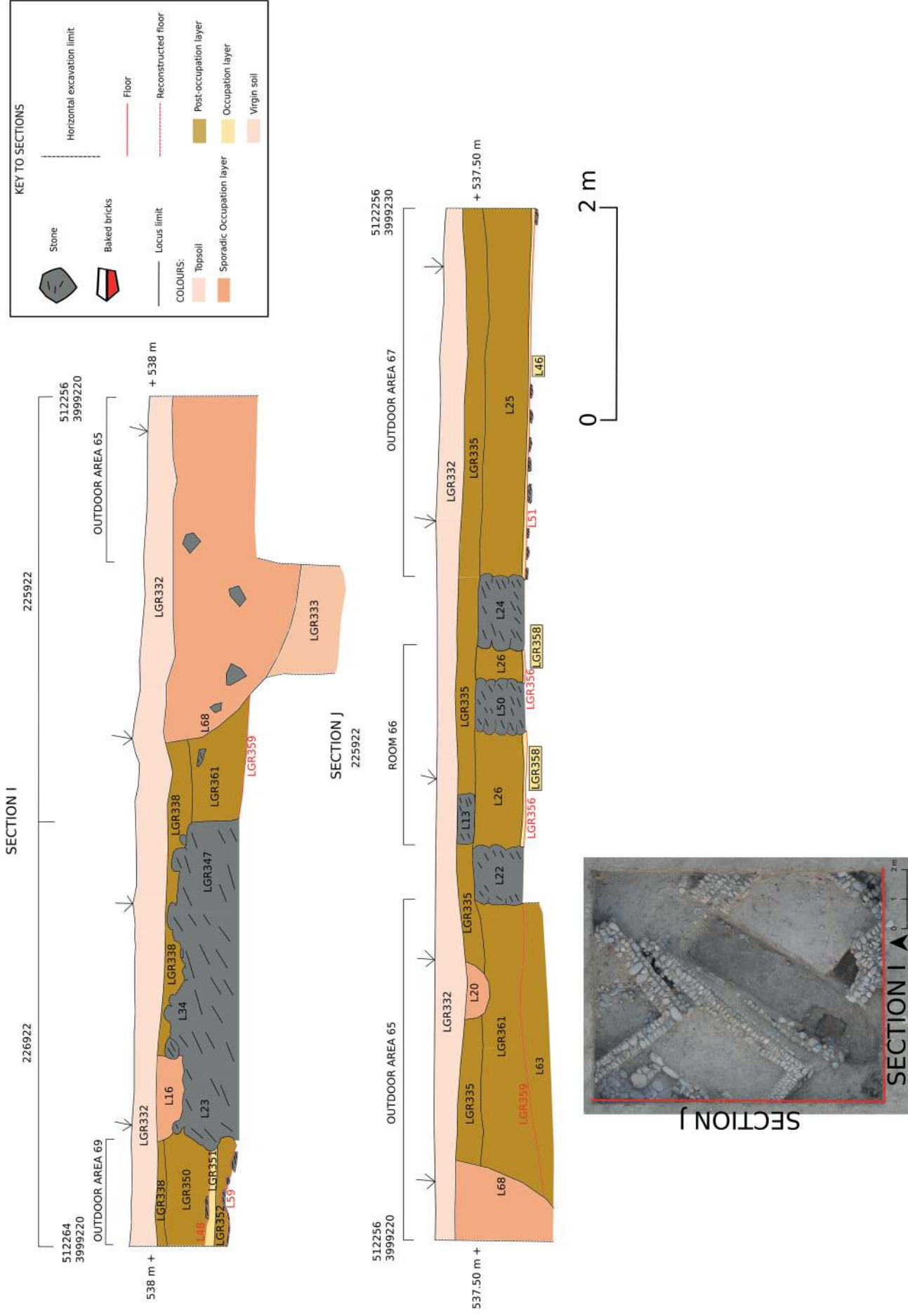


Fig. E19: DLT3's southern section (= section I) and western section (= section J). Prepared by Andrea Squitieri and Nikola Wenner, based on field drawings by Sophie Pietsch and Alessio Palmisano.

the building's layout, firstly because of the limited extension of the excavation area and secondly because of the subsequent construction of Building Q, which was erected on the northern portion of Building S during the Main Occupation Period 2.

