AN INVESTIGATION OF THE MATERIAL CULTURE FROM FIVE MIDDLE IRON AGE SITES IN THE LIMPOPO VALLEY

By

BELINDA LEIGH LIPPERT

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Supervisor: Dr Alexander Antonites

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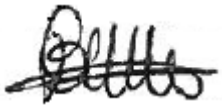
Declaration

I, Belinda Leigh Lippert, declare that this dissertation is my own original work. Where secondary material is used, this has been properly acknowledged and referenced in accordance with university requirements. This work has not been submitted before, in whole or in part, for any other degree or examination.

Signature: 

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Any opinion, findings and conclusions or recommendations expressed in this dissertation are those of the author and therefor the NRF do not accept any liability thereto.

Abstract

The rise of complex societies in the Limpopo Valley has received much attention over the years. The development and functioning of socio-political centres, such as Mapungubwe, has been the chief focus. Mapungubwe elite are believed to have controlled access to high status items within the Shashe-Limpopo Confluence Area (SCLA). Thus exotic trade goods, including glass beads and cowrie shells, and non-utilitarian metal items have been associated with elite status within the SCLA. These items do, however, appear at sites in the hinterland which necessitates a re-examination of previous assumptions about the control over 'prestige goods' on the larger landscape. This dissertation focusses on five small Middle Iron Age sites (AD 900 to 1300) in the Middle Limpopo Valley. The analysis of the small finds, glass and disk beads, non-utilitarian metal and spindle whorls, of each site provides insight into the activities taking place at a site level. The data generated in this work provides a starting block from which new understandings of hinterland can be built.

Key words: Mapungubwe, hinterland, small finds, prestige goods, trade, southern Africa.

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Chapter 1: Introduction

The Shashe-Limpopo Confluence Area (SLCA) has been the focus of a large number of research projects conducted in order to better understand the development of complex societies in the area (Fouché 1937; Gardner 1955; Hanisch 1980; Meyer 1998, Calabrese 2007; Huffman 2007a). In southern Africa the term Iron Age is used to refer to the period of history associated with farming communities. Of specific interest is the Middle Iron Age period (MIA), dating between AD 900 to 1300, at which time social stratification and the development of new forms of political leadership took place at Mapungubwe.

The origins of state formation can be seen at Schroda (AD 900 to 1025) where it is thought that the onset of trade with the Indian Ocean network brought access to an array of exotic goods (Hanisch 1980; Raath 2014; Wood 2000). Further evidence for the intensification of international trade and the beginnings of class separation are present at K2 (AD 1030 to 1220) which has been interpreted as a regional political centre (Meyer 1998, 2000). Evidence for clearly defined social stratification is found at Mapungubwe (AD 1220 to 1270) which is seen as one of the first state societies in southern Africa (Huffman 2000, 2007a, 2015; Meyer 1998). The size and extent of the Mapungubwe state has been postulated but not yet fully tested.

A complex set of interactions took place within the SCLA that have been a topic of some debate (Calabrese 2000b, 2007; Du Piesanie 2009; Wood 2012). Access to naturally occurring resources along with local and exotic trade goods was varied and has been explained through a system of strict control by elite groups (Calabrese

2000a, Huffman 2007b). Restricted access to items of trade likely built patron-client relationships between settlements of differing status or ethnicity during the MIA (Calabrese 2007; Du Piesanie 2009; Huffman 2007b, 2009). This imbalance of power, and implied control, was assumed to apply to the entire Mapungubwe state.

Mapungubwe did not exist in isolation instead it formed part of a larger system of exchange that involved a number of important participants who negotiated interactions on a wider landscape. Farther afield investigations into the articulation between the heartland and hinterland have been conducted at sites such as Mutamba (Antonites 2012, 2014, 2019). This research has provided insight into the agency and autonomy afforded to communities outside the SLCA and serves as a starting point for further research into hinterland communities.

An understanding of the relationship between the political centres and the smaller settlements situated outside of the SCLA remains poorly constructed due to a lack of comparative data from additional sites in the hinterland. Data from smaller hinterland sites needs to be included in the discussions about complexity in 13th century southern Africa. The five sites in this dissertation all fall within this designation.

Three of these sites are located in the Maremani Nature Reserve: Vryheid (MNR 04) is situated 85km to the east of Mapungubwe and Frampton 1 (MNR 74) and Frampton 2 (MNR 78) are located a further 15km east beyond that. The remaining two sites, Evelyn (EV 01) and Klein Bolayi (EV 02), are located in Klein Bolayi Game Farm less than 50km east of the Confluence Area.

1.1 Research Objectives

The focus of this research is to present data on hinterland sites through the analysis of the material culture found at each site. Within this larger objective the dissertation is structured around the following aims:

To provide a comprehensive analysis of the small finds excavated from the sites in the study.

To determine how the clusters of sites articulate regionally with one another and more broadly, how they articulate with the sites located in the core of the Shashe-Limpopo Confluence Area.

To investigate the social organisation of small scale sites located in the hinterland of the Mapungubwe polity.

1.2 Dissertation Structure

Chapter 2 provides background information for the study area. Chapter 3 is a review of the current and relevant literature pertaining to research conducted in the Limpopo Valley to date. Chapter 4 presents theoretical frameworks that deal with the functioning of societies in the Iron Age. Chapter 5 outlines the methodology used in order to answer the above mentioned research objectives. Chapters 6, 7, 8 and 9 provide detailed excavation reports and present the material culture found at The Framptons (MNR 74 and MNR 78), Vryheid (MNR 04), Klein Bolayi (EV 02) and Evelyn (EV 01) respectively. Chapter 10 will draw on the information presented in

the previous chapters to provide an understanding of the activities taking place at each site as well as draw comparisons between sites and provide final concluding remarks.

Chapter 2: Research Area

The sites discussed in this dissertation were all excavated as part of two larger research projects conducted by A. Antonites and C. Ashley. This research focusses on the role of Mapungubwe commoners in the Middle Limpopo River Valley (MLRV). For the purposes of this study the MLRV refers to the area south of the Limpopo River with the Mogalakwena River forming the western boundary and the Luvuvhu River forming the eastern boundary. It covers a stretch of approximately 250km and includes the Shashe-Limpopo Confluence Area (Figure 2-1).

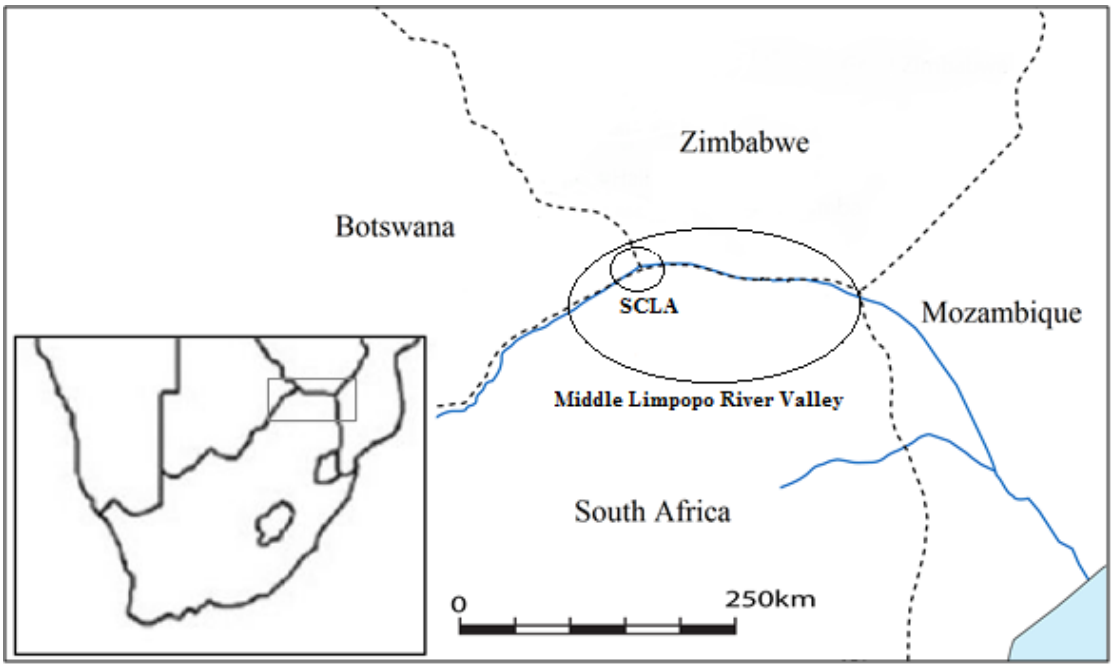

Figure 2-1: The Middle Limpopo River Valley

2.1 Background to the sites

Vryheid (MNR 04), Frampton 1 (MNR 74) and Frampton 2 (MNR 78) are found within the Maremani Nature Reserve which is located on the border of Zimbabwe, east of Musina, in the Limpopo Province of South Africa (Figure 2-2). The reserve itself was formed in 1999 as part of a large ecological restoration and nature conservation project funded by the Aage V. Jensen Charity Foundation. It includes a number of farms that were restored to, or as close as possible, their original state (prior to being used as agricultural land).

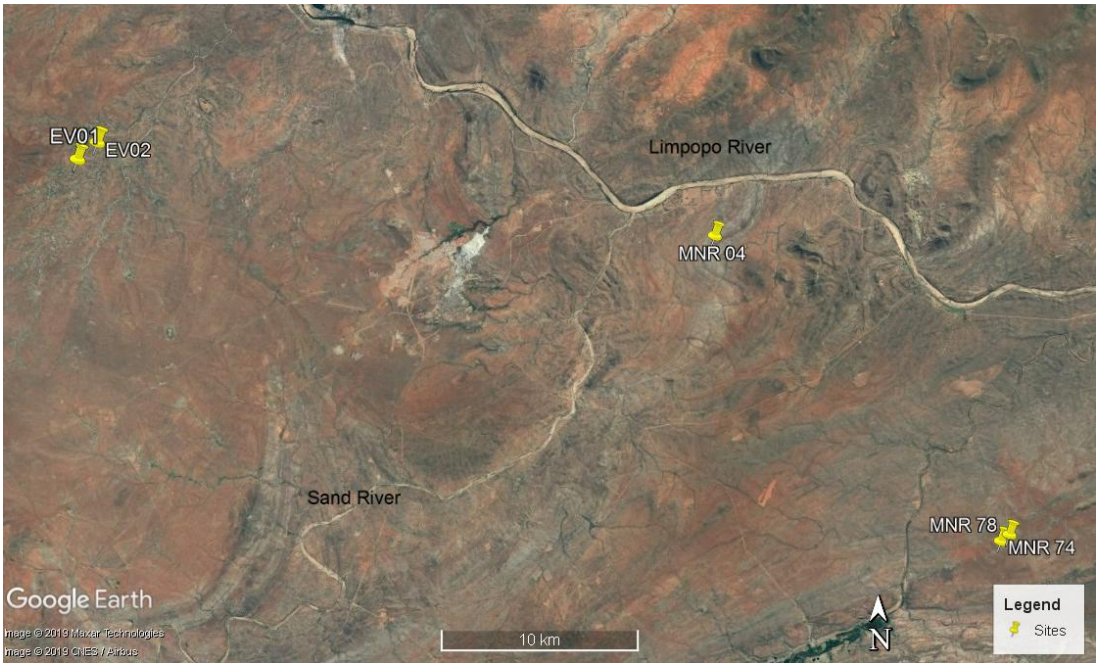

Figure 2-2: Site locations (Google Earth 2019)

N. Kruger conducted surveys of selected areas of Maremani in 2004 as part of an unfinished MA project and documented a number of sites ranging in size and age. He used the designation MNR and this was continued in later surveys by A. Antonites and C. Ashley. Antonites approached the Aage V. Jensen foundation in 2013 to

initiate research within the park. At the outset the focus was on finding and excavating Mapungubwe period sites along with later occupation sites.

Evelyn (EV 01) and Klein Bolayi (EV 02) are both located in the Klein Bolayi Game Farm located 50km east of Mapungubwe on a portion of the farm Evelyn 190MS (Figure 2-2). A large granite boulder is a prominent feature on the otherwise undulating landscape and lends its name, Klein Bolayi, to the nearby lodge. The presence of archaeological sites on the farm was brought to the attention of Antonites by Prof Tom Huffman who had been in contact with the farm's current owner Mr E. Uys. Antonites and Uys began contact and organised the initial reconnaissance of the area in 2014.

In 2015 Evelyn (EV 01) was excavated followed by the excavation of Klein Bolayi (EV 02) in 2016. A third site EV 03 was excavated in 2018 but will not form part of this dissertation. An intensive survey was conducted by N. Fletcher as part of an unpublished honours project in 2015 wherein a further 43 sites of archaeological interest were identified.

The sites herein were excavated as part of a NRF funded projects titled "The Archaeology of the Central Limpopo Valley" (CSUR13091944048) and "New approaches to Mapungubwe commoners: filed and collections-based research" (AOP150925143015).

2.2 Geology of the MLRV

The Limpopo Mobile Belt is subdivided into three separate zones; the Northern Marginal Zone (NMZ), Southern Marginal Zone (SMZ) and Central Zone (CZ). All

five of the sites discussed in this dissertation fall within the CZ which is composed of "amphibolite- to granulite- facies granitoid gneisses and supracrustal sequences" (Brandl 1981 c/o Kröner et al 2018:320).

One of the granitoid gneisses that forms part of the CZ is the Beit Bridge Complex. Within this complex lies Gumbu, a marble-dominated succession, a supracrustal rock formation deposited over 3.4 Ga (Brandl 1981). This formation consists mainly of calc-silicate rocks and marble which are principally sedimentary in origin (Wilson 1989). The ridge on which the Frampton Site Cluster sits falls within the Gumbu formation.

The hill on which Vryheid (MNR 04) sits is positioned on top of the Messina Layered Intrusion, one of the oldest layered intrusions on earth (older than 3.1Ga). This intrusion is made up of deformed and metamorphosed anorthosite and leuconorite within which are found layers of chromite and magnetite (Brandl 1981).

The CZ of the Limpopo Mobile Belt also contains a complex of unique geology called the Bulai Gneiss Suite (Kröner et al 2018). This granitic body was formed 3150 million years ago and contains xenoliths such as the Bulai pluton which is visible on Evelyn farm. The Bulai pluton is 2.61 million years old and is comprised of granite, granodiorite and charno-enderbite. Within this pluton is the Evelyn supracrustal enclave, which extends 700m in length and is visible in the Klein Bolayi River bed. The resultant landscape is dotted with granite outcrops.

2.3 Climate, Ecology and Fauna

The Limpopo Valley is defined as a semi-arid climate, receiving around 350mm of precipitation annually. It has a rainy season that extends from October to March with a peak in rainfall during January and February, however rainfall is highly variable (Smith 2005). The Limpopo River and its tributaries are thus non-perennial (Götze et al. 2008).

The areas surrounding the Limpopo River are generally classified as Mopane Bushveld which is part of the larger Savanna biome. The banks of the river itself are covered dense riverine growth (Van Rooyen and Bredenkamp 1996). A high plant and animal diversity is consistent throughout the valley. Numerous distinct plant communities occur throughout the Limpopo Valley (Götze et al. 2008)

2.4 Summary

The Limpopo Valley is home to both unique geological features and a variety of plant and animal life. This environment has played host to a number of communities since the Early Stone Age and has thus been the backdrop for the wide array of archaeological research. The relevant research from the MLRV is presented in the next chapter.

Chapter 3: The Archaeology of the Limpopo Valley

Middle Iron Age research in the Limpopo Valley has by and large focussed on sites within the Shashe-Limpopo Confluence Area (SCLA). Sites such as Schroda, K2 and Mapungubwe, considered to be socio-political centres, have been widely written about (Fouché 1937; Gardner 1949, 1955, 1963; Fagan 1964; Hanisch 1980; Meyer 1998; Huffman 2007a, 2009, 2015). The published information on smaller sites within the Confluence Area is limited (Calabrese 2007; Du Piesanie 2009) and even more so farther afield (Loubser 1991). More recent studies have assisted in understanding the role of hinterland communities although published data for smaller sites remains minimal (Antonites 2012, 2016, 2019; Antonites et al. 2016; Antonites & Ashley 2016).

3.1 Foragers in the Limpopo River Valley

Prior to the arrival of farming communities in the Limpopo Valley the area was occupied by foragers. The term 'forager' refers to the "hunting and gathering people of Southern Africa" (Lee 1976:5). The term 'farmer' here refers to more sedentary agriculturalist communities who made use of metal objects (Miller & Van Der Merwe 1994) . Some of the earliest Holocene forager evidence comes from Balerno Main Shelter and dates to c. 12,000 BC (van Doornum 2008). Between 1220 BC and AD 100 an increase in forager settlements has been documented. These sites generally fall into two categories; smaller satellite sites, which may have been occupied seasonally or on a temporary basis, and larger more permanent sites which may have functioned as aggregation camps (van Doornum 2008).

In the following period, AD 100 to 900, forager sites become more numerous on the landscape. This could be due to the occupation of arable land surrounding the Soutpansberg by farming communities (Hall & Smith 2000). The arrival of farmers in the early first millennium AD spurred the development of new power dynamics in the region. Over time, the nature and extent of interaction between forager and farmer groups underwent significant changes. Initially foragers lived alongside farmers in a pattern that persisted well into the 13th century (Forssman 2011). However, by the 14th century AD forager sites are believed to be absent from the SCLA landscape (Hall & Smith 2000).

During the final phase of contact (AD 1010 to 1300), there was a decrease in artefact densities at a number of sites excluding those such as Balerno Main Shelter, which were seen as aggregation sites (Forsman 2011). Van Doornum (2008) argues that the degree of change seen in forager settlements is contingent on two factors: the size of the forager site and its proximity to farmer settlements. Similar conclusions were reached by Forssman (2011, 2017) stating that forager mobility was not hindered by the arrival of farmers into the area, only that it had an influence on the sites chosen to be settled.

Changes in lithic assemblages at forager sites have been used as an indication of a possible dependence, the level to which is unknown, of foragers on the farmers at the time. Views regarding the relationship between the two groups have shifted over the years. Earlier narratives saw contact as resulting in forager groups being "absorbed or displaced" with no real agency in the situation (Denbow 1990:170). Alternatively it has been suggested by Hall and Smith (2000) that forager communities were involved in the production of a number of goods such as ostrich eggshell beads, skins and

perhaps ivory objects. This proposed impact on the economy may have afforded the foragers a degree of status in the local community (Forssman 2017).

The regular presence of trade goods at forager sites seem to support this notion but the exact nature of the roles assumed by each group need to be investigated further. Forssman (2017), notes that it would be beneficial to investigate the contribution of forager groups to the economy and whether it contributed to development of social complexity in the MLRV.

3.2 The Limpopo Valley c. AD 400 to 1050

Pinpointing the initial farmer occupation of the Limpopo Valley is problematic. In the Soutpansberg, farmer settlements appear between AD 300 and 500. In the valley itself however, no Early Iron Age residential sites have been identified. Bambata and Happy Rest ceramics occur in the valley on a few hilltops and in the bottom layers of occupation at Mapungubwe which have been interpreted as rain-making sites (Hall & Smith 2000; Meyer 2000). This could mean only a temporary and ephemeral presence, perhaps due to low rainfall that could not support farming activities (Huffman 2008:2036). Presently, though, no definitive statement can be made about the initial farmer settlement of the valley.

The influx of Zhizo-using farmers in the Limpopo basin has been attributed to a number of contributing factors. Zhizo ceramics are first identified in southwestern Zimbabwe as early as AD 750, appear in the Limpopo Valley around 100 years later, and are present until the end of the eleventh century AD (Huffman 2007a: 143). Originally it was believed that favourable farming conditions influenced the

movement south (Robinson 1966). Climatic data compiled by Smith et al. (2007), however, would suggest that conditions in the ninth century were unfavourable for large-scale agriculture although the low rainfall may have been offset by the utilisation of flood plains and wetlands in the area. The authors instead suggest that the area was settled in order to make use of the empty landscape and establish political and economic dominance. Van Doornum (2008) and Forssman (2011) have both shown that the landscape was by no means empty although there were no established farming communities present at the time. A contributing factor may also be the large elephant herds present in the SCLA which were hunted for their ivory (Forssman et al. 2014). Ivory was a sought after commodity for trading, especially internationally through the Indian Ocean trade network (Huffman 2000; Sinclair et al 2012). Evidence of its use and processing, on a large scale was found in the faunal material at the 10th to 11th century AD Zhizo settlement Schroda (Plug 2000; Raath 2014).

Schroda (named after the farm it is located on) is situated on a rocky plateau covering an area of approximately five hectares (1980), 7km east of the Shashe-Limpopo Confluence Area. Two distinct occupation phases have been identified at Schroda supported by both ceramic and glass bead assemblages (Raath 2014; Wood 2000). The first phase, associated with Zhizo ceramics, took place in the 10th century AD with the beginning point possibly being as early as AD 900 (Vogel 2000). The second phase, associated with Leokwe ceramic production, started at around AD 1000 and only lasted roughly 100 years (Vogel & Calabrese 2000; Calabrese 2007; Huffman 2007a; Raath 2014).

The interplay between Leokwe and Leopard's Kopje groups was investigated by Calabrese (2007) at Leokwe Hill. Leokwe was identified and classified as a new ceramic phase by Calabrese (2007:223) who posited that the development of the Leokwe ceramics was a result of interaction with people who made Leopard's Kopje ceramics after AD 1030 (Vogel 2000). Calabrese (2007:197) notes that there is not a 'drastic' difference between Zhizo and Leokwe ceramic styles, but rather a stylistic development characterised by the incorporation of Leopard's Kopje design elements.

The Zhizo occupation phase at Schroda has evidence of widespread local as well as international trade, confirming the site's prominence on the landscape for this period (Raath 2014). Metal implements, ivory crafts as well as possible basketry and other craft goods are evidence of trade (Hanisch 1980; Raath 2014). Cowrie shells and a marine mollusc corroborate costal trade links (Chirikure 2014) and the abundance of glass beads confirms links to international trade routes (Hanisch 1980; Raath 2014).

Over 600 glass beads were recovered from the site (Hanish 1980), however only 441 were later analysed by Wood (2011). The majority (n=325) belong to the Zhizo bead series which according to Robertshaw et al. (2010) are made in the Middle East. Zhizo series beads are believed to have entered southern Africa as early as the 8th century AD (Wood 2000) with their initial port of entry being Chibuene in southern Mozambique (Sinclair et al. 2012). These beads were not only used in their original form but were also melted down to form larger beads known as 'Garden Rollers' four of which were found at Schroda (Hanisch 1980) and are likely to date to the Leokwe occupation of the site. These beads are sometimes tied to status due to their rarity in the archaeological record (Wood 2011; Calabrese 2007).

Hanisch (1980) excavated six spatial areas within the site (TSR 1-TSR 6). Raath (2014), tentatively identified a number of activity areas within these, including household and food processing areas for both occupations of the site. The Zhizo period deposits include excavation area TSR4 which yielded a number of figurines depicting stylized female torsos (Hanisch 1980) and have since been linked to 'the procreative powers of women' and fertility rituals (Dederen 2010: 26). However, due to their association with a household context, Raath (2014:298) suggests they may have been domestic personal items, and not community-wide ritual in nature, following Wood's interpretation (2000: 92). TSR5 and TSR6 contained the debris of ivory production, crafting of bone objects and metal smelting showing that production activities took place in these areas (Raath 2014: 299). During the Leokwe occupation TSR6 continues to be used as a production area with a number of specialised activities such as possible basketry, shell bead production and metal working taking place (Raath 2014: 302).

Schroda was clearly a site of political and economic importance during its Zhizo occupation phase (Huffman 2007a) but a full understanding of its social and political role during the Leokwe occupation is still needed (Raath 2014). Original interpretations asserted that Schroda was abandoned as a direct result of the arrival of Leopard's Kopje-using people to the valley and their subsequent control over international trade from the capital of K2 (Fouché 1937; Hanisch 1980). Initially interaction was seen as hostile, with the Leopard's Kopje-using people seen as driving out the previous inhabitants of the valley (Huffman 1980, 1986). This relationship was later suggested to be more nuanced by Calabrese (2007), based on findings at

Leokwe Hill, and the continued settlement of Schroda after the establishment of K2 in the area.

Leokwe Hill, originally interpreted as a Mapungubwe period provincial capital (Huffman 1986), was later found to have been concurrently occupied by two distinct groups, each associated with different ceramic styles (Leopard's Kopje and Zhizo) (Calabrese 2007). The site is 10kms south of the SLCA and is located on the farm Little Muck in the Limpopo province of South Africa.

There are two distinct areas of occupation at Leokwe Hill. The first is the Northern terrace, Area A, associated with large stone walls and accompanied by (Leopard's Kopje) K2 and Transitional K2 ceramics (Calabrese 2000a, 2007). The northern side of the hill, Area B, has a large midden filled with Zhizo style ceramics. This vertical distribution of ceramics coincides with an uneven distribution of trade goods such as glass beads with Area A yielding 148 beads and Area B only five. Calabrese (2007) goes on to use the vertical distribution of ceramics and trade goods as evidence for the presence of class based division and mutual habitation of the valley by the two groups from the beginning of the 11th century AD.

The presence of both K2 and Leokwe ceramics at Leokwe Hill, are seen as the result of interaction between ethnic groups. The relative status at the start of this interaction is unknown, with K2 people eventually developing into the dominant group (Huffman 2007b, 2014). Unlike initially suggested by Calabrese (2000b), Huffman believes that social stratification did not take place before the 13th century. Instead, Huffman (2007b) argues that radiocarbon dating along with stratigraphic relationships and the

analysis of the glass beads at the site assert the most likely date for the appearance of social stratification to be between AD 1200 and 1250 during the Mapungubwe period.

3.3 The Limpopo Valley c. AD 1050 to 1200

The site of K2 was occupied by Leopard's Kopje-using people and dates between AD 1030 and 1220 (Vogel 2000). It is spread over a five hectare area organised into a 'central homestead complex surrounded by a peripheral settlement' (Meyer 2000:6). Meyer (2000) initially estimated that the site housed around 5000 people, however a later estimate by Huffman (2009) has placed the number much lower at 1500 to 2000 occupants. A large central midden was excavated and revealed that it covers the original central kraal which had eventually been abandoned. Identifiable domestic areas and cattle dung deposits surround this midden and make up a central homestead (Meyer 2000).

Initially, the site was organised around a centrally placed cattle enclosure/s or kraal, (Huffman 2007: 31-33). Cattle were a sign of wealth and status as they were used to pay bridewealth and formed an integral part of the agriculturalist system (Kuper 1980; Huffman 2001). Their position at the centre of a settlement is a practical means to safeguard wealth and also emphasises the male dominated areas of the settlement as the kraal was used as an area for men to hold court and discuss important matters (Huffman 2009).

