

DIGBY WELLS

ENVIRONMENTAL

PERMIT REPORT	
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1 Methods

To achieve the goals of this report several analytical techniques, following standard archaeological procedure, were used. This consisted of:

1. Survey: mapping of all site features, such as walling and distinct activity areas, as well as specific locations for augering and excavations.
2. Excavation: recording of all archaeological remains, as well as establishing the archaeological context and chronology of the site.
3. Augering: establishing and delineating the extent of the site.

A more detailed discussion of each method is provided below.

1.1 Survey

The survey was conducted using both handheld Garmin GPS units and a Trimble DGPS to record the spatial relationship of all site and landscape features. Due to the extremely thick nature of the vegetation on site these two methods were used concurrently, due mainly to the DGPS's inability to take measurements in these denser areas. Surveying consisted of two approaches:

- a) Single waypoint measuring: this was used to measure auger hole, excavation and important site feature locations (e.g., possible entrances to the settlement). The precise GPS location of individual artefacts, within excavations, were not recorded due to the high likelihood of these artefacts having been disturbed

through various colluvial and bioturbative (e.g., root activity) processes.

However, the DGPS was used to map in the excavations and surrounding settlement features to provide a greater spatial understanding of the settlement.

- b) Track logs and transect walking: this was used to map the extent (perimeter) of the settlement, as well as internal site features and walling (e.g., hut bases, possible kitchen areas, boundary of modern settlement, etc.). All settlement walls were followed and mapped with the handheld Garmin GPS units, whilst set to the 'most frequent point recording' mode. In order to ensure that all walls were mapped in the dense vegetation, each of the three specialists walked transects across the study area.

Surveying was conducted in and around the original Phase 1 points listed in the Heritage Scoping Report (SAHRIS Case ID. 6688), as well as towards the top of the ridge and around the base of the ridge. All walling was identified and analysed following Huffman (2007).

1.2 Excavation

Four trenches and one test pit were excavated in the Eastern settlement. These excavations were strategically placed around key archaeological features (i.e., in locations that were thought to bear the greatest potential for artefact recovery - activity areas). The following locations were chosen:

- a) GS1: alongside a grinding stone (possible food-processing area).
- b) SQ1: abutting a hut base (possible residential finds).
- c) SQ2: within a residential/hut area (possible residential finds).
- d) SQ3: at a possible kitchen/food preparation area (possible food-processing area).
- e) Test Trench 1: within a hut zone (to establish whether a hut floor was present).

All of these excavations began as single numerically labelled 1X1 m excavations. Emphasis was placed upon obtaining an adequate sample of cultural material from which it would then be possible to establish the chronology and cultural identity of the settlement. Diggings were conducted in a stratigraphically sensitive manner and all excavated material was screened for artefacts (i.e., bone, ceramic, charcoal, iron, beads, etc.). Stratigraphic changes that related to variations in sediment compaction, colour, inclusions and artefact sequencing (densities)

were recorded. All artefacts were bagged and accessioned by square and horizon (spatial information) as well as by type (e.g., metal, ceramic, etc.). Subsequent analysis of the excavated ceramics follows that of Huffman (2007).

Two excavations were expanded for the following reasons:

Site GS1: expanded by 2X1 m. The original 1X1 m excavation yielded a relatively high quantity of bone, ceramic and charcoal, and a high portion of this occurred towards the NW corner. For this reason the excavation was expanded towards the north and west. In total 3 m² were excavated.

Site SQ1: expanded by 1X0.5 m. The original 1X1 m excavation appeared to contain a stone foundation/walkway in the SW portion of the excavation. For this reason, the excavation was expanded towards the west. In total 1.5 m² were excavated.

Each excavation was subsequently backfilled once the cultural materials discontinued; by depth this varied for each excavation. Each site was filled with sterile, screened sediments, which were subsequently stamped and compressed to make the deposit robust and less susceptible to erosion.

1.3 Augering

Originally, the aim of this augering was to delineate the settlement, since the HSR (SAHRIS Case ID. 6688) did not identify the primary settlement/residential area. Accordingly, it was proposed that two large polygons would be superimposed over the landscape and auger holes would then be sunk using a random sampling procedure, to delineate and identify the settlement. This procedure was subsequently modified after the specialists identified the primary settlement areas, along with the site perimeters. For this reason auger data is no longer relevant and is not presented in this report.

Although random sampling was still conducted in one of these polygons - the western side of the east polygon - auger holes were sunk in strategic locations within the settlement. During this augering information was recorded that related to stratigraphy, sediment colour, composition and compaction, and artefact distribution. This information helped improve our spatial understanding of the settlement and to establish areas of heightened activity, and possibly, artefact distributions. All auger holes were backfilled using the sterile screened sediments.

2 Results

2.1 Survey data

2.1.1 Settlement description

LAN3111 has a small, isolated ridge running in an East-West direction (approx 1.5 km by 0.4 km, approx. 1200-1250 masl; Fig. 1). Our investigation of this ridge concerns only the southern- and eastern-most corner, which occurs on the farm Rietfontein 338. This ridge is densely vegetated with grasses and bushes of the savannah and grassland biomes, and the ground rises gradually in height when accessing the ridge from the East; this gradual height transition is largely different when traversing from the South.



Figure 1. Ridge from a distance, looking north, following the site access road. Mining activity (spoil heaps) occur nearby to the west and open grassland occurs to the east.