Room 66 of Building S is bounded to the south by the wall Locus:225922:022, to the east by the wall LGR:0345, to the west by the walls Locus:225922:024 and Locus:225922:050, and to the north by the wall LGR:0362, running below Building Q, which creates a double wall together with wall LGR:0355. A row of upright stones (Locus:226922:065) was set against wall LGR:0355 to form a kind of protective installation (visible under the floor of the younger Room 62). The northern wall LGR:0362 is connected to the eastern wall (LGR:0345). The walls Locus:225922:022, LGR:0345 and Locus:225922:024 are 55 cm wide and preserved to a height of 4-5 courses and approximately 45 cm high, built with medium-sized cobbles with an average diameter of around 25 cm.

Room 66 was accessible (at least) from the northwestern side, where a stone threshold (Locus:225922:052) and a door socket (Locus:225922:041) are located (**Fig. E20**).



Fig. E20: Room 66 / Building S, with the floor LGR:0357 covered by pottery sherds, the collapse Locus:225922:037, the threshold Locus:225922:051 and the door socket Locus:225922:041 leading to Outdoor Area 67. Photo by Alessio Palmisano.

Room 66 has a beaten mud floor with some embedded pebbles (LGR:0356, composed of Locus:225922:044 across most of the surface of the room, Locus:225922:058 along the eastern edge of the room, and Locus:225922:062, which runs below the floor of Room 62 of Building Q). This floor abuts the walls Locus:225922:024, Locus:225922:022 and LGR:0345 (**Fig. E20**).

Right above the floor LGR:0356 lies a deposit (LGR:0358: Locus:225922:038, Locus:225922:054 and Locus:225922:048) of brown, moist, friable, silty soil, moderately sorted, with pebbles and white inclusions. This layer was very rich in

small pottery sherds covering the whole room's floor. The pottery clearly extends below the younger wall Locus:225922:011 of Building Q. After the end of the Main Occupation Period 1, wall LGR:0345 collapsed partially, and the collapse (Locus:225922:037) covered some of the pottery on the floor (**Fig. E20**).

Towards the northeast, within the narrow space between the younger Building Q and Room 66's wall LGR:0345, we excavated a deposit (LGR:0341: Locus:225922:029, Locus:226922:028 and Locus:226922:038), which runs below wall LGR:0337 of Building Q. It is not clear, however, whether Building S was still in use during Main Occupation Period 2 when Building Q was built. It is likely that the later construction of Building Q was responsible for the removal of the walls bounding Building S to the north, and that during the Main Occupation Period 2 the remains of Building S, south of Building Q, may have been left in ruins and were not repaired.

The fill of Room 66 (Locus:225922:026) is a dark brown, moist, friable, silty soil, moderately sorted, with some pottery, ashes and traces of burning.

Above this fill Locus:225922:026 and Room 66's walls is a deposit (LGR:0335) of dark brown, moist, firm, clayey soil, moderately sorted, with several pebbles and sherds. Within this deposit, a circular stone feature (Locus:225922:012) was found, extending above the northern half of Building S and the southern part of Building Q, and composed of a course of stones of approximately 25-30 cm set roughly in a circle (**Fig. E21**). Because this installation lies on top of



Fig. E21: The circular installation Locus:225922:012, probably dating to the Sasanian period, above the Iron Age wall Locus:225922:011. Photo by Alessio Palmisano.

the walls of Building Q (Locus:225922:011 and LGR:0337) it must be younger than the latter. The installation has therefore been assigned to the Sporadic Occupation Period. No datable finds were collected during the excavation of this installation although it certainly postdates the Iron Age period.

