

Archaeological Ceramics as
Chronological Indicators on Islamic
Sites in Eastern Ethiopia

Submitted by Nicholas Tait, to the University of Exeter as a thesis for the degree of Doctor of Philosophy in Arabic and Islamic Studies, January 2020.

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Abstract

Archaeological research on Islamic sites in Ethiopia has been neglected, and the site of Harlaa, Eastern Ethiopia, has indicated that this is a serious omission. Strong evidence for links with Indian Ocean trade networks and for the presence of Islam from the 12th century CE, has been recovered from Harlaa. A significant component of the archaeological material was local ceramics, the focus of this thesis. Over 16,000 local ceramic sherds from the 2015 to 2018 seasons at Harlaa, recovered from both excavations and a field walking survey were analysed, and a typology of the local ceramics created. Chronological variation in the assemblage was identified and the viability of the local ceramics as chronological indicators is considered. The forms and styles identified in the local ceramics had long periods of use and there were no forms distinctive to early phases, rather new forms were introduced in later periods. This limited the viability of the local ceramics as chronological indicators at Harlaa. Comparisons with the local ceramic assemblage from the field walking survey highlighted issues with the use of surface collected local ceramic assemblages from Harlaa for chronological dating with regards to the mixing of material from multiple phases and the movement of deposits across the site. The local ceramics from Harlaa were also situated within their wider context, both within the Horn of Africa and the wider Indian Ocean trade networks, which highlighted the variability of local ceramic traditions across the Horn of Africa. Changes were visible in the local ceramics around the 12th century, when Harlaa gained access to the Indian Ocean trade network. However, the nature of these changes suggested that people were not adopting existing Islamic and Indian Ocean forms wholesale, rather ideas were being transmitted along the trade networks and being adopted differently in various locations.

Acknowledgements

There are many people I am indebted to, without whom this thesis would not have been possible. I would first like to thank the ERC and the *Becoming Muslim: Conversion to Islam and Islamisation in Eastern Ethiopia* Project for funding this research, as well as my supervisors Professor Timothy Insoll and Dr. John Cooper for their support, advice, encouragement and feedback during my time at the University of Exeter.

I would also like to thank the many in Ethiopia who have assisted with my research and the *Becoming Muslim* Project including Misganaw GebreMichael, Degsew Zerihun, Dejene Dandema, and Mr. Solomon Kebede at the ARCCH, as well as the villagers of Ganda Biyo for their hospitality, in particular Ibrahim Ali for his invaluable assistance both processing the ceramics and on the fieldwalking survey.

I am grateful to my family, in particular my parents Andrew and Ruth Tait and my sister Lucy Tait for their continual encouragement and support, as well as Henny and David Pearmain for their support during my many travels both to and through London. Finally, I would like to thank all those I have met during my time in Exeter for their support, in particular the members of the Centre for Islamic Archaeology and my fellow PhD students in the Institute of Arab and Islamic Studies.

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Chapter 1: Introduction

1.1 Introduction

Ethiopia, situated in the Horn of Africa, has a long history stretching back into the dawn of humanity (see Chapter 2.1), through early kingdoms such as Dʿmt, the Aksumite Kingdom which is famous for being an early convert to Christianity, the rise of various Islamic sultanates, the rock-cut churches of Lalibela, and the growth of the Ethiopian Empire, which was one of the only African states not to be fully colonised. Ethiopia and the Horn of Africa are also a crossroads and mixing pot of religions, with long-lasting presence of Christianity, Islam, various indigenous beliefs, and Judaic beliefs through the Beta Israel, or 'black Jews' (Phillipson, 1998, 20; Insoll, 2003: 37-39).

Archaeology in Ethiopia has tended to focus on certain areas, notably early hominids and the Aksumite kingdom, to the detriment of other areas of research (see Chapter 2). One area which has been largely neglected until recently is the archaeology of Islam in Ethiopia (cf. Insoll, 2003: 56-85; et. al., 2016; Begashaw, 2009; Fauvelle-Aymar & Hirsch, 2011; González-Ruibal et. al., 2017; see also Chapter 2 and 3). Previous archaeological work on Islamic sites within both Ethiopia and the wider Horn of Africa (here referring to Ethiopia, Eritrea, Djibouti and the Somaliland region of Somalia) has largely been limited to surveys of sites (e.g. Curle, 1937; Insoll, 2001; Fauvelle-Aymar et. al., 2006; 2007; Begashaw, 2009; Chekroun et. al., 2011), documenting Arabic inscriptions (e.g. Huntingford, 1955; Schneider, 1969; Bauden, 2011), and recording Islamic architecture, primarily mosques (e.g. Huntingford, 1978; Pradines, 2017). While the ceramics recovered pre-dated the period of interest for this thesis, Fernández (2011) undertook an interesting study of rock art and Islamic rain-making ceremonies at two sites in the Benishangul-Gumuz region in Western Ethiopia. This thesis has added to our understanding of the archaeology of Islam in the Horn of Africa through considering the chronological development of the local ceramics from the previously unstudied Islamic trade site of Harlaa in eastern Ethiopia. All dates are in AD/BC unless otherwise stated as this is the standard in Ethiopia, even on Islamic sites (see section 1.4.1 and Chapter 2).



Figure 1.1: View of the village of Ganda Biyo and surrounding terraced fields, looking south-east

1.1.1 The site of Harlaa

The primary case study for this thesis is the archaeological site of Harlaa, located in eastern Ethiopia in the Chartered City of Dire Dawa Administrative District, about 15 km south-east of Dire Dawa itself, along the Dire Dawa – Harar road (see Fig. 1.3). The local ceramics recovered during archaeological excavations from 2015–2018 as part of the ERC funded *Becoming Muslim: Conversion to Islam and Islamisation in Eastern Ethiopia* project (BM-694254-ERC-2015-AdG) will form the basis for the analysis and discussion (see section 1.1.2). The modern village of Ganda Biyo (Fig. 1.1), which overlays much of the archaeological site, is occupied by the Oromo people who arrived in the region in the 16th century and are therefore unrelated to the original inhabitants of archaeological Harlaa (Chekroun et. al., 2011; Insoll et. al., 2014; Khalaf & Insoll, 2019). Prior to the *Becoming Muslim* excavations at Harlaa which began in 2015 (Insoll et. al., 2014; 2016; Insoll, 2016; 2017a; 2017b; 2018a; 2018b; 2019; Website 8; see also section 1.4.2), archaeological work at Harlaa was

limited, primarily focused on field surveys (see 1.4.1.2 below). Harlaa showed clear evidence for the presence of Islam with three mosques identified as well as extensive links with the Indian Ocean and Red Sea trade networks (see section 1.3.1.3 below; also, Insoll, 2017a; 2018a; 2018b; 2019; Insoll et. al., 2014; 2016; in prep.). Based on the archaeological excavations and 24 AMS radiocarbon dates Harlaa was occupied from the 7th – 14th centuries, covering both Islamic and pre-Islamic periods, and reached its peak in the 12th – 13th century (Insoll, 2018b; in prep.), and so provided a valuable case study to consider Islamisation alongside the chronology and development of local ceramics at an Islamic site in eastern Ethiopia.



Figure 1.2: Fields and landscape around Harlaa, looking west

1.1.2 The landscape of Ethiopia

The geography and climate of Ethiopia and the Horn of Africa is extremely varied, ranging from the Ethiopian highlands, with the plateau at an altitude of between 2000 m to 3000 m, and the heights of the Simien and Bale mountains up to some 4600 m, bisected by the Rift valley, to the hot desert of the Danakil Depression, 120 m below sea level, beyond to the coastal plains of the Eritrean and Somali Red Sea coast. The climate and vegetation is similarly varied ranging from rainforest to tropical alpine to desert to scrubland and grassland to temperate woodland. The source of the Blue Nile is also located within Ethiopia's borders. Moving into Eritrea the Ethiopian highlands drop off

sharply as a 2000 m tall escarpment falls into the Red Sea coast. To the south-east the highlands fall off more gradually towards the Somali plains (Phillipson, 1998: 11-15; Insoll, 2003: 36-39; Briggs, 2015: 4). The Red Sea has been an important route of contact for the various states within Ethiopia and the Horn of Africa from at least early historic periods. The Red Sea was also an important route of travel, trade and contact during the Islamic period, including as a route for the *hajj* to Mecca via the port of Jeddah (cf. Gibb, 1962; Abdir, 1980; Phillipson, 1998: 11; Fauvelle-Aymar & Hirsch, 2001; Miran, 2012; Agius, 2008: 215-245; 2019; section 1.4). Human geography is also extremely diverse, with over 80 ethno-linguistic groups represented across Ethiopia (Phillipson, 1998: 15-24; Insoll, 2003: 36).

The site of Harlaa is situated 1700 m above sea level in the Chercher mountains on the southern edge of the Afar escarpment which drops down into Danakil Depression. The environment around Harlaa is highland savannah, with scattered scrub and trees and most of the land around Harlaa has been extensively terraced and farmed (Chekroun et. al., 2011; Khalaf & Insoll, 2019; see Fig. 1.1 and 1.2). The current population in the region is primarily Oromo, who are unrelated to the original inhabitants of the archaeological site (see sections 1.4.1.3 and 1.4.2).

1.2 Research Goals and Questions

Four primary linked research goals and questions were the focus of the thesis:

1. The identification of local ceramic types and the creation of a typology of the local ceramics.
2. What changes are visible in ceramic styles and manufacture methods over time in the local ceramics?
3. Assessing the utility of local ceramics in the identification and dating of Islamic sites in eastern Ethiopia.
4. What evidence can the local ceramics provide for Islamisation and links with the Islamic world?

As the local ceramics from Harlaa have not been previously studied, the first goal, the identification and creation of a typology of the local ceramics. Local ceramics here are defined as all ceramic vessels which were believed to have been produced at, or within the immediate vicinity of Harlaa. In addition to

providing valuable new information on local ceramics from Islamic sites in eastern Ethiopia, is required to be able to answer the other questions posed in the thesis. Having analysed the local ceramics, the identification of any chronological variation in the ceramic forms and wares in the typology will be important in understanding the development of the site of Harlaa and answering the final two questions. This will be considered alongside both local ceramics collected from Harlaa as part of a fieldwalking survey and local ceramics from sites contemporary to Harlaa across the Horn of Africa, both Islamic and otherwise, to assess the viability of the local ceramics from Harlaa as chronological indicators. Finally, the results will be brought together to reflect on the nature of Islamisation at Harlaa through the local ceramics. This will be undertaken by assessing both the nature and chronology of the changes observed in the local ceramics and the proposed date of the introduction of Islam to Harlaa as well as potential links with Islamic ceramic forms and Islamic practices.