Four separate settlements have been identified that occur atop, below and midway up the ridge, and one of these is clearly modern; the remaining archaeological settlements have been termed 'Eastern,' 'Western' and 'Northern' (Figs. 2 - 4). It is worth noting that the Modern settlement directly abuts the Eastern settlement, and it also contains a lower grindstone that

was very likely sourced from this older settlement nearby (Fig. 2b). Furthermore, large walls have been erected here with natural cobbles and boulders, identical to those that have been used for walling construction in the three nearby archaeological settlements (Fig. 2c & d). It is highly probable that these cobbles and boulders were sourced from these older settlements nearby, and this may account for some of the poor wall preservation in the Eastern settlement.

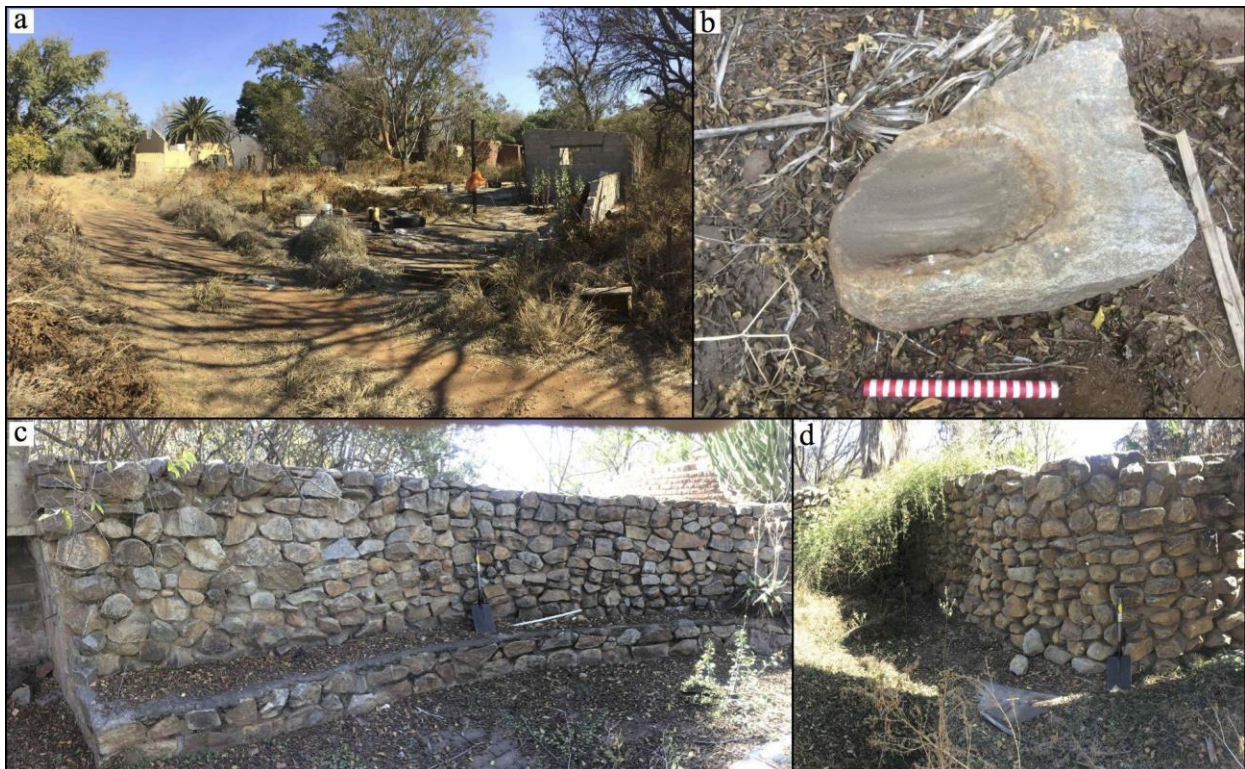


Figure 2. Modern settlement with maize lower grindstone (b) and walling with cobbles and boulders, likely sourced from the nearby settlement (c & d). The location of this settlement has had a direct impact on the preservation of the Eastern settlement.

A basic description of these three settlements is as follows:

Exterior walling: each settlement is surrounded by a scalloped perimeter wall, likely marking the boundary of the residential zone (Figs. 3 & 4). This scalloping is especially clear in the Eastern and Western settlements, whereas the Northern settlement comprises mainly of terracing walls (Fig. 5). In addition to this a key feature of the Eastern settlement are the two areas with parallel walls running East-West, which possibly served as entrances to the settlement, or perhaps cattle lanes. Exterior walling is double infilled and retains generally poor coursing, although the poor preservation of these walls, with subsequent collapses in the vast majority of areas, may mask their true complexity (Fig. 6). Where they are better



preserved coursing is clearly evident. In addition to this large boulders are frequently used as foundation stones upon which the walls are built (Fig. 6g & h), and in both the Western and Northern settlements the naturally exposed bedrock boulders are frequently incorporated into the walling.

Interior walling: also double infilled and showing coursing where adequately preserved, it comprises mainly small circular areas that are walled off, likely serving as hut (residential) or kitchen (food preparation) areas; these may also have served as small kraaling areas (Figs. 6 & 7). Several entrances/exits also occur, likely guiding movement between different activity and residential areas of the settlements. Where preserved these are marked by upright (vertical) boulders (Fig. 6d).

Associated artefacts: locating artefacts at the surface proved to be extremely difficult, due to the dense vegetation and build-up of dead plant matter, across all of the settlements. However, a single large maize lower grindstone was located in the Eastern settlement (Fig. 8). See also the Table 1 discussion (Section 2c), which provides the details of all surface finds.