Another feature that we attribute to this Sporadic Occupation Period is wall Locus:225922:013, which runs east to west and was found roughly in the centre of Room 66, close to the western baulk (**Fig. E19**: section J, **Fig. E22**). It is 1.60 m long and 65 cm wide, made of two rows of medium-sized stones and stands one course high. Its construction technique differs from that of earlier walls. The stones are placed almost vertically instead of horizontally. The wall continues under the baulk towards the west, but no other feature connected to it has been found. The wall was assigned to the Sporadic Occupation Period, and it may belong to the Sasanian period, although there is presently no clear evidence for its dating. This later wall (Locus:225922:013), the circular installation (Locus:225922:012) and the deposit LGR:0355 were all covered by the topsoil (LGR:0332).



Fig. E22: The wall Locus:225922:013, probably dating to the Sasanian period, located stratigraphically above the Iron Age walls Locus:225922:022 and LGR:0345. Note the construction technique of Locus:225922:013, with cobbles placed in upright position, which differs from the technique used for the Iron Age walls. Photo by Alessio Palmisano.

E5.7 Outdoor Area 67

Alessio Palmisano

Outdoor Area 67 is located to the northwest of Room 66. It is bounded to the southeast by wall Locus:225922:024 and to the north and west by the limits of the excavation area (**Figs. E4, E11, E19**: section J). The boundaries of Outdoor Area 67 to the northeast are not known because of the construction of Building Q.

The floor of Outdoor Area 67 (Locus:225922:051) is paved with medium-sized, flat stones with a diameter of c. 30-40 cm (**Fig. E23**); it abuts wall Locus:225922:024 and runs underneath wall Locus:225922:011, belonging to Building Q of the Main Occupation Period 2 (**Fig. E10**:



Fig. E23: The paved floor of Outdoor Area 67. Photo by Alessio Palmisano.



Fig. E24: Outdoor Area 67, with the floor Locus:225922:051, the possible pillar base Locus:225922:053, the threshold Locus:225922:052 and the door socket Locus:225922:041. Photo by Alessio Palmisano.

section G). A threshold (Locus:225922:052: **Fig. E24**) was found, extending north of wall Locus:225922:024 and made of a large oblong stone with a door socket still in situ (Locus:225922:041). The doorway that connects Outdoor Area 67 to Room 66 is limited to the north by a feature (Locus:225922:053) composed of medium-sized stones (diameter of 30-50 cm) with a large circular stone on top. Because the complete layout of Outdoor Area 67 is not known (also because it was damaged by the construction of the younger Building Q), the function of this structure is difficult to interpret. One possibility is that it was the base of a pillar located on the right side of the entrance in order to support a portico.

Right above the floor of Outdoor Area 67 was a greyish-brown, moist, friable, clayey soil, containing a few pebbles, stones, pottery and some ashes (Locus:225922:046). Above this layer was a fill (Locus:225922:025) of dark brown, clayey soil, which formed from the Post Main Oc-