1.2.1 Scope of research

The ceramic analysis which formed the foundation of the research for this thesis was that of the local ceramics from the 2015 – 2018 season excavations (12506 sherds, see Chapter 5) at Harlaa as well as from a fieldwalking survey undertaken as part of the 2018 season (3689 sherds, see Chapter 6). The site of Harlaa was chosen as the primary case study as the site shows significant evidence for participation in the Indian Ocean and Red Sea trade networks and the presence of Islam. Additionally, the local ceramics from Harlaa had not been previously studied, which provided an opportunity to expand upon the literature available for local ceramics from Islamic sites in the Horn of Africa. The 2015 – 2018 season ceramic assemblage was selected for analysis as it provided a sufficient density of material for analysis and creation of a typology of the local ceramics from Harlaa, but was small enough to complete the analysis in the allotted timeframe. It was not possible to export the material from Ethiopia for analysis, and so all primary analysis had to be undertaken in the field. It was decided that analysis and identification of imported ceramics from Harlaa was outside the scope of this thesis. However,

identification of the imported ceramics as part of the wider *Becoming Muslim* project was referenced where relevant. The analysis of the local ceramics from the 2019 season were not included in this thesis due to the time constraints. However, the 2019 local ceramic assemblage was recorded for the *Becoming Muslim* project and select key examples will be referred to as required.

The literature review (Chapter 2) considered existing literature on local ceramics from archaeological sites within the Horn of Africa during the period that Harlaa was occupied. This allowed the local ceramics from Harlaa to be considered within their wider context and to investigate potential links. Ethnographic literature on ceramics in Ethiopia (Chapter 4) was also considered to provide an understanding of trends in the current ceramics and their manufacture in Ethiopia. When considering Islam and Islamisation through the local ceramics at Harlaa, key port sites along the Arabian and Red Sea coast were selected to provide comparison (see Chapter 7.5.3 and 7.6). All these sites were part of the Indian Ocean and Red Sea trade networks that Harlaa was linked with, and so provided evidence for the key Islamic ceramics which were moving through the trade network. A more comprehensive analysis and comparison with Islamic ceramic traditions was beyond the goals and scope of the research.

1.3 Islam

As this thesis is focused on an Islamic site and the period of Islamisation in eastern Ethiopia, it is important to briefly outline the background to Islam and Islamic beliefs and practices.

1.3.1 Establishment of Islam

Islam ('submission to the will of God' [Insoll, 2003: 12]) had its roots in the Arabian Peninsula around 610 AD with the Prophet Muhammad who began receiving visions from God through the Angel Gabriel. By 615 Muhammad was the head of a community in Mecca. However, due to conflict with the non-Muslim population the community moved to Medina in 622 AD, in what is known as the *hijrah* (or migration). This marked the start of the Islamic calendar and the formal establishment of the Muslim community. Conflict with Mecca continued until 628, when an armistice was signed, with the Muslim occupation

of Mecca completed in 630. The Prophet Muhammad died in 632 and was buried in Mecca (Gibb, 1984: 1-2; Insoll, 1999; 2003; Petersen, 2005).

Muhammad's successors rapidly consolidated Islamic control of the Arabian Peninsula before expanding out into the Levant, Egypt, Iraq and parts of Iran between 633 and 650 AD. These were followed by further conquests and expansion into Central Asia, the Maghreb, southern Spain and along the Nile and Red Sea coast (von Grunebaum, 1953: 3-7; Rogers, 1976: 24-42; Gibb, 1984: 2-15; Insoll, 1999; 2003). The Islamic expansion into the Horn of Africa will be discussed in 1.4.1.2 below.

1.3.2 Islamic Beliefs

The Qur'an, the writings of the Prophet Muhammad revealed to him through the Angel Gabriel, forms the basis of the Islamic faith. Second to the Qur'an is the *hadith*, which are a collection of the Prophet's sayings and teachings. These two together form the basis of the *shari'ah* or Islamic law. The Five Pillars of Islam, which are the core precepts for believers are as follows: the first is the *shahadah* 'There is no god but God and Muhammad is the Prophet of God'; the second is *salat*, the requirement to pray five times a day facing Mecca; the third is the *sawm*, fasting on Ramadan, the tenth month of the lunar year; the fourth is *zakat*, alms giving of between 2.5-10% of one's wealth to the needy; and the fifth is the *hajj*, making a pilgrimage to Mecca at least once in a person's life if possible. These Five Pillars have an impact on the material culture of Islam (Gardet, 1977: 573; Gibb, 1984; Insoll, 1996b; 1999; 2003; Hulmes, 2008; Rippin, 2012: 104-117). Islamic diet is also governed by religious law, the requirements and significance of which will be discussed in Chapter 7.6.2.

The mosque is the primary place of worship for Muslims. The requirements for a mosque are straightforward: '...a wall correctly oriented towards the *qiblah*, namely the Black Stone within the Ka'bah in Mecca' (Hillenbrand, 1994: 31). No other liturgical accessories, walls, spaces or roof are required. Despite this, certain features are commonly associated with mosques. The *qiblah* wall is usually indicated by a *mihrab*, most commonly as an alcove in the wall. The minaret is used by the *muezzin* to call to prayer, and

usually takes the form of a tower. As washing prior to prayer is a requirement, there is usually an ablutions area with access to water in, or close to the mosque (Rogers, 1976: 82-91; Fehervari, 1977: 703; Insoll, 1999: 28-33; 2003: 15-17; Scarce, 2008a, 2008b). While there are of course exceptions, aspects of Muslim burials are also generally uniform across the Islamic world. Burial should be rapid, usually without a coffin, and the grave should be shallow enough to hear the *muezzin's* call, but deep enough to '...allow the corpse to sit up for its interrogation by the angels Munkar and Nakir...' (Insoll, 1999: 169). Grave goods are prohibited, and the burial should be on its side facing the *qiblah*. As burials are not meant to be disturbed, gravestones or grave markers are common, although not ubiquitous. These markers can vary from simple wooden or stone markers at the head and foot to carved gravestones and tomb structures depending on sect and region (Insoll, 1999: 169-170, 176-178).

A sense of community is encouraged by Islam through the concept of *ummah*, the world-wide Islamic community (Insoll, 1999: 10, 211-213). This can be seen through a tradition of communal eating and feasting (e.g. Insoll, 1999: 104; see also Chapter 7.6.2 for more information) as well as the uses of the mosque, although limitations in the implementation of *ummah* could be seen (e.g. Insoll, 1999; 24, 211-213). The Muslim domestic environment and household were also dictated to an extent by the Qur'an and *hadith*, and the concept of domestic privacy was emphasised. The focus is on protecting the sanctity of the family and women. This often manifests in the physical space being separated into two spheres, with a male-communal sphere and a more private female family sphere. Muslim houses often have layers of space and are designed to restrict access and visibility to the inner areas, where the women's and family quarters lie (Insoll, 1999: 62-66; 2003: 17-20).

1.4 Background

1.4.1 Background to the Horn of Africa and Harlaa

To better situate the site of Harlaa, the background to the history of Ethiopia and the wider Horn of Africa will be briefly outlined, considering both the Islamic and pre-Islamic periods. The limited previous archaeological work undertaken at Harlaa and the traditions surrounding Harlaa and the ‘Harla people’ will also be considered.



Figure 1.3: Map of key sites discussed (base map from d-maps.com [Website 7])

1.4.1.1 Pre-Islamic and Christian Horn of Africa

Historically and archaeologically, Ethiopia is perhaps best known as the ‘cradle of humanity’ and for the wide range of early hominins and prehistoric sites which have been discovered (e.g. Johanson & White, 1979; Johanson & Edey, 1990; Robertshaw, 1995: 57-61; Conroy, 1997; Phillipson, 1998; Asfaw et. al., 2002; Barsky et. al., 2011; Wood & Leakey, 2011; Nigus, 2012; Finneran,

2007: 33-66; 2013; Haile-Selassie et. al., 2015; Gallotti & Mussi, 2017). There was continuous occupation of Ethiopia, particularly in the highlands across the prehistoric period from the Early to Late Stone Age (e.g. Cervicek, 1971; Phillipson, 1977; Clark & Prince, 1978; Clark et. al., 1984; Clark, 1988; Barnett, 1999; Pleurdeau, 2005; Fernández et. al., 2007; Fernández, 2011; Beyin & Shea, 2013). In the early historic period Egypt had trading links the 'Land of Punt', which has been linked with the Horn of Africa, stretching as far back as 2500 BC, although archaeological evidence for this Egyptian trade within the Horn of Africa is extremely limited (Chittick, 1975; Robertshaw, 1995: 70; Smith and Wright, 1988; Phillipson, 1998: 38-39; 2012: 16-17; Insoll, 2003: 40-42; Kalb, 2009). Historical evidence for links between the Horn of Africa and the wider world, including India and the Mediterranean, has been recorded historically in the Classical era, with Roman and Greek geographers (Chittick, 1975; 1980; Phillipson, 1998: 38-39; Insoll, 2003: 40) including Ptolemy, Strabo, (Hamilton & Falconer, 2016) the anonymously authored *Periplus of the Erythraean Sea* (Huntingford, 1980), Agatharchides (Burstein, 1989), and later in the 6th century Cosmas (McCrinkle, 1989).

Links between the Horn of Africa and the Arabian Peninsula also predated the rise of Islam. Evidence for contact between Arabia and Ethiopia has been found as far back as the 8th century BC, with excavations on sites with 'unmistakable South Arabian influence' (Munro-Hay, 1991: 61), particularly the South Arabian kingdom of Saba. These sites were identified as part of the kingdom of D'mt, although the existence of a single 'Ethio-Sabaeen' pre-Aksumite state of D'mt across the region has been challenged (Phillipson, 1998: 42-43; 2009; 2012: 19-41; Finneran, 2007: 109-144; Fattovich, 1990; 2010: 147-148, 152, 157, 163-165; Wolf & Nowotnick, 2010: 367). One of the most significant sites was that of Yeha (see Fig. 1.3), which has been identified as the capital of D'mt. The architecture at Yeha had parallels with Sabaeen architecture from southern Arabia, particularly with regards to religious structures (Anfray, 1963b; 1972; Fattovich, 1972; Phillipson, 1998: 42-49; 2009; 2012: 24-29; Insoll, 2003: 40-41). More recently work has been undertaken at the site of Meqaber Ga'ewa (see Fig. 1.3), where a temple dedicated to the Sabaeen god Almaqah was identified (Wolf & Nowotnick, 2010; Phillipson, 2012: 29).