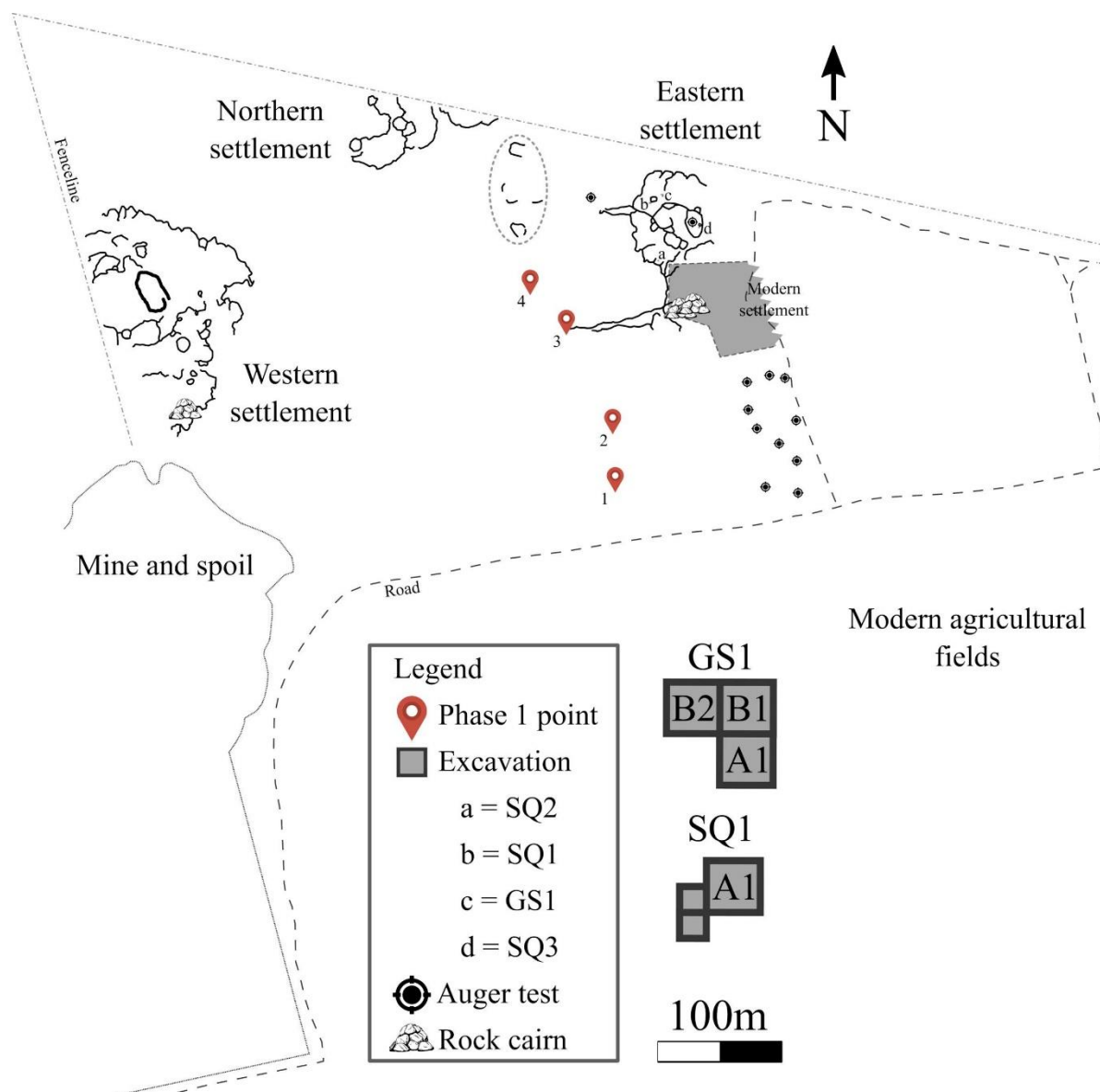


Figure 3. Detailed site map for Rietfontein 338. Three large stone-walled settlements occur (Eastern, Northern and Western), and quite clear is the proximity of the Modern settlement to the Eastern settlement. The original Phase 1 survey points indicate sporadic poorly preserved walls, whereas our survey was expanded beyond these points in order to sufficiently delineate the major settlements of the area. Also indicated here are the locations of the four excavations and the auger testing areas.

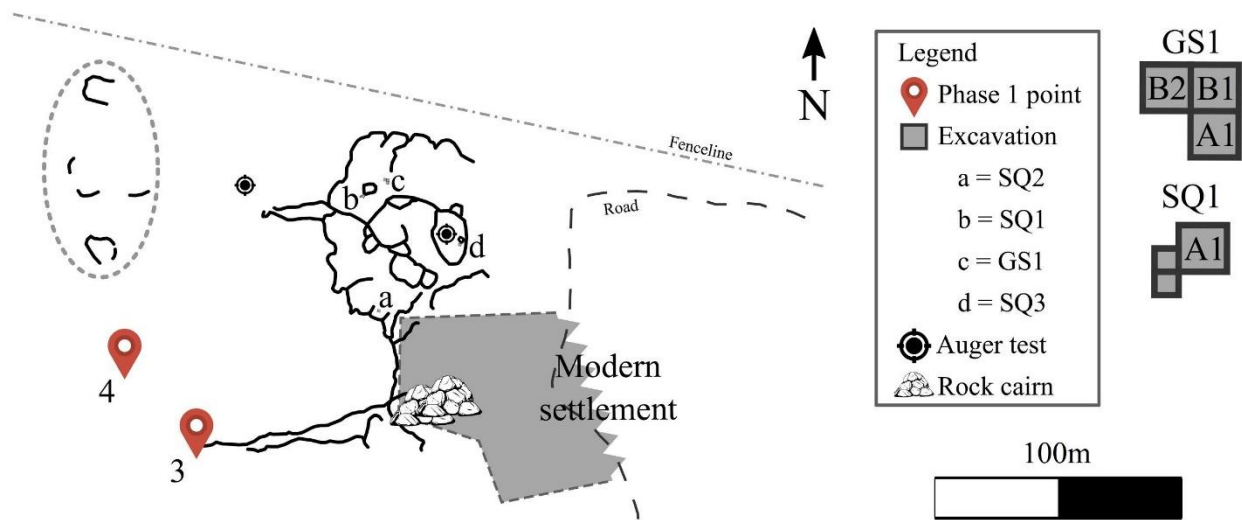


Figure 4. Close up of the Eastern settlement, along with abutting Modern settlement. Distinct scallops are most evident on the northernmost portion of the perimeter wall, and the two areas with parallel walling occur to the west of the settlement. Also note the position of the four excavations (a-d).