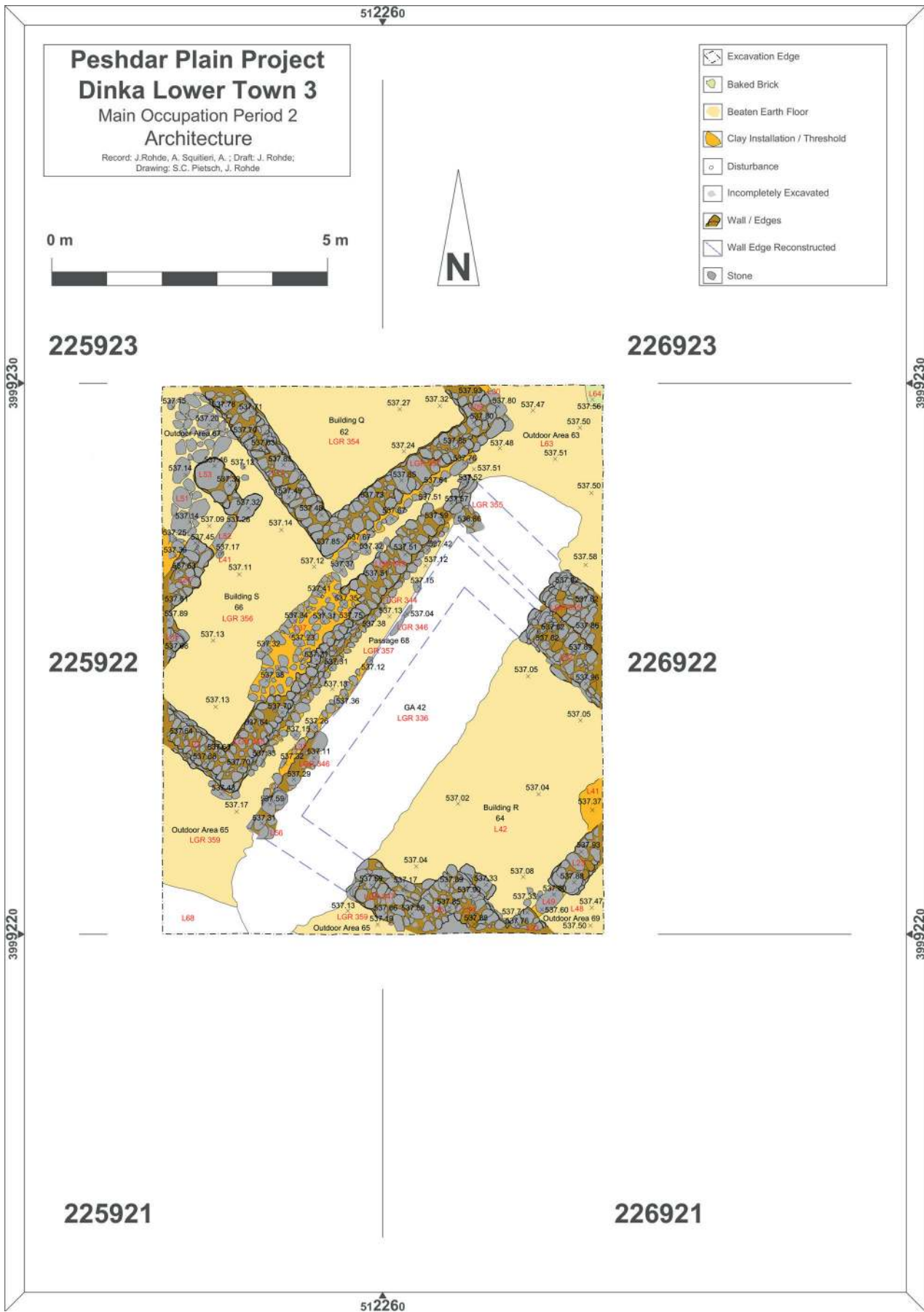


Fig. E25: Plan of the Main Occupation Period 2 levels in DLT3. Prepared by Jens Rohde.

cupation Period 1 to the end of the Post Main Occupation 2 (Fig. E19: section J). During the Main Occupation Period 2, that is when Building Q was in use, this outdoor area may have been in ruins, similar to Building S. The fill Locus:225922:025 was covered by a dark brown fill with pebbles and some pottery (LGR:0335), which also covered the walls (Fig. E9: section G; Fig. E17: section J). It was in turn sealed by the topsoil (LGR:0332).

E5.8 Building Q and Room 62

Jens Rohde & Alessio Palmisano

Building Q (Figs. E4, E25) belongs to the Main Occupation Period 2, which is one stratigraphic phase younger than the period during which Buildings R and S were erected. Despite its younger age, Building Q belongs to the Iron Age chronological horizon because its floor has yielded the same pottery types as those found on the older, Main Occupation Period 1 floor (§G1).

Due to the erection of Building Q, the architectural structure and the functions of Outdoor Area 63 and Building S changed drastically. Building Q is oriented very differently from the architectural features underneath it and its construction caused the partial destruction of both Building S and Outdoor Area 67. It is not clear what the function of the latter two areas was during the use of Building Q, although it is possible that they were both left in ruins (§E5.6-7).

Room 62 is the only known room from the excavated, southern part of Building Q. It is delineated by wall Locus:226922:009 to the northeast, wall LGR:0337 (Locus:226922:008 and Locus:225922:017) to the southeast and wall Locus:225922:011 to the southwest. All these walls are made with the same technique as the older walls of the Main Occupation Period 1.