Outside of early hominins, Ethiopia is also well known for the Kingdom of Aksum which controlled territory in Northern Ethiopia and Eritrea from 150 BC – 850 AD (Bard et al., 2014). The Kingdom of Aksum was famous for the early conversion to Christianity around 330 AD by king Ezana (Phillipson, 1998: 50; 2004; 2012: 91-99; Insoll, 2003: 42-43; Finneran, 2007: 181-183; Fattovich, 2010: 158-159), although the majority of the rural population likely did not convert until much later under the Solomonid dynasty (1270-1974) (Trimingham, 1965: 65, Insoll, 2003). Between the 3rd and 6th centuries AD, the Aksumite kingdom also occasionally controlled territory in southern Arabia (Phillipson, 1998: 51; Insoll, 2003: 41; Finneran, 2007: 157-159). The Aksumite Kingdom and key cities will be discussed in more detail as part of the literature review in Chapter 2.2.

After the collapse of the Aksumite kingdom there was a period of instability until the region was again consolidated under the Christian Zagwe dynasty around 1137 AD. The most famous of the Zagwe kings was king Lalibela (1190-1225 AD), to whom some of the rock-cut churches at Lalibela (see Fig. 1.3) are attributed (Phillipson, 1998: 127-133; Trimingham, 1965: 55-58; Abir, 1980: 11, 14; Derat, 2010). The Zagwe dynasty was succeeded by the Solomonid dynasty, claiming descent from the biblical king Solomon through the queen of Sheba, which was founded in 1270 AD and ruled Ethiopia until Emperor Haile Selassie was deposed by the communist Derg revolution in 1974 (Phillipson, 1998: 27, 140-142; 2004). As will be seen below, relations between the Christian kingdoms of Ethiopia and their Islamic counterparts was mixed with periods of both cordial relationship and conflict.

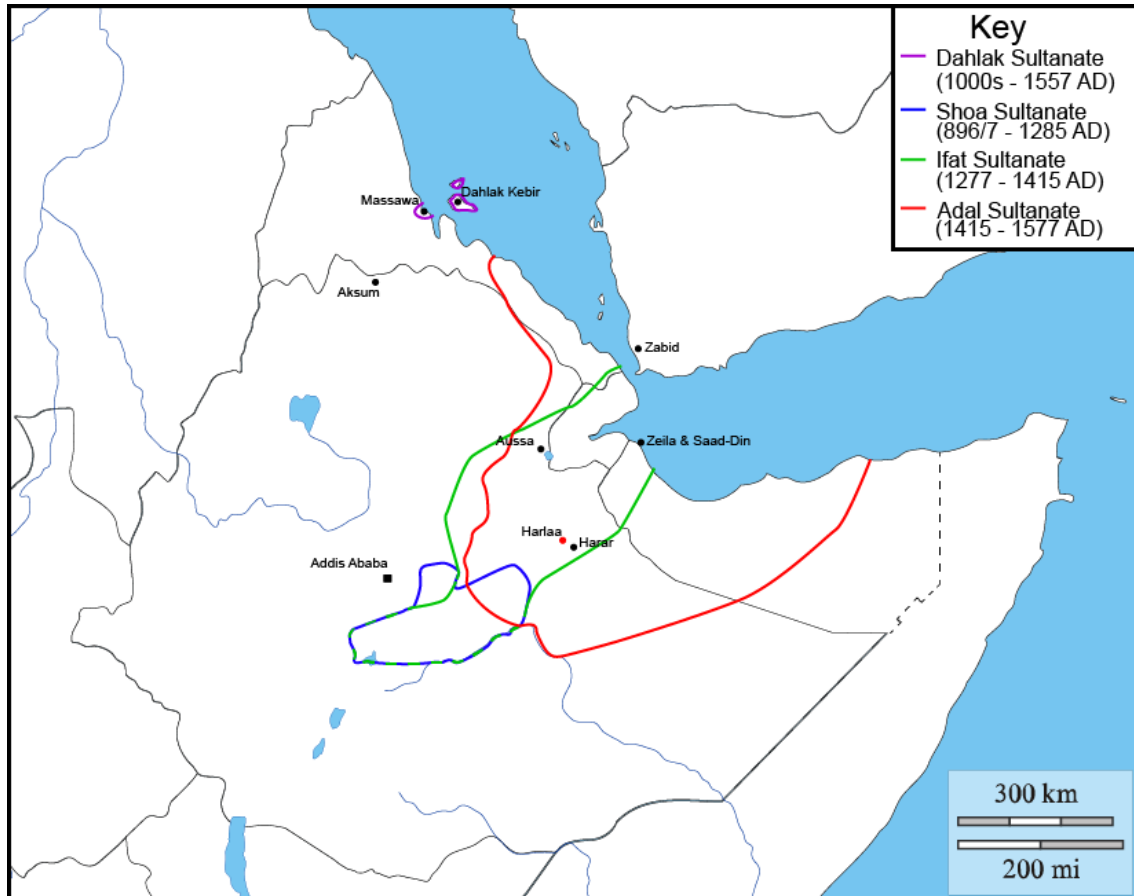


Figure 1.4: Approximate borders of the main Islamic Sultanates discussed (after Trimingham, 1965; Braukämper, 1977a; 1977b; Abir, 1980; Fauvelle-Aymar & Hirsch, 2011a)

1.4.1.2 Islamic Horn of Africa

As will be seen in Chapter 2, the archaeology of Islamic Ethiopia is currently very limited (Insoll, 2003: 39; Finneran, 2007: 237-238; Begashaw, 2009), and particularly with regards to locally produced ceramics. This section will provide a brief overview of the history of the development and spread of Islam in Ethiopia and the key Islamic states in the Horn of Africa until the 16th – 17th century, after the abandonment of the site of Harlaa. Contact between the Horn of Africa and Islam began as far back as during the prophet Muhammed’s life and the initial development and expansion of Islam. Muslim refugees from Mecca during their initial persecution travelled to Aksum in 615 AD and were received by the Aksumite king. Additionally, the Prophet’s first *muzzein* (who calls people to prayer) was believed to have been of Ethiopian origin, one of the Prophet’s spears was a gift from the king of Aksum, and the Ethiopians were not subject to the initial Jihad, with the Prophet reportedly having said ‘Leave the

Abyssinians in peace” (Trimingham, 1965: 42-46; Fischer, 1977: 382-383; Abdir, 1980: 10; Insoll, 1996b: 444; 2003: 45-46; Ahmed, 2007: 263) Finneran, 2007: 211; Bruzzi, 2017: 64). These all suggest that in the initial years, while largely cut off from the rest of the Christian world by the expansion of Islam, Christian Ethiopia had cordial relationships with the Islamic world.

The first Islamic foothold in the Horn of Africa was on the Dahlak Islands (see Fig. 1.3 and 1.4), which were occupied in the early 8th century as a result of repeated raids by “Abyssinian” pirates from bases on the islands, including on Jeddah, the port of Mecca, in 702/3 AD. While initially a tributary of the kings of Zabid in Yemen, by the 11th century the Dahlaks were a fully independent sultanate. In the 12th century the city of Massawa on the mainland came under control of the Dahlak Sultanate (Bosworth, 2007: 339). The Dahlaks thus formed a beachhead of Islam in the Horn of Africa and was the first of many important trade ports along the African Red Sea coast to fall under Islamic influences. During the 9th – 11th century along the north eastern African Red Sea coast various trade ports were developed or came under Islamic influence including Suakin, Badi, Zeila and Berbera as well as Mogadishu and Kilwa on the Swahili coast (Trimingham, 1965: 46-47, 60-62; Robertshaw, 1995; Insoll, 1996b: 444-446; 2001: 41; 2003: 51-56; Finneran, 2007: 238-240; Begashaw, 2009: 14; see also Fig. 1.3).

A range of Islamic states grew up both along the Red Sea coast and to the south and east of the Ethiopian highlands, effectively ringing in the Christian Ethiopian kingdom (Huntingford, 1955; Trimingham, 1965: 62-63; see also Braukämper, 1977a; 1977b). The most significant of these Islamic polities, and the first inland Islamic state in the Horn of Africa, was the Sultanate of Shoa (see Fig. 1.4), which by tradition was founded in 896/7 AD in the modern Shewa region along the western edge of the Afar depression. Little is known of the early days of the Shoa Sultanate, however, it likely spent time as a tributary of the Christian kingdom (Trimingham, 1965: 62-63; Braukämper, 1977a: 22-27; Fischer, 1977: 383; Insoll, 2013: 73). The decline of Shoa at the end of the 13th century was recorded in a short untitled Arabic history (cf. Trimingham, 1965: 58; Braukämper, 1977a: 22-23). The Sultanate was torn apart by a combination of internal strife and conflict with neighbouring Muslim tributaries seeking to throw off Shoa’s control. Part of the Sultanate was conquered by the Christian

kingdom, while the remainder was conquered by the neighbouring Ifat Sultanate in 1285 AD, which rose to become the next dominant Islamic polity in the region.

Ifat (see Fig. 1.4) was one of seven Islamic states in the region which were sometimes tributaries of the Solomonid Christian kingdom and sometimes successfully fought for independence (Trimingham, 1965: 66-68; Braukämper, 1977a: 28-29; Fischer, 1977: 383-384; Insoll, 2003: 73). The Ifat Sultanate was the first of the Islamic polities in the Horn of Africa to come into major conflict with the Christian kingdom. However, this conflict was political and economic in origin, often around access to trade, as opposed to religious conflict (Trimingham, 1965: 65, 67; Abir, 1980: 20-21; Insoll, 2003: 73; Begashaw, 2009: 14-15). Despite initial success during an attempt to declare independence from Christian Ethiopia, the Sultanate under Sa'ad ad-Din II was eventually pushed back and the Sultan was killed in 1402 or 1415 near Zeila on the island which now bears his name, with large parts of the Sultanate, including the port of Zeila occupied by the Christian Kingdom for a time. After this defeat the centre of Islamic power in the Horn shifted eastwards to the Adal Sultanate (Trimingham, 1965: 74-75; Braukämper, 1977a: 29-30, 31-32; Abir, 1980: 26; Insoll, 2003: 64, 73, 76; see also Fig. 1.4).

Adal was viewed as the successor to both Ifat and Sultan Sa'ad ad-Din II, as could be seen through its alternative name *Bar Sa'ad ad-Din*, or "the land of Sa'ad ad-Din". The conflict between the Muslim sultanate and Christian kingdom continued with victories for both sides; Adal re-conquered Zeila and temporarily controlled border provinces of Christian Ethiopia such as Bali, the Christian emperor Zara Yaeqob (reigned 1434-1468) had several resounding victories over Adal, and regular Muslim raids into Ethiopia territory. In 1521 the capital of the Adal Sultanate moved to the city of Harar (see Fig. 1.3 and 1.4) from the previous centres of Zeila and Dakar.