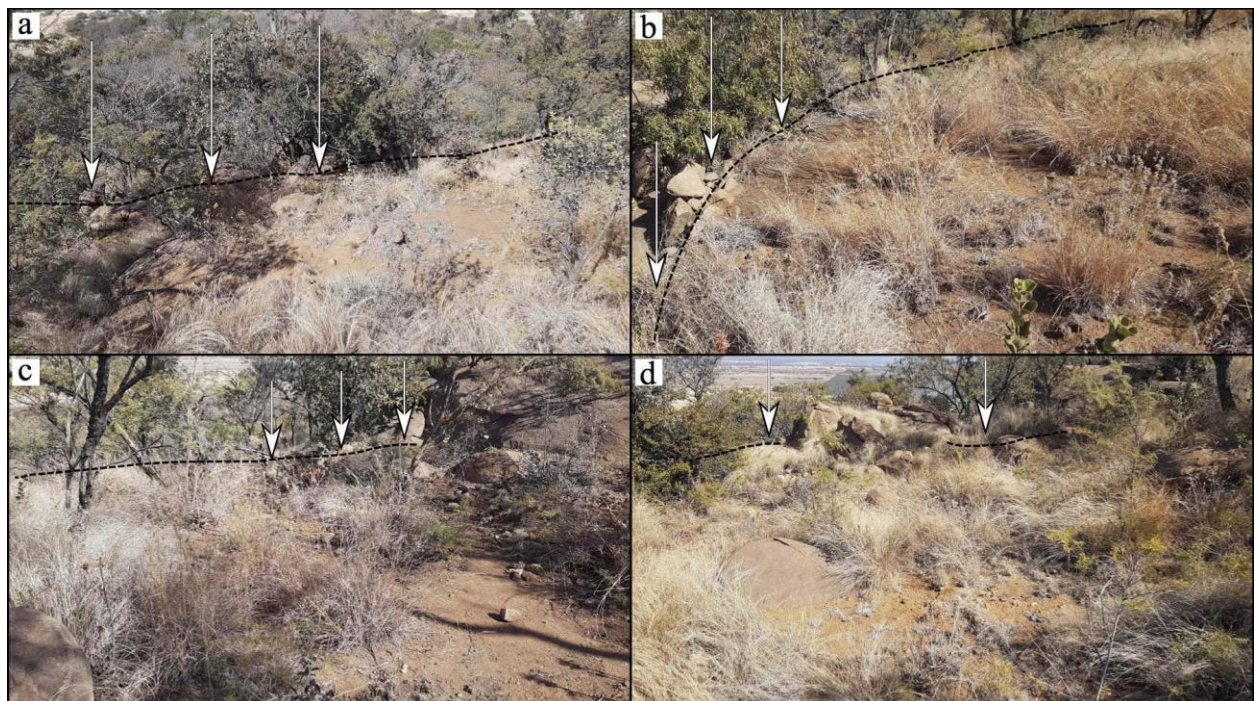


Figure 5. Northern settlement with flat areas framed by low terracing walls that frequently incorporate the local bedrock.



Figure 6. Eastern settlement walling and features. Possible hut areas (a & b: the small TT1 excavation took place at 'a,' whereas site SQ1 was located in the foreground of 'b'), entrance to the 'cattle lane' (c), entrance (d), wall coursing (e & f) and large boulders at base of walling (g & h) are shown.



Figure 7. Western settlement walling (a: double infill; b: coursing; c: poorly preserved).

2.2 Excavation data

2.2.1 Context and stratigraphy

All of the excavations comprise simple stratigraphic profiles, which begin with an uppermost horizon of surface debris (vegetation). Underneath this horizon the stratigraphy varies by excavation, but SQ1 and GS1 share a similar sequence, as do SQ2 and SQ3 (Figs. 8 - 11). A basic summary of these horizons is as follows:

- Surface debris (SD: 0-2/3 cm depth): this is comprised of both living and dead organic matter in between dry unconsolidated sediments of light grey to brown colouration. These are primarily silts and fine sands, and sporadic pebbles and cobbles also occur. This layer forms a distinct and uniform cover across the entire site. No artefacts were recovered from this layer.

Sites GS1 and SQ1 (Figs. 8 & 9):

- Horizon A (2/3-12 cm depth): this is comprised of dry, hard, consolidated light brown silts with few to no pebbles and cobbles; roots are frequent. Ceramics, bone and charcoal occur throughout this horizon, albeit in a low density.