Wall Locus:226922:009 is about 55 cm wide. It is composed of two rows of cobbles with small pebbles in between and preserved to a height of 4-5 courses of cobbles of ovoid or flattish shape and a size of about 20-30 cm. The lowest course lies on approximately 1 cm of soil accumulation, which clearly indicates that it was built after the floor of the Outdoor Area 63 ceased to be used (Fig. E26). Against the northeastern face of the wall Locus:226922:009, there is a row of cobbles set upright in a leaning position, which was used as a protective installation.

Wall Locus:226922:009 is connected to wall LGR:0337, which is about 55 cm wide and consists of 4-5 courses of cobbles set in two rows. The cobbles have an ovoid or flattish shape and a size of about 20-30 cm, with the ex-



Fig. E26: Building Q's wall LGR:0337, sitting atop the walls of Building S (LGR:0345 and LGR:0355), as seen from the east. Note the row of vertically placed cobbles LGR:0343 that marks the floor level abutting Building Q's wall LGR:0337. Similar vertically placed cobbles (LGR:0344) are also visible as leaning against the older Building S's wall (LGR:0345). Photo by Jens Rohde.

ception of two cobbles that are larger than the others and set at a right angle to the alignment of the wall along its entire width. Small pebbles and cobbles fill the wall core. Like wall Locus:225922:009, this wall is also equipped with a protective installation (LGR:0343) made of vertically set cobbles leaning against its outer face (Fig. E26).

Wall LGR:0337 is connected in the west to wall Locus:225922:011, which is 3.22 m long and 47 cm wide. It is made of two rows of medium-sized stones, on average 20-25 cm long, and four courses high (corresponding to c. 58 cm).

For the foundation of the walls Locus:225922:009, LGR:0337 and Locus:225922:011, the older walls of Building S (LGR:0355 and LGR:0362) were partially, but not completely, destroyed. Parts of them were found below the floor of Room 62.

Room 62's floor is a compact beaten mud floor with a few embedded pebbles (LGR:0354: Locus:225922:067 and Locus:226922:061), abutting walls Locus:226922:009 and LGR:0337 (Fig. E10: section G). The floor lies above layer LGR:0358 which in turn covers the older floor LGR:0356, both going underneath wall Locus:225922:011 and belonging to the Main Occupation Period 1. Right above Room 62's floor LGR:0354 is a dark brown, moist, friable, silty soil (Locus:225922:060), containing a few bones, some pebbles and a few pottery sherds. This soil marks the end of the Main Occupation Period 2 and had been identified only in the eastern portion of the room (Fig. E10: section G). It is covered by Locus:226922:044, a dark brown, moist, firm, silty-clayey soil with only a few pebbles and some sherds, which was also identified only in the western part of the room. This deposit formed as a result of erosion processes that occurred after the end of Main Occupation Period

2. It is covered by LGR:0334, a dark brown, moist, firm, silty-clayey soil with some pebbles and sherds, which lies above the walls.

Within deposit LGR:0334 is a circular stone feature (LGR:0349; Locus:225922:030, Locus:226922:043; **Fig. E27**), which is interpreted as being connected to the circular stone installation Locus:225922:012 (described above; §E5.6). Both belong to the Sporadic Occupation phase. Finally, all these features are overlaid by the topsoil (LGR:0332).



Fig. E27: The circular installation LGR:0349, probably dating to the Sasanian period, in the upper fill of Room 62. Photo by Jens Rohde.

E6. The Sporadic Occupation Phase of DLT3

The features discussed in this section are clearly located stratigraphically above the Iron Age features of the Main Occupation Periods 1 and 2 (**Fig. E28**), indicating that a considerable span of time had passed since the end of the Iron Age occupation.

In addition to the features discussed below, six small pits were found in different locations of the excavated area (cuts: Locus:225922:021; Locus:225922:068; Locus:225922:019; Locus:226922:017; Locus:226922:018; and Locus:226922:024). These pits have not yielded diagnostic pottery that would allow us to narrow down their chronology. They could also be considerably younger than the Sasanian period.