The most dramatic conquests by the Adal Sultanate were under Imam Ahmad ibn Ibrahim al-Ghazi, also known as Iman Ahmad Gagn or "Ahmad the Left Handed", who launched a *jihad* against Christian Ethiopia, beginning in 1527, after Ethiopia invaded the Adal sultanate after they refused to pay tribute. After defeating the invading force, Gagn launched a series of campaigns into Christian Ethiopia from 1529 until his eventual defeat at Wayna Daga in 1543

by the Christian Ethiopian forces assisted by the Portuguese who were starting to expand their influence in the region. During his *jihad* Gragn conquered almost three quarters of the Christian kingdom reaching as far as Tigray, looting and converting the population. Gragn's successor, amir Nur, fortified the city of Harar and attempted to capitalise on Gragn's success. Although his initial campaign was unsuccessful and Harar was sacked by the Ethiopian army, amir Nur later defeated and killed Emperor Gäläwdewos in 1559. Despite this success, the Adal Sultanate's decline was inevitable as the Oromo migrations from the south overran the country. Harar was surrounded by the invaders, and in 1577 the seat of the sultanate moved to Aussa in the Afar desert (see Fig. 1.3 and 1.4), from where its influence gradually waned. Harar separated from Aussa in 1647 to become an isolated, independent city state (Trimingham, 1965: 74-94; Braukämper, 1977a: 31-35; Fischer, 1977: 385-287; Abir, 1980: 30-38, 69-72, 79, 87-92; Insoll, 2003: 76-78, 81-83; Insoll, et. al., 2014; Chekroun, 2016). Archaeological investigations in the Horn of Africa at sites relating to these sultanates will be discussed in Chapters 2 and 7.

Rather than dedicated active conversion or large-scale movement of people, the main initial vector of Islamisation in the Horn of Africa was through Muslim merchants who travelled along the trade routes. This meant that the introduction of Islam was not associated with Arabisation, as was seen in the Sudan and Northern Africa as in the Horn the small number of traders and artisans interacted with and mingled with the locals. This also meant that Islam likely predominantly spread through the upper classes (Trimingham, 1965: 138-139; Abdir, 1980: 10-12; Ahmed, 2007: 264). A link between pastoralists and nomads and early conversion to Islam has been often suggested, although is of mixed validity and due to the ephemeral nature of nomadic material culture can be challenging to identify archaeologically (e.g. Trimingham, 1968; Insoll, 1996a; 1996b: 446; 1999; 2003: 33-34, 73-76). This does however appear to have relevance to areas of the Horn of Africa. Sunni Islam was well established among the Somali pastoralists by the 11th century, although of a 'local style of Muslim life' (Insoll, 2003: 73-76).

1.4.1.3 Background to Harlaa

Very little was previously known about the site of Harlaa or the people who inhabited it prior to the work undertaken as part of the *Becoming Muslim* project. Harlaa has traditionally been linked with the semi-legendary ‘Harla people’ who were believed to have inhabited the region prior to the Oromo migrations in the 16th century. Sites associated with the Harla are found in the region between Dire Dawa and Harar along the Chercher and Harar mountains. Local tradition states that the Harla were “giants” based on the large stone blocks they used to construct the buildings (Wilding, 1980; Chekroun, et. al., 2011; Insoll, et. al., 2016). Indeed, Braukämper (1977a, 21) noted that ‘...beyond folk tales which survived about them, it is difficult to obtain reliable information about their historical fate.’ The earliest historic mention of the Harla people was in the chronicle of the Ethiopian Emperor ‘Amdä-ṣiyon I (1314-44), where their king joined the Muslim forces of Ṣalih against Christian Ethiopia. There are no clear mentions of them again until the 16th century when they were listed as part of the forces of Ahmad Gagn. Tradition states that the Harla fell as a result of divine punishment for their pride and wealth. Potential links have been suggested between the Harla and the city of Harar, which is sometimes seen as the last bastion of the Harla people (Braukämper, 1977a, 20-21; Insoll & Zekaria, 2019; Insoll et. al., in prep.). Links have also been suggested between the Harla and the Argobba people who live in the area around Harar as well as in the hills on the western edge of the Danakil (Wilding, 1980).

1.4.1.4 Previous archaeological work at Harlaa

No previous archaeological excavations had been undertaken at Harlaa, with archaeological work consisting of surveys recording features and a few surface collected artefacts, primarily those recovered by local farmers. Two Islamic gravestones from Harlaa were recorded and photographed by Schneider in the 1960s (Schneider, 1969; Chekroun et. al., 2011: 79). In 1999 the site was visited by Le Quellec, Poissonier and Hagos, although the report was not published. They were shown a range of objects recovered by farmers, including three coins, one Ayyubid dirham and two Mamluk dirhams, all dating to the 13th century. Many of these objects were later observed by Chekroun et.

al. (2011: 79-80), as well as during the fieldwork undertaken as part of this thesis. The site has been visited several times by Chekroun et. al. (2011) and a range of features noted, locations of which were all recorded using a GPS. These included two mosques, a potential burial tumulus, a stone lined well and sections of large wall. Further inscribed Islamic gravestones were also recorded, although none were in situ (Bauden, 2011: 294-296). A range of archaeological material recovered by the farmers was noted, and a few examples photographed. The material recovered consisted of pottery; coins, including further examples not recorded in the 1999 survey; and a range of stone objects such as jewellery moulds. Archaeological work undertaken at nearby sites in the Chercher mountains as well as at Harar will be discussed in the Chapter 2 Literature Review below.

1.4.2 The *Becoming Muslim* Project at Harlaa

The *Becoming Muslim: Conversion to Islam and Islamisation in Eastern Ethiopia* project archaeological work at Harlaa began in 2015 (Insoll, et. al., 2016; Website 8) and consisted of an initial survey of the site to locate visible features and record new Arabic inscriptions. Two test excavations were also undertaken (see Fig. 6.1 for location of excavation units), the first in one of the stone-built mosques (Unit [A]) and the second in what was identified as the primary settlement area (Unit [B]). The 2016 season (Insoll, 2016; Insoll, 2017a) expanded the excavations at Unit (B) which identified it as a potential jeweller's workshop. However, the season had to be cut short due to unrest in the region. Unit (B) remained the focus of the excavations in the 2017 season (Insoll, 2017a) and completed the 2016 excavation before further extending the unit, confirming the identification of the structure as a jeweller's workshop. Two further units (Units [C] and [D]) were opened in fields across the Dire Dawa – Harar road from the main part of the village, in an area identified as a cemetery. Both Units (C) and (D) located Islamic burials with no grave goods. A systematic archaeological survey was undertaken by Khalaf aiming to identify and record all features associated with the medieval site of Harlaa, photographing the features and plotting their location using a DGPS.

The 2018 season (Insoll, 2018a) was the final season of excavation at Unit (B), which expanded the unit to include more of the structure as well as an area of deep stratigraphy identified in 2017. A further test unit, Unit (E), was opened to investigate a potential domestic structure in the terraced fields above the workshop identified during the 2017 archaeological survey. The archaeological survey was continued in 2018 to record new features identified as well as assess and record changes to, or the destruction of previously recorded features. An additional fieldwalking transect survey (see Chapter 5) was undertaken across the site, which collected unstratified surface archaeological material, primarily ceramics, for comparison with the excavation assemblage. The 2019 season (Insoll, 2019) saw continued work at Unit (E), and greatly expanded the size of the unit. A second unit, Unit (F), was opened further up the fields from Unit (E) at a promising site identified in 2017. An archaeological survey was also undertaken by Insoll to record the Arabic inscriptions remaining at Harlaa, assess the relationship between the excavated settlement features, and investigate the Gara Harfattu hill opposite the site.

1.4.2.1 Trade and Harlaa

The *Becoming Muslim* project has provided significant evidence for links between Harlaa and the Red Sea and Indian Ocean trade networks. Both Islamic and Chinese coins have been recorded from the excavations and recovered by the local farmers. Imported ceramics from across the Islamic world and China, including Chinese Celadon, east Asian Martaban, Yemeni Black and Yellow ware and Egyptian Glazed wares have been identified. While some glass beads were produced locally, others were potentially imported from Central Asia, the Middle East (potentially Mamluk Egypt) and south India. Glass vessels were also potentially imported from Central Asia. Other imported material included large quantities of imported shell, in particular cowrie shells, likely from the Red Sea and the Maldives, which showed evidence of working at Harlaa. Carnelian from the Sudan or Gujarat alongside carnelian bead production techniques with close links with Gujarat were noted. Obsidian was likely sourced from regional trade networks (Insoll, 2017a; 2018a; 2018b; 2019; in prep.; Insoll et. al., 2016; 2017; in prep.; Parsons, in prep.). These alongside

the evidence for jewellery production in Unit(B) showed that Harlaa had an active role in the Red Sea and Indian Ocean trade networks.

1.5 Outline

This first chapter has introduced the thesis, goals and key background which will be relevant for the following discussion. Chapter 2 will review the existing literature on ceramics from the Horn of Africa between 500 – 1500 AD, highlighting relevant sites and ceramics for both the analysis and discussion. Chapter 3 will define the methodology for both the ceramics analysis and the fieldwalking survey undertaken and situate both within the wider literature and methodology within African archaeology. Chapter 4 will discuss ethnographic literature on ceramic production in Ethiopia, considering both modern and historical literature and the trends visible in the local ceramics. This will allow the archaeological ceramics from Harlaa to be considered in comparison to the modern ceramics and inform on discussion of potential functions and manufacturing methods. Chapter 5 will provide discussion on, and initial interpretation of, the results of the ceramics analysis undertaken on the local ceramics from Harlaa from the 2015-2018 season excavations, identifying key wares and forms and their chronological distribution. Chapter 6 will consider the fieldwalking survey undertaken as part of the 2018 field season and the results of ceramic analysis of the assemblage recovered, comparing the results to the excavation ceramic assemblage and considering the viability of the local ceramics as chronological indicators. Chapter 7 will gather the results of the previous chapters into a discussion on the research questions, assessing the viability of the local ceramics as chronological indicators, investigating potential links between the local ceramics from Harlaa and sites both within the Horn of Africa as well as the wider Indian Ocean trade network as well as the nature of the changes identified and potential links with Islamisation and Islam at Harlaa. Finally, Chapter 8 will bring together the results of the thesis and the research goals into a conclusion.

1.6 Conclusion

Having introduced the thesis and outlined the research goals and questions which will be answered, this introduction also provided background to Islam, the region and the primary case study site of Harlaa. The next chapter will provide a review of the existing literature on archaeological ceramics from relevant sites across the Horn of Africa.