Sites which are organised around a central kraal are often interpreted in accordance with the Central Cattle Pattern (CCP). This model is a structuralist interpretation of settlement layout developed from ethnographic data by Kuper (1980, 1982) and later

applied to archaeological sites by Huffman (1986, 2001). Within this interpretation the central kraal is a male domain where court is held, disputes are heard, smithing activities and male crafts are carried out. It is also the locale for long term grain storage pits and burials of high status, mostly male, individuals (Huffman 1986). The size of the court could be directly correlated to the power and rank of a chief, therefore the larger the court the more important the chief (Huffman & Hanisch 1987).

The outer, or residential area, is the domain of married women; their households, kitchens, grain bins and often their place of burial. Activities such as smelting would take place in a secluded area outside the settlement as it shares symbolic connections to reproduction and is thus a sacred matter. The notion that the front of a settlement is public and secular whereas the back area of a settlement is private and sacred is mirrored at a household level (Kuper 1980; Huffman 2001).

At K2, prior to the occupation of Mapungubwe, alterations to the site's settlement layout are clear and resemble early iterations of the Zimbabwe Pattern a prerequisite of social stratification (Huffman 2007a, 2009).

The shift of the kraal away from the centre of the settlement at K2 is therefore particularly significant given the structural link between cattle and male power. Huffman (2001) links this development to a greater emphasis being placed on trade goods and metal items as forms of power and wealth. Cattle herding may have been outsourced to Leokwe cattle outposts (Huffman 2014).

3.4 The Limpopo Valley c. AD 1200 to 1300

The ceramics found at K2 began to change around AD 1200 and have been reclassified as Transitional K2 (TK2) which marks a change in political and social structure (van der Walt 2012). Around AD 1250 the leaders of K2 moved to Mapungubwe Hill where new socio-political complexities were manifested in a new settlement pattern (Huffman 2007a; Meyer 1998).

Mapungubwe Hill was occupied permanently from AD 1220 to 1300 (Huffman 2009) with the immediate settlement expanding some 10 hectares around the hill itself and housing an estimated 5000 people at its peak (Huffman 2000). Previously the hill had served as an important landmark and rainmaking site during K2 occupation (Schoeman 2006). In societies that rely on agriculture the role of the rainmaker is one of great importance. This person was seen as the one who could intercede between the ancestors and the living; the power they wielded through the use of medicines and rituals, could bring about rain and thus provide a healthy harvest (Murimbika 2006).

In the Limpopo Valley during the 13th century, specific sites were believed to have been used for rainmaking due to their position away from the K2 capital. Hilltops with either naturally formed rock cisterns or streams nearby were regarded as potent areas (Schoeman 2006). At Mapungubwe the dwelling place of elites, rainmaking and sacred leadership were combined in the same physical space (Huffman 2007:376). This incorporation of the ritual space is understood to have been used to give legitimacy to the chief through his association with the sacred space (Huffman 2000).

The physical separation of the classes at Mapungubwe is seen in the isolation of the king and his relatives at the top of Mapungubwe Hill, from the rest of the community who lived at the base of the hill. This type of settlement pattern is known as the Zimbabwe Pattern (Huffman 2001, 2009). The new pattern included five components; a palace, a court, a compound for the wives of the leader, a place for followers and places for the guards. The palace was set apart from the rest of the settlement as a private and sacred space of king, an organisational pattern that embodied his role as a sacred leader. The back of the palace also contained the rainmaking area used by the sacred leader as a place to pray to the gods through his ancestors (Murimbika 2006).

The intentional division of space at Mapungubwe is apparent in the distinct occupation areas. Mapungubwe Hill housed the leader and those of a high status, while the court was at the base of the hill with the commoners living in front of it; a spatial expression of the new socio-political order. The land around Mapungubwe Hill was settled by the commoners and used for agriculture and the keeping of livestock, pursuits made possible by fertile soil and favourable farming conditions (Meyer 1998).

The surplus production of food from large scale farming allowed for specialist craft production (Huffman 2008). The crafts produced included iron, copper and gold items, along with ivory objects (Miller 2002). The production of iron and other metals was closely linked to ideas of reproduction and transformation and is argued to have been controlled by elites (Calabrese 2000a). The redistribution of these metals was associated with the strengthening of kin-based ties and systems of tribute forming a part of the intensifying trade taking place both regionally and internationally. Local trade network involved a number of settlements that contributed indirectly to

participation in the Indian Ocean trade network (Huffman 2009:50). Gold, ivory and animal skins were traded for glass beads, cloth and in rare cases exotic ceramics. Four small sherds of Chinese celadon were also recovered from Mapungubwe Hill and were classified as Southern Song ceramics (AD 1127-1279), (Fouché 1937; but see Prinsloo et al. 2005).

Mapungubwe, due its large size and the widespread appearance of its ceramics, was estimated to have influence over an area as large as 30000 square kilometres (Huffman 2009) and thus has been interpreted by Huffman as the centre of southern Africa's first state society (for the counter argument see Chirikure et al. 2013b, 2016). It was a hub for trade and social activities and acted as a central distribution point for trade goods offered in exchange for fealty (a full discussion on exchange networks will be dealt with in Chapter 4). The decline of Mapungubwe is not well understood but it is clear that by AD 1300 political power had moved to Great Zimbabwe and Mapungubwe was eventually abandoned during the 14th century (Huffman 2009).

3.5 Peer Polities

The chronology as laid out above is the most widely accepted version of events. However, some (e.g. Chirikure et al. 2013a, 2013b, 2014) reject the single trajectory of power from Schroda to K2 and finally culminating in the separation of social classes at Mapungubwe. Through re-examining ceramic evidence and stone architecture of larger sites in conjunction with using Bayesian modelling of radiocarbon dates, Chirikure et al. (2013a) proposed an alternative political situation for the area.

Sites such as Mapungubwe, Mapela, Malumba and even the earlier occupation of Great Zimbabwe (Chirikure et al. 2013b) possess stone walling coupled with the presence of exotic trade goods. These sites are dated late 1st millennium to the early second millennium AD which prompted Chirikure et al. to propose that they functioned as "peers and not subordinates" (2013a: 362). This follows the model set forth by Renfrew (1996) wherein interaction between competing polities results in the adoption and implementation of a large degree of structural similarities and parallels.

The fact that gold and other imported artefacts were recovered from a number of sites that are contemporaneous with Mapungubwe is seen to suggest the absence of a central redistributive authority (Chirikure et al. 2013a). Sites such as Mapela Hill, Malumba and Mapungubwe overlap chronologically. Although separated by vast distance they share similar features such as stone walling, hilltop settlement, the presence of trade goods and the working of gold (Chirikure et al. 2013a). The initial interpretation was that these sites served as provincial or district centres under the control of Mapungubwe (Huffman 2015). Chirikure et al. (2014), however, suggest instead that they were competing peer polities and served as multiple nodes of control as the formation of early states was likely to have arisen in multiple communities exhibiting the same cultural practices.

3.6 Beyond the Shashe-Limpopo Confluence Area

The bulk of research to date has focussed on the large 'capitols' like Mapungubwe, Khami and Mapela Hill. Few smaller sites have been given any attention and those that have been studied are mostly located close to the SCLA (e.g. Calabrese 2007; Van Ewyk 1987). Du Piesanie (2009) conducted surveys of the smaller sites within

the SLCA in order to understand differing access to resources between Leokwe and Leopards Kopje groups (discussed in detail in Chapter 4). No excavations were conducted and only surface material culture documented which means that little comparative analysis can be done. Mapungubwe ceramics have, however, been excavated at certain sites outside of the SLCA and will be briefly described below.

3.6.1 Mutamba

Research conducted at Mutamba, located some 80km south of Mapungubwe on the northern slopes of the Soutpansberg foothills, sheds light on the interactions between Mapungubwe and sites in the wider hinterland (Antonites 2012, 2014). The site is located in a natural saddle along a sandstone ridge that runs from east to west. It was first excavated by Loubser (1988, 1989, 1991) and later by Antonites (2012, 2019). Initial excavations consisted of one 3m x 3m trench being placed over an ashy concentration which revealed a badly disturbed deposit (Loubser 1991:254). Later excavations, conducted in 2010 and 2011, were more thorough and consisted of multiple test units and two larger excavation units (Antonites 2012). The site itself only extends over an area of around 1.2 hectares and has a central kraal area most likely surrounded by residential areas. The earliest occupation layer of the site is associated with Mapungubwe ceramics and id dated to the mid-13th century. This occupation is followed by number of later occupations including a Mutamba ceramic layer (Antonies 2012).

At Mutamba evidence for small scale production of ostrich eggshell beads and cotton spinning, on a more intensive scale, have been recovered from household contexts (Antonites 2019). The site yielded numerous drawn glass beads (n=342) along with

four wound beads, a single gold bead and metal items. Antonites (2012) therefore suggests this is indicative of the notion that hinterland communities could have made use of their geographical position on the landscape to gain access to prestige goods reserved for elite culture in the SCLA.

3.6.2 Princess Hill

Princess Hill is located on a small sandstone ridge about 5km north of Mutamba. The upper part of the site has been almost completely destroyed by a modern building which obscures a full understanding of the site layout. A large 3m x 3m trench was placed over a concentration of archaeological floors, which contained a number of post holes, on the eastern approach of the hill that leads up to what was tentatively described as central cattle kraal (Loubser 1991).

The only available date for the site comes from a carbonised post found in a post hole of one of the fragmented daga floors. This carbonised post was dated to AD 1180 ± 80 (Wits 1590). The vast majority of ceramics from the site were Mapungubwe ceramics. Along with these ceramics two cylindrical figurines were found as well as eleven spindle whorls. Other finds included five ostrich eggshell beads and an *Achatina* bead. Only three metal items were found; one of which was an iron blade and the other two were copper helix bangles with fibre cores.

3.6.3 Vhunyela

Vhunyela is located at the base of a sandstone outcrop around 10km north of Mutamba. Venda style stone walling sits atop the outcrop but the earlier occupation, marked by visible ash and dung concentrations, was situated at the outcrops base

(Loubser 1991). Two trenches were excavated by Loubser (1991): a 3m x 3m on the edge of the north-west facing dung deposit (Trench 1) and a 2m x 2m trench located near the eastern dung deposit (Trench 2). Both trenches contained Mapungubwe ceramics but there were only a few small finds associated with these layers. In Trench 1, a single arrow head was found along with one piece of iron wire and two spindle whorls. In Trench 2, a single glass bead, long and green, and a single ostrich eggshell bead were found.

3.6.4 Tavhatshena

Tavhatshena is located on a spur just south of the Soutpansberg range and possessed multiple occupations spanning the 12th to 17th centuries (Loubser 1991). The bottom layer, Layer 6, a grey ashy dung layer, of Trench 1 contained Mapungubwe ceramics along with Mutamba and Eiland ceramics. The dung concentration, that Trench 1 was excavated through, was partially enclosed by a low stone wall on the eastern side. Charcoal samples associated with this area were dated to AD 1050 ±110 (Wits 1437). The only small finds explicitly associated with this layer are four iron bangle fragments and one coiled copper artefact.

3.6.5 Verulam

Verulam is located north of the Soutpansberg on a flat topped sandstone hill that is close to the Sand River. Sheer sandstone cliffs limit access to a single eastern approach. Loubser (1991) excavated an L-shaped unit in a particularly ashy area of the site. Only the bottom layer, a layer of ash and dung, could be linked to Mapungubwe occupation. Only a single wound copper artefact was found in this layer.

3.6.6 Stayt

Stayt is located much further east than any of the previous sites mentioned, around 90km south-east of the SCLA and 30km south-west of Tshipise. The site does not take up a full hectare and is located on a sandstone spur. Small finds from the site include four copper ingots, eighteen gold beads and a soapstone amulet (Prinsloo & Coetzee 2001). The remaining small finds were only recently analysed as part of an unpublished Honours project at the University of Pretoria (Hopf 2017). A total of 208 shell beads were analysed, more than ninety percent of these beads were ostrich eggshell (n=191) while *Achatina* shell beads made up the rest of the sample (Hopf 2017:33). A total of 66 glass beads were analysed along with six soapstone beads, six copper items and 15 non-utilitarian iron objects and 20 spindle whorls.

3.6.7 Kromdraai

Kromdraai is approximately 85km south east of Mapungubwe and is north of the Soutpansberg mountain range. The site was excavated in the 1980s by H.P. Prinsloo but the resulting data was never published. Six excavation units were opened on the site but very little information is available about them. Faunal material from the site has been radiocarbon dated to AD 1270-1410 (Vogel 2000:57).

The material culture and ceramics, which are consistent with Mapungubwe type ceramics, were analysed as part of an unpublished Honours paper at the University of Pretoria (Mouton 2017:63). A total of 692 glass beads were analysed, all of which were drawn beads, 202 disc beads (83% of which were ostrich eggshell beads), four soapstone beads, 203 non utilitarian metal items (86% of which were iron), seven

spindle whorls and a soapstone amulet. This abundance of these status items would suggest less strict control over such goods in the hinterland.

3.7 Conclusion

The discussion regarding access to prestige goods such as beads and metals has relied primarily on a model that asserts that political centres had complete control over such goods within their immediate vicinity. The application of this model has been widely accepted but has not been tested against actual data. It is therefore important to turn the focus of the research to smaller sites that are not directly located in the SLCA. These sites can shed light on the distribution of trade goods on the wider landscape and if access to trade goods was actually as strictly controlled outside of the Confluence Area. These sites can provide unique insight into the land use and activities at a site level outside the SLCA.

Chapter 4: Interpreting the hinterland

The majority of research that has been conducted on Iron Age sites has focussed on the large regional centres and little attention has been paid to the specifics of smaller, and often more ephemeral, sites. The way in which these smaller and often less centralised, or hinterland, sites are organised can provide invaluable insight into the functioning of larger political systems during the Middle Iron Age (MIA). Social organisation on a site level provides insight into daily life at these sites while material culture can shed light on interaction with the larger political centres. These interactions are seen through the patterns of consumption, both at a site level as well as on a landscape level.

4.1 Social organisation and site level activities

On a site level specific activity areas are often identifiable through the application of certain spatial models. Social organisation is interpreted through two main settlement patterns that were present during the MIA. The first, the Central Cattle Pattern (CCP), was present in the Early Iron Age and continued to be the dominant settlement pattern for commoner sites in the MIA. The second, the Zimbabwe Pattern (ZP), was present at elite sites and involved the physical division of elites and commoners. This site layout changed along with a change in societal organisation and world view from kinship based- to class based societies (Huffman 2000). Huffman (2001: 24) sees the CCP and ZP as 'normative models' that communicate distinct worldviews. The CCP, for example, would include such worldviews as a patrilineal society with male hereditary leadership and bridewealth in cattle (c.f. Kuper 1982).

Data gleaned from ethnographies provided the base on which these models were built and later applied, in part, to interpret site layout (Huffman 1982). Junod (1927) provided one of the earliest Southern Bantu ethnographies based on time spent among the Tsonga. The resultant detailed recount of bridewealth practices involving cattle, and a complex system of debt and repayment that accompanies their use in marriage negotiations, provided the groundwork for later models. These transactions underpin a vast array of social interactions and enforce mutual obligations thus perpetuating the importance of cattle in a society (Kuper 1980, 1982). The large number of cattle kept at Mapungubwe (Voigt 1983), made it clear that cattle still played an important role even after the shift to the ZP settlement layout (Hall 1986).

A settlement's status, and thus the importance of its chief, has been linked by some to the size of the cattle kraal and associated inferred wealth in cattle (Huffman & Hanisch 1987, Huffman 2009). The kraal was the domain of men, a meeting area in which to hold court, resolve disputes and partake in activities. Based on this assertion Huffman and Hanisch (1987) outlined a five level settlement hierarchy in which the political standing of a settlement could be directly correlated to its size (Huffman 1986). Level 5 sites, the largest settlements, were said to house paramount chiefs and are defined by their large size, covering more than 2500m^2, and the presence of Zimbabwe style walling. Level 4 sites were slightly smaller, up to ten hectares of settlement, and were overseen by a senior chief. Level 3, only roughly three hectares, and were the home of petty chiefs. The smallest sites identified, Levels 1 and 2, are only one hectare or less in size and are positioned on open areas with a central mound of cattle dung (Huffman & Hanisch 1987). This model stood in as a proxy for the interpretation of smaller sites rather than actual excavations taking place. The

perceived functioning of political power and related site size was thought to be reflected directly through site 'wealth' (Huffman & Hanisch 1987: 81). The term 'wealth' here was initially used to refer to wealth in cattle but later was associated with items such as glass beads and non-utilitarian metals (Huffman 2007).

The wearing of metal artefacts, along with the acquisition and display of glass beads, and the related control over their production were associated with elite status during the MIA in the SLCA (Calabrese 2000b, 2007; Huffman 2007a). Control over iron working was linked to the creation, negotiation and institutionalization of power in Iron Age political systems (Fagan 1969; Childs & Killick 1993; Miller & Van Der Merwe 1994; Calabrese 2000; Chirikure 2007). The importance of metals in establishing and developing long distance trade is brought to the fore when the scale of production extended beyond the household level (Calabrese 2000b, Childs & Killick 1993).

In sub-Saharan Africa ethnographic accounts link the production of metal artefacts, both iron and copper, with ideas of reproduction and transformation (Miller 1995). Metallurgy is thus the domain of the male and is on occasion controlled by the chief who in some cases was a metallurgist himself (Childs & Killick 1993). Metal was generally produced in areas that were secluded or private in order to closely guard the knowledge that surrounds the smelting process. Items such as tuyères, slag and the remains of furnace walls have all been used as evidence to confirm the smelting or smithing of metal taking place at site (Miller 1996).

Iron working was an incredibly crucial production pursuit as its significance was twofold due to its use in both "daily utilitarian activities and in ritual and power

relations" (Chirikure 2007: 73). In farming communities the use for iron artefacts such as hoes, axes and adzes, was essential in order to increase productivity (Miller 1996). In contrast the production and use of non-utilitarian metals was more restricted in the Shashe-Limpopo confluence area and concentrations of these artefacts, along with glass beads, were apparent at elite sites including Mapungubwe Hill (Calabrese 2000b, 2007).

4.2 Trade, economy and political organisation

The Mapungubwe state existed before the introduction of the market and the use of currency in southern Africa. It thus needs to be understood outside of these paradigms. Local trade networks already established before the introduction of exotic trade goods allowed for trade and exchange not only between farming communities but also incorporated hunter gatherers and herders. These centralised regional trade networks connected sites of varying sizes through the exchange of cattle and women along with subsistence and trade goods. During the MIA the distribution of exotic trade goods, and to a certain degree non-utilitarian metal objects, in these systems are understood to have been closely controlled and overseen by elites (Huffman 2007a). The patterns of redistribution of exotic goods, used as a means to identify associated underlying political organisation, have been conceptualised through a number of theoretical frameworks but remain largely untested by raw data.

The economic growth of complex societies can be described through an analysis of their interregional exchange systems as set out by Wallerstein (1974) in The World Systems Theory. These exchange networks involved geographically separate areas that, due to the nature of their interaction, had varying levels of social and economic

development. Political centres, or ‘cores’, were highly developed through specialization and the manufacture of finished products. The growth and expansion of the core leads to an exploitation of the less developed ‘periphery’. Labour in the peripheral areas produces critical raw materials, such as subsistence goods, which are brought back to the core. Surplus not consumed in the core is then returned to the periphery thus expediting the establishment of new relationships. This unidirectional model stresses the control of the core over the periphery, through either direct or indirect rule, generally held together by a shared ideology or social system (Stein 1998).

Chase-Dunn and Hall (1993) adapted this theory and applied it as a tool to examine ancient societies. To that end they have defined four specific networks of exchange within the larger World System: political-military networks, bulk goods networks, information networks and the largest of these important networks, luxury or the prestige goods networks. The connections formed through repetitive systemic interaction, such as the exchanging of prestige goods, facilitate the formation of dependence and expectations between actors within the system (Chase-Dunn & Grimes 1995). In turn this allows for the development and perpetuation of client relationships between elite and commoner groups (Friedman & Rowlands 1977).

The ‘Prestige Goods Model’ as put forward by Friedman and Rowlands (1977) asserts that the development of hierarchical control and power hinges on highly valued items. Client relationships were formed by elites through the gifting and exchange of such items thus creating relationships obligation. To that end long distance trade goods would be brought directly to the regional centre and then distributed to create bonds

of loyalty. In addition the production of desired items, those that are associated with elite status, such metal items of adornment are carefully controlled (Calabrese 2000b).

The presence of exotic goods can be seen as being representative of not only the debt owed to the regional centre, as their value can only ever be partially reciprocated, but also indicative of the relative status of a settlement within this system (Calabrese 2007:349). Calabrese (2000a, 2007) indicates that the non-renewable nature of items such as glass beads needs to inform how their presence, or in some cases stark absence, is analysed as they can be indicative of uneven power balances.

Numerous studies into the glass beads found in the Limpopo Valley have been conducted in order to create functional temporally sensitive bead series (Beck 1937; Van Lowe 1955; Schofield 1958; Gardner 1963; Davidson 1972; Saitowitz 1996). Work conducted by Wood (2000, 2005, 2012) has provided five such bead series that can be used as an aid when dating sites. An intensification of international trade during the peak of Mapungubwe's power is clearly evident in the tens of thousands of glass beads recovered from the hilltop royal burials (Wood 2000). Their association with royal burials, coupled with their non-renewable nature, situates them as prestige items during the Mapungubwe period (Huffman 2007a).

The role of prestige goods in Iron Age societies however, has recently been re-examined. Moffett and Chirikure (2016: 372) caution against equating prestige goods to political power as "multiple prestige strategies within a community, relating to age, gender and lineage, that may vary greatly in space and time" could be present. These prestige strategies in combination with pre-existing cultural filters, such as value already placed on items of adornment such as disk beads, should be used to create an

understanding of how value would have been negotiated within specific communities. In the Banda area of central Ghana, Stahl (2002) investigated the effects of early trans-Saharan trade (c. 1300 AD) on the local communities. Here, specific emphasis was placed on the value of taste and the change in meaning placed in exotic objects as these objects cross cultural lines. Stahl documents how taste, along with production and consumption practices, shaped patterns of local supply and demand.

The distribution of glass beads has not shown a marked difference between presumed elite and commoner sites (Wood 2012; Antonites 2012, 2014). Their patterns of use have been observed to be similar to those of shell beads as both were used, often in conjunction, as adornment (Moffett & Chirikure 2016: 370). The focus should then shift from the perceived 'value' of the exotic items to their use or 'function' (Costin 2007: 156). In this case the 'function' of glass beads would be understood through their use as decoration by being worn as necklaces and waistbands or sewn onto aprons (Gardner 1963). Shifting the focus allows for a renewed assessment of depositional contexts of imported goods and could begin to form an understanding of their inclusion in already present local systems of meaning (Moffett & Chirikure 2016: 368).

4.3 The hinterland

The extent and reach of the political influence of a society, however, is not always easy to define or clearly visible in the archaeological record. Population increase at Mapungubwe would have resulted in the need for an increased number of resources and an expansion of the boundaries of the polity into new territories to the east (Du Piesanie 2009).

Large political centres such as Mapungubwe, and Mapela Hill, asserted political and social control over a number of settlements within their immediate geographical area and used them as a means of providing resources not readily available in the immediate vicinity. Lower-status sites within the expanding territory would have been tasked with the production of items utilised in international trade or foodstuffs to be distributed locally, which usually took place at the household level but required intensification to keep up with international trade (Calabrese 2007:352).

The area south of the Middle Limpopo River Valley (MLVR) had not previously been occupied by farming communities and allowed for the expansion of these groups into social vacuums between already established nodes of power (Kopytoff 1987:14). These liminal spaces formed part of the 'internal African frontier' as coined by Kopytoff (1987:9). A phenomena formed by the migration of people not only seeking out opportunity but also those who may have been marginalised or were spurred on due to social or political unrest. As Mapungubwe's political power expanded the areas further away from the metropole were no longer under strict political control as deterritorialisation took place on the southern and eastern edges of the MLRV (Antonites & Ashley 2016).

A state, often viewed as a homogenous entity due to its hegemonic nature, can exhibit high degrees of differentiation within its boundaries (McIntosh 1999). Within each complex society the patterns of goods consumption can vary depending on the specific function of a site within that system itself. Their presence or absence at a site level provide insight into both the access of the site's inhabitants to larger networks of trade as well as the activities that take place at a site itself. Interaction on a landscape scale should not be seen in isolation as the movement of people on the

landscape bring with them the flow of goods as well as ideas and technologies (Killick 2009:301).

4.4 Summary

Complex dynamics at play in the hinterland have resulted in the need to reassess the model of understanding regarding the distribution of material culture. The situation in the hinterland has proven to be a rich tapestry of production with sites such as Mutamba producing goods in order to actively partake in larger systems of exchange (Antonites 2012, 2014, 2019).

Chapter 5: Methodology

The five sites under study were excavated by A. Antonites, C. Ashley and members of the Department of Anthropology and Archaeology, University of Pretoria. The material culture that was excavated included faunal remains, ceramics and small finds such as glass beads, disk beads, metals, slag, spindle whorls, a figurine, a piece of celadon and cowrie shells. The ceramic and faunal assemblages of each site will not be dealt with herein.

5.1 Excavation Methods

An arbitrary site datum (Datum 1) was permanently placed at each site. A site grid was measured from Datum 1 and was oriented to magnetic north. Datum 1 was assigned arbitrary coordinates (either N100 E100 or N1000 E1000, depending on the size of the site). Excavation units were identified by the grid coordinate of their southwest corner.

Excavation units were opened in areas that had been identified as activity areas within the site using a method of purposive sampling based on surveys of the sites. Each locus was assigned a unique number. A locus refers to a minimum volume of matrix and loci are based on depositional or cultural criteria within a defined excavation unit. Any change in soil texture, inclusions (both natural and cultural), or colour would result in the opening of a new locus.

The surface of each locus was documented and photographed. At the beginning of each new locus two samples were taken: a ten litre flotation sample and a soil sample of $10cm^3$. The soil texture and Munsell soil colour (wet and dry) were recorded. Loci

containing homogenous deposit across excavation units were combined and referred to as contexts.

All excavated deposits (except flotation samples) were sieved through a 5mm sieve, and the artefacts and ecofacts were collected for further processing at the University of Pretoria's archaeology labs.

5.2 Material Analysis Methods

5.2.1 Glass Beads

Glass beads were analysed according to the morphological analysis developed by Wood for southern African glass beads.

Wood (2000, 2005) identified glass bead sequences in the southern African region based solely on the morphological characteristics of the beads. These characteristics include method of manufacture, end treatment, shape, size, colour and diaphaneity. These sequences were later confirmed through the use of chemical analysis in order to determine the beads origin (Robertshaw et al. 2010).