E.6.1 Buildings structures of the Sporadic Occupation Phase

Andrea Squitieri

In excavation area DLT3, Sasanian-period sherds (§G1) have been found only from the deposit LGR:0338, which is located underneath the topsoil in the western part of the trench (above the Iron Age Room 64 and Outdoor Ar-

reas 65 and 69; §§E5.1-2; §E5.5). Nevertheless, we assume that the features discussed here generally belong to the Sasanian period. Additional Sasanian-period pottery was recovered from the topsoil throughout the trench (§G1).

The wall Locus:225922:013 (discussed in §E5.6; **Fig. E22**) is located in the western part of the excavation area DLT3, but was not completely excavated because it continues under the western baulk. This wall was found at a higher level than the Iron Age walls and is not oriented according to any of the older features, moreover with a construction technique that was very different from that of the Iron Age walls. It was made with cobbles that were set slightly upwards instead of horizontally, as was typical for the attested Iron Age walls.

Two circular stone installations (Locus:225922:012 and LGR:0349, discussed in §E5.6 and §E5.8; **Figs. E21, E27**) were unearthed in the northwestern part of the excavation area DLT3 above the Iron Age Buildings S and Q. The two installations probably belonged to the same structure, whose function remains unknown.

E.6.2 Human remains of the Sporadic Occupation Phase: Grave 100

Kathleen Downey

In the upper layers of the northern part of the excavation area DLT3, corresponding to the upper fill in Room 62, some bones of a cranial vault were uncovered (**Fig. E29**) right below the stone circular installation LGR:0349 (§E5.8; **Fig. E27**). At a first glance, this pile of stones above the bones appeared to have been lined in a row at roughly the same level as (and similar in appearance to) the stone capping used to cover the Sasanian graves of Gird-i Bazar. However, further excavation revealed that the stone pile represented an installation connected to a second stone installation (Locus:225922:012; §E5.6). While the function of this combined feature remains unknown, it cannot represent a grave capping. No cut of any possible grave pit was identified either.

The cranium appears to have been facing southeast, but the occipital and posterior portion of parietals were moved. The nuchal crest was directly upward and rotated counter clockwise. The anterior of the sagittal suture was positioned touching the left parietal.

Only limited diagnostic features are present on the bones, but these are definitely the remains of an adult human. No other bones were found in association with this cranium, nor were other human bones collected from other parts of DLT3. Following our documentation system for the registration of human remains, a grave number