Chapter 2: Literature Review

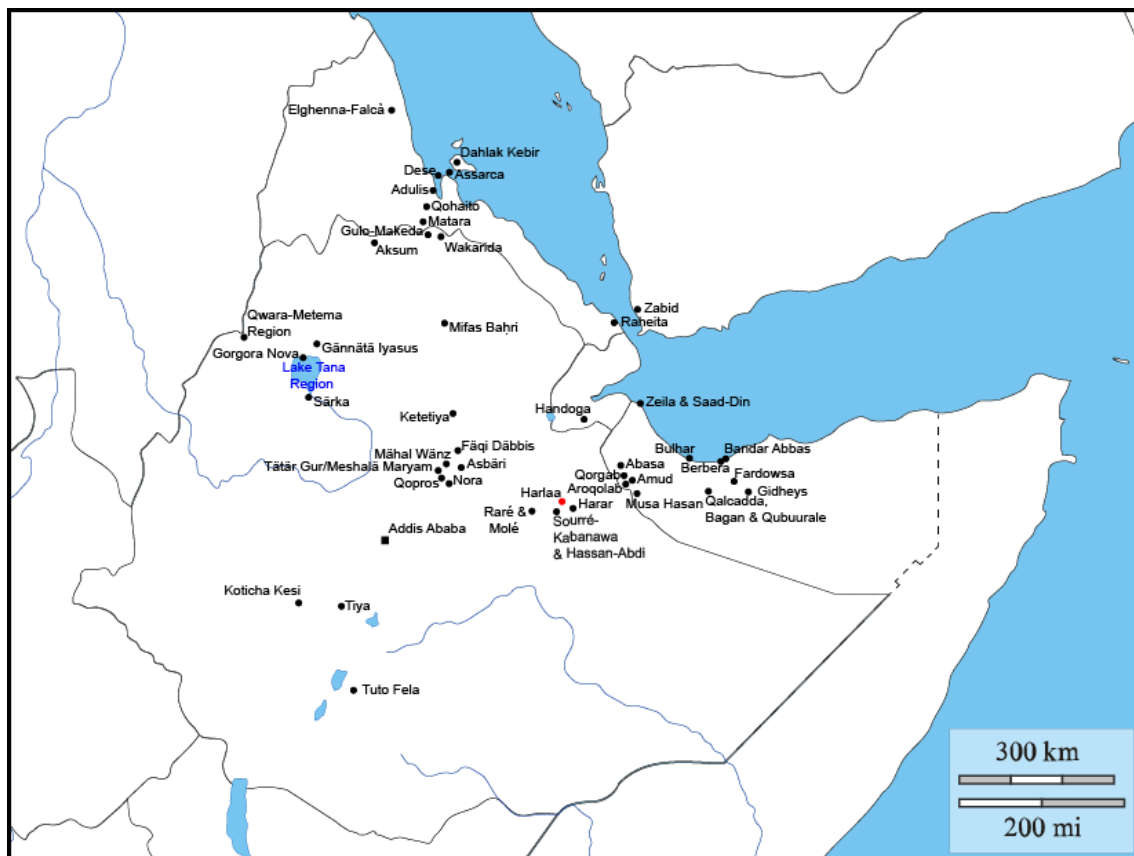


Figure 2.1: Map of sites discussed (base map from d-maps.com [Website 7])

2.1 Introduction

Ethiopia has a long and rich archaeological history spanning back to the dawn of Humanity and early development of hominins more than three million years ago (see Chapter 1.4.1). It was important to consider the archaeological literature in Ethiopia and the wider Horn of Africa to provide both an understanding of the local ceramics at archaeological sites in Ethiopia and how they may relate to and inform on the Harlaa assemblages as well as situate the

thesis in wider archaeological research. This literature review will consider sites in Northern, Central and Eastern Ethiopia, Eritrea, Djibouti and Somaliland dating between 500 – 1600 AD. Somaliland as defined here consists of the modern autonomous region/self declared state of Somaliland which roughly covers the historical British Somaliland colonial territories (see dashed border on Fig. 2.1 for Somaliland borders). This date range was chosen as it covered both the period which Harlaa was occupied, the 7th – 15th century, and the immediately preceding and succeeding periods (Insoll, 2017). As local ceramics are the subject of this thesis only archaeological literature where ceramics are discussed will be considered in any depth. Imported ceramics where present, in particular Islamic wares, will also be briefly considered as it will be important to understand what types of vessels were being imported into the region and how they may have influenced the development of the local ceramics.

2.2 Aksumite Sites

The Aksumite civilisation is perhaps the best known of the ancient Ethiopian kingdoms and has been the focus of many archaeological excavations. The Aksumite kingdom was centred around the capital of Aksum and covered parts of the modern regions of Tigray and Amhara in Ethiopia as well as Eritrea. The chronological extent of the Aksumite kingdom has been revised multiple times including by Munro-Hay (1989) and Phillipson (1998; 2000; 2012). Recent work by Bard et. al. (2014) has attempted to revise the chronology, extending the ends of the Aksumite kingdom back to 150 BC and forward to 800/850 AD and revising the internal sub-divisions (see Fig. 2.5). Aksum was famous for being one of the first Christian kingdoms, having traditionally converted in 330 AD under king Ezana (Phillipson, 1998: 50; Insoll, 2003: 42-43, see Chapter 1.4.1). Only the relevant later Aksumite periods will be considered in any depth in this literature review.

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Figure 2.2: "Late" pottery from Aksum: a),b), burnished bowls; c), purple painted ware; d), burnished beaker (Chittick, 1974: 197)

2.2.1 Aksum

The first archaeological project undertaken at Aksum was by the German Deutsche Aksum-Expedition led by Dr. Enno Litmann in 1906 and published in 1913. This project was primarily a comprehensive survey of Aksumite inscriptions, coins, monuments and buildings. Minimal stratigraphic archaeological excavation was undertaken, primarily to expose partially buried monuments and expose building plans. While this project has provided an extremely valuable record of Aksumite architecture and inscriptions (Phillipson, 1998: 29-31), it was of limited use for this thesis.

Excavations were undertaken by de Contenson at Aksum and the surrounding region from 1957-59 (de Contenson, 1959; 1961a; 1961b; 1963). While the reports on these excavations provided some interesting early discussion on Aksumite ceramics, no date ranges were provided for the stratigraphic phases, so all levels will be briefly considered. In Level I three categories of ceramics were identified among sherds which were noted to be very fragmentary; red glossy pottery, black pottery which was sometimes red and black and sometimes with a glossy surface, and micaceous pottery. Red glossy pottery was the most common, and micaceous pottery was very rare. The most common decoration was incised decoration, with rare examples of relief decoration (de Contenson, 1959: 28-29).

Four classes of ceramics were identified in Level II; fine red pottery, orange glossy pottery, pink pottery, and white and cream pottery. Fine red

pottery was the most common, and a range of main forms were identified including cups and cylindrical bowls similar to forms from Level I, hemispherical bowls and jars of various sizes. Incised decoration was again common and included crosses and flowers (de Contenson, 1959: 30). Little discussion was made of the other three rarer wares, with the orange glossy pottery mainly hemispherical bowls and the pink pottery was mainly large thick vessels with unpierced lug handles. The white and cream pottery was described as large jars with handles covered with horizontal grooves, similar to those produced in Alexandria at the end of the Roman Empire to the early Byzantine period (de Contenson, 1959: 31). These were likely the Mediterranean amphora, including Ayla-Aksum amphora which are discussed repeatedly below (e.g. see section 2.2.2, 2.2.3, and 2.2.10). Minimal discussion was provided from the Level III ceramics, which consisted of four wares; jars and bowls of a black glossy pottery with incised decoration, grey glossy pottery with relief decoration in the form of high necked and carinated jars; rare micaceous pottery and dark coarse globular jars and flat dishes (de Contenson, 1959: 33; 1963: 11). Illustrations of vessel forms were provided in later publications (cf. de Contenson, 1961a; 1963). The lack of chronological dating available at this early period of Aksumite archaeology limited the use of this analysis for this thesis.

The next archaeological excavations at Aksum were undertaken by Neville Chittick under the British Institute in Eastern Ethiopia in 1973-74. This project was unfortunately cut short due to the 1974 revolution and the ensuing civil war and famine (Phillipson, 1998: 32). A preliminary report was released by Chittick in 1974. This report outlined the results of the various trenches, however, it was very clearly a preliminary report. The relevant material from the excavations undertaken at the stelae field were from the Tomb of the Brick Arches and associated robber tunnels. The local ceramics discussed were primarily of the Red Aksumite Type (Fig. 2.2a,b), which was attributed to the Late Aksumite period (5th – 8th century AD). However, the later analysis by Wilding (1989) and the excavations by Phillipson (2000: 31-77, 128-133) attributed both the tomb and Red Aksumite wares to the Classical Aksumite period (4th – 6th cent AD, with the tomb in use until the mid-late 4th century), which would pre-date the period of interest (Chittick, 1974: 167). In the Tomb of the False Door (Chittick, 1974: 190-191), which itself was pre-Christian, a

collection of post-Aksumite grey ware sherds were found which were interpreted as being washed in after the tomb was closed off. Unfortunately, there was minimal description of those ceramics and no depictions. However, this was to be expected as this was a preliminary report and the focus of the excavation was on the Aksumite periods.

Very few imported ceramics were recovered, primarily unspecified 'amphorae from the Mediterranean world' (Chittick, 1974: 194), dated to the 5th to early 7th century. Additionally, there were isolated examples of undated green-glazed and 'Sassanid-Islamic wares', likely turquoise glazed wares; Iranian or Iraqi (from Basra) products (Priestman, 2011). There were rare examples (fragments of eight vessels) of a mat impressed pottery, which were identified as being 'late' and possibly associated with the Nile valley and the 'Black Noba' people. Chittick acknowledged that the dating of the local ceramics was limited in the preliminary report. A brown-burnished ware was discussed as being later than the Red Aksumite wares, characterised by deep bowls and rounded bottom beakers, often decorated with impressed or incised crosses or motifs. Rare purple-painted wares, which were produced in the Eastern regions of the Aksumite kingdom were also present. The post-Aksumite grey wares were not discussed further by Chittick.

Chittick unfortunately passed away prior to the full publication of the excavations and the publication was completed by Munro-Hay (1989a), with the ceramic analysis undertaken by Wilding (1989). This publication was produced during the period of unrest in Ethiopia, so primary analysis of the material was impossible. This created acknowledged limitations with the analysis and interpretation of the ceramics (Wilding, 1989: 235). There was a clear bias towards the earlier Aksumite periods, as could be seen by the length of the Classical Red Aksumite wares section (54 pages), compared to the later Brown Aksumite (12 pages) and Grey and Black Aksumite ware (11 pages) sections. Brown Tigrayan ware, which was in use well after the decline of Aksum, and therefore of particular interest to this study, was conspicuously absent as it was not studied in detail due to Chittick's primary interest being with the Classical Aksumite period (Wilding, 1989: 235). The analysis was generally detailed with regards to different forms and styles, although there was little quantitative analysis. There were detailed illustrations of all the key forms for the wares.