5.2.1.1 Method of manufacture

The first attribute to be documented during analysis was the method of manufacture. This is a visual analysis informed by the understanding of how glass bead are made.

The majority of glass beads found in the region are made through the 'drawn' method of manufacture and are small and monochromatic (Wood 2005, 2011a). Drawn beads are made by pulling hot glass into a long tube with a bubble, or through perforation

with a metal tool, a hollow forming the perforation in the centre. These long tubes are then cut into smaller pieces and sorted by diameter, some of which are later reheated and their sharp edges rounded (Wood 2005: 28).

In contrast a ‘wound’ bead is created when a mandrel is dipped into hot glass and is wound on a flat surface until the desired bead shape is reached. At K2, and its related sites, a third type of bead was found and is known as a Garden Roller. Produced locally, these beads were created by melting small glass beads and placing the hot glass into a mould to cool and harden, creating a much larger bead classified as ‘moulded’ (Wood 2011a).

5.2.1.2 End treatment, roundness factor and shape

Drawn beads, as mentioned above, are generally reheated after they are cut into smaller bead sizes. The degree to which each bead has been reheated was noted. The end treatment of drawn beads can range from reheated (the edges of the bead are melted in order to gain a round shape), untreated (beads that are not reheated and thus retain sharp edges and are classified as ‘cut or chopped tubes’) or ground flat, (the uneven edges of a bead are ground against a surface until smooth) as described by Wood (2005: 29). These characteristics were noted under end treatment.

The edges of a bead will change shape in proportion to how long it was heated for resulting in an altered overall shape of bead. The varying degree to which a bead had been reheated will account for its roundness factor this again ranges from untreated beads (R0) to beads that have been reheated to the point that their profile is completely rounded (R4) (Table 5-1).

Table 5-1: Roundness factor descriptions (Wood 2005: 38).

Roundness factor	Description
R0	untreated *(chopped tubes)*
R1	slightly reheated *(reheated tubes)*
R2	reheated to the point that edges are bevelled *(tubes and cylinders)*
R3	reheated enough to round bead's ends and part of body *(cylinders)*
R4	reheated to the point that the profile is totally rounded *(oblates and spheres)*

Differing roundness factors and methods of manufacture result is distinct bead shapes. Each bead was classified as a certain shape based on criteria carefully defined by Wood (2005: 31-32; Table 5-2).

Table 5-2: Glass bead shapes (Adapted from Wood 2005: 31-32).

Shape	Description
tube	beads have parallel straight sides, ends may be slightly rounded
cylinder	similar to tubes, beads have a rounded profile due to reheated ends being reheated
oblate	bead has a smoothly rounded profile, length must be less than diameter
sphere	beads are round with roughly equal length and diameter
ellipsoid	elongated spheres, length greater than the diameter (reserved for wound beads)
barrel	a bead with rounded sides and flat ends (rare in drawn beads)
bicone	two symmetrical cones with a common base (reserved for wound beads)

5.2.1.3 Colour and diaphaneity

Bead colour was determined under natural light using the Munsell Book of Colours for comparison. The specific ISCC-NBS numbers were then grouped together under larger colour groups such as green, blue-green, blue, black etc. (Wood 2000: 81).

Each bead was then placed on a microscope and backlit in order to determine the amount of light that passes through the glass, known as the diaphaneity. If no light passes through the glass is it considered opaque, whereas if objects can be clearly seen through the bead it is classified as transparent (Table 5-3).

Table 5-3: Glass diaphaneity (Wood 2005: 35).

Diaphaneity	Description
transparent	objects can be clearly seen through glass
transparent-translucent	glass is slightly cloudy (often due to bubbles)
translucent-transparent	glass is cloudy but light passes easily through bead
translucent	light passes through the entire bead
translucent-opaque	glow of light from most of bead
opaque-translucent	slight glow of light at edges of bead
opaque	no light seen through edge of bead

5.2.1.4 Measurements and bead size

The size of each bead was also documented by measuring the diameter and length. Due to the relatively small size of beads in the region Wood (2005:33-34) developed four size designations for beads (Table 5-4).

Table 5-4: Bead sizes (Wood 2005: 34)

Size designation	Diameter (mm)
minute	<2.5
small	2.5-3.5
medium	3.5-4.5
large	>4.5

Any additional details about a specific bead were noted (Figure 5-1). This included if the beak was broken and if so how much of the bead was present. The inclusion of bubbles in the glass and the levels of patination were also noted where applicable.

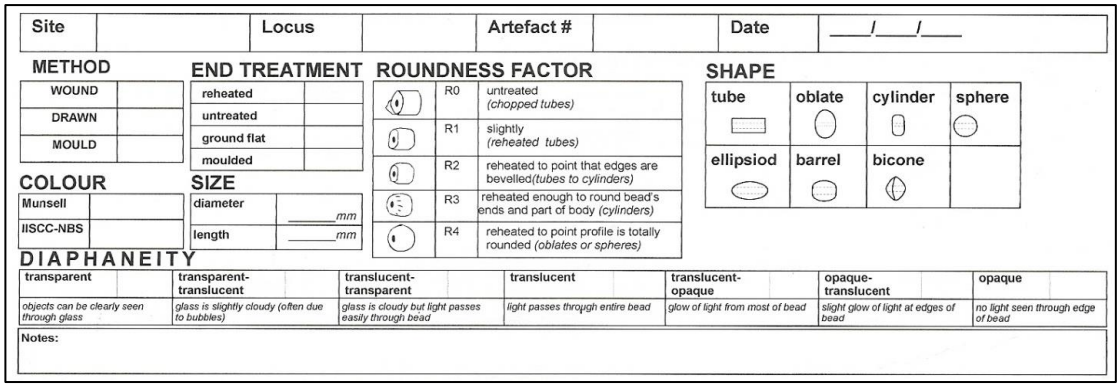

Figure 5-1: Glass Bead Analysis Form (Antonites 2012).

All the above information allowed for the beads to be sorted into a specific bead series. Each of these bead series can be directly related to a specific time period in the Shashe-Limpopo Confluence Area between the 9th and 13th centuries (Wood 2011). By documenting these variables it allows for the beads to be placed into their respective series.

5.2.2 Disk Beads

A number of ostrich egg shell, *Achatina* (Giant African land snail) and stone disk beads were recovered from the sites. The measurements of each bead were taken; the diameter, thickness and the maximum size of the peroration. The raw material of each bead was then determined by visual inspection under a microscope and comparing it to reference samples of raw materials. In some instances it was not possible to determine the material of the bead, in which case it was left as 'unknown.'

Further notes were taken with regards to the perforation and are defined as follows: a complete perforation extends the whole way through a bead, a semi-complete bead has perforations extending through to both sides but has not been enlarged, or an incomplete bead with a perforation that has been started but does not extend the whole

way through (Antonites 2012:216). Beads with incomplete perforations were interpreted as still in the process of being made.

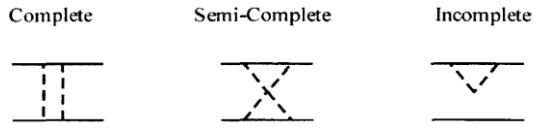

Figure 5-2: Perforation categories (Antonites 2012: 216).

The general shape of the beads fell within one of three categories which were circular, oval or irregular (Figure 5.3). Broken beads were classified according to their shape of unbroken to differentiate them from beads that were irregular due to being unfinished.

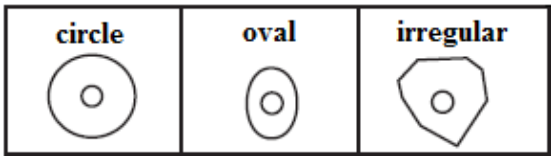

Figure 5-3: Disk bead shapes.

Deterioration of the bead was also noted (this includes possible burning, breaking or wear). Finally, the edge finish of each bead is documented and range from angular to well-rounded (Table 5-5).

Table 5-5: Edge finish categories

Edge finish category	Description
very angular	all edges are very sharp
angular	all edges are sharp
sub-angular	at least 1/3 of edges are sub-rounded
sub-rounded	at least 2/3 of edges are smooth
rounded	edges are smooth
well-rounded	all edges are smooth and very round

5.2.3 Metal

Metal analysis can be divided into two larger categories; finished metal item and the by-products of the production process such as slag and tuyères (Miller 2002). In each case the metal or alloy composing the artefact was, where possible, ascertained and documented along with whether or not the substance was magnetic. Any corrosion in the surface of the metal was also documented. A small sketch of each metal artefact was annotated in order to illustrate where each measurement was taken.

5.2.3.1 Finished metal objects

Metal artefacts can take a number of forms; these include utilitarian metal items (those made for practical uses) and non-utilitarian (items used for decoration, adornment or in some cases have symbolic significance).

5.2.3.2 Slag

Pieces of slag were the only production related artefacts that were found. It was documented through a sketch, the colour and corrosions were noted, along with the weight and dimensions of each piece. Any further analysis of slag can only be done through chemical analysis.

5.2.4 Spindle Whorls

Three measurements were taken: diameter, height and the perforation size. Spindle whorls are often found in an incomplete or broken state and the complete diameter was estimated through the use of a diameter chart set at 5mm intervals. This chart was

also used to document how much of the spindle whorl was present. A complete whorl is a full circle thus parts of the whole are documented as a percentage of the whole.

Lastly each spindle whorl was weighed and a weight for the original was then estimated (c.f. Antonites 2012, 2019). It was noted whether each object was complete or still in the process of being manufactured. Any decoration, obvious inclusions or burnishing was also documented.

5.2.5 Other Items

5.2.5.1 Clay Figurines

All figurines that were recovered were fragments of a whole making the identification of their forms difficult. Figurines were weighed, measured, sketched and photographed. Where possible the morphological features of each were described.

5.2.5.2 Cowrie shells

Two measurements were taken; length and width. If the shell was broken or whole was documented along with details regarding whether the break was along the length or width of the shell. The presence or absence of the dorsal surface was noted. If possible the species of the shell was identified and documented.

Those that had a more rounded appearance were classified as *Cypraea annulus* and those with a more pentagonal shape were tentatively classified as *Cypraea moneta*. However, identification to a species level is difficult especially if the dorsal surfaces of the shell have been removed (Moffett 2016:239).

5.3 Dating

Samples from each of the sites were sent for radiocarbon dating to provide accurate date ranges. The returned uncalibrated dates were calibrated on OxCal v.4.3.2 (Bronk Ramsey 2017) using the southern hemisphere curve (Hogg *et al.* 2013). Both the uncalibrated dates and the calibrated 2-sigma date ranges are included for each site.

5.4 Summary

The material culture of each site was analysed according to the above defined sets of parameters that will facilitate the comparison of items at each site and between sites. These analyses can form the base for further studies into the material culture from the sites in the following chapters.

Chapter 6: The Frampton Site Cluster

The farm Frampton 72MT forms part of the southern border of the larger Maremani Nature Reserve. A low ridge, approximately 8 kilometres long, runs roughly south west to north east through the northern portion of the farm. The ridge rises in elevation towards the north east with spurs and boulder outcrops scattered along its length. At least five small settlements have been documented along this ridge. They from part of the larger cluster of sites referred to as the Frampton Site Cluster. From west to east the sites are MNR 75, MNR 74, MNR73, MNR78 and MNR79. The boundaries between these sites are poorly defined with a relatively low presence of artefacts throughout. However, it was decided to treat areas with relatively higher concentration of material culture and architectural features as individual sites. Only two of these sites have been excavated to date; Frampton 1 (MNR 74) and Frampton 2 (MNR 78).

6.1 Ecology and Previous research

The current vegetation around the Frampton sites is classified as mopane bushveld. This type is dominated by Mopane trees (*Colophospermum mopane*) and nine-awned grass (*Aristida adsoensionis*) with occasional baobabs. To the south of the ridge on which the sites are located, the soil is deep aeolian red sand that was used as agricultural fields until the 20th century. A small non perennial stream is located just over 1 kilometre to the west and 4 kilometres beyond it runs the Nzhelele River, a major tributary of the Limpopo River.

Previous research conducted on the sites includes faunal analysis, initially compiled in an unpublished honours project by S. Uys (2014) on the Frampton 1 (MNR 74) fauna which was later published by Antonites et al. (2016). An archaeobotanical study was conducted on the relatively small samples from both Frampton 1 and 2 but has not yet been published (Uys 2018). The study found both wild and domesticate plants were present at the sites suggesting the communities had access to both in order to fulfil their needs (Uys 2018:143).

6.2 Frampton 1 (MNR 74)

Recorded by Kruger in 2004 as MNR 74 (N -22.473333, E 30.306111) the site was not initially designated a specific temporal classification. In 2012 it was further investigated by Antonites and the presence of several large sherds of Mapungubwe ceramics prompted the decision to excavate in 2013. These ceramics were found trapped between boulders which form a roughly 5 metre high outcrop on the ridge crest. The site is less that 30m long from north to south. Archaeological deposit is shallow ranging from 5-10cm in depth.

Faunal analysis showed a predominance of small stock, sheep and goats, in the domesticate fauna but the sample also revealed a number of wild animals which made up the majority of identified taxa (Antonites et al. 2016).

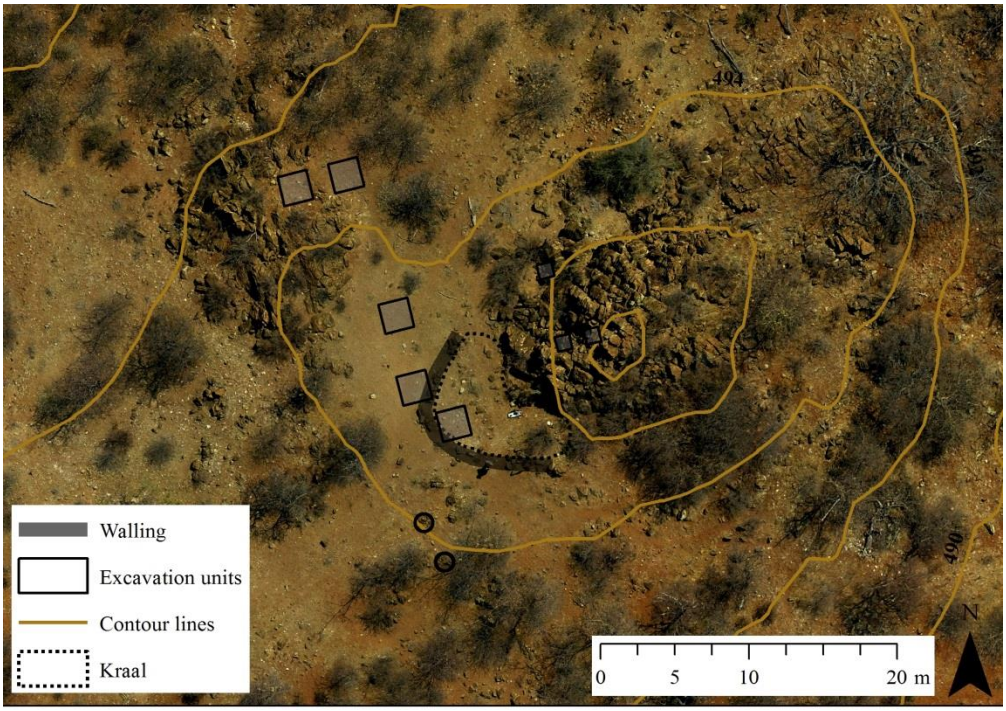

Figure 6-1: Frampton 1 (MNR 74).

6.2.1 Excavation Units and contexts

A permanent datum of N100 E100 was placed in the centre of the site (see Figure 6-1). Five 2m x 2m excavation units were opened up along the eastern and northern slope. In addition, a further three 1m x 1m test trenches were placed close to the south east along the edge of a slight rocky rise. In total, 23m^2 were excavated. Each of these three test trenches was shallow, ending on bedrock, and contained minimal deposit except for broken ceramics.

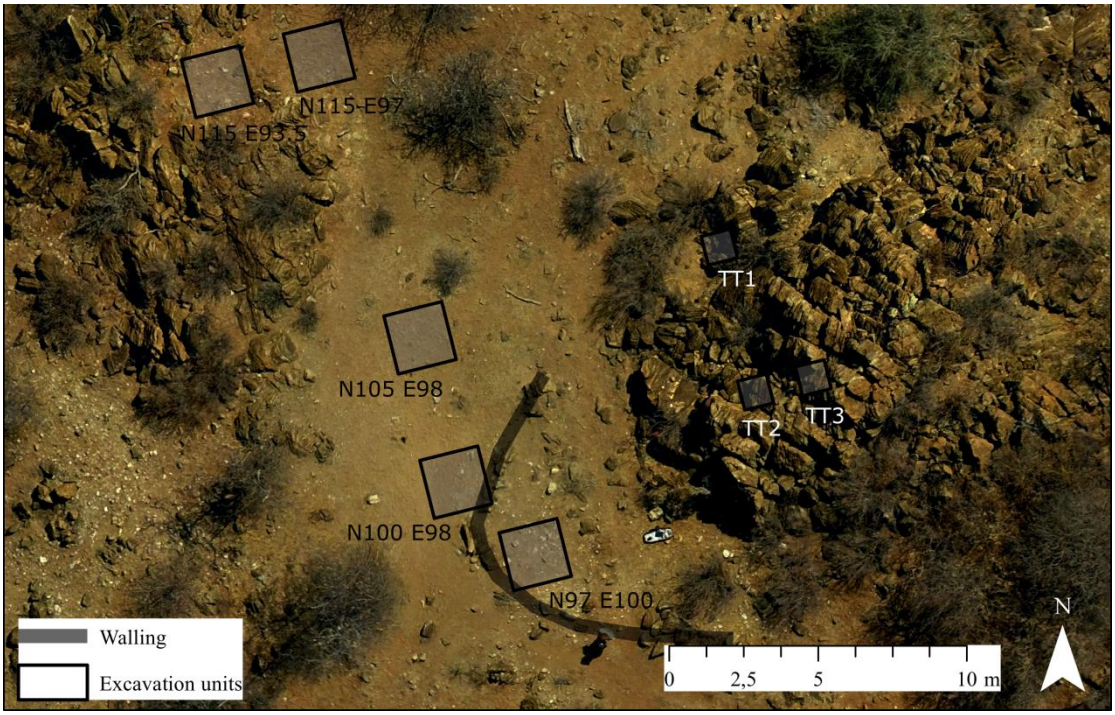

Figure 6-2: Frampton 1 (MNR 74) excavation units.

N97 E100

This unit is immediately west of the small rocky outcrop and was excavated in an ashy area interpreted as a small stock kraal. All the contexts in this unit were predominantly brown in colour.

- C1001: Ashy surface soil layer.
- C1002: Dung layer with gravel inclusions.
- C1003: Dung gravel-interface.

N100 E98

This unit was opened in order to expose the extent of the kraal to the north. The contexts are consistent with those in N97 E100.

N105 E98

This unit contained undifferentiated occupation material to the north of the kraal.

- C1001: Surface layer of disturbed topsoil.
- C1004: Gravel and brown topsoil mix of undifferentiated material
- C1005: Increase in gravel inclusions; ending on bedrock.

N115 E93.5 and N115 E97

The two northern most 2m x 2m units were placed over a suspected midden deposit which had washed down and collected along the base of several boulders. These units are located on a slight slope and have consistent depositional layers.

- C1006: Sandy surface layer.
- C1007: Light loam midden deposit containing clusters of ceramics and bone with gravel inclusions.
- C1008: Gravel layer with increased ceramic and bone clusters. The deposit is reddish brown and unit ends on bedrock.

Test Trenches

The test trenches were 1m x 1m excavated as single spits. TT1 is located under a small boulder overhang and contained a shallow brown loose ashy deposit (C1009). This context consisted of 185 litres of deposit and 4 glass beads were found within it. TT2 and TT3 are located close together and were nestled up against the rocks. Both contained shallow soil deposits, a total of 65 litres removed which contained only two spindle whorls, it ended on bedrock (C1010).

6.2.2 Dating

Two charcoal samples were taken from the midden area (C1007). Uncalibrated dates of 873 ± 35 (D-AMS-4206) and 791 ± 31 (D-AMS-4205) were provided. When calibrated they provide a 2-sigma range of AD 1187-1281 (D-AMS-4206) and AD 1273-1388 (D-AMS-4205) respectively.

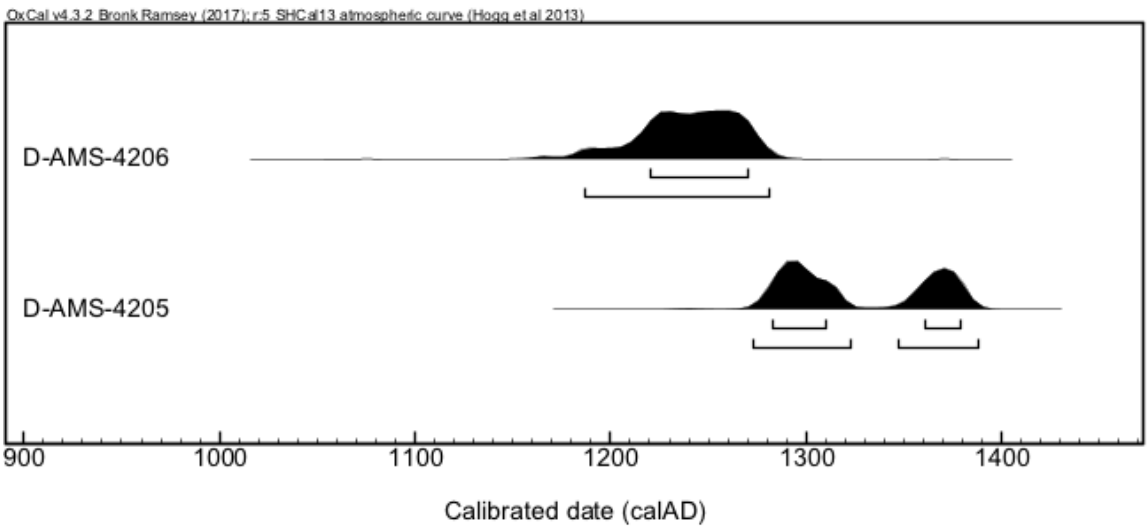

Figure 6-3: Radiocarbon dates from Frampton 1. Results are calibrated using the Southern Hemisphere calibration curve (Hogg et al. 2013) and are plotted in OxCal v4.3.2 (Bronk Ramsey 2017).

Table 6-1: Radiocarbon dates from Frampton 1. Results are calibrated using the Southern Hemisphere calibration curve (Hogg et al. 2013) and are plotted in OxCal v4.3.2 (Bronk Ramsey 2017).

Laboratory number	Uncalibrated age BP	1-Sigma range (cal. AD)	2-Sigma range (cal. AD)
D-AMS-4206	873 ± 35	1220-1270	1187-1281
D-AMS-4205	792 ± 31	1283-1379	1273-1388

6.3.1 Material Culture

The majority of small finds from Frampton 1 (MNR 74) were made up of glass and disk beads. Only three metal items were found with one instance of slag, as well as 9 spindle whorls.

6.3.1.1 Glass beads

All of the glass beads from Frampton 1 (MNR 74) were drawn (*n*=33) and only one of these beads was not reheated. The other 32 beads were reheated to various degrees and all of the beads were either cylindrical (*n*=23) or tube (*n*=10) shaped.

Table 6-2: Frampton 1 (MNR 74) glass bead colour frequencies

Colour	*n*	%
Black	21	63.6
Blue-green	3	9.1
Brownish-red	3	9.1
Green	1	3.0
Yellow	5	15.2

Black was the most dominant bead colour (*n*=21), of which 17 are cylinders and 4 are tubes, followed by yellow (*n*=5), 3 of which are cylinders and 2 are tubes. Over 70 percent of the beads fell within the small category (Table 6-4). These characteristics mean that the beads most likely fall within the East Coast Indo-Pacific series (Wood 2011) which started dominating imports into southern Africa around AD 1220 (Figure 6-4).

Table 6-3: Diameter size distribution for Frampton 1 (MNR 74) glass beads

Size designation	*n*	%
minute (<2.5mm)	4	12.1
small (2.5-3.5mm)	24	72.7
medium (3.5-4.5mm)	5	15.2

Figure 6-4: Sample of glass beads from Frampton 1 (MNR 74).

6.3.1.2 Disk beads

A total of 37 disk beads were collected. Of these the majority (*n*=36) are made from ostrich eggshell and a single bead from *Achatina*. With a diameter of 8.9mm, the *Achatina* bead is larger than any bead in the entire ostrich eggshell collection which ranges from 4.4mm to 7.4mm in diameter (Figure 6-5).

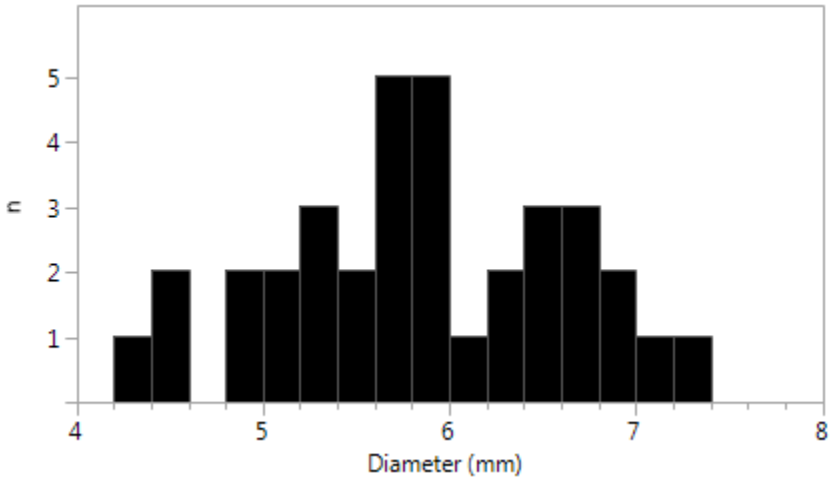

Figure 6-5: Histogram of Frampton 1 (MNR 74) ostrich eggshell bead diameters

The perforation on all beads was complete and only four beads were not circular in shape. A single bead was oval in shape and the other three beads were too broken to correctly extrapolate their original shape.

6.3.1.3 Metal

Three metal artefacts were recovered. Two of these are iron helixes that are lightly corroded with diameters of 4.8mm and 2.8mm. Both helixes were made from flat ribbon, the ribbon itself is on average 1mm thick. The third iron artefact was a small uneven edged metal plate of 41.4mm by roughly 29.6mm. The irregular shape and thick reddish rust make identifying the original use difficult (Figure 6-6).

Figure 6-6: Iron helix from Frampton 1 (MNR 74).

6.3.1.4 Slag

A single piece of slag was found in the midden deposit on the eastern slope. This slag, 12.9g in weight, is magnetic and dark black in colour with small sparkling inclusions.