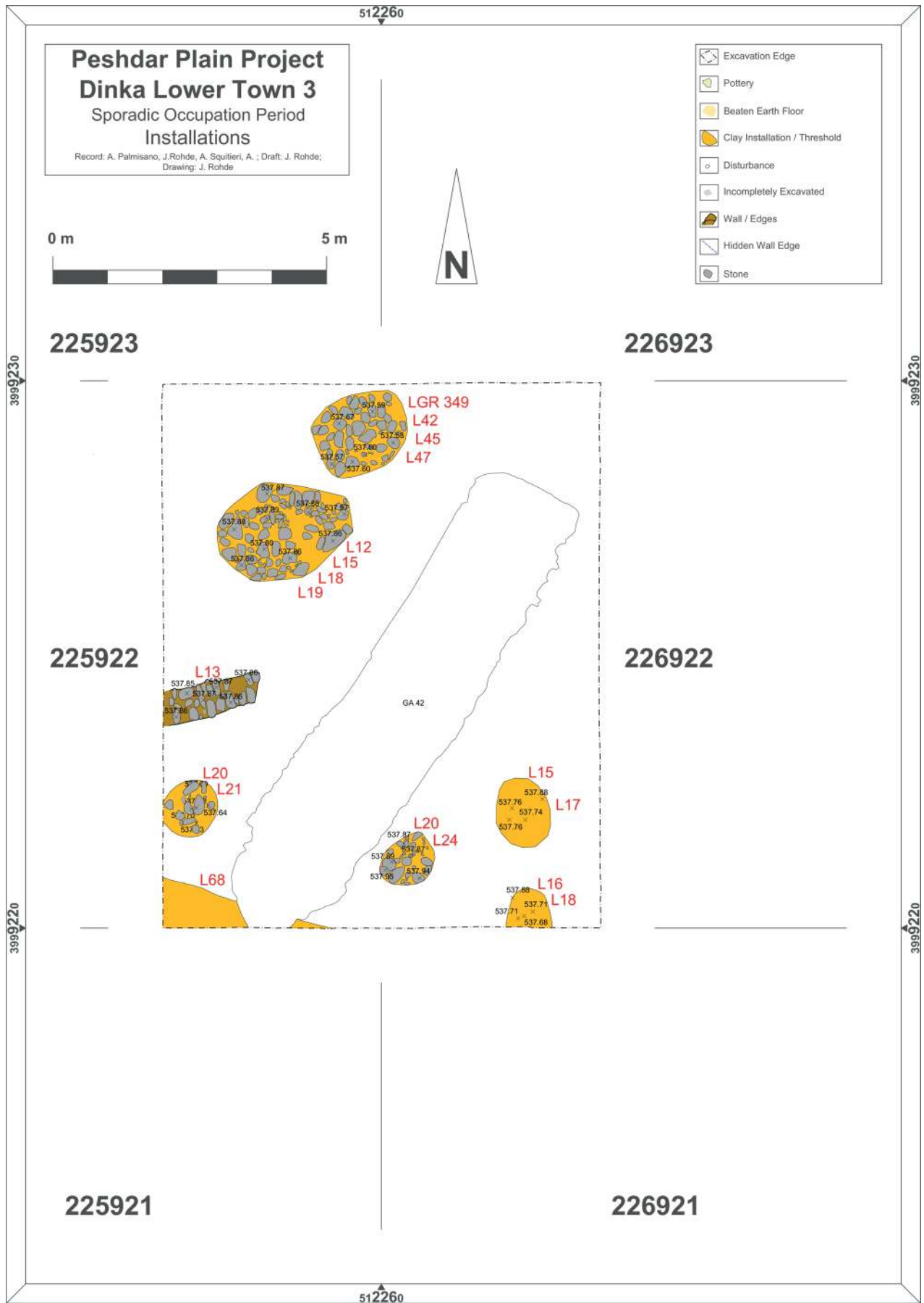


Fig. E28: Plan of the Sporadic Occupation Period levels in DLT3. Prepared by Jens Rohde.



Fig. E29: Human remains (registered as Grave 100) found below the installation LGR:0349 in the upper fill of Room 62. Photo by Kathleen Downey.

(Grave 100) was assigned to this cranium, despite the fact that no clear grave cut could be identified.

These isolated human remains are difficult to interpret, but stratigraphically they surely belong to a period after the Iron Age Main Occupation Period 2. Therefore, they have been tentatively assigned to the Sporadic Occupation Period. Due to the presence of Sasanian-period pottery in the upper layers of DLT3 and because of the Sasanian-period graveyard at Gird-i Bazar⁵⁶, it seems possible that the human remains from DLT3 also belong to the Sasanian era, but there is no direct evidence for this chronological attribution.

E7. Recent interventions at DLT3: GA42 and the topsoil

Andrea Squitieri

The geoarchaeological trench GA42 was excavated with a digger in 2015 and then backfilled (**SE1**). During the 2018 campaign, we located the cut of this trench (LGR:0336: Locus:225922:016 and Locus:226922:014; **Figs. E2, E11, E25**) and re-excavated it (**Fig. E30**). The 2015 refill (LGR:0333: Locus:226922:003 and Locus:226922:006) was partially removed during this campaign in order to uncover the archaeological structures visible in 2015.

Above all the archaeological features of DLT3 lies the topsoil (LGR:0332: Locus:225922:002, Locus:225922:004; Locus:225922:005; Locus:225922:010; Locus:226922:002 and Locus:226922:005), which was heavily affected by recent ploughing.



Fig. E30: After the removal of the topsoil of DLT3: the tops of some stone walls are already visible while the cut of the 2015 geoarchaeological trench GA42 was not yet evident at this stage. Photo by Jens Rohde.

A small number of modern objects were recovered from this topsoil, including a glass fragment (PPP 226922:002:003). Possible Iron Age items retrieved from the topsoil are the perforated stone PPP 226922:005:004 and the whetstone PPP 226922:005:005 (**SH**, nos. 41-42).