The pottery was divided into five roughly chronological categories, Red Aksumite, Brown Aksumite, Grey and Black Aksumite, and Brown Tigrayan. All Aksumite wares were handmade, being coil- or slab-built or pinch- or press-moulded (Wilding, 235-236). Red Aksumite was dated from the 2nd to the early 5th century and so was too early to be of use for this study (Wilding, 1989: 236). Brown Aksumite was ‘...consistently later than the RA (Red Aksumite) ware in stratigraphic distribution’ (Wilding, 1989: 290), however, no hard dates were given for its use. Despite having a fine paste, and a harder, denser and smoother fabric, Wilding (1989: 290-301) considered these wares to be of a much lower quality than the Classical Red Aksumite wares, claiming they were ‘derivative, and in some ways less imaginative and versatile than the Red Aksumite ware’ (1989: 290). The vessels were less well fired and usually self-slipped or roughly burnished. There were relatively few open bowls, and those present were very crude. Crude incised crosses under the rim were common as were incised cordons or friezes. Painted decoration was rare. Beakers were still common in Brown Aksumite wares and appear to have developed directly out of Red Aksumite styles. Small globular bowls were one of the main characteristic shapes of Brown Aksumite wares. Wide-necked pots and cooking bowls were present in large numbers.

According to Wilding (1989: 302) the term ‘Grey ware’ was applied to ‘an amorphous collection of little ceramic merit, manufactured and fired in an undisciplined and technically inferior way.’ The author was clearly not impressed with these wares; there were even complaints about the poor quality making ceramic sections hard to draw. These ceramics were believed to date to the very end of the Aksumite period, although again no date was given. The Black Aksumite wares were very highly burnished and were found in the very top levels of some trenches. These were generally decorated with a thick belt of horizontally incised parallel lines scored by diagonal line filled triangles. There was at least one example of a potential Shay culture carinated bottle (Fauvelle-Aymar & Poissonnier, 2016: 71; see also 2.6 below) among the Black Aksumite wares, although there were other examples of carinated forms which were not seen in the Shay tumuli assemblages. This Black Aksumite ware was of particular interest as a black highly burnished ware was also present at Harlaa, so it was unfortunate that Gray and Black Aksumite wares were not considered

separately and in more depth. There were a few examples of Purple-painted Aksumite wares (Fig. 2.2c; Fig. 2.4) which were believed to originate from the eastern area of Aksumite territory in modern eastern Tigray and Eritrea. The surface of these wares was well-burnished with decoration painted in blocks and panels of purple or purplish-red paint, often outlined by incisions. These vessels were usually globular pots or bowls, most commonly with an open mouth, but also ledge rim and hole mouth varieties were recorded (Wilding, 1989: 311-312). While now outdated, Wilding's ceramic analysis remains significant as it has formed the basis for many of the more recent studies of Aksumite ceramics.

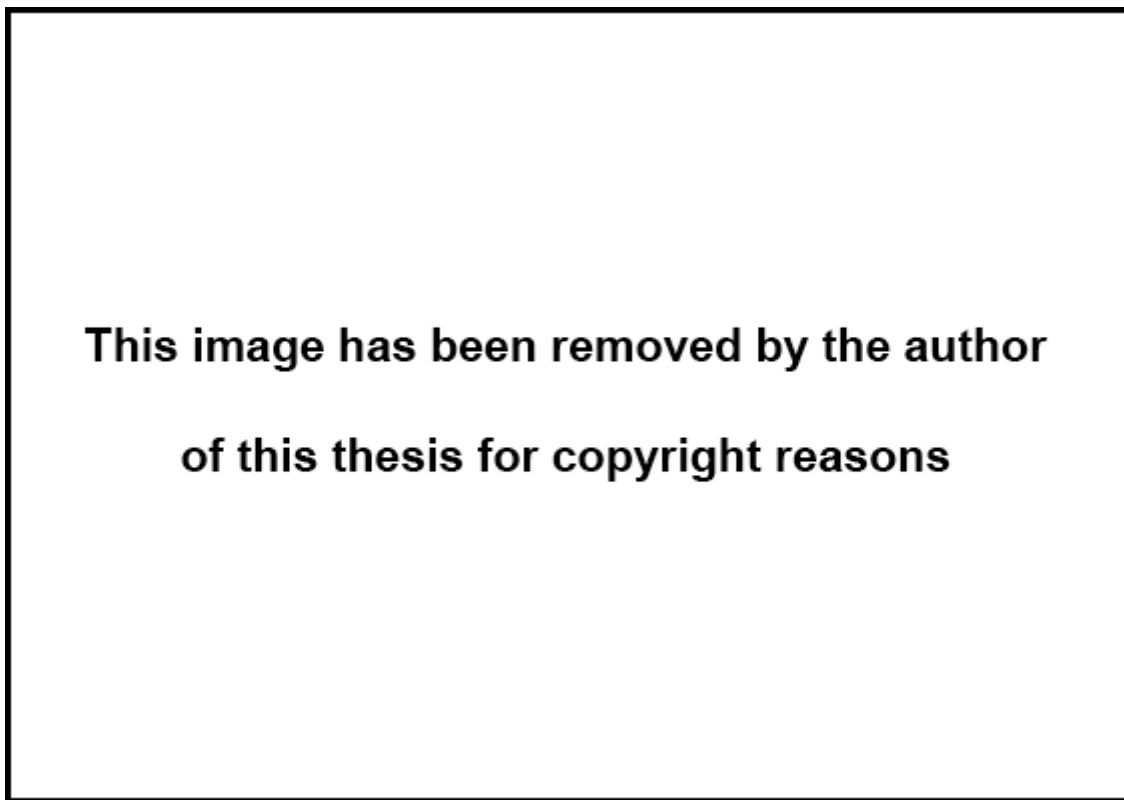


Figure 2.3: Late Aksumite cooking and storage vessels from D site (Phillipson, 2000: 323, 331)

David Phillipson undertook a series of excavations at Aksum from 1993-1997 under the British Institute in Eastern Africa (Phillipson, 1995; 1996; 2000; Phillipson et. al., 1996; Phillipson & Phillips, 1998). As the ceramic analysis had yet to be completed, discussion on the ceramics was brief and no chronology was given for the ceramics in the two main preliminary reports (Phillipson et. al., 1996; Phillipson & Phillips, 1998), although the ceramics were noted to generally be similar to those from Chittick's excavations (Munro-Hay, 1989a;

Wilding, 1989). Therefore, most of the discussion of the ceramics here will rely on the full monograph (Phillipson, 2000). The excavation at the mausoleum in the stelae field, while dating to the classical Aksumite period (250-500 AD), contained a selection of late Aksumite and post-Aksumite ceramics (see Fig. 2.5 for dating). Descriptions of the ceramics from the later phases were surprisingly vague and brief in the full monograph (Phillipson, 2000), especially considering the detailed analysis of the Classical Aksumite ceramics from the Tomb of the Brick Arches. Dating and chronology of this later material was unclear, as the material from phase III included a fragment of east-Asian porcelain which 'does not pre-date the 18th century' (Phillipson, 2000: 207). Phase 4A was noted as possibly being as late as the 17th – 18th century (Phillipson, 2000: 211). Much of this material may therefore have post-dated the period of interest. It was also noted that the divide between phases II – IV was often hard to identify, which suggested a degree of mixing of the material had taken place.

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Figure 2.4: Lake Aksumite pottery from D Site; a)-c),e),i) Purple Painted ware; d),f)-h) unidentified other imported wares (Phillipson, 2000: 331)

At the D Site, a domestic settlement on the northern edge of Aksum, there were two main phases of occupation, one pre-Aksumite, dated from 800 – 400 BC, and a late Aksumite (500 – 750 AD) phase which will be discussed

here (Phillipson, 2000: 312-331). The ceramics analysis was detailed, especially with regards to decoration and vessel forms, with detailed illustrations, although again there was little quantitative analysis. The terminology used was largely based on Wilding's (1989) analysis. All the vessels were handmade, with no evidence for coiling. In general, the quality of late Aksumite vessels declined compared to Classical wares, with poorer quality firing and thick walls and handles. Burnishing was more common, and decoration was usually incised and 'comparatively sparse and slapdash' compared to the Classical wares (Phillipson, 2000: 290-291). Based on the descriptions and depictions of the vessels red and red-brown slips were common. A selection of the Purple-painted wares from the Eastern plateau discussed above were also present (see Fig. 2.4). A small quantity of sherds from vessels with a pearlised finish were interpreted as high status items imported from another region of the kingdom, possibly from the east, based on a large ledge-rim bowl treated on both the interior and exterior with Ethiopic letters incised in the rim.

Extensive surveys were undertaken in the region between Aksum and Yeha on the Shiré plateau in 1974 covering 714 km, which were published in 2005 (Michels, 2005; Phillipson, 2008). This survey collected a significant amount of archaeological material, including roughly 180,630 ceramic sherds, from the early pre-Aksumite to early post-Aksumite period, and was focused on investigating changing settlement patterns in the region (Michels, 2005: 8-9). While significant ceramic analysis appeared to have been undertaken, there was minimal discussion of it in the monograph. The main focus was on the identification of a variety of wares based on fabric texture, colour and surface treatment and the establishment of a chronological seriation using this data (Michels, 2005: 9-15). While particular ware types were identified as associated with phases, such as 'Coarse Red Rough' ware dominating in the early post-Aksumite (750 – 850 AD), there was no discussion of forms for either wares or periods, or examples of the wares, which limited the usefulness of the ceramics outside of Michels' study.

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Figure 2.5: Comparison between Aksumite chronological sequences created by Phillipson, Munro-Hay and Bard (Bard, 2014: 312)

A series of excavations were undertaken at Bieta Giyorgis, a hill surrounding Aksum, directed by Fattovich and Bard from 1993 – 2004 (Fattovich, 1995; Fattovich & Bard, 1997; Bard & Fattovich, 1993; 2001; 2002; Bard et. al., 1997; Bard et. al., 2014). This project was particularly useful as it provided the most recent attempt at producing a chronology of the Aksumite ceramics. The site encompassed the proto-Aksumite (360 BC) to the post-Aksumite (800/850 AD) period. While the descriptions of the ceramics from each period were very brief, the revised chronological sequence (see Fig. 2.5) alongside the ceramic sequence created (see Fig. 2.6) provided a very useful resource for interpreting Aksumite ceramics as it provided both an outline of the key Aksumite forms and their chronological distribution as well as depictions of the forms and wares at the end of the sequence, particularly post-Aksumite forms. Manzo (2005) provided a brief outline of the imported material, including ceramics from Bieta Giyorgis. The main wares from the Middle Aksumite (350 – 500/550 AD) and Late Aksumite (500/550 – 800 AD) periods were, 'Ayla-Aksum' amphorae (see 2.2.10 for description), with 'Near Eastern micaceous amphorae' also found in the Middle Aksumite period were, a range of African Red slipped wares, potential Post-Meroitic mat-impressed sherds and blue glazed sherds 'possibly from Sasania or Mesopotamia' (Manzo, 2005: 60).