6.3.1.5 Spindle whorls

The nine spindle whorls from this site all have very similar diameters with the majority (n=6) having a diameter of c. 60mm (rounded to the closest 5mm) (Table 6-5). Due to the fact that only one spindle whorl was complete, the rest only being 50 percent or less present, only 4 whorls had accurate perforation measurements. Three of these had a perforation measurement between 10.6mm and 10.9mm with a single outlier having a 14.1mm perforation.

Table 6-4: Frampton 1 spindle whorl diameter distribution

Diameter (mm)	*n*	%
50	2	22.2
60	6	66.7
70	1	11.1

6.3.2 Distribution and site summary

The radiocarbon dates and the East Coast Indo-Pacific glass beads place occupation in the late 13th century AD. The shallow deposit suggests occupation was likely temporary. The majority of the small finds were excavated from the midden context on the northern slope of the site and were likely deposited there due to discard practices (Table 6-5). Spindle whorls were found throughout the site as were disk beads. Very little evidence of metal production or consumption was present.

Table 6-5: Distribution of small finds at Frampton 1

Context Description	Glass Beads (n)	Disk Beads (n)	Metal Helixes (n)	Metal Other (n)	Slag Weight (g)	Spindle Whorls (n)
General surface	7	6	-	-	-	1
Kraal deposit	-	12	-	-	-	3
Undifferentiated Occupation	5	2	1	-	-	-
Midden	17	16	1	1	12.9	3
Ashy Deposit	4	-	-	-	-	2

6.4 Frampton 2 (MNR 78)

Frampton 2 (N -22.46597, E 30.31329) was also identified by Kruger during his 2004 survey. It was only given a chronological designation after being resurveyed by Antonites in 2012 and 2013. Mapungubwe ceramics found on the surface prompted excavation in 2014.

Frampton 2 is a rocky site and was found due to the presence of low stone platforms that were constructed to enhance the natural terrace it is situated on. Low uncoursed stone walling is present along the southern and eastern edges of the site creating enclosures and directing access to the site. Two grain bin stands are visible on the surface of the slope that drops away to the south (Figure 6-7).

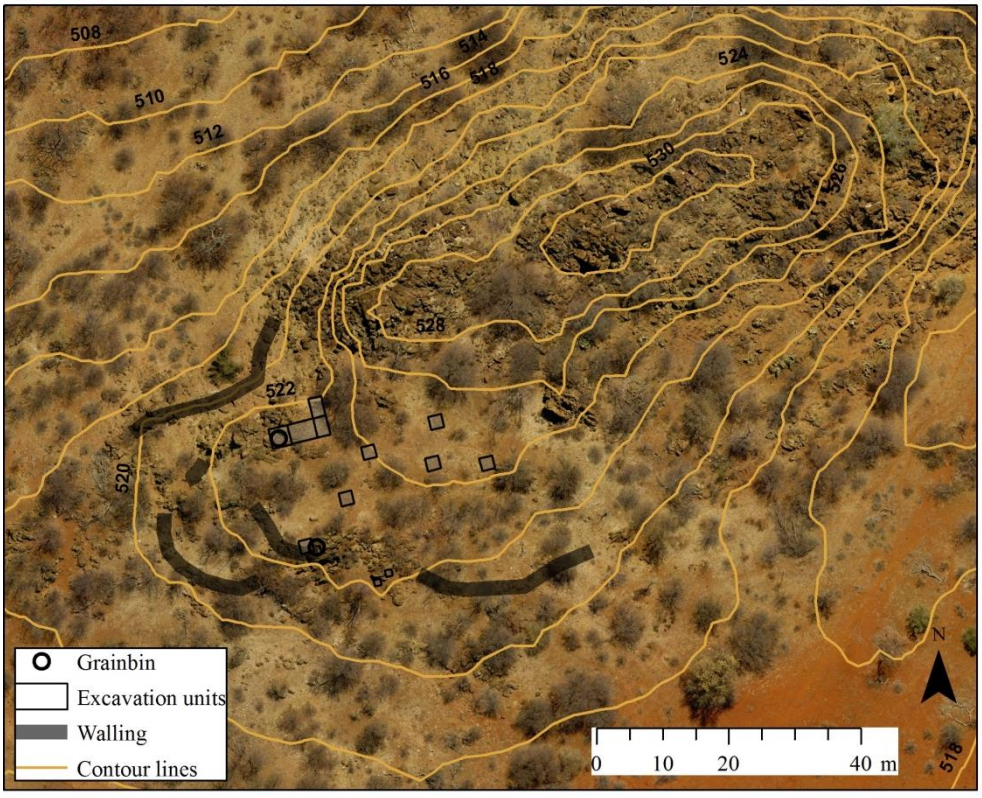

Figure 6-7: Overview of Frampton 2 (MNR 78).

6.4.1 Excavation Units and contexts

The arbitrary datum N100 E100 was set up near the eastern edge of the site. Six 2m x 2m units were excavated, along with two $1m^2$ test pits and four large test trenches of roughly 3m x 2m, in total $53m^2$ was excavated (Figure 6-8).

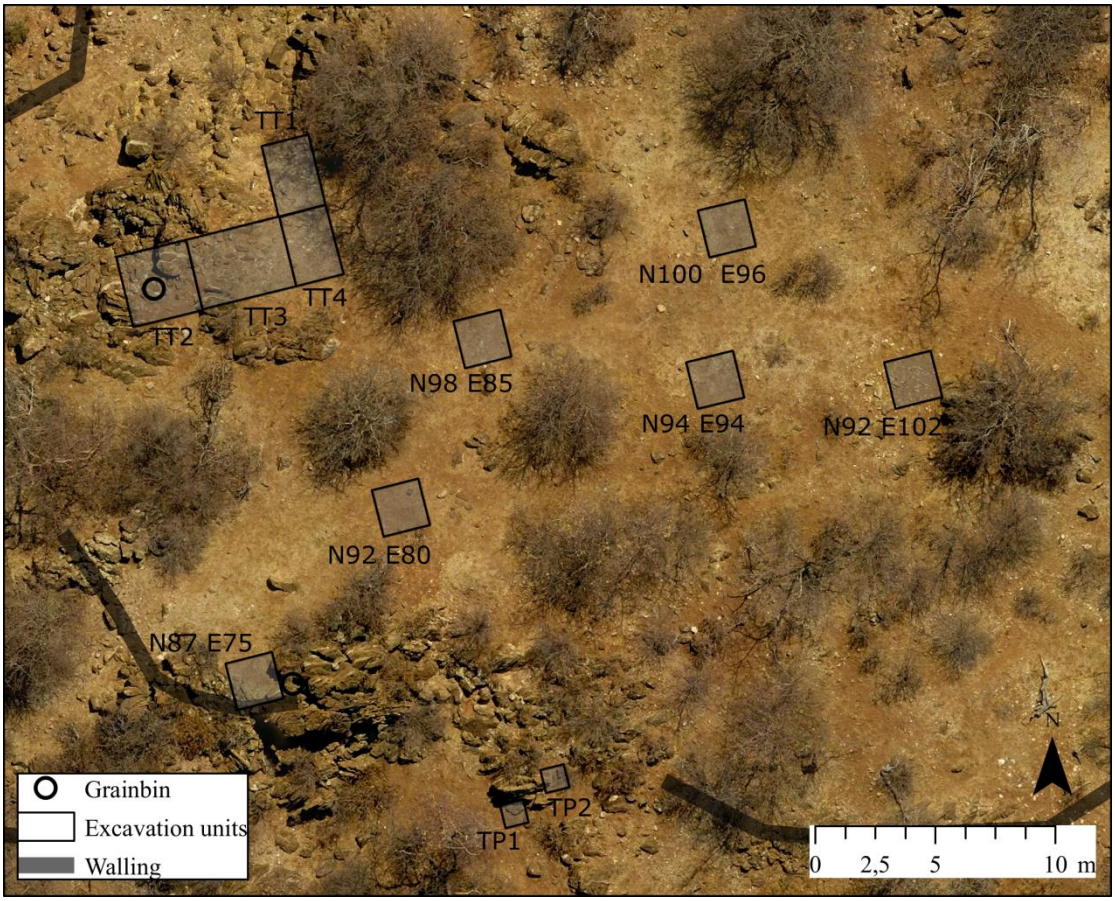

Figure 6-8: Frampton 2 (MNR 78) excavation units.

N87 E75

This unit was opened on the south facing slope in close proximity to a grain bin base on top of a small built up platform which includes walling on the southern side. The presence of hut flooring at the bottom of the unit suggested a general household context for material from this unit.

- C1001: Disturbed surface sandy layer.
- C1002: Layer of reddish brown soil with increased gravel inclusions that ends on a compact gravel floor.
- C1003: Sandy layer beneath the flooring with a decrease in artefact density.

N92 E80

This unit was placed on a flat area close to the relative centre of the site.

- C1004: Surface layer that included broken ceramics and root disturbances.
- C1005: Sandy deposit with an increase in material culture. This context ends on a sterile gravel layer.

N98 E85

This is the northern most excavation unit placed just below a boulder outcrop.

- C1004: Disturbed surface layer.
- C1006: A sandy deposit that ends on gravel.

N94 E94

- C1004: Disturbed surface layer.
- C1007: Soil slowly becomes more compact until the unit ends on sterile gravel.

N100 E96

This unit was placed on the northern slope to investigate an area of wash. The only material culture recovered from this unit was a single spindle whorl in C1009.

- C1008: The surface was gravelly but contained a number of pot sherds.
- C1009: A sandy soil layer that has increased gravel inclusions with large rocks towards the bottom.

N92 E102

This unit includes the rock wall located to the east of the site and was opened in order to investigate the construction of the wall and its relationship to the rest of the site. The small wall is a quickly built, informal structure made from rocks of varying sizes.

- C1010: Disturbed surface layer.
- C1011: Loamy sand layer on both sides of the wall feature. This unit ends on a sterile gravel layer.

Test pits and test trenches

Two 1m x 1m test pits (N83.7 E84 and N84.5 E85.5) were opened on the southern slope below the wall feature to test the deposit in this area. A high density of material found in these pits indicates this may be a midden area. The deposit from these pits was removed in a single spit as the soil type was consistent between the units (C1012).

A rocky area was investigated to the north east of the general occupation area due to the material culture that had become caught between the rocks. The deposit was shallow and undifferentiated within each 2m x 3m unit and they will be referred to under a single context (C1013). The four units were placed in an 'L' shape.

6.4.2 Dating

The first radiocarbon sample (D-AMS 008694) is charred material associated with the hut floor (C1003) and the second (D-AMS 008695) was charcoal from the midden uncovered in the northwest test pit (C1013). These two samples gave a cal. AD 1222-1297 and 1212-1278 date range respectively.

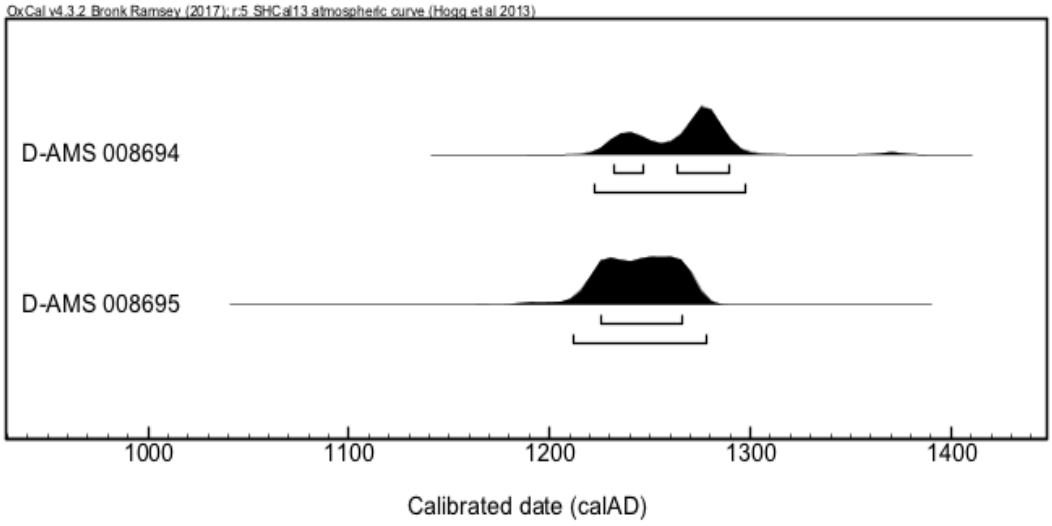

Figure 6-9: Radiocarbon dates from Frampton 2 (MNR 78). Results are calibrated using the Southern Hemisphere calibration curve (Hogg et al. 2013) and are plotted in OxCal v4.3.2 (Bronk Ramsey 2017).

Table 6-6: Radiocarbon dates from Frampton 2 (MNR 78). Results are calibrated using the Southern Hemisphere calibration curve (Hogg et al. 2013) and are plotted in OxCal v4.3.2 (Bronk Ramsey 2017).

Laboratory number	Uncalibrated age BP	1-Sigma range (cal. AD)	2-Sigma range (cal. AD)
D-AMS 008694	785 ± 29	1232-1289	1222-1297
D-AMS 008695	835 ± 24	1225-1266	1212-1278

6.4.3 Material Culture

The material culture found at Frampton 2 (MNR 78) includes disk beads, a single stone bead, metal artefacts (predominantly helixes), slag, and spindle whorls. No glass beads were found at the site.

6.4.3.1 Disk beads

A total of 78 disk beads were recovered from the site. The majority of these beads were made out of ostrich eggshell (*n*=76) whereas only two were made from *Achatina* (one had a diameter of 4.7mm and the other of 12.4mm). The ostrich eggshell beads range in diameter from 4.4mm to 10.7mm and are rather evenly distributed throughout sizes (Figure 6-10).

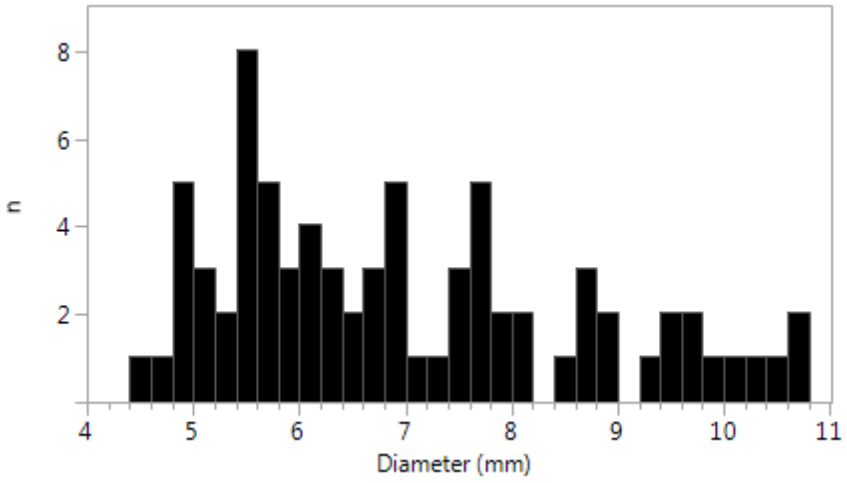

Figure 6-10: Histogram of Frampton 2(MNR 78) ostrich eggshell bead diameters

All the beads had a complete perforation and all except one were circular in shape. Twenty-six of the beads were broken but their unbroken sides were still circular and well rounded. Only a single bead (MNR78/DB072) had an irregular shape that suggested it was unfinished.

6.4.3.2 Stone Bead

The single stone bead recovered from the site is made of soap stone. It was much larger than any of the other disk beads recovered and had a diameter of 5.5mm and a length of 2.9mm. The bead has an irregular shape and is fragile with peeling edges but contains a clearly defined perforation towards the centre (Figure 6-11).

Figure 6-11: Stone bead from Frampton 2 (MNR 78).

6.4.3.3 Metal

A total of 44 metal artefacts were analysed from the site. Of these the vast majority (*n*=41) are iron helix fragments. The remaining artefacts (*n*=2) included a small iron sheet (15.8mm by 45.4mm and with a thickness of 3.9mm) and what is a possible iron pendant.

The possible pendant (MNR78/M041) is 81.6mm in length with a shaft width of 4.8mm. One end of the shaft has been curved back in on itself to form an incomplete eye. This is unlikely a simple iron point as there is no definite tapering of the shaft away from the eye.

The iron helix fragments range in length from 2.2mm to 20.7mm with the majority weighing less than 1g. Corrosion in the form of thick reddish-brown rust obscures the actual diameter of the helixes in most cases and made it difficult to ascertain the ribbon thickness.

6.4.3.4 Slag

Slag was only found in one area of the site; in one of the test pits on the southern slope. The sample of slag consisted of approximately 20 magnetic fragments that had a combined weight of 147,22g. Each piece was porous with clearly visible air bubbles making it prone to further breakage.

6.4.3.5 Spindle whorls

A total of 13 spindle whorls were recovered at the site all of which were made from ceramic sherds. Of these only one was unbroken and another two had more than 50% of the whorl present (*n*=2). Thus, only a total of three had perforations that could be accurately measured. These holes were uniform in diameter and measured between 11.2mm and 11.9mm.

Over half (*n*=7) of the spindle whorls were represented by fragments that made up less than 20% of a complete whorl. This made an accurate estimation of their

complete weight difficult. The remaining six however had a calculated complete weight ranging from 26.0g to 53.6g.

Another ceramic disk resembling a spindle whorl was also found. This disk has rounded edges, an overall oval shape and no sign of a perforation (Figure 6-12). Due to its size, measuring only 30mm in diameter, and therefore much smaller than spindle whorls, from the site and elsewhere (Antonites 2019) it is unlikely to have been a spindle whorl. Similar ceramic disks have been found on other Iron Age sites, but their use remains elusive.

Figure 6-12: Ceramic disk from Frampton 2 (MNR 78).

6.4.4 Distribution and site summary

Frampton 2 (MNR 78) was likely settled temporarily in the late 13th century as evidenced by the radiocarbon dates and shallow archaeological deposit. The undifferentiated wash on the north eastern side of the site yielded the highest and most diverse number of artefacts (Table 6-7). This area likely contained general wash from the occupation to the south. Even so, disk beads are abundant throughout the site along with spindle whorls. A number of metal items were found in conjunction with slag which could mean smithing took place at the site. The complete absence of glass beads however, stands in contrast to Frampton 1 (MNR 74).

Table 6-7: Distribution of the small finds at Frampton 2 (MNR 78).

Context Description	Disk Beads (n)	Stone Beads (n)	Metal Helixes (n)	Metal Other (n)	Slag Weight (g)	Spindle Whorls (n)
General surface	2	-	-	-	-	1
Household	1	-	-	-	-	1
General occupation	11	-	3	-	-	2
Gravel wash	-	-	-	-	-	1
Stone wall	4	-	-	-	-	-
Midden	7	-	11	-	147.2	4
Undifferentiated wash	54	1	27	3	-	4

Chapter 7: Vryheid (MNR 04)

The site Vryheid (MNR 04) is the largest of the three Maremani sites in this study. It is located on the farm Vryheid 8MT (N -22.328894, E 30.167605) in the north east corner of the reserve. It is located on and around a spur on a ridge. The site was initially discovered by Kruger and Antonites in 2003 during an initial survey of Maremani.

7.1 Site background

The vegetation on the hill consists mainly of two types of grass; mountain grass (*Danthoniopsis dinteriz*) and blue-seed grass (*Tricholaen monachne*). This hill is also populated by red bushwillow (*Combretum aplculatum*). The immediate area around the hill can be classified as Mopane veld and is considered arid.

The Sand River, 200 metres to the north east of the site, would have been a perennial water source during occupation of the site. However, due to damming and irrigation upriver it no longer flows unless high volumes of rain have fallen. The site also overlooks the Limpopo River which is located some 3 kilometres to the north.

7.2 Excavations and Contexts

The site has been excavated on three separate occasions (October 2014, September 2015 and September 2018). In total, 72m^2 was excavated in the MIA occupation areas. Due to the size of the site it has been divided into three separate areas (Figure 7-1). In addition to the MIA material, there is also a small Late Iron Age (LIA) homestead (c. 17th century) on the site (it will be dealt with briefly). Area A is

defined as the slope and summit area of the hill and includes a kraal and domestic area. Areas B and C are located on the eastern foot of the hill divided by the low ridgeline running from the hill. Area B is located on the south western side of this line and is a domestic area with 21 stone grain bin bases visible on the surface. Area C on the northern side contained ashy deposit and a kraal.

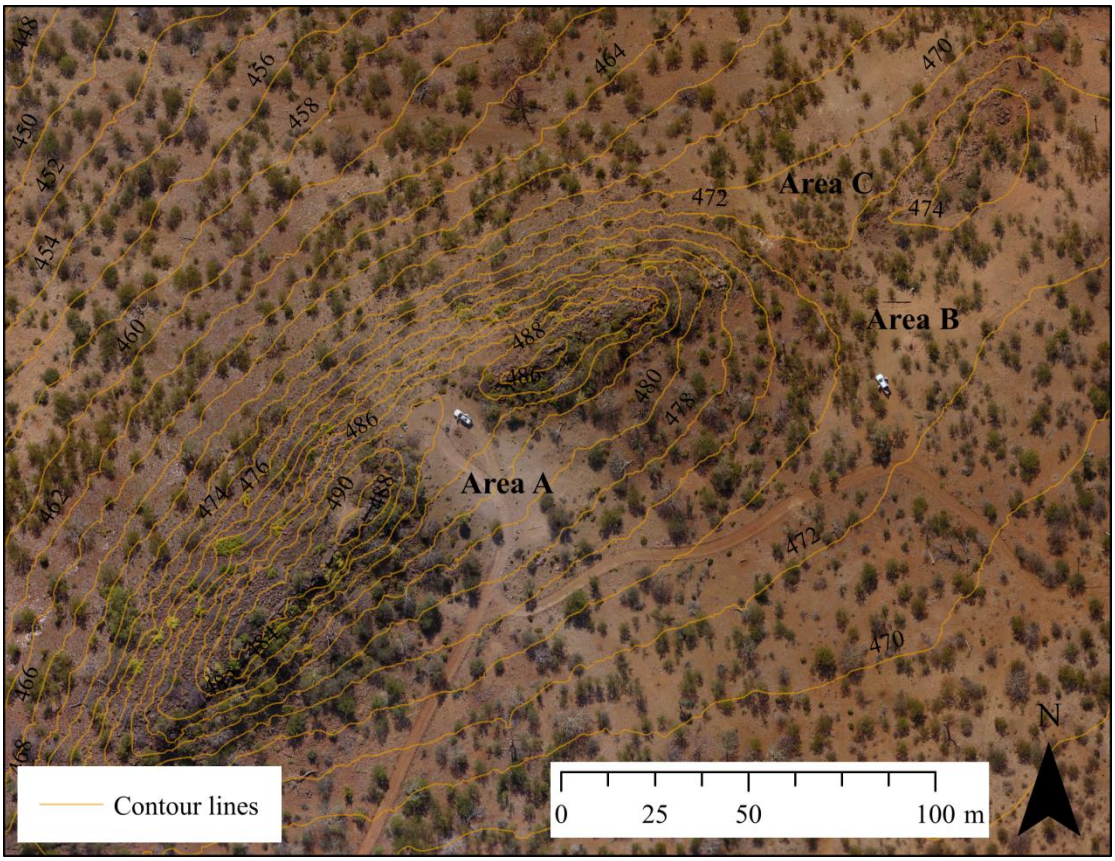

Figure 7-1: Vryheid (MNR 04) excavation areas.

7.2.1 LIA Occupation

On the top of the western hill four 2m x 2m squares were excavated (Figure 7-2). The northern most excavation unit (N104 E90), located highest on the hill, was interpreted as a household area due to the presence of daga and hut flooring. A second unit 2m x 2m unit (N102 E91) was opened alongside it to further uncover partially defined

features. On the northern slope a test pit (N111 E87) revealed ashy deposit. Due to its position below the household context it has been interpreted as a midden and material was probably dumped down the side of the hill from the occupation above it. On the southern side of the western hill a household context was excavated (N90 E66) Letaba ceramics were discovered in these units and radiocarbon dates revealed a date range of the late 17th century to the middle 18th century. Thus the material culture excavated from these units, 16m^2 in total, will not be discussed in this dissertation.

7.2.2 Area A

Between the two small peaks there is a slight slope area which is referred to as Area A. A large amount of cattle dung can be seen on the surface of the slope. Three 2m x 4m units and one 2m x 2m units were excavated in this area to define the extent of the kraal and household areas.

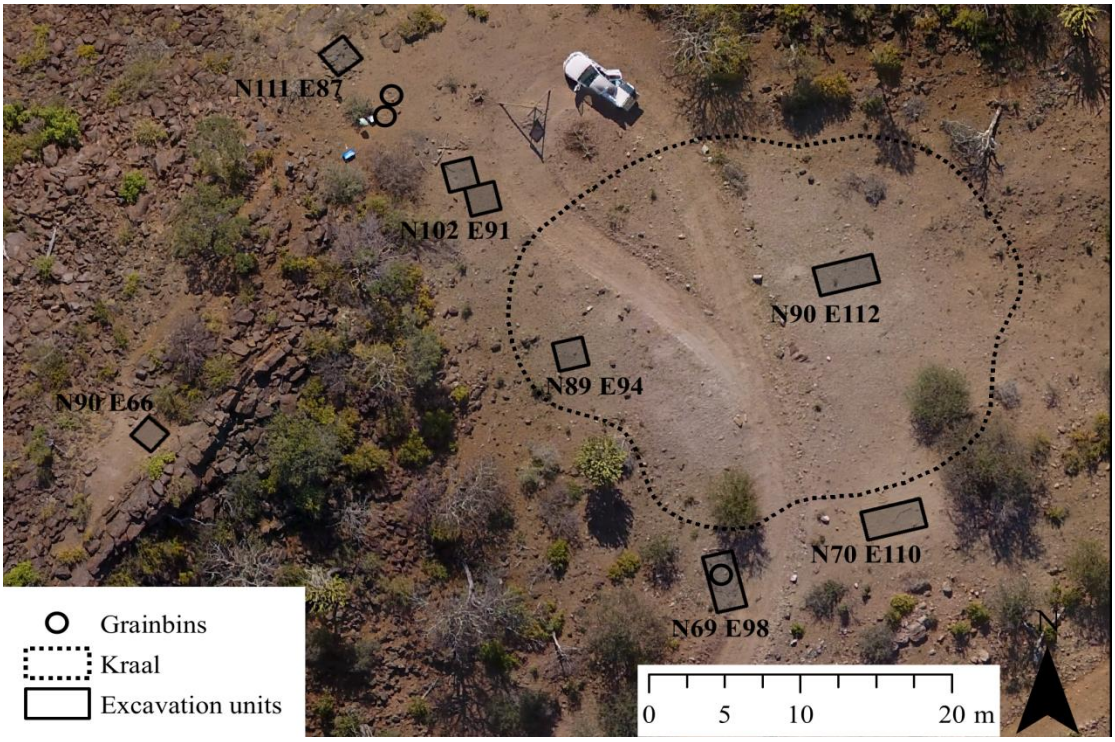

Figure 7-2: Vryheid (MNR 04) Area A excavation units.