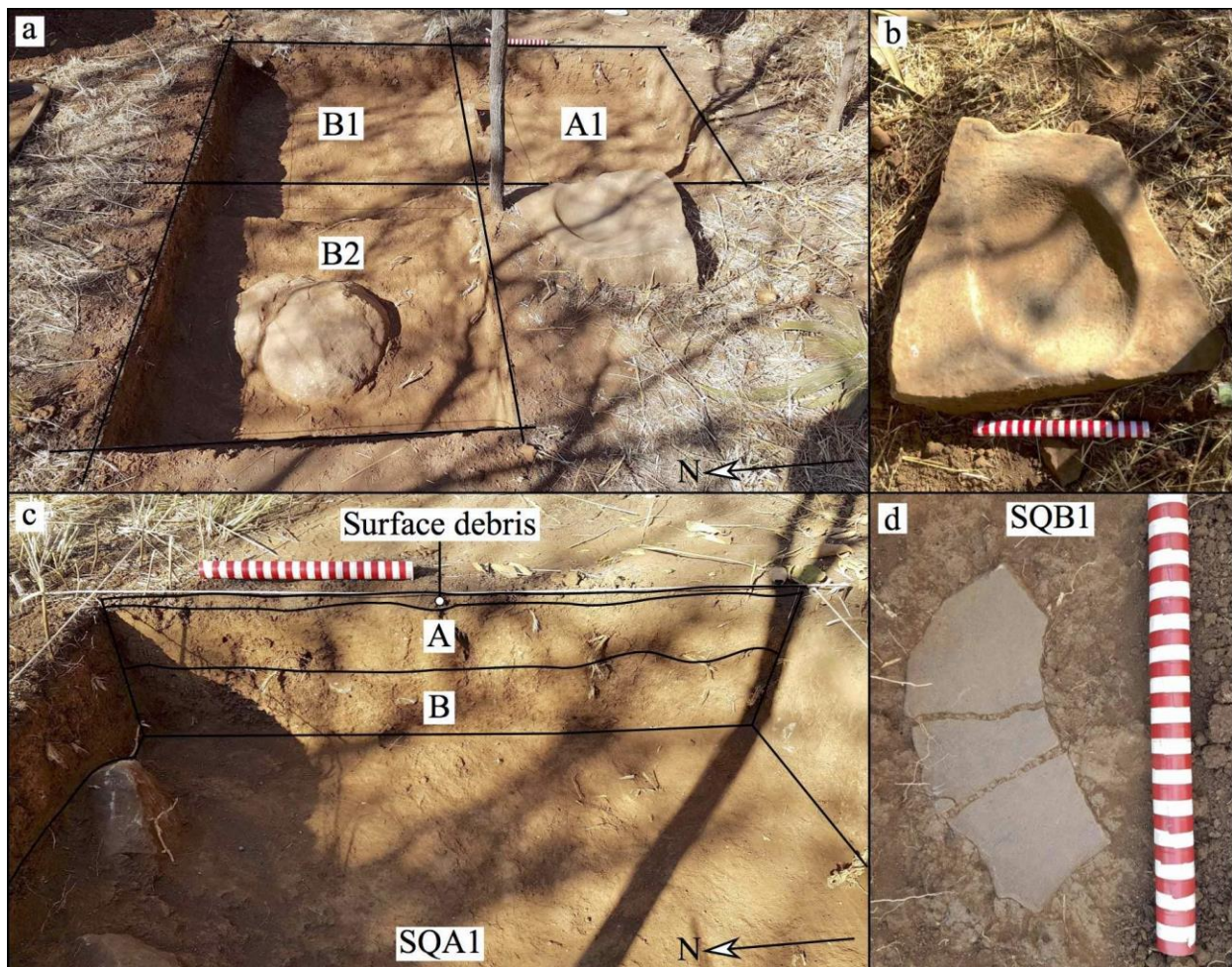


Figure 8: Excavation site GS1, with associated grindstone (b) and *in situ* pottery (d).

- Horizon B (12-25 cm depth): this is comprised of dry, compacted, nodular, dark brown silts and fine sands, with sporadic pebbles, cobbles and roots. This horizon is less consolidated than the overlying Horizon A. The nodular character of these sediments may indicate an old decaying soil, which is supported by the higher frequency of artefacts in this horizon (ceramics, bone, charcoal and iron), thus possibly indicating the original living surface. Since the overlying sediments (Horizon A) have fewer artefacts and are heavily influenced by bioturbation (sediment



displacement through natural root activity), perhaps the artefacts that occur in Horizon A were pulled up from Horizon B. This is a common phenomenon in many archaeological sites.



Figure 9. Excavation site SQ1, with west extension (a) and 'foundation/walkway' (b).

Sites SQ2 and SQ3 (Figs. 10 & 11):

- Dark brown (DB) horizon (2/3-16 cm depth): this is comprised of dry, compacted, nodular, dark brown silts and fine sands, with sporadic pebbles, cobbles and roots. Artefacts occur here in a low density (charcoal, ceramic and fauna).
- Ash horizon (16-19.5 cm; only occurs in SQ3 and is overlain by DB; Fig 11): this is comprised of dry, loose, silts and fine sands with a grey colouration, with sporadic pebbles, cobbles and roots. Ceramic and fauna occur here in a higher density.
- Orange/brown (OB) horizon (19.5-26 cm; only occurs in SQ3 and is overlain by the Ash horizon; Fig 11): this is comprised of dry, highly compacted orange to brown silts and fine sands, with sporadic pebbles, cobbles and roots. This horizon is sterile.

a. Trench specific notes

GS1: excavations stopped at a depth of 25 cm since artefacts discontinued. The majority of the cultural material came from a depth of 10-20 cm. A small accumulation of clay-like granules occurred in the base of Horizon A, in square B2.

SQ1: excavations here were discontinued after reaching a supposed stone foundation/walkway, which occurred at the top of Horizon B.

SQ2: excavations stopped at a depth of 20 cm (within DB) since artefacts discontinued. It is possible that DB is synonymous with Horizon B in excavations GS1 and SQ1, based on similarities in sediment composition and artefact densities. Horizon A may be absent at this site due to its position on the landscape (possible erosion and/or lack of deposition in this area). The DB horizon in this excavation is thicker than that in SQ3, stretching down to the base of the excavation at 20 cm.