While not suitable for producing thrown wheel-made vessels, a 'well-balanced slow potter's wheel of finely polished basalt' was recovered from Bieta Giyorgis in 2013. Tentatively dated to the classic/middle Aksumite period (150 – 550 AD), this provided a rare insight into Aksumite ceramic production. The wheel was reportedly found associated with two undated well fired miniature beakers and a clay seal (Phillipson & Aregay, 2014).

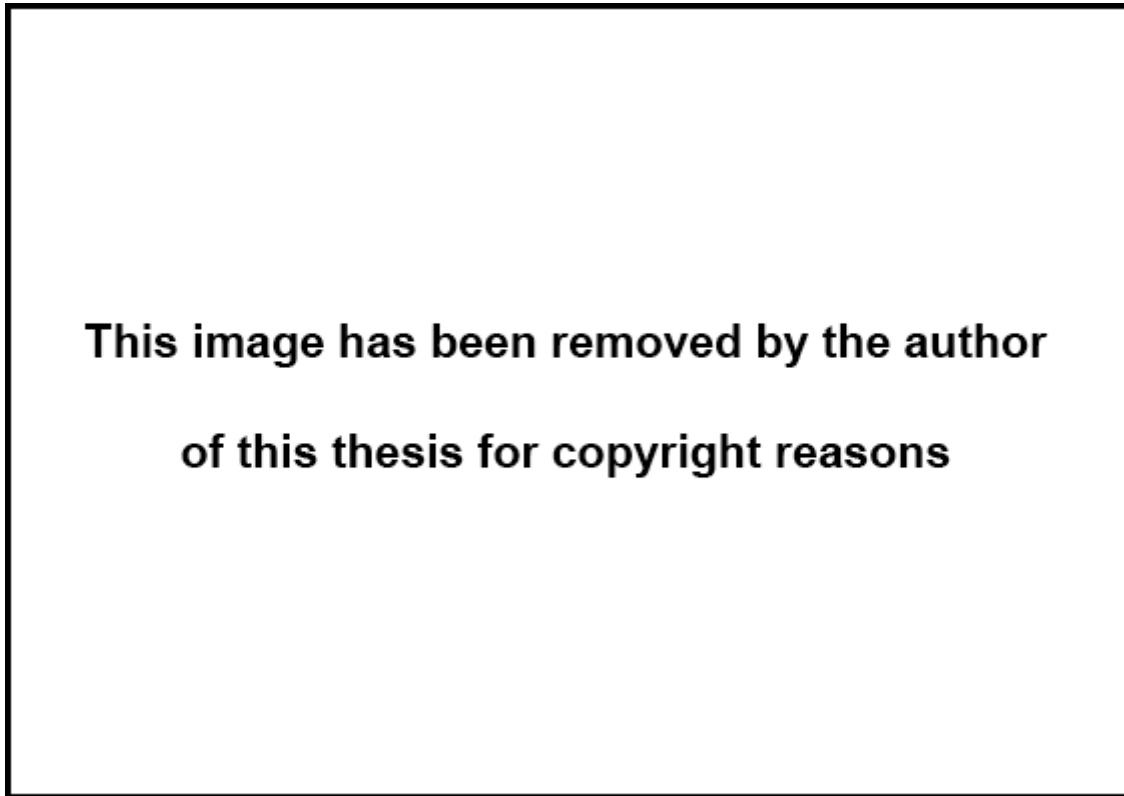


Figure 2.6: Ceramic form sequence at Bieta Giyorgis (Bard, 2014: 293)

2.2.2 Adulis

Adulis was 'one of the most prominent Red Sea ports during the Roman and Byzantine periods' (Zazzaro & Manzo, 2012: 234; Zazzaro et. al., 2014b: 44). Adulis was dated from the late centuries BC until the 7th century AD and located in modern Eritrea (see Fig. 2.1); it was likely one of the main Aksumite ports (Peacock & Blue, 2007: 2-3, 131; Zazzaro & Manzo, 2012: 234). Multiple projects have been undertaken at Adulis and the surrounding region (Zazzaro et. al., 2014b: 43). Excavations were undertaken in 1868 by the British Army under the direction of the British Museum, although there was minimal discussion of the ceramics so they will not be considered further (Munro-Hay, 1989b). Further work has been undertaken by Paribeni (1907) in 1907 and Anfray (1974; Anfray & Zazzaro, 2016) in 1961 – 1962. Some of the material

from these two excavations was later re-analysed by Zazzaro (2013; 2016). More recently, the Adulis project began in 2004 as a non-destructive survey of the site and surrounding region, but had to stop in 2006 due to tightening regulations (Peacock & Blue, 2007). The Eritrean-Italian Archaeological Project at Adulis began in 2011 (Zazzaro et. al., 2014a; 2014b; Zazzaro & Manzo, 2012).

The Eritrean-Italian Archaeological Project were the most recent excavations undertaken at Adulis that have been published. At the point of the publication of the most recent report (Zazzaro et. al., 2014a) the ceramics analysis had not been completed. However, quantitative and distributional analysis were planned (Zazzaro et. al., 2014a: 524-525) and a very limited preliminary report on the ceramics was published (Zazzaro & Manzo, 2012). Despite this, there was still important information on both the local and imported ceramics in the 2014 report. Zazzaro et. al. (2014b) also re-examined the chronology of Adulis to attempt to bring it in-line with the updated Aksumite chronology (e.g. Bard et. al., 2014). While the focus was not on the ceramics, there was discussion on the key forms present in each period, with the periods updated compared to both the earlier report (Zazzaro et. al., 2014a) and Zazzaro's re-analysis of previous Adulitan material (Zazzaro, 2013). There was also information on the local ceramics which had not been discussed elsewhere.

Sector 5 was the main unit which covered the periods of interest to this analysis (5th – 7th centuries), although the late material from Sector 1 as well as the final occupation layers from Sectors 2 and 3, dated the 5th – 6th centuries, also covered the start of the period under study. Sector 5, a housing and workshop complex, was located on the southern limit of the town along the Haddas river (Zazzaro et. al., 2014a: 519). The later phase ceramics, dated from the 5th – 7th centuries, were typically coarse ware globular bowls and basins with ledge rims and incised crossed decorations on the lip, as well as globular jars with conical necks (Fig. 2.7a). Fine ware bowls and cups with impressed or incised Christian crosses were also present (Fig. 2.7b). Similar vessels were found at Aksum, although the fabric suggested there was potentially an external source for these vessels (Zazzaro et. al., 2014a: 524-525). The report on the chronology of Adulis (Zazzaro et. al., 2014b) focused on

Sectors 1 and 3, which limited the relevant ceramics for this discussion. Periods 1.1-1.2 were dated to the 6th – early 7th century AD and so were the main period of interest. The primary local fabric from these phases was ‘moderately friable’ and often contained mica. The surface was usually smooth and was occasionally slipped or burnished. Small coarse ware bowls with rounded profiles, sometimes with incised crosses under the rim were one of the main forms in this period. Similar forms of bowls were also found at both Matara and Aksum dating to this period. The typical Adulis unrestricted bowls and cauldrons with incised decoration on flat lips were also dated to this period. Bowls with rounded or vertical profiles and stamped crosses in a different fabric to the local wares were identified as potentially being produced in the highland settlements between Adulis and Aksum as was a fragment of a fine bowl, which was interpreted as an Aksumite imitation of African Red Slip ware. The primary imported ceramics from this period were Alaya-Aksum amphorae and African Red Slip Ware including the ‘Hayes 104 Type C’ African Red Slip Ware dish discussed below (Zazzaro et. al., 2014b: 59-62). While recovered from contexts identified as from periods 2.2-2.3 (2nd – 3rd / early 4th century AD, potentially earlier), worked discs and ‘food washer stands’ were relevant to later discussions on modification of the local Harlaa ceramics (Zazzaro et. al., 2014b: 69-70, see Chapter 7.3.2).



Figure 2.7: a) Adulis Orange-Red to Brown micaceous wares; b) fine ware bowls with impressed crosses (Zazzaro & Manzo, 2012: 245-246)

As an important trading centre, the imported ceramics from Adulis were of particular interest as they provided evidence of the ceramics which were being consumed at the Ethiopian end of the Red Sea trade during the start of the Islamic Period. A variety of amphorae were present at Adulis. Ayla-Aksum amphorae (see section 2.2.10 below; Fig. 2.18; and Pedersen, 2008) were the most common type of amphorae at Adulis, and Adulis was the most prolific site for this type of amphora outside of Ayla. Ayla-Aksum amphora were the most common type of trading amphorae in the Red Sea region from the 4th – 7th century. Two types of Late Roman Amphorae, LRA1 and LRA2, dated to the 4th – 7th and 5th – 7th centuries AD respectively were also found. LRA1 were produced at a variety of locations in the Eastern Mediterranean and were believed to have contained olive oil and wine, while LRA2 were produced in the Aegean region (Zazzaro et. al., 2014a: 536-539). A small selection of sherds identified as Ayla Ware were recovered. These were produced from a similar, but finer sorted, fabric to the Ayla-Aksum amphorae. No date was given for the Ayla Ware, although it was assumed to be of similar date to the amphorae. A single sherd from a North African Red Slip African Ware ‘Hayes 104 Type C’ dish dating to the 6th – early 7th century was also recovered (Zazzaro et. al., 2014a: 543). A small selection of green to pale turquoise glazed sherds were recorded which were loosely classified as likely Mesopotamian and dated ‘from the 3rd century BC to the early Islamic period’ (Zazzaro et. al., 2014a: 546). These were probably Turquoise Glazed ware of types already discussed with respect to Aksum (see 2.2.1 above).

The Adulis project survey had a range of goals which aimed to better understand the site, its chronology, and the surrounding landscape. The survey included ‘study of the surface pottery through systematic collection’, although there was only limited discussion, description and illustrations of the ceramics outside of Adulis itself (Peacock & Blue, 2007: 2-5). In addition to surveys at the site of Adulis, pottery was collected as part of surveys at several sites in the surrounding region. These included the Galala hills, about 5 km south of Adulis, although survey was somewhat limited due to trenches and mines left over from the Ethiopian-Eritrean war, and the nearby ‘Diodorus Island’, a fossil skerry which, although now inland, was likely once an island in the past (Peacock & Blue, 2007: 33, 37, 79). Pottery was also collected from shoreline deposits near

Adulis as well as two sites on the island of Dese, about 25 km south of Dahlak Kebir (see 2.3 below) and 24 km north of Adulis (Peacock & Blue, 2007: 57-58, 79). Most of the material from Diodorus Island was dated to the 1st century BC – early 1st century AD and so was too early to be of use here (Peacock & Blue, 2007: 79-83). The only relevant ceramics collected from the Galala hills discussed were sherds of Ayla-Aksum amphorae, which were noted to be similar to sherds from Adulis itself. Again Ayla-Aksum amphorae were the only relevant ceramics discussed from the shoreline deposit surveys (Peacock & Blue, 2007: 85-86). Aksumite pottery was recovered from the island of Dese, although there was no real discussion on these ceramics, as the focus was on the classical Roman imports (Peacock & Blue, 2007: 83-85). A variety of handmade and coarse-ware sherds were mentioned at all sites, although no date was given for any of these wares. The interest in the classical period of Adulis meant that it could not be assumed that these wares were relevant to this study (Peacock & Blue, 2007: 79-86).