N89 E94

This 2m x 2m unit was excavated in 2014 in the kraal.

- C1010: Disturbed light brown loose surface layer of soil with broken ceramics.
- C1011: Yellow brown burnt dung layer.
- C1012: Brownish grey fine ashy layer. Context ends on bedrock.

N90 E112

A 2m x 4m unit excavated in 2014 to determine the eastern extent of the kraal.

- C1013: Rocky surface layer with dark brown soil.
- C1014: Soft soil with increasing dung inclusions.
- C1015: Light grey vitrified dung covers the majority of the unit.
- C1016: Soft loamy sand layer with increased rock inclusions. Context ends on bedrock and sterile gravel.

N69 E98

Located to the south of the two previous units this 4m x 2m unit was excavated in 2014 to explore the area south of the kraal. Once surface deposit was cleared a grain bin base was exposed.

- C1006: Sandy surface soil with large rocks. Ceramics and shell visible on the surface.

- C1007: Increase in gravel inclusions in the soil. Large rocks with material culture trapped between. Some scattered dung inclusions.
- Circular grain bin stand on sterile soil.

N70 E111

This 2m x 4m unit was excavated in 2018 to the south east of the previous units on an area of ashy slope wash deposit to determine whether the level areas on the slope were natural or manmade terraces. The excavation did not reveal any indications of terracing. Small amounts of vitrified dung and loose rocks were present on the surface. No small finds were present in either of these contexts.

- C1001: Very loose brown surface sand.
- C1004: A brown gravel wash layer with ashy inclusions.

7.2.3 Area B

Area B, located on the south eastern slope of the hill, was excavated in 2014, 2015 and 2018 (Figure 7-3). The area is surrounded by visible grain bin stands on the surface. . In 2015 a large 4m x 8m unit was opened to investigate another stone feature in the area.

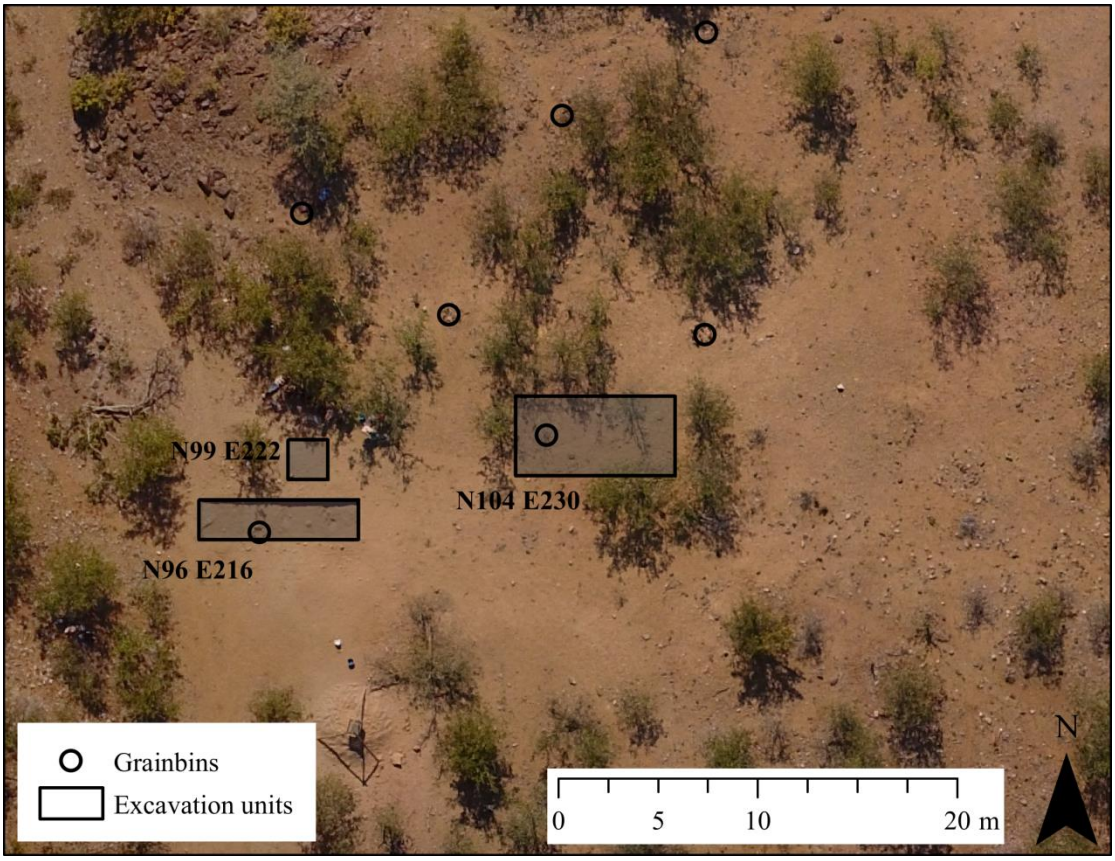

Figure 7-3: Vryheid (MNR 04) Area B excavation units.

N99 E222

In 2014 a 2m x 2m unit was opened in an ashy area of deposit.

- C1002: Disturbed and loose ashy grey surface deposit.
- C1008: Uniform, soft ashy soil. Context ends on red sterile soil.

N96 E216

In 2018 a 2m x 8m unit was opened on dark ashy deposit. This area, originally thought to be a midden, is more likely to be a kraal area. No small finds were present in this unit.

- C1002: Loose ashy and friable sand surface deposit.

- C1003: A layer of consolidated brown wash with ash and gravel inclusions.
- C1005: Ashy burnt dung layer with a decrease in gravel towards the bottom. Dark grey brown in colour. Low density of \material culture. Ends on bedrock.

N104 E238

In 2015 a trench, 4m x 8m, was opened to explore the domestic space visible through numerous grain bin stands.

- C1020: Loose sandy soil with gravel inclusions. This deposit contained bone and ceramic sherds.
- C1021: Compact gravelly dark yellowish brown deposit. A decrease in gravel towards the bottom.
- C1022: Soft ashy light brown layer. Material exposed is lying vertically.
- C1023: Brown gravelly surface that contains daga. This unit ends on the hard packed gravel floor.

7.2.4 Area C

An area on the north east slope of the hill was designated as Area C (Figure 7-4). This area did not yield a high amount of material culture.

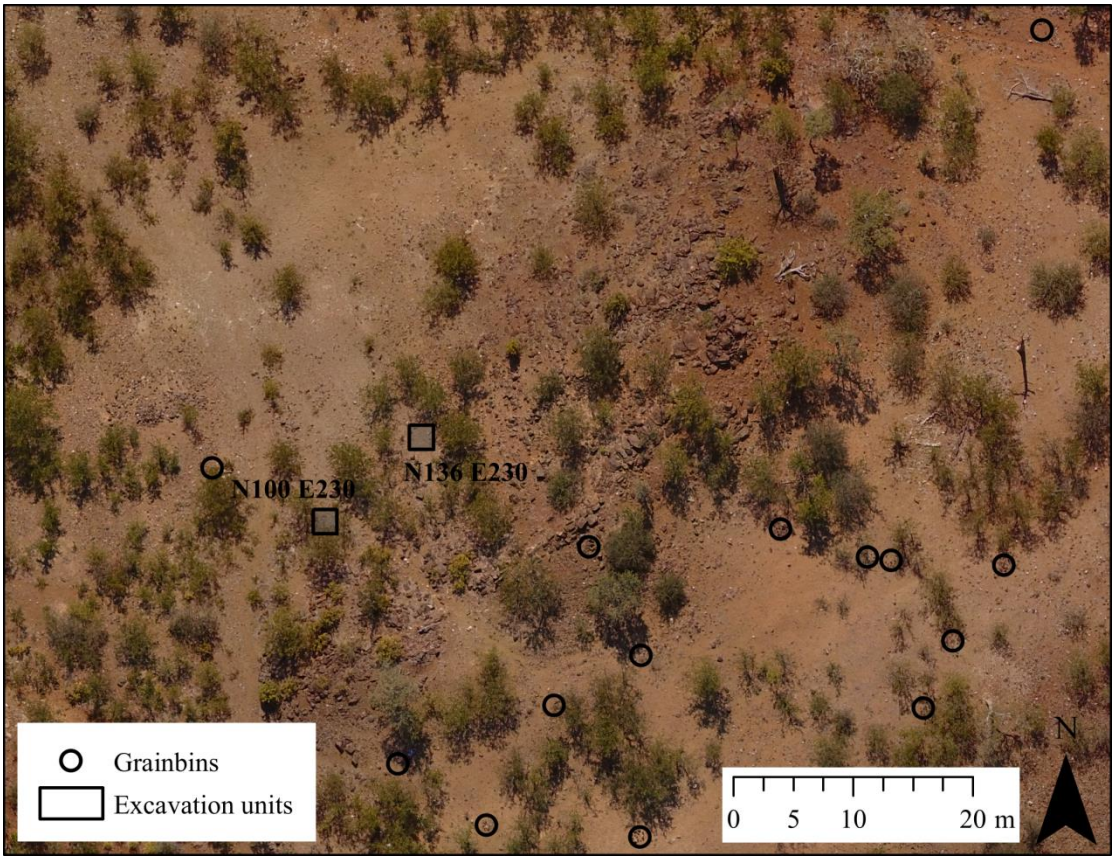

Figure 7-4: Vryheid (MNR 04) Area C excavation units.

N100 E230

This unit was excavated in 2014.The soil in this area had fine ashy inclusions and contained midden deposit.

- C1018: Brown surface soil with an ashy texture.
- C1019: Fine ashy loam with an increase in material culture. Ends on bedrock.

N136 E230

In 2015 this unit was opened to explore the northern area in more detail.

- C1009: Loose surface soil of a possible midden deposit.

- C1017: Greyish brown layer with gravel inclusions that contains ceramic sherds and fragmented animal bones. A natural gravel layer was reached at the bottom of the unit.

7.3 Dating

Five charcoal samples were sent for radiocarbon analysis. One of these dates was taken from the middle of the kraal in Area A in C1016 and provided an uncalibrated date of 917 ± 25 BP (D-AMS 008688). This sample produced a calibrated 2-sigma date of cal. AD 1033-1076.

A further sample was taken from the southern edge of the kraal, C1007 also in Area A. The uncalibrated date was 822 ± 23 BP (D-AMS 008690) which produced a calibrated 2-sigma date of cal. AD 1219-1279. A sample was taken from the north western edge of the kraal, in C1012, and provided an uncalibrated date of 1075 ± 22 BP (D-AMS 008691) and when calibrated returned a 2-sigma date range of cal. AD 985-1034.

The final two samples were taken from Area B, from the ashy deposit C1008, the samples had an uncalibrated date of 952 ± 22 (D-AMS 008692) and 902 ± 25 (D-AMS 008693). The calibrated 2-sigma date ranges are cal. AD 1043-1190 and 1069-1259 respectively (Table 7-1).

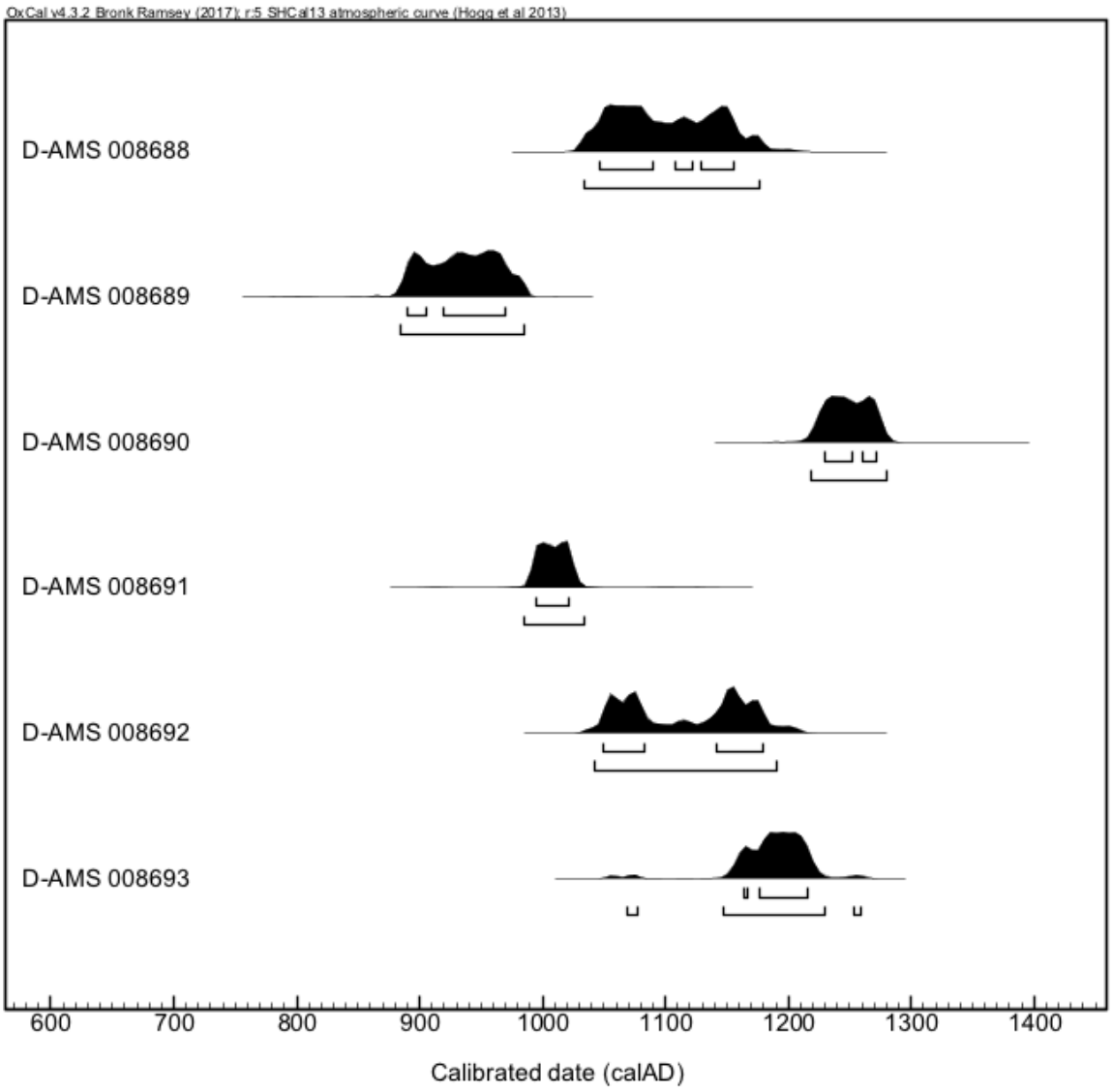

Figure 7-5: Radiocarbon dates from Vryheid. Results are calibrated using the Southern Hemisphere calibration curve (Hogg et al. 2013) and are plotted in OxCal v4.3.2 (Bronk Ramsey 2017).

Table 7-1: Radiocarbon dates from Vryheid. Results are calibrated using the Southern Hemisphere calibration curve (Hogg et al. 2013) and are plotted in OxCal v4.3.2 (Bronk Ramsey 2017).

Laboratory number	Uncalibrated age BP	1-Sigma range (cal. AD)	2-Sigma range (cal. AD)
D-AMS 008688	917 ± 25	1046-1156	1033-1076
D-AMS 008690	822 ± 23	1230-1271	1219-1279
D-AMS 008691	1075 ± 22	955-1021	985-1034
D-AMS 008692	952 ± 22	1049-1179	1043-1190
D-AMS 008693	902 ± 25	1164-1216	1069-1259

7.4 Material Culture

7.4.1 Glass Beads

The sample of beads from Vryheid (MNR 04) is made up of 18 drawn glass beads. Of these beads the vast majority (*n*=15) are cylinders and only one bead that is a tube. Bead diameter ranged from 2.6mm to 4.8mm with half the beads (*n*=9) falling within the small size range.

Table 7-2: Diameter size distribution of Vryheid (MNR 04) glass beads

Size designation	*n*	%
small (2.5-3.5mm)	9	50.0
medium (3.5-4.5mm)	7	38.9
large (>4.5mm)	2	11.1

The diaphaneity of the beads mostly ranged from opaque, the black and brownish-red beads, to translucent-opaque. The most common colour of beads was black (*n*=8) followed by brownish-red (*n*=2).

Table 7-3: Colour distribution of Vryheid (MNR 04) glass beads.

Colour	*n*	%
Black	8	44.4
Blue	2	11.1
Blue-green	1	5.6
Brownish-red	3	16.7
Green	2	11.1
Yellow	2	11.1

The beads thus appear to be a mix between the East Coast Indo-Pacific series and the Mapungubwe Oblate series that is found at commoner sites (Wood 2011: 76). These

beads are usually less well shaped and are slightly larger in size many of which are classified as cylinders rather than oblates (Figure 7-6).

Figure 7-6: A sample of glass beads from Vryheid (MNR 04).

7.4.2 Disk Beads

The collection of disk beads from Vryheid, in total 52 beads, are mostly ostrich eggs shell (*n*=47) and the remaining beads that could be identified were *Achatina* (*n*=4). The material of one bead was not possible to determine. The beads range in size from 3.8mm to 14.7mm (Figure 7-3 and Figure 7-7).

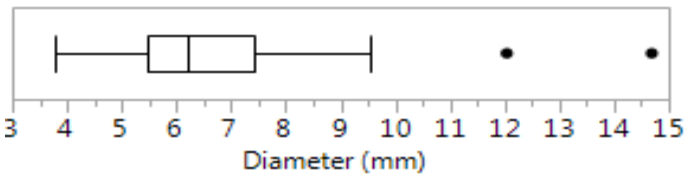

Figure 7-7: Box and whisker plot of Vryheid bead diameters.

All of the extreme outliers seen in the box and whisker plot (Figure 7-2) are ostrich eggshell beads. The *Achatina* beads adhered to a smaller size range with the smallest bead measuring 5.2mm and the largest measuring 9.6mm.

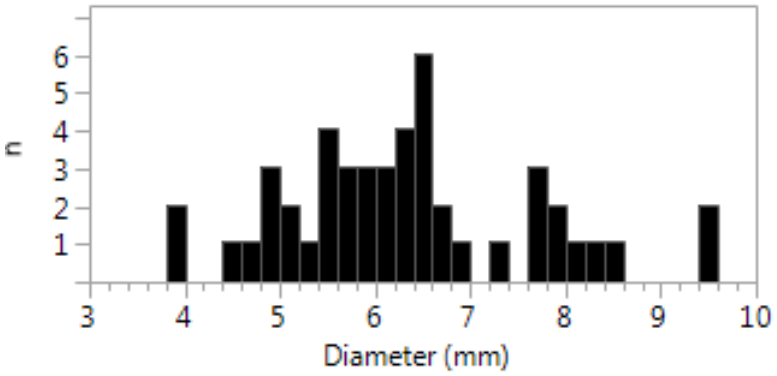

Figure 7-8: Histogram of bead diameters from Vryheid (MNR 04) (extreme outliers not shown).

Beads are consistently circular in shape, however seven are broken or heavily chipped on the edges but their unbroken edges are well rounded. Two beads could be classified as being oval in shape, both are ostrich eggshell. One *Achatina* bead has an irregular shape and its edges are chipped and uneven (MNR04/DB044).

All of the beads have complete perforations and none of them show evidence of still being in production.

7.4.3 Metal

In total, 16 metal items were found at Vryheid. These include three iron artefacts that are most likely utilitarian in nature, 11 helixes (*n*=3 of which are cupreous and *n*=8 made from iron), and two pieces of copper wire.

The utilitarian iron objects were all collected during general surface surveys making their exact context unsure. All three artefacts (MNR04/M003, MNR04/M004 and MNR04/M005) were rusted and beginning to flake. Their size and shape indicate that they were likely adzes.

The iron helix fragments weigh less than a gram each. Their diameters were hard to determine as a thick corrosion was present. This also made it difficult to ascertain if the helixes were made from ribbons or rounded wire. Two less corroded fragments (MNR04/M001 and MNR04/M013) were made from a flat ribbon and rounded wire respectively.

The three copper helixes had varying diameters of 1.4mm, 1.8mm and 4.4mm. Each of these artefacts was made from a single rounded uniform copper wire. MNR04/M009 has the largest diameter, a significantly larger wire thickness (1.2mm in comparison to 0.5mm and 0.4mm), and is also the longest helix recovered. Although the ends of this helix have been pulled apart the middle piece is still intact and contained uniform coils.

Copper-like wire was found in two different contexts. The first context contained four separate pieces of wire, two of which were twisted loosely together. These wires are covered in a thin coating of greenish verdigris. A single thin strand of wire was recovered from context C1007. This short strand of 37,4mm only weighed 0.06g and was covered in a thick coating of verdigris.

7.4.4 Slag

Twenty fragments of slag were found with a combined total weight of 323.1g. Slag was only found in Area A and C with the majority being found in various contexts in unit N90 E112 which sits on the edge of the kraal. Many of the slag pieces had visible reddish brown rust inclusions.

7.4.5 Spindle whorls

The spindle whorls found on this site number seven in total. No complete spindle whorls were found at the site and all are less than 30% complete. It is therefore problematic to definitively describe this sample. However, estimated diameter size ranged from 60mm to 90mm while just over half (*n*=4) had an estimated diameter of 70mm (Table 7-4).

Table 7-4: Diameter distributions for Vryheid (MNR 04) spindle whorls

Diameter (mm)	*n*	%
60	2	28.6
70	4	57.1
90	1	14.3

Two spindle whorls had clear evidence of a hole being present but due to the broken nature of the artefacts the diameter of the holes could not be measured.

7.5 Distribution and site summary

Vryheid (MNR04) was likely occupied from the middle to late 13th century. Multiple grain bins indicate substantial farming activities were likely taking place at the site. Area A and C were the most abundant in material culture (Table 7-5). Area B was

excavated in order to explore the relationship between the domestic context in Area A, on the Hill, and the domestic context in Area B down below. Both areas had the presence of multiple forms of material culture although the finds were more abundant in Area A.

All of the copper items, three helix fragments and two pieces of copper wire, came from Area A along with a large quantity of slag. The multiple occupations of the site could mean that a portion of this material culture could be associated with the 17th century occupation.

Table 7-5: Distribution of small finds at Vryheid (MNR 04).

Context Description	Glass Beads (n)	Disk Beads (n)	Metal Helixes (n)	Metal Other (n)	Slag Weight (g)	Spindle Whorls (n)
Area A						
General surface	2	5	-	1	-	1
Kraal	5	6	3	1	229.6	3
Grain bin	2	12	4	1	18.8	1
Slope wash	-	-	-	-	-	-
Area B						
Surface	-	3	-	1	-	-
Ashy Kraal Deposit	2	1	-	-	-	1
Unconsolidated Wash	-	-	-	-	-	-
Gravel wash	3	3	1	-	-	-
Gravel floor	1	4	1	-	74.6	-
Area C						
Surface	2	5	-	1	-	-
Midden	1	13	2	-	-	1

The position of Vryheid on top of, and surrounding, a small hill allows for clear comparisons to be made between different areas of occupation on the site. These comparisons will be put forward in detail in Chapter 10 as well as further discussions regarding the activities and relative status of the site itself.

Chapter 8: Evelyn (EV 01)

Klein Bolayi Game Lodge is located 50km east of Mapungubwe and is around 30km west of Vryheid (MNR 04). Evelyn (EV 01) and Klein Bolayi (EV02) are both located on the farm Evelyn 190MS and are within 2km of each other. The sites are 13kms from the Limpopo River and are directly south of its tributary the Mzingwane River. The Klein Bolayi River, a small perennial river, runs approximately 700m to the east of both sites. The landscape is generally low and undulating with the exception of a large granite boulder, around 300m long and 200m wide, is a key feature on the landscape half a kilometre to the south of the site Evelyn (EV01).

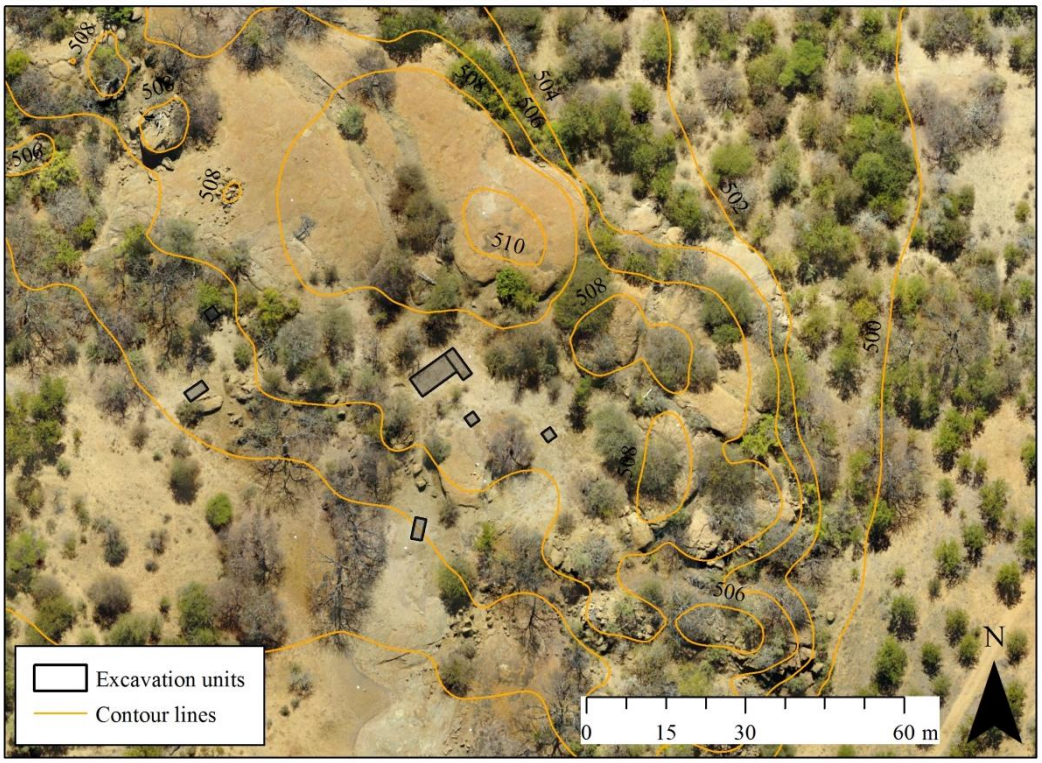

Figure 8-1: Overview of Evelyn (EV 01).

Evelyn (EV 01) is situated around a large flat topped granite boulder roughly 60m x 50m (Figure 8-1). A large portion of the original occupation likely took place on top

of this boulder and its debris collected as wash down the surrounding slopes. The vegetation of the area includes both Mopane and Baobab trees that are dotted around the rocky outcrops.