SQ3: excavations stopped at a depth of 26 cm (within OB) since artefacts discontinued. This square contains two additional units not present anywhere else on site (Ash and OB). As for site SQ2 above, DB here may also be synonymous with Horizon B in excavations GS1 and SQ1, based on similarities in sediment composition and artefact densities. The ash horizon here may indicate some kind of living surface (possibly even a midden), and this is further supported by the completely sterile nature of the underlying horizon (OB).

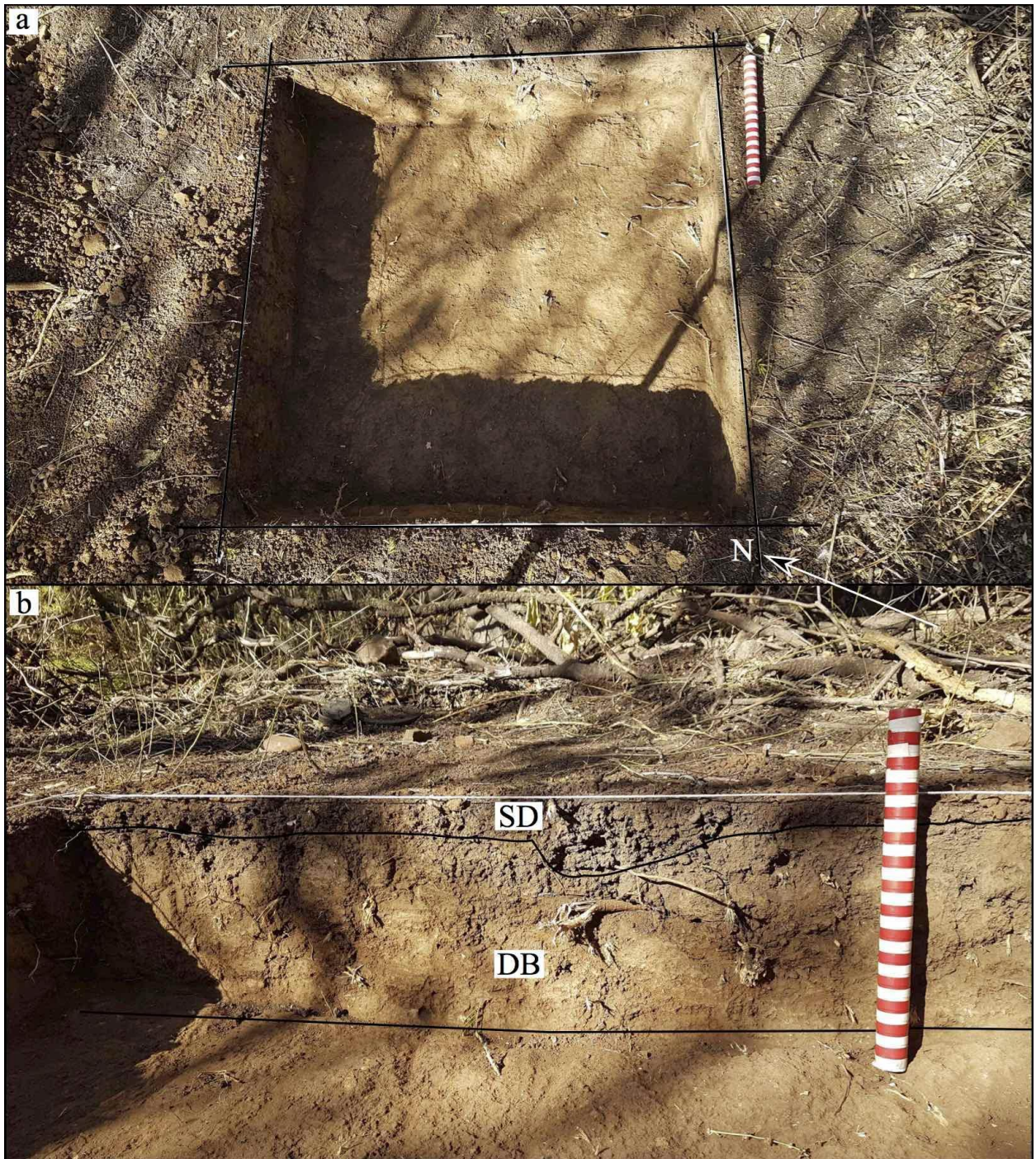


Figure 10: Excavation site SQ2. Excavations stopped within the dark brown horizon, as material discontinued (DB).



Figure 11. Excavation site SQ3, with ash layer underlain by the sterile orange/brown horizon (OB). Artefacts were most frequent in the ash layer. This ash horizon did not occur in any of the other three excavations.

2.2.2 Artefact data

A limited quantity of cultural items were retrieved during all survey and excavation work (Table 1), the vast majority of which comprise non-diagnostic materials (plain ceramics = 50.2%; fauna = 24.1%; charcoal = 15.4%; ceramic clumps = 5.1%; Fig. 12). Surface collections yielded plain and decorated ceramics, glass and stone tools, of which the latter two are likely unrelated to the settlements (glass is likely modern and the stone tools far older in age - MSA).



Table 1. Artefact counts for those recovered from the four excavations, smaller test trench (TT1) and surface collections. ‘Ext.’ denotes extension and ‘Dec.’ denotes decorated.