E8. Preliminary conclusions

F. Janoscha Kreppner

An important result of the excavations conducted in DLT3 was that, in stark contrast to the various other excavation areas investigated so far within the Dinka Settlement Complex, we could for the first time identify an occupation phase that is older than the Iron Age occupation.

East of the geoarchaeological trench GA 42, ceramic material was discovered lying flat on an uneven floor (Locus:226922:055), which suggests in regard to technology, fabric and morphology a dating into the Late Chalcolithic period. Deposits overlying this floor were sealed by the floor (Locus:226922:042) of Building R of the Iron Age Dinka Settlement Complex (DSC).

In the western section of the geoarchaeological trench GA42, sunk into the virgin soil and covered by the wall LGR:0346 of the Iron Age Building R, we found the remains of a pottery kiln that can be assigned to the same Late Chalcolithic occupation phase. The excavation of this kiln was completed in April 2019, with the help of additional funding made available by the Rust Family Foundation to Mark Altaweel and Andrea Squitieri. In the meantime, the kiln was the subject of Sophie Pietsch's 2019 BA thesis "Untersuchungen eines chalkolithischen Keramik-

brennofens in Dinka, Peshdar Ebene, Autonome Region Kurdistan des Nord-Irak” at the Institut für Prähistorische Archäologie, Freie Universität Berlin, supervised by Wolfram Schier (FU Berlin) and F. Janoscha Kreppner (WWU Münster). The results will be published in a future publication.

After a long hiatus of several millennia, this part of the settlement was again inhabited in the Iron Age during the so-called Main Occupation Period of DSC.

At the beginning of the Main Occupation Period 1, there was Building R which we located east of the geoarchaeological trench GA 42. Its Room 64 could be accessed via a passage from the east. In the northwest, southwest and southeast, there are connected spaces but their excavated areas are too small to allow their safe identification as covered rooms, courtyards or outdoor areas. The very narrow Passage 68 separates Building R from Building S. Its Room 66 could be entered from the west through a passage with a single-leaf doorway, of which the door socket in front of the threshold has been preserved. The north of Building S has not been preserved, as a new Building Q was later erected here that partially destroyed the older structure.

The use of the new Building Q defines the Main Occupation Period 2. In some areas, new floors were installed (Outdoor Area 63 and Outdoor Area 69). On the other hand, in Building R, Outdoor Area 65 and Outdoor Area 67, the original floors continued to be used during the Main Occupation Period 2. It is for this reason that we attribute the two sub-phases to the Main Occupation Period, which represents a continuous settlement development before the buildings were finally abandoned.

The ground plans of all these buildings are neither completely preserved nor completely located within the excavated area. However, it can be said that the architecture is small and irregular, without any indication of a representative or ceremonial character. Only a few installations and finds provide information about the room functions. In Building R (= Room 64), the installation Locus:226922:041 suggests activities involving fire. In terms of furnishings and finds, Building S (= Room 66) is reminiscent of the living and reception rooms excavated in Gird-i Bazar. The fact that the area in front of its entrance is paved might suggest that this is a courtyard from which rooms were accessible. The pottery and construction methods attested for DLT3's Main Occupation Period are similar to those found in the other excavation operations of DSC and thus belong to the local Iron Age cultural tradition of the first half of the first millennium BC.

The recovery of charcoal remains that provide a ¹⁴C date range of 830-789 calBC (95.4 % probability)⁵⁷ in 2015 and the 2018 discovery of the fragment of a brick with a cuneiform inscription, most likely of an Assyrian ruler (**ŠI**), clearly indicate that the structures encountered in DLT3 were (still) in use at a time when the Peshdar Plain and the Dinka Settlement Complex had been integrated into the Province of the Palace Herald and formed part of the holdings of the Assyrian Empire⁵⁸. Nevertheless, none of the remains excavated so far in DLT3, or elsewhere in the Lower Town, point towards a change in material culture or an Assyrianising influence.

57 Altaweel/Marsh 2016, 27-28 with Fig. B2.7.

58 Radner 2016.