8.1 Excavation units and contexts

The excavations at Evelyn took place in July 2015. Seven excavation units, totally 72m^2, were opened two of which were later joined to form a large 'L' shaped unit (N1000 E976).

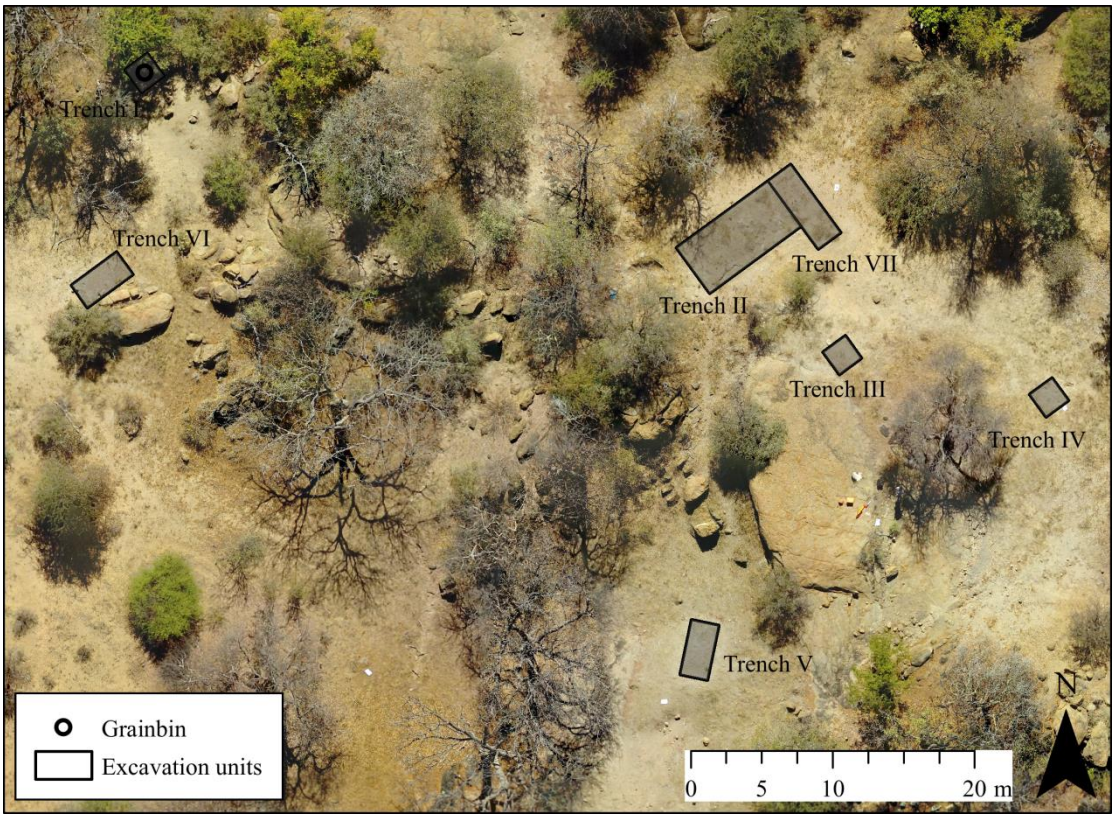

Figure 8-2: Evelyn (EV 01) excavation units.

N1000 E976

Initially this unit was divided into two separate excavation trenches (Trench II and Trench VII). Trench VII was opened to investigate a stone feature whereas Trench II

was opened on wash deposit above a midden. The wash deposit from the massive boulder outcrop to the north was consistent throughout both units and covered a midden deposit. The trenches were eventually joined. The unit itself is a 10m x 2m strip with an extra 2m x 2m creating an inverted ‘L’ shape to the north east. It is located on a south facing slope that gets gradually steeper to the south. Contexts C1001 and C1002 cover the entire unit, the units in which other contexts appear will be stated where necessary.

- C1001: A layer of loose brown surface sand with root disturbances and slight erosion.
- C1002: Gravel wash layer washed down from the rock outcrop to the north.
- C1003: A bone rich deposit made up of looser soil with a high inclusion of very friable animal bones. (This deposit only extends through three units N1000 E976, N1002 E976 and N1004 E978).
- C1004: Grey ashy midden deposit with a marked decrease in material culture and bone inclusions. (C1004 is below C1002 in N1000 E978, N1002 E978 and N1004 E978 but it is below C1003 in N1000 E976, N1002 E976 and N1004 E978).
- C1005: A small shy pit removed as a contained unit. (This context is within C1004 and appeared only N1002 E976).
- C1006: Dark reddish grey ashy lens with an increase in gravel and daga inclusions. (This context only appears in N1008 E978 and N1008 E980 and ends on packed gravel flooring in both units).

- C1007: Household floors that were not excavated. (This floor extends throughout units N1006 E976, N1006 E978, N1008 E976, N1008 E978 and N1008 E980).

Within C1004 in unit N1004 E978 a burial was uncovered. The burial consisted of a single skeleton buried between two large rocks. No clear burial shaft, or cut, was visible due to the presence of the rocks (Figure 8-3).

Figure 8-3: Female burial at Evelyn (EV 01).

A complete pot was found buried in the same context and forms part of the burial goods which also include glass beads, disk beads and a single copper helix (Table 8-1). An in depth study of the burial and related context formed part of an unpublished honours thesis by Msibi (2017). This analysis found that the skeleton was most likely that of an elderly female (Msibi 2017: 74-86).

Table 8-1: Material culture associated with the burial

	Burial	Ceramic pot
Glass beads	426	400
Disk beads	2	4
Copper helix	-	1

N1014 E999 and N1004 E988

Both of these 2m x 2m units are located on a slight slope on the south east portion of the site. (N1014 E999 was initially referred to as Trench IV and N1004 E988 as Trench III). The deposit is consistent between the two units as both units are within the kraal area of the site. Neither unit contained any distinct features.

- C1008: Loose surface layer slightly darker brown than other areas of the site with a loamy texture.
- C1009: A dark reddish grey gravel wash layer with an increase in material culture towards the bottom on the unit. Small ashy inclusions as well as yellowish dung also appear towards the bottom of context.
- C1010: Reddish yellow dung layer. Contained large chunks of intact dung and burnt dung towards the bottom.
- C1011: Brown sterile sandy layer that ends on bedrock in both units.

N983 E1000

A 4m x 2m unit (Trench V) which was placed over an ashy deposit near the base of the southern slope of the site.

- C1012: Loose surface greyish brown sandy deposit with ashy inclusions.

- C1013: Greyish brown ashy deposit containing slight gravel inclusions towards the bottom.
- C1014: Dung layer that contains ashy burnt inclusions and ends on sterile soil.

N971 E946

This unit is located on the western slope of the site, along with N961 E942, on an area of wash that has collected between boulders. Two grain bin bases were visible on the surface and both were excavated in a 2m x 2m unit (Trench I).

- C1015: Sandy surface context.
- C1016: Gravelly wash layer that has collected between the grain bin bases.
- C1017: Material excavated from between the stones was removed as a single context for flotation.

Figure 8-4: Grain bin bases in N971 E946

N961 E942

N961 E942 is a 4m x 2m unit (Trench VI) that has similar depositional layers to N971 E946 and the northern border of the unit is formed by a boulder.

- Both C1015 and C1016 are present in this unit.
- C1018: Brown possible midden deposit that has collected against the boulder.

8.2 Dating

A total of 10 charcoal samples were sent for radiocarbon analysis. Two of these samples D-AMS 028776 and D-AMS 028779 were from the same context (C1014 in N983 E1000) however the first came from the top of the context, and could be associated with the material above it, while the second from the bottom of the context. D-AMS 0287776 returned a 2-sigma calibrated date of cal. 1045-1212 whereas D-AMS 028779 was cal. AD 1187-1217.

D-AMS 028778 a sample from C1003, the bone rich lens in N1004 E976, returned an uncalibrated date of 821±22 and was calibrated to a 2-sigma calibrated date of cal. AD 1220-1279. In the context below, C1004 the grey ashy midden deposit in N1000 E978, the sample D-AMS 028777 returned a calibrated date range of cal. AD 1014-1206.

A single sample was taken from the kraal area, C1010 in N1014 E999, D-AMS 028780 retuned a 2-sigma calibrated date of cal. AD 1045-1209.

D-AMS 028781 and D-AMS 028782 both came from C1002, the gravel wash layer in N1000 E976, these two samples returned uncalibrated dates of 965±24 and 776±24

respectively. The dates were combined and returned a 2 sigma calibrated date of cal. AD 1180-1266 (Table 8-2).

The final three samples D-AMS 028783, D-AMS 028784 and D-AMS 028785 were all collected from the in and around the ceramic vessels associated with the burial in C1004. Their consistent context allowed for these dates to be combined which resulted in a 2-sigma calibrated date range of cal. AD 1150-1200.

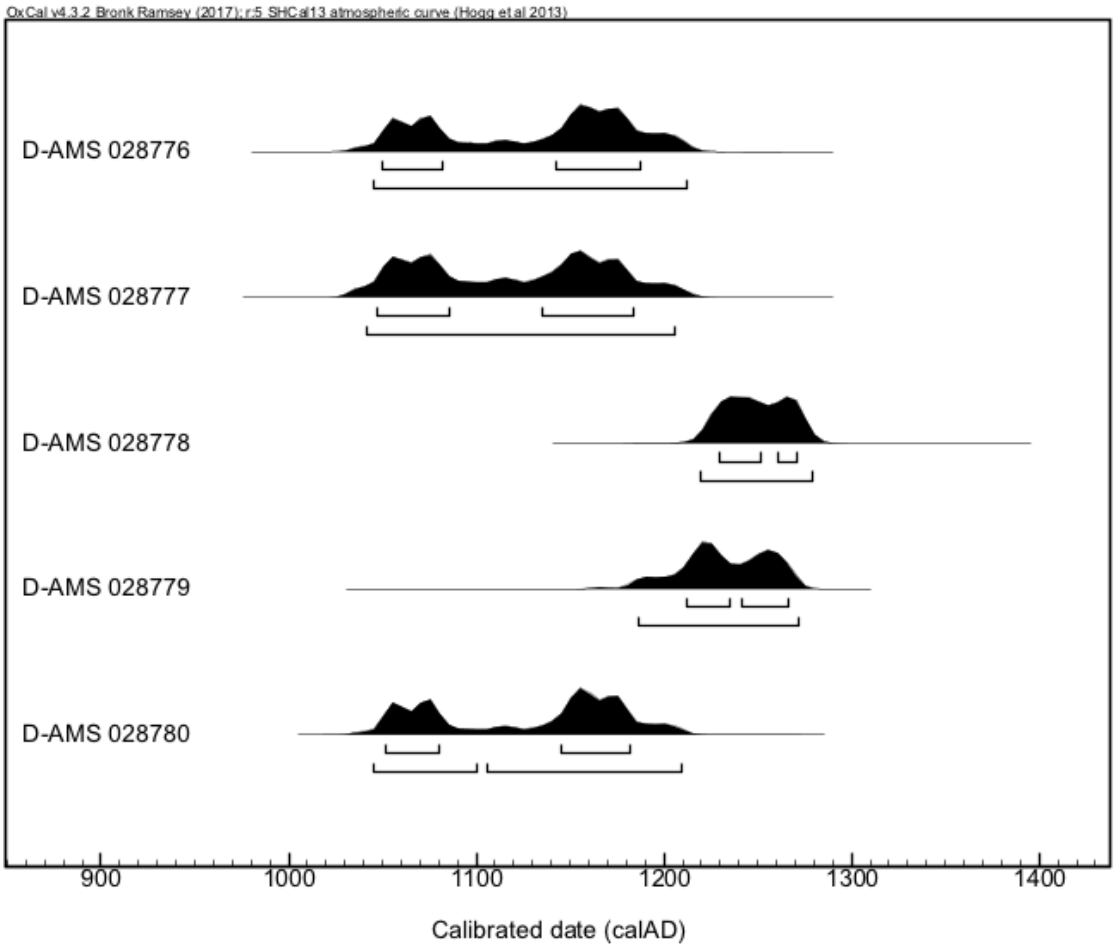

Figure 8-5: Radiocarbon dates from Evelyn (EV 01). Results are calibrated using the Southern Hemisphere calibration curve (Hogg et al. 2013) and are plotted in OxCal v4.3.2 (Bronk Ramsey 2017).

Table 8-2: Radiocarbon dates from Evelyn (EV 01). Results are calibrated using the Southern Hemisphere calibration curve (Hogg et al. 2013) and are plotted in OxCal v4.3.2 (Bronk Ramsey 2017).

Laboratory number	Uncalibrated age BP	1-Sigma range (cal. AD)	2-Sigma range (cal. AD)
D-AMS 028776	943± 27	1050-1187	1045-1212
D-AMS 028777	951± 29	1047-1183	1041-1206
D-AMS 028778	821± 22	1230-1271	1220-1279
D-AMS 028779	856± 24	1212-1266	1187-1271
D-AMS 028780	946± 22	1051-1182	1045-1209
D-AMS 028781	965± 24	1046-1160	1035-1179
D-AMS 028782	776± 24	1266-1293	1226-1300
(Combined Date 1)		1188-1228	1180-1266
D-AMS 028783	944± 21	1051-1183	1045-1211
D-AMS 028784	988± 27	1042-1146	1028-1157
D-AMS 028785	837± 24	1224-1266	1210-1278
(Combined Date 2)		1158-1200	1150-1215

8.3 Material Culture

8.3.1 Glass beads

In total 951 drawn glass beads and one wound bead were found at Evelyn (EV 01). These beads were mostly found in close proximity to the burial (*n*=426) and in the associated complete ceramic pot (*n*=400).

By far the most abundant bead colours are black (*n*=460) and green (*n*=413) which together make up more than 90% of the collection (Table 8-3). The next most frequent colour is blue-green (5.6%) followed by yellow (1.3%), brownish-red (1%) and finally blue (less than 1%).

Table 8-3: Glass bead colour distribution at Evelyn (EV 01)

Colour	*n*	%
Black	460	48.3
Blue	5	0.5
Blue-green	53	5.6
Brownish-red	10	1.0
Green	413	43.3
Yellow	12	1.3

The majority of beads are classified as either minute (62%) or small (36.8%), only just over 1% of beads are medium or large (Table 8-4). There are three beads that were broken down their length and thus an accurate diameter measurement could not be taken.

Table 8-4: Diameter size distribution for Evelyn (EV 01) glass beads

Size designation	*n*	%
minute (<2.5mm)	588	62.0
small (2.5-3.5mm)	349	36.8
medium (3.5-4.5mm)	9	0.9
large (>4.5mm)	3	0.3

The most common bead shape is cylinders (*n*=631), followed by tubes (*n*=240) and finally oblates (*n*=80). Many of the black beads were cylinders that were nearly oblate in shape but not reheated enough to be classified as such (Table 8-5).

Table 8-5: Evelyn (EV 01) beads by shape and colour.

	Tube	Cylinder	Oblate
Black	56	353	51
Blue	-	2	3
Blue-green	4	32	16
Brownish-red	2	6	2
Green	172	235	5
Yellow	6	3	3
Total:	240	631	80

These beads are most likely a combination of K2 Indo-Pacific and East Coast Indo-Pacific bead series (Wood 2011).

A single blue-green spherical wound bead was found broken in half. The bead is opaque and large measuring 9.2mm in diameter and 8.9mm in length (Figure 8-6).

Figure 8-6: Wound bead from Evelyn (EV 01).

8.3.2 Disk beads

In total 186 disk beads were found, of these the vast majority (*n*=178) were made out of ostrich eggshell, only five were made from *Achatina* and the material of the final three beads could not be determined. The beads ranged in size from 2.9mm to 9.9mm but the majority of the sample falls within 4.8mm to 6.2mm with a few extreme outliers (Figure 8-2 and Figure 8-3).

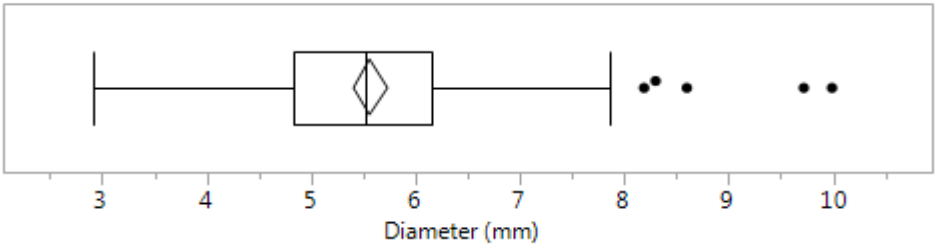

Figure 8-7: Box and whisker plot showing disk bead diameters from Evelyn (EV 01).

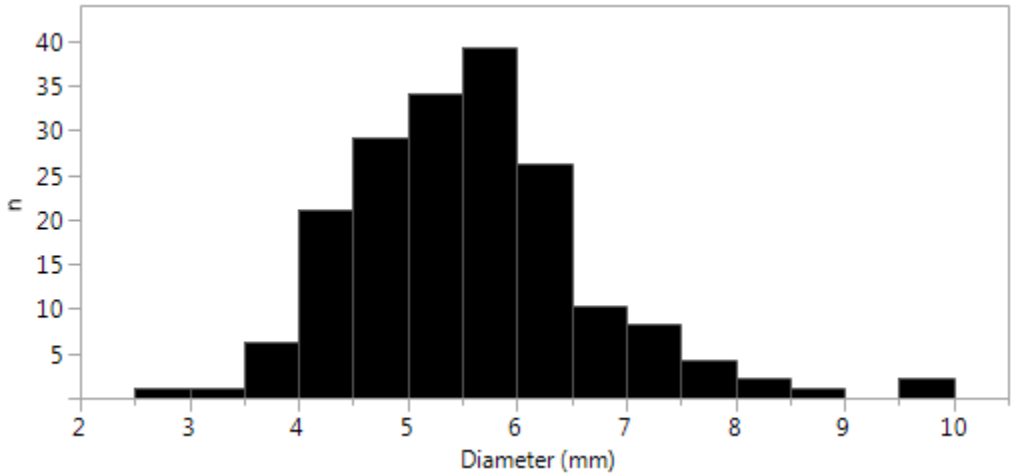

Figure 8-8: Histogram showing disk bead diameter range at Evelyn (EV 01).

All of the beads had a complete perforation and only four of the unbroken beads were irregular in shape. Four beads have very angular edges that did not have to do with breakage; these beads appear to have not been fully rounded down into a spherical shape.

8.3.3 Metal

A total of 55 metal items were found at Evelyn (EV 01). These items include two tapering iron bars, two small metal plates, one possible iron pendant, two copper bangles and a total of 48 helixes.

Table 8-6: Metal artefact types at Evelyn (EV 01).

Artefact type	Count (*n*)
Iron Helix	35
Copper Helix	13
Copper bangle	2
Iron Pendant	1
Iron bar	2
Iron plate	2

EV01/M035 is 37.35mm in length, one end has been bent to form a circular eye of 5.8cm and the other end is flattened into a slight flare of 8.1mm. The small size of this artefact and the presence of the small eye means it is likely a pendant (Figure 8-9).

Figure 8-9: Iron pendant from Evelyn (EV 01).

Two solid copper bangles were found lying interlaced with each other. There is a greenish verdigris that covers the surface of both bangles and they have a diameter of approximately 5.6mm (Figure 9-9).

Figure 8-10: Copper bangles from Evelyn (EV 01).

Both copper and iron helixes were found in multiple contexts on site. A total of 35 iron helixes were found all were broken into small fragments weighing less than 1g. The majority (*n*=23) had thick corrosion obscuring their actual diameter measurement. The 12 pieces that were slightly less corroded were all made out of a flattened ribbon of wire with a diameter ranging from 1.9mm to 6.3mm.

The 13 copper helixes all had a thin layer of greenish verdigris covering their surfaces. In general these helixes had much smaller diameters ranging from 1.3mm to 2.5mm, with one having a diameter of 4.8mm. Nearly all (*n*=12) of the helixes were made out of a flattened copper ribbon and only one was made from a thin rounded wire.

The two iron bars are solid and both taper to one end resulting in an almost conical shape. EV01/M015 is the longer of the two, 55.5mm, but at its thickest part the diameter is 5.1mm. In comparison EV01/M018 is slightly shorter at 37.3mm but is

generally thicker with a diameter of 7.8mm at its thickest. Due to their size and shape they could be described as iron points.

The larger of the two iron plates, EV01/M016, is slightly wedge shaped with a length of 39.2mm and is 22.0mm at its widest point. The narrower end is beginning to flake, and pieces are starting to break off it, due to corrosion that covers the entire surface of the artefact. EV01/M029 is smaller in size, 22.2mm by 8.6mm, and has a more irregular shape with a slight curve.

8.3.4 Slag

Slag, in total 454.5g, was found in multiple areas of the site predominantly in midden contexts or in the kraal. The largest sample, weighing 281g, consisted of five large fragments recovered from gravel wash on the southern slope.

8.3.5 Spindle whorls

In total, 18 spindle whorls were found. Only one of these was unbroken, but did not have evidence of a perforation yet, less than half of each of the other spindle whorls was present in the collection. Nearly 40% of the sample had an estimated diameter of 60mm with the next most frequent diameter being 50mm (Table 8-7).

Table 8-7: Spindle whorl diameter distribution at Evelyn (EV 01).

Diameter (mm)	*n*	%
40	4	22.2
50	5	27.8
60	7	38.9
70	2	11.1

All but one of the spindle whorls were made out of ceramic sherds. EV01/SW11, however, was made out of stone and was the thinnest of the spindle whorls.

8.3.6 Cowrie shell

One cowrie shell, broken down the length, was found at the site. This shell was missing its dorsal surface which had been removed and the edges smoothed down. The shell is 21.2mm long and is oval in shape.

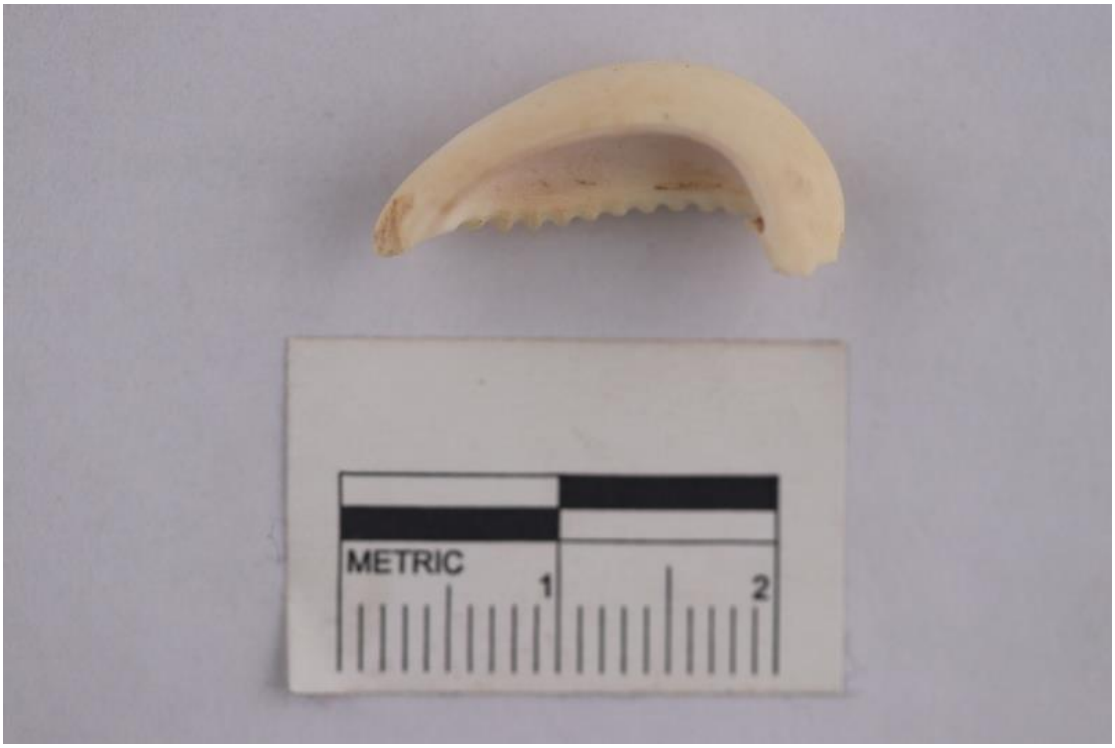

Figure 8-11: Cowrie shell from Evelyn (EV 01).

8.3.7 Figurine

A small piece of oddly shaped ceramic was collected from C1004 a grey ashy midden deposit. The small oval shaped piece, which has broken off a larger item, does not have a consistent diameter but is roughly 15.3mm at its widest and 15.3mm at the narrowest point (Figure 8-12). It only has a length of 15.7mm and due to its broken

nature, and the lack of any further pieces being collected, the original shape of the figurine could not be determined.

Figure 8-12: Figurine from Evelyn (EV 01).

8.3.8 Celadon

A small piece of glazed ceramic, 18,8mm by 13.3mm with a width of 8.1mm, was a unique item found at Evelyn (EV 01). This piece of ceramic is almost completely flat with no visible curve to it (Figure 8-13). The ceramic itself is whitish grey with a thin layer of grey-green glaze of each surface. It was found in C1002 the gravel wash context on the southern slope.

Figure 8-13: Celadon from Evelyn (EV 01).

8.4 Distribution and site summary

The richness of small finds excavated from the area of wash and the midden layer beneath far outweighs the other sites in this study. The radiocarbon dates and ceramic analysis (Antonites pers. comm) suggests that the site likely within the TK2 ceramics phase and therefore belong within the late 12th to 13th centuries AD.

Be that as it may it is important to note that the intentional deposition of grave goods along with the burial can provide insight into the use of these items rather than just the way they were discarded.

The site of Evelyn is unique, within these five sites, in that both a burial and a piece of celadon were found. The increased amount of glass beads, primarily grave goods, provides an opportunity to assess the intentional deposition of artefacts rather than

merely discard practices. The next chapter focusses on Klein Bolayi (EV 02) a site that is located close by on the landscape.

Table 8-8: Small finds distribution at Evelyn.