Context	Square	Sub-square	Horizon	Ceramic				Fauna	Charcoal	Iron	Glass	Stone
				Plain	Dec.	Rim	Clump					
Excavation	GS1	A1	A+B	24	1	-	-	4	9	-	-	-
	GS1	B1	A+B	28	1	1	9	31	12	1	-	-
	GS1	B2	A+B	20	1	-	-	4	5	-	-	-
	SQ1	A1	A	4	-	-	4	-	-	-	-	-
	SQ1	Ext.	A	-	-	-	-	-	12	-	-	-
	SQ2	N/A	DB	9	-	-	-	7	-	-	-	-
	SQ3	N/A	DB	-	-	-	-	-	1	-	-	-
	SQ3	N/A	ASH	14	-	-	-	11	-	-	-	-
	TT1	N/A	A+B	14	-	-	-	4	-	-	-	-
Surface collection	Surface	N/A	Surface	13	4	-	-	-	-	-	1	1
	Hut 1	N/A	Surface	1	1	-	-	-	-	-	-	-
	Hut 2	N/A	Surface	-	1	-	-	-	-	-	-	-
				127	9	1	13	61	39	1	1	1

Clumps comprised of lumps/nodules of ceramic

Fauna and *iron* were non-diagnostic

Glass was clear and likely modern

Stone comprised of Middle Stone Age material

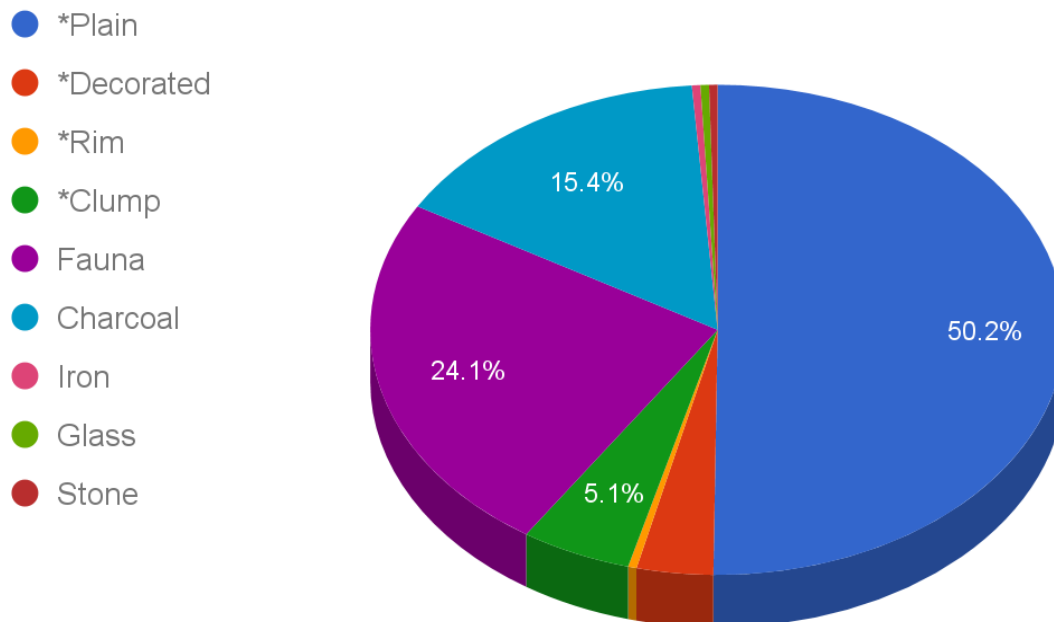


Figure 12. Percentage breakdown of cultural remains from Rietfontein 338 (* = ceramic). Decorated ceramics, rim shards, iron, glass and stone each account for very small percentages of the total sample (<3.6%).

There is little that can be concluded regarding these materials, other than by their collective presence at some of the sites:

GS1: contains ceramic, fauna, charcoal and iron, the greatest number of artefact types. Originally this site was chosen as it appeared to be a ‘food preparation’ area. The coexistence of these types of artefacts may then support this claim, in combination with the associated maize lower grindstone. The single iron implement is non-diagnostic and thus cannot provide greater resolution in this regard.

Remaining sites: contain ceramic and charcoal (SQ1) and ceramic and fauna (SQ2 & 3), but these residues are typically found in residential areas.

In total, nine pieces of decorated pottery were recovered, and in several instances a red burnish slick occurred on both the inside and outside of individual sherds. Figure 13 provides an illustration of these decorations, as well as an indication of the vessel profiles. All of the diagnostic ceramic shards exhibited similar features. They consist of bowls and possible jars



with bands identified below the rim or in the neck area of the vessel. These bands consisted mostly of a series of punctates that were created by depressing either a tool or even fingernail into the clay while it was wet, before firing. Several of the shards were too small to securely associate with a ceramic tradition (e.g., Fig. 14), but they still provide useful insights into the decoration styles present at the site.