Context Description	Glass Beads (n)	Disk Beads (n)	Metal Helixes (n)	Metal Other (n)	Slag Weight (g)	Spindle Whorls (n)
Surface above midden	4	-	2	-	33.1	1
Gravel wash (south slope)	32	35	20	3	327.1	9
Bone rich deposit	11	14	9	2	-	1
Grey ashy midden	20	32	9	1	10.3	2
Burial and associated pot	826	6	1	-	-	-
Ashy lens above gravel floor	6	7	2	-	4.7	-
Loamy surface deposit	4	1	-	-	-	-
Gravel wash (east slope)	10	10	1	-	13.5	1
Ashy surface (east slope)	8	3	-	-	-	-
Ashy deposit above kraal	11	24	-	-	-	1
Kraal	17	40	1	-	15.7	1
Sandy surface (west slope)	2	1	-	-	-	-
Gravel wash (west slope)	-	3	1	-	-	2
Grain bin	-	3	-	-	-	-
Midden under rock overhang	2	7	2	1	38.3	-

Chapter 9: Klein Bolayi (EV02)

The site of Klein Bolayi (EV 02), located around two kilometres to the north east of Evelyn (EV 01), is situated on flat ground in close proximity to a steep sided hill less than 1km to the north. A modern 4x4 track cuts through the site, next to which is an ashy midden that helped with the initial identification of the site (Figure 8-1).

Figure 9-1: Klein Bolayi (EV 02) overview.

9.1 Excavation units and contexts

Excavations took place at Klein Bolayi in July 2016. The arbitrary datum was given the coordinates N1000 E1000 to accommodate the large size of the site. A total of six excavation units, 96m^2 in total, of varying size were opened on different areas of interest around the site (Figure 9-2 and Figure 9-3). These units exposed a large area of cattle kraal, midden deposit and large stone feature.

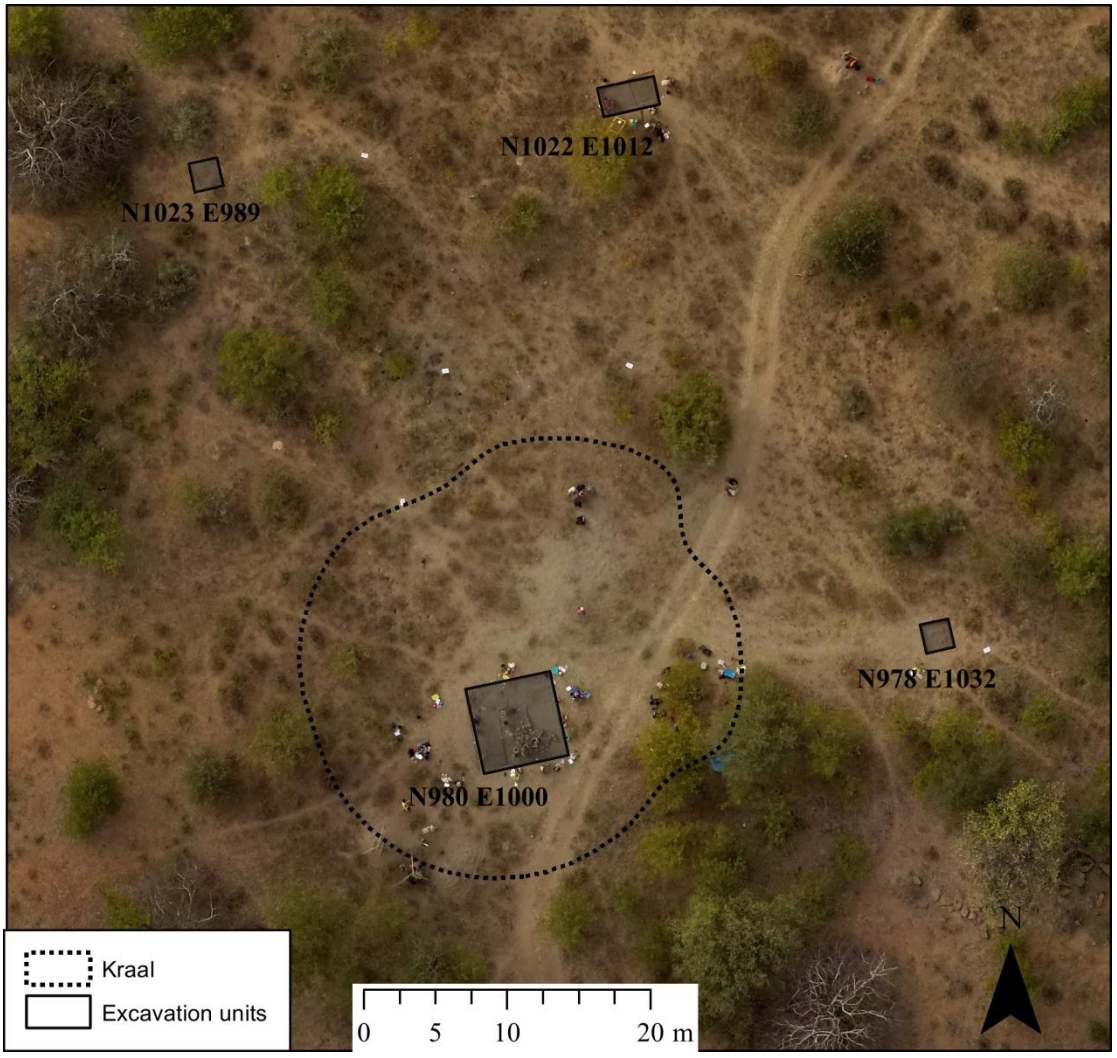

Figure 9-2: Klein Bolayi (EV 02) southern excavation units.

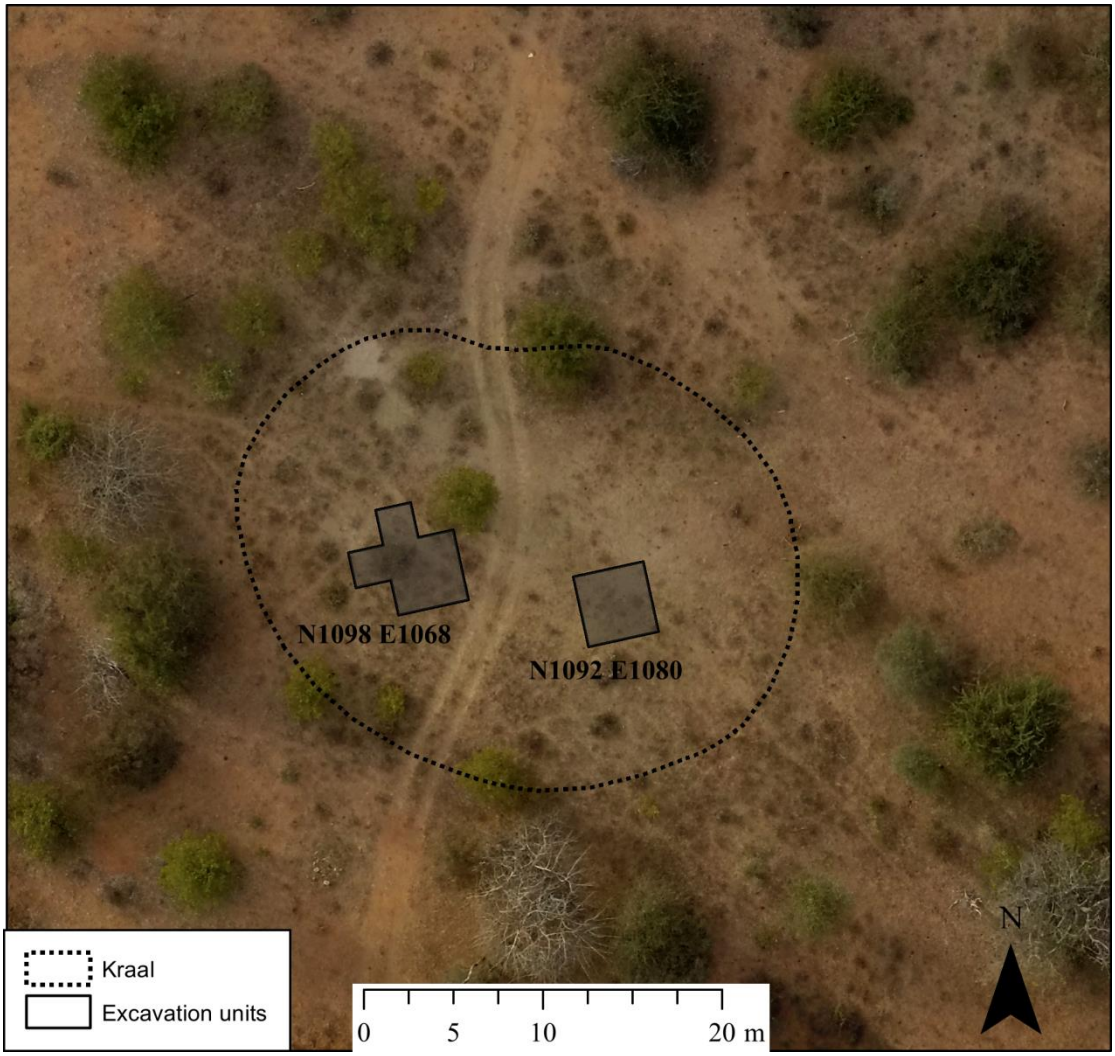

Figure 9-3: Klein Bolayi (EV 02) northern excavation units.

N980 E1000 (Trench I)

A large unit of 6m x 6m was opened, in nine contiguous 2m x 2m units, in the ashy kraal deposit.

- C1001: Surface loose ashy midden deposit. Disturbed by animal activity.
- C1003: Undisturbed ashy deposit of variable consistency. This context ends on a layer of horizontal artefacts.
- C1006: This is an artefact rich deposit of ashy soil; containing the stone feature (C1004).

- C1004: A stone feature roughly 1m by 1m round feature of a single layer of packed stones (the midpoint of the feature is N982 E1004). Several items of material culture were trapped between the stones.
- C1009: Dark ashy soil that changes to a greyish white dung deposit towards the bottom.
- C1016: Sterile surface under the kraal context that was not excavated.

N978 E1030 (Trench II)

A 2m x 4m unit located east of the main kraal area, uncovered the remains of a hut floor.

- C1007: A gravel layer exposed after surface clean up.
- C1011: A distinct ashy deposit that containing animal bones and a few ceramic sherds. This ashy deposit had more consolidated red patches present within it. These patches were the remains of hut debris.
- C1018: The hut flooring, with a visible posthole, which is defined as a feature within C1011. The hut floor was not excavated but clearly rested on sterile soil.

N1022 E1021 (Trench III)

To the north another 2m x 4m unit was excavated on a slight downward slope to the north of the main kraal.

- C1002: Top soil layer with animal disturbances. Most likely an area of wash.
- C1005: A rich artefact layer on top of a compact gravel deposit.

- C1008: Compact gravel layer with pebble and cobble inclusions. Natural wash on a downward slope.
- C1010: A small ashy deposit present in the eastern quadrant of the unit which was caused by root disturbance.

N1023 E989 (Trench IV)

A number of small pieces of slag were found lying on the surface to the east of this unit and prompted the excavation of a single 2m x 2m unit. This unit yielded very little cultural material and sterile soil was reached after about 10cm. It is likely that items located here were part of a wash event from another part of the site.

- C1015: Compact sandy layer with gravel inclusions.
- C1017: The unit ends on sterile reddish soil which extends throughout. This context was not excavated.

N1096 E1068 (Trench V)

A 6m x 6m unit was placed to investigate the northernmost extent of the site, this unit was separated into nine smaller 2m x 2m units. Only six of the nine units were excavated (the 2m x 2m units that were not excavated were N1096 E1068, N1100 E1068 and N1100 E1072). This unit extends over a large kraal area covered by a shallow ashy layer.

- C1012: Loose ashy soil with a low density of ceramics present.

- C1019: Clearly defined compact kraal layer which has formed a whitish laminate surface. This surface was not excavated.

N1092 E1080 (Trench VI)

A second unit was a 4m x 4m placed to the southeast of the previous unit to investigate the extent of the kraal context. A modern vehicle track separates the two units. The deposit was shallow and excavation ended on a compact dung layer with friable edges that made defining its extent difficult in some places as in the unit above.

- C1013: Loose ashy surface deposit.
- C1014: Dung deposit that lacks the vitrified characteristics of the previous unit.

9.2 Dating

The radiocarbon dates from Klein Bolayi (EV 02) consist of seven charcoal samples that were sent for radiocarbon analysis. Three of these samples were taken from N980 E1000 (the 6m x 6m unit). The first sample from this unit (D-AMS 028786) is associated with the ashy midden deposit (C1006) that contains the stone feature and returned a 2-sigma calibrated date of cal. AD1021-1150. The two further dates from this unit (D-AMS 028791 and D-AMS 028792) are from the bottom of the midden deposit where the kraal deposit begins (C1009) and returned dates of cal. AD 893-1025 and 1046-1217 respectively.

The sample D-AMS 028787 was taken from the area of wash from N1022 E1021 (C1008) this sample returned a 2-sigma date of cal. AD 1071-1224. D-AMS 028790 was found in N987 E1030, the northern most unit on the site, and returned a 2-sigma date of cal. AD 1042-1178.

The final two samples were from the kraal area located on the northern edge of the site. D-AMS 028788, which came from C1012 in N1098 E1070, and D-AMS 028789, from C1011 in unit N978 E1030, returned dates of cal. AD 895-1018 and 770-963 respectively. This final date (D-AMS 28789) is substantially earlier than the other radiocarbon dates. It is possible that this sample was comprised of old wood that was used as a post in the kraal area.

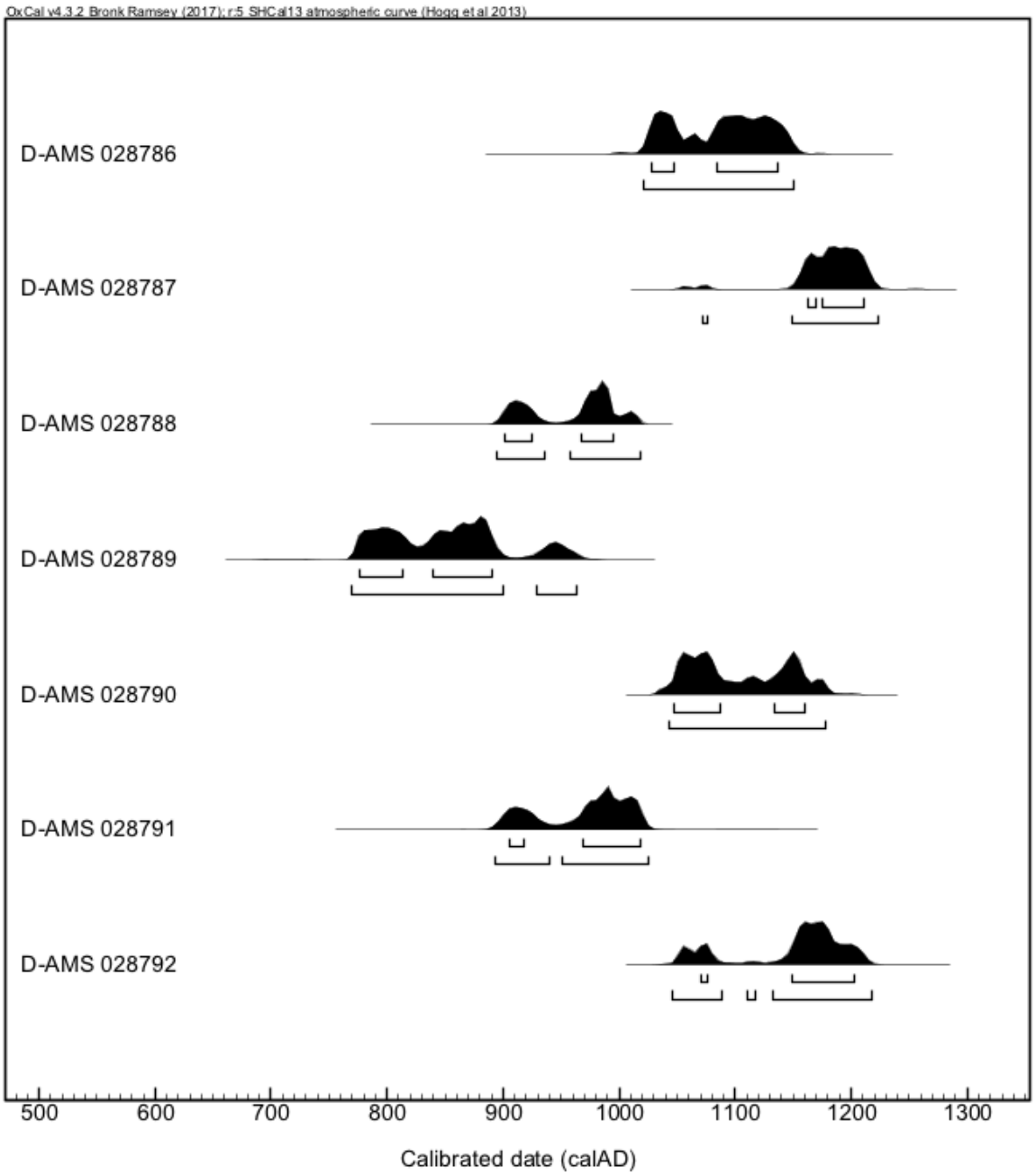

Figure 9-4: Radiocarbon dates from Klein Bolayi (EV02). Results are calibrated using the Southern Hemisphere calibration curve (Hogg et al. 2013) and are plotted in OxCal v4.3.2 (Bronk Ramsey 2017).

Table 9-1: Radiocarbon dates from Klein Bolayi (EV 02). Results are calibrated using the Southern Hemisphere calibration curve (Hogg et al. 2013) and are plotted in OxCal v4.3.2 (Bronk Ramsey 2017).

Laboratory number	Uncalibrated age BP	1-Sigma range (cal. AD)	2-Sigma range (cal. AD)
D-AMS 028786	1012± 27	1028-1136	1021-1150
D-AMS 028787	910± 22	1163-1210	1071-1224
D-AMS 028788	1127± 19	901-995	895-1018
D-AMS 028789	1227± 27	776-890	770-963
D-AMS 028790	963± 19	1047-1160	1042-1178
D-AMS 028791	1115± 31	905-1018	893-1025
D-AMS 028792	934± 23	1071-1203	1046-1217

9.3 Material Culture

The small finds from this site include glass beads, shell disk beads, a stone bead, metal and slag. In addition to this a single ceramic amulet and 4 cowrie shells were also found. No spindle whorls were found at the site.

9.3.1 Glass Beads

In total, 15 glass beads were found at Klein Bolayi. All of the glass beads were drawn and reheated. The most common shape were tubes (*n*=12), three were slightly reheated tubes (R1) and nine had bevelled edges from reheating (R2). Cylinders were the only other bead shape present in the sample and only three were found.

Table 9-2: Distribution of glass bead sizes at Klein Bolayi (EV 02).

Size designation	*n*	%
minute (<2.5mm)	9	60.0
small (2.5-3.5mm)	5	33.3
medium (3.5-4.5mm)	1	6.7
large (>4.5mm)	0	0.0

The beads ranged in diameter size from 1.9mm and 4.2mm. The majority of beads (*n*=9) fell into the minute size category, with five falling into the small size designation and one medium bead (Figure 9-2).

Blue-green was the most abundant colour (*n*=8), seven of which are tubes and one is a cylinder. The next most frequent colour is brownish red (*n*=5), four of which are tubes and one is a cylinder. A single blue cylinder and one green tube were the only other two colours that were found (Figure 9-3). There is only a small sample of beads at this site which makes it difficult to place them definitively into a bead series, however they most likely form part of the K2 Indo-Pacific series (Wood 2011: 75).

Table 9-3: Colour frequency of Klein Bolayi (EV 02) glass beads.

Colour	***n***	**%**
Blue	1	6.7
Blue-green	8	53.3
Brownish-red	5	33.3
Green	1	6.7

9.3.2 Disk beads

The sample of disk beads of Klein Bolayi consists of 63 beads in total. Of these almost 80 percent (*n*=49) are ostrich eggshell beads and the other 14 beads are made from *Achatina*.

The beads have a 6.8mm range in diameter, the smallest bead being 2.9mm and the largest 9.7mm.

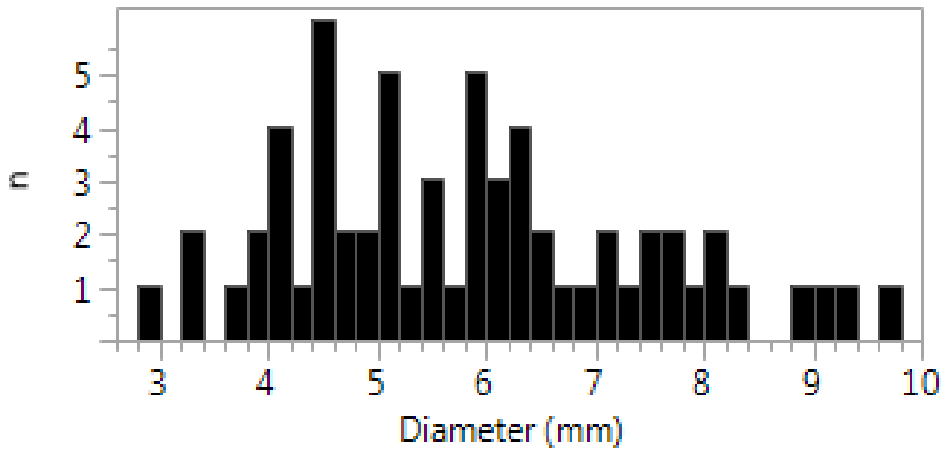

Figure 9-5: Histogram of disk bead diameters for Klein Bolayi (EV 02)

The most common shape of bead is circular (*n*=56), six beads are classified as irregular and two *Achatina* beads are oval in shape. Of the six irregular beads one is too broken for its original shape to be properly determined and another is an *Achatina* bead that has begun to chip and peel. The other four beads have squared edges and appear to not have been ground completely circular. Even so all the beads contained complete perforations.

9.3.3 Stone Bead

A single stone bead was found during initial site surveys and falls under general surface finds. The bead is circular in shape and a light white colour. It is much larger than the other disk beads found at the site, 17.3mm in diameter with a 3.8mm perforation, the bead is also thicker than other beads at the site 6.6mm (Figure 9-6).

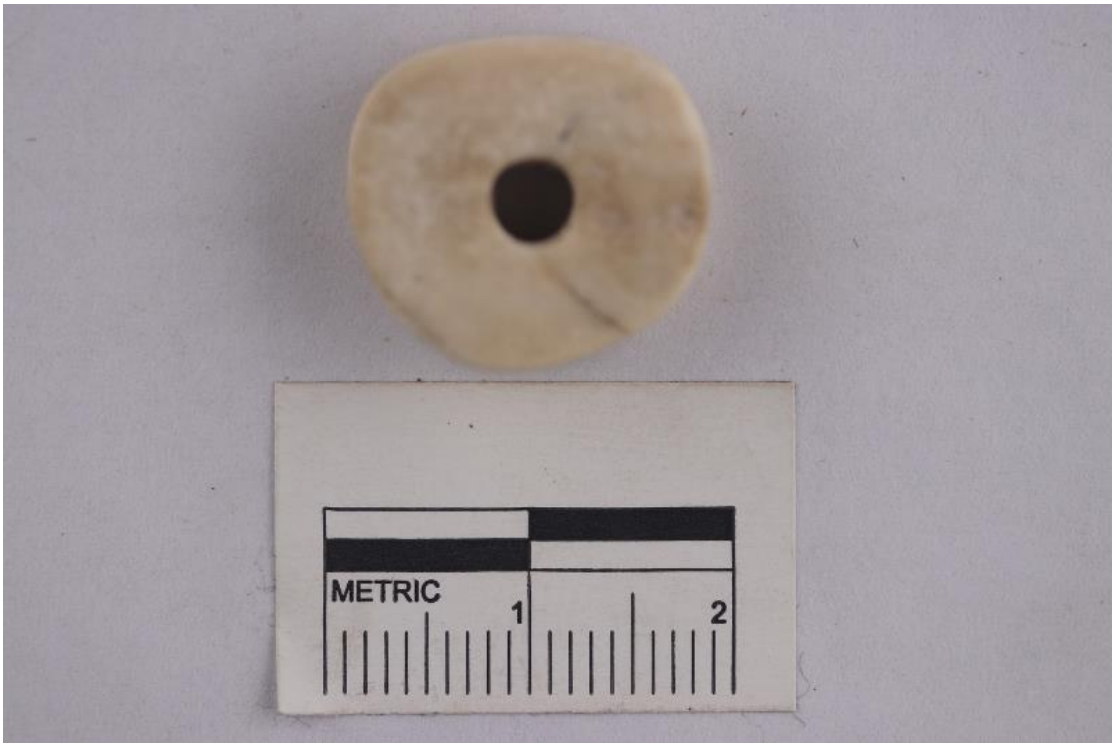

Figure 9-6: Stone bead from Klein Bolayi (EV 02).

9.3.4 Metal

A total of 59 metal artefacts were found the majority of which were helixes made out of copper (*n*=24) and iron (*n*=29). Other copper artefacts include two strands of copper wire and a piece of solid copper bangle. Iron artefacts include a tapered rod, an iron plate and a semi-circular item of undetermined function.

Table 9-4: Metal artefact types from Klein Bolayi (EV 02).

Artefact type	Count (*n*)
Iron helix	29
Copper helix	24
Copper bangle	1
Copper wire	2
Tapered rod	1
Iron plate	1
Unknown iron artefact	1

The copper helixes had greenish verdigris covering their surfaces which did not

obscure the individual coils. All of the helixes were made from thick flat ribbons ranging is width from 1.1mm to 2.3mm. The diameter ranged widely from 1.5mm to 9.8mm however most of the fragments were so small that they weighed less than 1g. The copper wire found on the site is flattened into a ribbon shape and slightly curved. The width of this ribbon, 2.04mm, is consistent with the shape of the copper helixes.

The piece of solid copper bangle, similar to those found at Evelyn, is covered in green verdigris that does not obscure the shape of the artefact (Figure 9-7). This semi-circular band weighs 18.78g and has a diameter of roughly 5.13g.

Figure 9-7: Copper bangle from Klein Bolayi (EV 02).

The three iron artefacts that are not helixes are all covered in thick reddish brown corrosive rust. The metal plate (EV02/M001) is small and rectangular, 17.7mm by 16.34mm, weighing 1.81g. In profile it appears to have been fashioned out of two metal plates that were stacked on top of each other. The plates are now rusted

together. In the same context a rounded piece of iron was found (EV02/M002) that resembles a tube cut length ways and then slightly flattened out. The function of this artefact is unknown. The tapered iron rod (EV02/M007) is broken into several smaller pieces, 109.5mm in length and weighing 10.4g.

The iron helixes were covered in a thick layer of rust and were highly fragmented with none of the fragments weighing over 1g. Diameter measurements were slightly obscured by the surface corrosion, however, they ranged from 2.0mm to 3.7mm.

9.3.5 Slag

Slag was found in multiple contexts on the site. There were 80 separate fragments weighing a total of 564.3g. These slag fragments were mostly blackish grey and magnetic. Two fragments from C1011, with a combined weight of 30.1g, were not magnetic and contained small greenish flakes which could be indicative of copper smelting (Miller et al. 2001).

9.3.6 Ceramic amulet

A ceramic amulet was found in the ashy deposit in N978 E1030 (C1011). It is roughly rectangular in shape, 33.3mm by 25.8mm and 7.1mm thick, and tapers slightly towards the end that has two holes bored into it. These holes are of different sizes and both narrow toward the centre showing they were probably bored from both sides. This amulet was most likely made out of a piece of a ceramic pot as there is a slight curve along the profile of the amulet.

Figure 9-8: Ceramic amulet from Klein Bolayi (EV 02).

9.3.7 Cowrie shells

A total of 4 cowrie shells were found at Klein Bolayi (EV 02), only one was a complete shell, two were broken down the length and one was broken down the width and length. All of the shells had their dorsal surfaces removed and the edges were smoothed to some extent after this removal. This contrasts the jagged edges of the breaks found in those shells which have been broken down their length or width.

On the almost complete cowrie (EV02/CS001) clear signs of polishing are present after the dorsal surface was removed (Figure 9-9). The general oval shape of this shell means it can tentatively be identified as *Cypraea annulus* and the same can be said for the two shells that are broken down the length (EV02/CS002 and EV02/CS004). The shell that was broken down width and length (EV02/CS003) cannot be classified to a species level as the remaining piece is too small.

Figure 9-9: Cowrie shell (EV02/CS001) from Klein Bolayi (EV 02).

9.4 Distribution and site summary

Klein Bolayi (EV 02) offers an opportunity to look into the change of use in space at a site level due to the presence of two kraal areas. The activity area around the stone feature in the southern kraal yielded a wide array of material culture and exotic trade items.

The site must also not be seen in isolation as it is so close to Evelyn (EV 01) on the landscape and was likely also occupied during the late mid to late 12th century. These two sites, although overlapping in dates differ in their layout and amount of small finds.

Table 9-5: Small finds distribution at Klein Bolayi (EV 02).

Context Description	Glass Beads (n)	Disk Beads (n)	Stone Beads (n)	Metal Helixes (n)	Metal Other (n)	Slag Weight (g)
Loose ashy surface deposit	2	3	1	4	-	19.3
Ashy deposit above kraal	2	13	-	14	3	91.9
Stone feature	4	33	-	25	3	343.4
Main kraal	1	-	-	3	-	26.3
Ashy deposit resting on hut floor	3	1	-	6	-	30.1
Slope wash	2	4	-	-	1	53.1
Loose ash covering northern kraal	1	8	-	-	-	-
Northern kraal deposit	-	1	-	-	-	-

Chapter 10: Discussion and Conclusion

Evidence of the organisation of production at a site level, both of raw materials and finished goods, can be indicative of the level of engagement in the larger economy. Production can take place on a variety of social scales including single to multiple household and community scales. In addition, production can be for use at the site itself as well as the creation of surplus for local and long distance trade.

In the southern African MIA, goods have often been divided into two separate categories; items associated with elite culture and those that are not. Items such as glass beads (following Wood 2005, 2011) and non-utilitarian metal objects (following Calabrese 2000a, 2007) would fall under the former category. Disk beads, spindle whorls and utilitarian metal objects occur in both elite and commoner contexts. It is rather the absence of elite goods at a site that informs its classification as a commoner settlement (e.g. Huffman 2007a). This clear division between commoner and elite assumes an ingrained system of value and exchange networks closely controlled by elites within the Shashe-Limpopo Confluence Area (SCLA) itself (Calabrese 2007, Huffman 2007a).

Moffett and Chirikure (2016) have argued against this thinking and the associated acceptance of the Prestige Goods Model as an applicable tool to understand southern African state societies. The authors argue that southern African 'states' were "decentralized and segmentary, and the degree of autonomy in 'peripheries' was high" (Moffett & Chirikure 2016: 373). As stated in Chapter 3 and 4 this notion has been supported by work conducted at Mutamba where it was found that the site's position on the landscape afforded the people living at the site access to goods that

were highly controlled in the SLCA (Antonites 2012, 2014, 2019). It is thus pertinent to focus on the function of specific types of material culture rather than their ascribed 'value' (Chapter 4), as it is through function that we can gain insight into the social value of material culture (Costin 2007, Moffett & Chirikure 2016).

10.1 Site level activities

With that in mind a brief overview of the activities taking place at each of the sites is followed by an exploration of certain trends observed when comparisons between sites are formed. The focus here is placed on the presence or absence of each type of material culture. For the relative abundance of each see Appendix A for the amount of deposit removed per context.

10.1.1 Klein Bolayi (EV 02)

One of the largest of the five sites and the closest to the SLCA, its earlier dates, sprawling position over flat land and abundance of metal artefacts of adornment make it an important site for discussion.

Initially the site was centred around a large kraal that was also used as a midden. Subsequently, the kraal was either moved to the northern edge of the settlement or additional kraals were created. It is during this later phase of occupation that a stone platform was built on top of the first kraal. This arrangement of stones is similar to the stone circles found on Mapungubwe Hill (Meyer & Cloete 2010:257). The deposit layer surrounding this stone circle, and the layers above it, yielded the highest number of artefacts. It is clear that this area was used for important activities since cowrie shells, glass beads, both iron and copper items along with slag were found there. The

kraal is an area where male dominated activities such smithing typically occur (Huffman 1982, Calabrese 2000b).

Evidence for agricultural activities at the site are minimal, limited to a few upper grindstones, with no identifiable iron implements or visible grain bins on the surface. In addition no evidence for the spinning of cotton was found on site, despite the abundance of wild cotton that grows on the site currently. It would seem that the focus of the sites activities were the keeping of cattle and the production of finished metal items. This stands in rather stark contrast to Evelyn (EV 02), not some 2km away.

10.1.2 Evelyn (EV 01)

Occupation at Evelyn likely occurred slightly later than Klein Bolayi (EV 02), from roughly around AD 1190 to 1230, given the TK2 ceramics and glass beads. The settlements may have overlapped temporarily or could have been settled by the same group moving across the landscape. The massive boulder outcrop north of the kraal, now devoid of deposit, was evidently an area of settlement along with the area around the southern base of the hill.

A variety of activities took place at the site, many of them likely taking place on top of the rock as the a vast quantity of material culture was excavated from wash down the southern slope, including evidence of small scale production of cotton and cloth and smithing activities. Disk beads may have even been produced in the kraal area of the site as seen in C1013 and C1014 on the southern slope of the site.

These small scale industries would appear to have afforded the sites residents with access to a number of trade items. Glass beads (*n*=48) along with a cowrie shell

fragment and a celadon sherd were recovered from the midden area. These long distance trade items were found in a discard related context and it was likely that the site had access to greater numbers than just those found within the midden.

The burial, along with its grave goods, provides much clearer insight into the level of access to exotic trade items at the site. The burial itself contained hundreds of beads associated with an elderly woman. The richness of the grave goods cannot be explained simply through status as elsewhere burial artefacts such as glass beads have been found not to be sex or status specific (Steyn & Nienaber 2000:115). The burial location, within the midden, is similar to many of the graves found at K2 (Gardner 1963). Of the grave goods, those collected from around the neck area as well as those deposited in the associated pot, glass beads (*n*= 826) far outnumber shell disk beads (*n*= 6). This is not the case for the rest of the site however.

10.1.3 Vryheid (MNR 04)

Father east than the previous two sites Vryheid (MNR 04), covers a small hill and the surrounding area was likely settled during the mid-13th century. This large site has a number of different occupation areas and numerous grain bins dotted around the hill are visible on the surface.

There is some evidence of production activities, such as spinning and smithing, taking place in the kraal in Area A. Very little was found in Area B however, despite the large amount of deposit removed from the ashy kraal area. Area C had a number of beads, both glass and disk, present along with a number of metal helixes. The minimal amount of copper present at the site, despite it being positioned less than 12km from copper ore deposits at Musina, could indicate that local copper and iron was not

exploited during the time of occupation. Oral histories assert that the ore deposits at Musina were only used in the last 300 to 400 years although this cannot be confirmed without further investigation (Stayt 1931; Van Warmelo 1940).

10.1.4 Frampton 1 (MNR 74) and Frampton 2 (MNR 78)

The position of this site cluster, a little more than 100km to the east of Mapungubwe, provides perspective on the possible eastern boundary of the Mapungubwe state. Occupied during the mid-13th century both Frampton 1 (MNR 74) and Frampton 2 (MNR 78) had a shallow archaeological deposit and were likely only occupied temporarily.

Presumed status goods such as non-utilitarian metal occur at the sites along with evidence of spinning and metal smithing. It is interesting to note that at Frampton 1 (MNR 74) minimal metal items (*n*=3) were found in conjunction with a substantial collection of glass beads (*n*=33), whereas at Frampton 2 (MNR 78) a substantial collection of non-utilitarian iron objects (*n*=42) was found and yet glass beads were completely absent. Frampton 2 (MNR 78) also had more than double the amount of disk beads present (*n*=78) at Frampton 1 (MNR 74) (*n*=37). The presence of a number of spindle whorls on both sites show that cotton was likely produced although at such small sites it was likely produced on a smaller scale for local consumption.

10.2 Regional site articulation

The five sites comprising this study vary in both size and distance from the SCLA. Comparisons drawn between the sites show variability in their site level activities, however, a few trends emerge that are consistent between sites.

10.2.1 Small scale fibre production

The technology associated with spinning and weaving likely only reached the interior of southern Africa during the 13th century. Fibre and cloth do not generally preserve well in the archaeological record thus one of the few indications that this activity took place is the presence of spindle whorls. Cloth production during the Iron Age generally took place either for local consumption, personal use, or as a means to access the regional trade networks through its surplus production (Antonites 2019:106). Although there is no way to accurately ascertain how much fibre or cloth was being produced by a single site, the presence of such activities can be confirmed through spindle whorls.

Spindle whorls are found in the 13th century layers of deposit at Mapungubwe in abundance but are conspicuously absent from the earlier settlement at K2 (Gardner 1963). Spindle whorls were not unique to Mapungubwe and have been found in large numbers on certain hinterland sites such as Mutamba (Antonites 2012, 2019) and in smaller numbers at other settlements such as Leokwe Hill Northern terrace, Vhunyela, Stayt and Krodraai (Lobser 1991, Calabrese 2007, Hopf 2017, Mouton 2017). The distribution patterns, and numbers present, of these objects can suggest patterns of cloth production, not only for individual use but also participation in a local spinning

industry (Antonites 2019). An industry that involved the political centre, Mapungubwe, as not only a consumer of sought after cloth but also a producer of this commodity (Antonites 2019:144).

Four out of the five sites have evidence of some form of spinning taking place. However, no spindle whorls were found at Klein Bolayi (EV 02) which could be due to its earlier occupation and a lack of the spinning technology in the interior. At Evelyn (EV01) the presence of spindle whorls could indicate a later occupation date or merely a focus on different production items. The Evelyn (EV 01) spindle whorls (*n*=18), all but one were broken, were mostly found in areas of wash on the slopes of the site likely washed down from occupation areas to the north. Half of the sample (*n*=9) were found in the wash on the southern slope above the midden area whereas another two whorls were found in the kraal contexts.

The three Mapungubwe era sites all showed evidence of spinning taking place at what was likely a household level or in communal areas on a small scale for local consumption. The two most common contexts that spindle whorls were recovered from were midden contexts and kraal areas. At Frampton 1 (MNR 74) spindle whorls (*n*=3) were found as part of the kraal context a further six broken whorls were recovered from midden contexts and had likely been discarded when no longer functional. A slightly higher number of spindle whorls were present at Frampton 2 (MNR 78) and were distributed throughout the site including household and general occupation contexts. At Vryheid (MNR 04) the collection consisted solely of fragments of whole whorls. Almost half of the 7 whorls (*n*=3) were found in the Area A kraal context with a single other whorl coming from the Area B kraal context.

In general the distribution of spindle whorls covered the majority of contexts at each site. They were found in their highest numbers in kraal contexts generally seen as the domain of the male and spinning may have been taking place in these areas. It is more likely that the spindle whorls recovered from kraal contexts, all of which are broken, were found there because they were discarded as part of household refuse as kraals have been found to be used as middens for the disposal of ash and household waste.

At smaller hinterland sites there were likely fewer households and fewer people present to engage in crafting activities. Thus it would be less likely that these sites produced goods such as cotton on a large enough scale to engage in substantial levels of trade. It is more likely that cotton was produced on a small scale at a household level, supported by the broken whorls appearing in middens, and was consumed at a site or local level too.

10.2.2 Disk bead production

Ostrich eggshell and *Achatina* (giant land snail) beads have been present in the archaeological record since the Later Stone Age and are also found in Iron Age contexts in southern Africa. Shell beads are used as adornment and strung together or sewn onto clothing. Evidence of bead manufacture, such as the presence of bead blanks or unfinished beads, is often ignored or lost as fragments of shell remain in faunal collections.

All five sites had both ostrich eggshell and *Achatina* beads present, the ostrich eggshell beads were ubiquitous and comprised the majority of the samples as they were documented in nearly every context. Fragments of unworked ostrich eggshell and *Achatina* were found but form part of the faunal record. The availability of raw

materials for the manufacture of these beads is clear; however possible further evidence of their manufacture was present, although minimal, at certain sites.

At Klein Bolayi (EV 02) evidence of possible bead production consisted of four ostrich eggshell beads that were not fully rounded; found in the deposit associated with the stone feature above the southern kraal. These beads had complete perforations but were irregular in shape with squared edges in profile.

The largest sample of disk beads was recovered from Evelyn (EV 01), in total 186, with at least one bead being found in every context bar one (the surface deposit above the midden). For such a large sample there were relatively few *Achatina* beads (*n*=5) which only makes up less than 3 percent of the total. More than half of these (*n*=3) were found in the kraal context which is a pattern that holds true for ostrich eggshell beads too as nearly 35% (*n*=64) were found in the kraal deposit and the ashy layer above it. Only four beads showed possible evidence of being in stages of manufacture, as their shapes were irregular and their edges angular, these beads were found in both the midden and kraal deposits.

At Vryheid (MNR 04) the two highest concentrations of beads came from Area C (*n*=25), of which 13 were found in a midden context, and Area A (*n*=23), where 12 were collected in the consolidated wash associated with a grain bin, only four beads were excavated in Area B. Interestingly none of the beads found at the site were in production and in general they had well rounded edges and were very circular. At Frampton 1 (MNR 74) the smallest of the bead collections (*n*=37) was also the most uniform as the beads all fell within a 2.9mm range. In general these beads had rounded edges and a uniform appearance. Again no clear evidence of bead production

was found at the site. The second largest collection of disk beads (*n*=78) came from one of the smallest sites Frampton 2 (MNR 78). Sixty-nine percent of these beads (*n*=54) were found in the test pits dug in an area of unconsolidated wash that was caught between rocks.

Access to raw materials to create disk beads, and their presence on a site, cannot be used as definitive evidence of bead production taking place. However at Evelyn (EV 01) and Klein Bolayi (EV 02) evidence does seem to suggest that bead production may have been taking place on a small scale. This needs to be corroborated with the faunal data. It is important to note that the beads from all of the sites contained complete perforations. This may be due to the fact that beads are easier to recognise as such once a perforation has already been made. Thus there may be a number of slightly rounded yet unperforated blanks present in the faunal collection.

10.2.3 Smithing activities

The production and, to a varying degree, the consumption of non-utilitarian metal objects was closely controlled in the SLCA during the time of the Mapungubwe state (Calabrese 2000b, 2007). Even though there is a large variation in the distribution of copper and iron artefacts during the Middle Iron Age (Calabrese 2000b). Within the SLCA metallurgy can thus be linked to elite status, however, this has no corroborating historic evidence beyond what can be observed in the archaeological record (Du Piesanie 2009). The MLRV has deposits of both iron, and to a more localized extent, copper ores, making the production of these metals a fairly widespread industry (Miller 2002). This assertion is evident in the presence of metal, and slag, at all five of the sites in this study.

Iron and copper were both used to make items of adornment such as bangles, pendants, wire bracelets, earrings and anklets, however, iron is generally much more abundant in the archaeological record. Items related to the process of metallurgy, indicating that some form of smithing of smelting was taking place at a site, include furnace remnants, tuyères and slag. Due to its 'near-indestructability' smelting slag is the most abundant remnant of the metallurgical process (Miller & Van Der Merwe 1994: 5). This slag was the only evidence of metal working taking place at any of the sites and will be discussed alongside specific finished artefacts at each site.

There is a high degree of variability between the two Frampton sites which is interesting considering their close proximity and similarity in size. At Frampton 1 (MNR 74) the collection of metal artefacts numbered only three, one of which was a utilitarian piece of flat metal, the only non-utilitarian metal items were two iron helixes. Slag was recovered in the midden area and the sample itself only weighed 12.9g. At Frampton 2 (MNR 78) artefacts were wholly iron, again slag was found in midden context albeit the quantity was greater (147.2g). Of the 41 iron helixes found at the site 92% were found in midden contexts and undifferentiated wash, with the last eight percent coming from the general occupation area.

The number of helixes is greatly decreased (*n*=11), in comparison to Frampton 2 (MNR 78), at Vryheid (MNR 04). There is however the appearance of copper at the site, albeit a small amount, in the form of three helixes and two strands of thin copper wire. The kraal in Area A also had the presence of over 200g of slag, meaning it may have been an area used for smithing activities (this kraal is down slope from the 17th century occupation and thus may contain some material washed from the later occupation). The slag found in the gravel floor in Area C, 74.6g, is more likely to be

associated with the earlier occupation as it is deeper in the deposit than the slag in Area A. The presence of iron artefacts throughout these sites confirms access to such artefacts in the hinterland, albeit to varying degrees. At the three Maremani sites evidence of copper is absent or minimal despite the presence of copper ore deposits in the vicinity which could suggest, as stated above, that local ore was only utilized during the last 300 to 400 years.

The quantity and variety of metal items increases, along with the quantity of slag present (454.5g and 564.3g respectively), at both Evelyn (EV 01) and Klein Bolayi (EV 02). The majority of the metal artefacts found at Evelyn (EV 01), 87%, were helixes with a higher proportion of these being iron. The highest numbers of helixes were found in the gravel wash layer on the southern slope, mostly likely washed down from the occupation on top of the boulder to the north. A rather unique find at Evelyn (EV 01) were the two solid copper bangles which were found in the bone rich midden layer within close proximity to the burial. A similar item was found at Klein Bolayi (EV 02) however it was only a fragment.

Klein Bolayi (EV 02) has the most diverse collection of metal artefacts, both iron and copper. The distribution of copper and iron is almost even throughout the collection. Slag and metal artefacts were found dispersed throughout the site except for in the northern kraal; the highest concentrations of both were associated with the stone feature atop the southern kraal. There does appear to be a correlation between evidence of smithing activities and a higher number of metal artefacts at a site.

Evidence of smelting, in the form of tuyères or furnace remnants, is not present at any of the sites. It is possible that smelting took place in as yet unidentified secluded areas

outside of the main settlements but only the presence of smithing can be confirmed at this point.

10.2.4 Access to long distance trade

The presence of glass beads at a site speaks to the site's participation in the larger trade network however, numbers vary between sites. Precise regional comparisons are often inaccurate due to previous excavation methods (Wood 2012); the small size of glass beads makes them difficult to see during excavation and they are likely to fall though larger sieve meshes. The collection of floatation samples from each locus of excavation can provide a more accurate sample of bead distribution at a site level. Thus, the most accurate comparisons to be made will be between sites that have used this specific method.

The presence of glass beads at four out of the five sites herein, no glass beads were found at Frampton 2 (MNR 78), confirms access to exotic trade goods in the hinterland during the 12th and 13th centuries. This should not however be used as a direct correlate to assign status to these sites as evidence from Mutamba has shown that glass beads should no longer be associated primarily with elite status in the hinterland (Antonites 2014).

Chinese ceramics are a much rarer marker of international trade during the 13th century especially in the southern African interior. Only three sherds were found on Mapungubwe Hill and were associated with elite contexts (Gardner 1963). A single piece of celadon was found in the gravel wash on the southern slope at Evelyn (EV01). Drawing conclusions from a single instance of celadon is unwise, however it does confirm that access to exotic ceramics was not confined to elite sites within the

SLCA at the end of the 12th century. A full understanding of the control over trade in the eastern hinterland remains elusive as more data needs to be generated in order to form a holistic view.

10.3 Summary

These five sites show evidence of active participation in the local economy each one contributing to the larger polity in their own way. The presence of exotic trade goods, such as glass beads, has been confirmed at a variety of sites of different sizes located at varying distances from the SCLA. This speaks to a much wider distribution of these items than previously acknowledged at the time of this study. These sites should not be looked at in isolation but rather as complementary pieces that form part of a large mosaic on the landscape.

10.4 Conclusion

These five sites provide data points on the landscape that can be used to build a more in depth understanding of the articulation between the core and the periphery, and to a greater extent between the multiple groups present within the peripheral spaces. Within this small sample there is a marked variation in the number and frequency of material culture items, although distance from the core cannot account for all of the variation.

On a regional level Evelyn (EV 01) and Klein Bolayi (EV 02) are closer to SLCA and both show a significantly higher numbers of small finds present. This could be interpreted in multiple ways. The sites could have been regional centres, or Level 4 settlements housing senior chiefs allowing the two sites access to exotic goods and metal items or their position outside of the Confluence Area afforded the sites enough agency to gather larger numbers of these items. Both sites may have produced goods for the larger network, although production evidence does not support this, as well as providing for the individual needs of each site. Their position closer to the SCLA could mean that they still fell under some form of political control or at least were in close enough proximity to ascribe to the same 'value' system, whereas sites further in the hinterland had different strategies at the fore.

Vryheid (MNR 04) appears more agriculturally based; possibly producing surplus for other sites and yet has access to fewer exotic items. This focus on agriculture, coupled with its position further afield, could be explained by a need for self-sufficiency to support a longer lived more permanent population at the site.

Frampton 1 (MNR 74) and Frampton 2 (MNR 78) are short lived ephemeral sites with a range of activities taking place, production of a number of items at a household level, and were more likely the material remains of a more mobile group/s moving across the landscape as needed.

These five data points on the landscape provide a starting point from which a large mosaic of hinterland life can begin to be built. It is important not to be too tied down to 'wealth' or 'prestige' models and to instead investigate the data as unique cases that may not fit these models. Instead of the focus on binary divisions such as 'commoner' and 'elite' there is an opportunity to investigate the much more fascinating "less hierarchical, more decentralized or horizontally complex configurations" of Iron Age societies (McIntosh 1999: 1).

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Appendix A: Volume of Deposit Excavated

	Frampton 1 (MNR 74)						
Context	**Deposit**	**Glass**	**Disk**	**Metal**	**Metal**	**Slag**	**Spindle**
Description	**Removed (l)**	**Beads (n)**	**Beads (n)**	**Helixes (n)**	**Other (n)**	**Weight (g)**	**Whorls (n)**
General surface	190	7	6	-	-	-	1
Kraal deposit	665	-	12	-	-	-	3
Undifferentiated Occupation	220	5	2	1	-	-	-
Midden	1085	17	16	1	1	12.97	3
Ashy Deposit	250	4	-	-	-	-	2

Frampton 2 (MNR 78)							
Context	**Deposit**	**Disk**	**Stone**	**Metal**	**Metal**	**Slag**	**Spindle**
Description	**Removed (l)**	**Beads (n)**	**Beads (n)**	**Helix (n)**	**Other (n)**	**Weight (g)**	**Whorls (n)**
General surface	240	2	-	-	-	-	1
Household	370	1	-	-	-	-	1
General occupation	1815	11	-	3	-	-	2
Gravel wash	540	-	-	-	-	-	1
Stone wall	625	4	-	-	-	-	-
Midden	295	7	-	11	-	147.22	4
Undifferentiated wash	1370	54	1	27	3	-	4

Vryheid (MNR 04)							
Context	**Deposit**	**Glass**	**Disk**	**Metal**	**Metal**	**Slag**	**Spindle**
Description	**Removed (l)**	**Beads (n)**	**Beads (n)**	**Helixes (n)**	**Other (n)**	**Weight (g)**	**Whorls (n)**
Area A							
General surface	443.1	2	5	-	1	-	1
Kraal	1597.5	5	6	3	1	229.6	3
Grain bin	927.5	2	12	4	1	18.8	1
Slope wash	771	-	-	-	-	-	-
Area B							
Surface	690	-	3	-	1	-	-
Ashy Kraal Deposit	5175	2	1	-	-	-	1
Unconsolidated Wash	1195	-	-	-	-	-	-
Gravel wash	1885	3	3	1	-	-	-
Gravel floor	1397.5	1	4	1	-	74.6	-
Area C							
Surface	85	2	5	-	1	-	-
Midden	942.5	1	13	2	-	-	1

Evelyn (EV01)							
Context	**Deposit**	**Glass**	**Disk**	**Metal**	**Metal**	**Slag**	**Spindle**
Description	**Removed (l)**	**Beads (n)**	**Beads (n)**	**Helixes (n)**	**Other (n)**	**Weight (g)**	**Whorls (n)**
Surface above midden	345.5	4	-	2	-	33.1	1
Gravel wash (south slope)	7947.5	32	35	20	3	327.1	9
Bone rich deposit	827.5	11	14	9	2	-	1
Grey ashy midden	2632.5	20	32	9	1	10.3	2
Burial and associated pot	7.5	826	6	1	-	-	-
Ashy lens above gravel floor	1180	6	7	2	-	4.7	-
Loamy surface deposit	55	4	1	-	-	-	-
Gravel wash (east slope)	1363	10	10	1	-	13.5	1
Ashy surface (east slope)	70	8	3	-	-	-	-
Ashy deposit above kraal	1080	11	24	-	-	-	1
Kraal	3202.5	17	40	1	-	15.7	1
Sandy surface (west slope)	95	2	1	-	-	-	-
Gravel wash (west slope)	310	-	3	1	-	-	2
Grain bin	100	-	3	-	-	-	-
Midden under rock overhang	1000	2	7	2	1	38.3	-

Klein Bolayi (EV02)							
Context	**Deposit**	**Glass**	**Disk**	**Stone**	**Metal**	**Metal**	**Slag**
Description	**Removed (l)**	**Beads (n)**	**Beads (n)**	**Beads (n)**	**Helixes (n)**	**Other (n)**	**Weight (g)**
Loose ashy surface deposit	997.5	2	3	1	4	-	19.3
Ashy deposit above kraal	1252.5	2	13	-	14	3	91.9
Stone feature	5940.5	4	33	-	25	3	343.4
Main kraal	8498	1	-	-	3	-	26.3
Ashy deposit resting on hut floor	4190	3	1	-	6	-	30.1
Slope wash	2462.5	2	4	-	-	1	53.1
Loose ash covering northern kraal	3615	1	8	-	-	-	-
Northern kraal deposit	3265	-	1	-	-	-	-