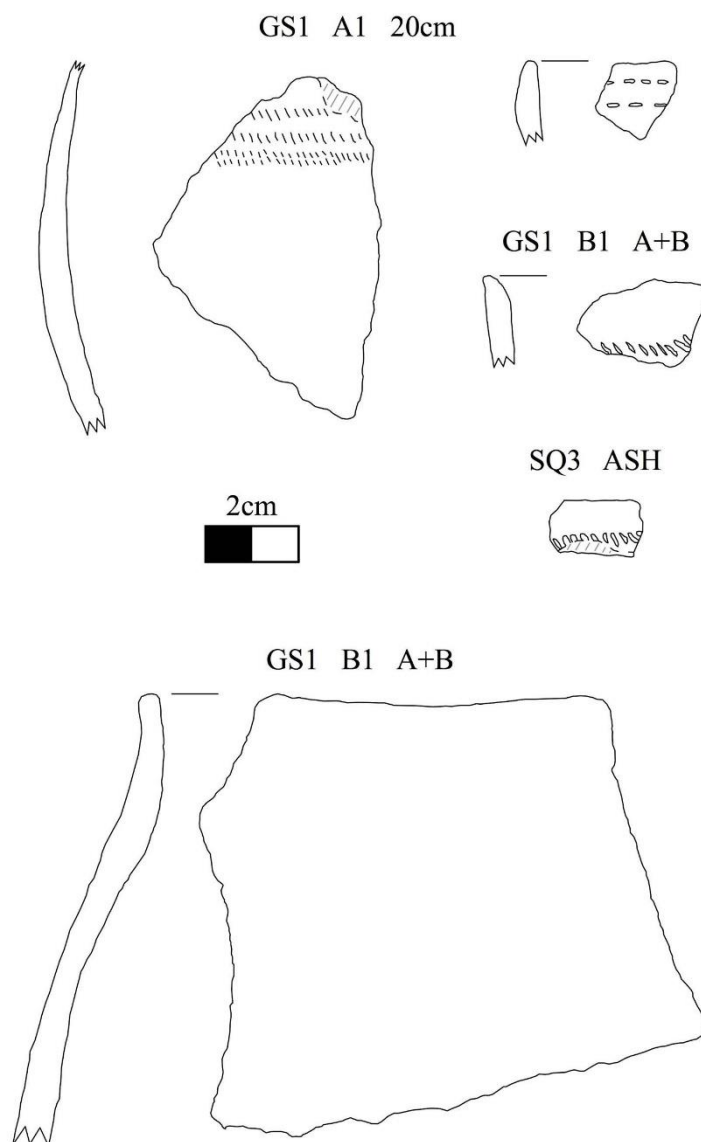


Figure 13. Ceramics from the Eastern settlement excavations (sites GS1 and SQ3).



Figure 14. Small ceramic shards with clearly marked decorations (large bold blocks are 10 mm).

3 Interpretation

Key cultural residues that assist in building an interpretation of the site are the walling, specifically its spatial orientation, and the ceramic sequence. No other clear evidence indicating either a cultural identity or a chronology, that can be associated with the site, was identified. Nonetheless, the available data are sufficient to provide a somewhat detailed background of the site. The walling and ceramic assemblages are discussed separately below and the interpretation is concluded with a broader discussion.

3.1 Stone walling

As presented above, Rietfontein 338 preserves three distinct settlement areas, termed here the Eastern, Northern and Western settlements (for the discussion we exclude the Modern settlement, since it in no way relates to the prehistoric occupations). Between the Eastern and Northern settlement, on the edge of the hill, are a series of walled-off areas, possibly hut bases. These are the only walls that are not clearly associated with a settlement but are likely

affiliated nonetheless. It is highly likely that all of the settlements are associated and occupied during a similar or the same phase. Such examples are common in the North West and other parts of southern Africa (e.g., Hall 2012). The supposed stone 'foundation/walkway' in SQ1, thought to be a distinct feature at the site, was deemed to be natural.

With regard to the identity of the settlements' occupants, the specific design of the settlement (i.e., their shape) is distinct and culturally specific. The walling appears to be consistent with Molokwane walling, dating to the late 18th and early 19th centuries AD (cf. Jordaan 2016), but possibly even from the 17th century (Huffman 2000); some of these settlements were abandoned between 1823 and 1838 when Mzilikazi raided the interior (Huffman 2000: 17). Molokwane settlements are defined by: scalloped outer walling along the perimeter of the site; internal divisions for livestock and dwellings; middens within the settlement and a large midden at the entrance (Huffman 2007: 40); and, aggregations of settlements in a limited area (Taylor 1979). This settlement type is associated with Sotho-Tswana speakers. Thus, the likely chronological period for the site based on the walling designs is at least from the 18th century, but possibly earlier, and into the 19th century.

3.2 Ceramic assemblage

Buispoort ceramics are typically associated with Molokwane settlements. This facies is characterised by rim-nicked and incised decorations found on the vessel in the rim, neck and shoulder areas (Huffman 2007: 205). Uitkomst pottery is also known of in the study area and is similar in age to Buispoort but differs markedly in the dominance of comb-stamping, a style almost absent in Buispoort ceramics (Jordaan 2016: 38-39).

Comparing the ceramics from the Eastern settlement to known typologies it appears as if the shards belong to the Buispoort facies. The Buispoort-like shards from the site include notching at the base of the rim and neck in bands. If correct, this confirms the Molokwane walling association since Buispoort pottery is known to belong to such settlement types.

3.3 General discussion

The settlement complex appears very similar in structure and appearance to other known Molokwane settlements and this is to some extent confirmed through the identification of Buispoort-like ceramics in the occupied areas. The hill very possibly represents an aggregated settlement complex occupied somewhere between the 17th and 19th centuries and was possibly set up in such a way for defensive purposes. Therefore, the entire hill complex should

be seen as a continuous cultural mini-landscape that is connected not only spatially and chronologically, but also structurally (i.e., consistency of architectural features) and ideologically (i.e., the same cultural groups inhabited the settlements). This site, therefore, represents a nodal point on the landscape and may have housed a community numbering in the thousands.

4 Final recommendations

In accordance with the findings of this report it is imperative that the settlements on Rietfontein 338 be conserved for future research. The following specific recommendations are required:

- Immediate intervention may include the fencing in of the ridge;
- Formulate a Heritage Site Management Plan that will provide the details and strategy behind the conservation efforts, making specific reference to the following:
 - Monitoring subsequent to blasting activities to gauge the influence of vibrations and fly rock on the integrity of the site;
 - Quarterly and annual on-site monitoring by a qualified specialist; and
 - Progress reporting for submission to the heritage resources authorities during the implementation of the Project.

5 References

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