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Figure 2.8: Aksumite style bowls with crosses from Adulis (after Peacock & Blue, 2007: 98)

More detailed analysis and descriptions were given for the ceramics from the surveys at the site of Adulis itself. While many local Aksumite ceramics were identified, it was noted that there was some difficulty identifying those handmade ceramics of Aksumite date among the survey ceramics. Some forms, such as that in Fig. 2.8a, had clear parallels with Aksumite forms. A distinctive local ware, termed ‘scratched top wares’ consisted of bowls and jars with “scratched” decoration on flat rims (see Fig. 2.9). The exact date of these wares was unclear, but they were noted as potentially being Aksumite due to their distribution (Peacock & Blue, 2007: 99-101). The most common imported ceramics were Aqaba ware, dating from the 4th – 7th century, including amphorae and coarse wares. Late Roman 1 and 2 wares, dating to the 5th – 6th century were also present (Peacock & Blue, 2007: 95-97). Unidentified glazed Islamic ceramics were recovered from Dese Island (Peacock & Blue, 2007: 58).



Figure 2.9: 'Adulitan scratch top ware' bowls (after Peacock & Blue, 2007: 99)

Chiara Zazzaro undertook analysis of two assemblages from excavations at Adulis by Anfray (1974) and Paribeni (1907). Ceramics from Anfray's excavations at Adulis held in the National Museum of Ethiopia in Addis Ababa were studied in 2004 by Zazzaro and Sernicola. Many items recorded both in the Museum inventory of Adulis finds and Anfray's notes could not be located. Additionally, the inventory numbers had been replaced with new inventory numbers, and so could not be cross-referenced with Anfray's notes. This meant that most of the chronological context had been lost. Material including ceramics from Adulis, primarily from Paribeni's work in 1907 held at the National Museum of Asmara were also studied in 2005 and 2011. The collection had been moved several times, and after the war with Ethiopia some objects were lost and mislabelled, so again chronological and contextual information was not available for the material (Zazzaro, 2013: 31-34).

The majority of the ceramics from Anfray's excavations held at the National Museum in Addis Ababa were identified as Aksumite type 3-4 (400 – 450/550 AD and 550 – 700 AD). The main categories of vessel forms identified were cauldrons, jars, restricted bowls, unrestricted bowls and basins, and painted vessels. The cauldrons were similar to examples both from Aksum and from more recent excavations at Adulis and were characterised by a red-orange fabric and had a 'flat flaring rim and two or more horizontal handles with incised notches' (Zazzaro, 2013: 52). The jars were also primarily in a red-orange fabric and Adulis jars were characterised by a globular or bag-shaped body with a cylindrical neck, flared rim and vertical handles between the neck and shoulder.

Several different forms of closed bowls were identified, usually burnished or slipped in red over an orange-red fabric with mineral temper. Decoration consisted of vertical or diagonal appliqué ridges, incised crosses and letters under the rim, and 'patterns of domed incisions or leaf motives [*sic*]' (Zazzaro, 2013: 52) on the middle of the body. Some bowls were noted to have similarities with examples from Matara. Three restricted bowls were in a black-grey fabric, one decorated with an incised stylised cross formed of six circles, which were interpreted as potentially being of a later date. Most of the unrestricted bowls and basins were of local forms as opposed to typical Aksumite forms. Ten examples of fine orange-red bowls with external burnishing or a red slip and a flared rim were identified as Aksumite wares imitating wheel-made African Red Slip wares. The local Adulis bowls included flat rims with incised decoration similar to those discussed above (Zazzaro, 2013: 51-57). The Adulis/Aksumite 3-4 ceramics from Paribeni's excavations broadly appeared similar to those already discussed above, although bowls with ring bases and crosses on the interior were mentioned. Interestingly the typical unrestricted bowls and basins with flat rims with incised decoration on the rims from Adulis did not appear to have been present in the material from Paribeni's excavations held at the National Museum of Eritrea (Zazzaro, 2013: 39-43).

The painted vessels from Anfray's collection, with a compact yellow-orange burnished fabric and purple-brown painted patterns were likely Aksumite purple painted wares. A few Late and post-Aksumite sherds (post 700 AD) were identified in Anfray's collection at the Nation Museum in Addis Ababa. These were primarily Black-ware types and consisted of bowls, jars and basins with smoothed or burnished surfaces and occasionally were decorated with incised crosses or geometric patterns. A carinated sherd was noted as being similar to an example from Matara (see 2.2.3 below). Bowls with flattened bases and decorated with multiple horizontal parallel incised lines and unrestricted bowls with a 'thickened narrowing rim' with small horizontal lug handles were also both noted to have parallels with Matara. (Zazzaro, 2013: 57)

Among both Anfray and Paribeni's excavations the main imported ceramics dating to after the 6th century were amphorae sherds, primarily Ayla-Aksum ware which have already been discussed previously. In addition to the Ayla-Aksum amphorae, several wares were noted to have similarities to

material from the Black Assarca Shipwreck (see section 2.2.10 below) such as a globular amphora and jars with filters in a pink fabric with a white slip. Only a limited number of imported glazed ceramics were recorded, four undated Sassanian white glazed sherds with darker yellow details as well as one fragment of an 'open bowl covered with a thin white glaze' which was compared to Abbasid tableware dating to the 9th century AD from Anfray's excavations, and twelve unidentified sherds with calciferous temper with the glaze ranging from yellow to green to blue from Paribeni's excavations. There were also potential imported Indian ceramics, possibly from the port site of Sanjan in Gujarat (Fig. 2.10), dated from the 8th to 16th centuries in Anfray's assemblage (Zazzaro, 2013: 46-48, 59-65). This re-analysis of the museum collections made information on these assemblages more widely available and provided useful re-interpretation of the ceramics based on new information. Many useful, high quality photographs of key sherds from both assemblages were provided, although unfortunately no profile drawings.

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Figure 2.10: Potential imported ceramics from Gujarat recovered from Matara (Zazzaro, 2013: 64)

The most recent publication on Adulis (Anfray & Zazzaro, 2016) primarily aimed to update the interpretation of the 1961-62 excavation results based on new data and interpretations and provided easier access to the results. The discussion of the ceramics was somewhat brief, as would be expected from a publication which appeared to be somewhat aimed at the general public as opposed to purely academic, but provided a decent overview of the main forms (Anfray & Zazzaro, 2016: 44-52) and their chronological distribution (Zazzaro, 2016) at Adulis. There were many grey-scale photographs of a range of forms, but no profile drawings were included. The imported amphora and African Red

Slip Ware discussed previously were mentioned. Zazzaro's descriptions of the local wares and forms present during the Aksumite phases appeared to be largely based on her analysis of the National Museum assemblage (Zazzaro, 2013; 2016) with little new information present.

2.2.3 Matara

The site of Matara was an important Aksumite site along the route between the port of Adulis and Aksum itself situated in modern Eritrea (see Fig. 2.1), close to the Ethiopian border. Excavations were undertaken by Anfray and the Ethiopian Institute of Archaeology from 1959 – 1964 (Anfray, 1963a; 1966; 1967; 2012; Anfray & Annequin, 1965). While now somewhat dated, the original pottery report on Matara provided a good overview of the ceramics from Matara (Anfray, 1966). Anfray described the broad forms present at Matara in the two main phases, pre-Aksumite and Aksumite, with Aksumite Matara of interest here. Many detailed illustrations provided a good overview of the forms present at Matara, which generally appeared similar to the typical Aksumite forms found elsewhere. The Aksumite period at Matara was dated to the 2nd – 8th century AD. Anfray further divided this phase down into 'Axoum 1' dating from the 2nd – 4th century and 'Axoum 2' from the 6th – 8th century AD. Unfortunately, it was not possible to clearly separate the ceramics between these two Aksumite Phases (Anfray, 1966: 12-13).

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Figure 2.11: a) Purple painted Aksumite ware bowl; b) Red fabric Aksumite bowl with incised decoration from Matara (Anfray, 2012: 36-37)

The initial ceramic report (Anfray, 1966) provided an early detailed analysis and description of the Aksumite ceramics. The report provided an outline of the key forms of both the Aksumite and pre-Aksumite ceramics at Matara as well as a selection of interesting unique forms. A more recent paper

(Anfray, 2012) provided an update of the site of Matara, situating it within the wider archaeology of the Aksumite kingdom and new developments in the understanding of the material culture and history of the Aksumite kingdom. Unfortunately, there was only limited discussion of the Aksumite ceramics and little new information compared to the original report. There was however new data on imported ceramics which was not available elsewhere (Anfray, 2012: 42-43). Additionally, there were some questionable translations (presumably originally French), such as the repeated use of 'vase' instead of pot or vessel when describing various vessel forms, which made descriptions unclear.

The Aksumite ceramics from Matara were all hand-made, mainly with a red fabric, occasionally a black fabric. The fabric was usually well fired despite being produced from poorly sorted clay. The surface finish was either matte, well smoothed or occasionally slipped in red. Decoration was varied with geometric patterns produced in incised, painted, appliqué, impressed and moulded decoration present (Fig. 2.11). Christian crosses and rare examples of inscriptions were also found (Anfray, 1966: 6-7, 11-12; 2012: 35). It was noted that the crosses were often on the bottom of vessels, which meant that they were not simple decoration, but showed that Christianity was entrenched in the local society (see Fig. 2.13b).

Based on the descriptions, photographs and illustrations, there was a lot of similarity between the key local ceramic forms found at Aksum and at Matara. Handles came in a variety of forms at Matara, mostly small loops and were usually decorated. A range of bowls, mainly in red fabric were found at Matara (Anfray, 1966: 7-9). A type of deep bowl distinct to Matara had a flat base and horizontal incised decoration under the rim, with more rows the larger the vessel, and a small 'dimple' under the rim (see Fig. 2.13a and Anfray, 2012: 39). Both bowls and jugs made with a glossy red fabric (potentially burnished) and decorated with vertical incised lines or diamonds were recovered. The cups were also usually in a red fabric and had ring bases. Large storage vessels were also mentioned, but not described in detail (Anfray, 1966: 7-9). Cooking vessels, although not described, were mentioned in the 2012 paper. The painted wares (Fig. 2.11a) were usually painted dark purple and based on the description and illustration were likely examples of Purple Painted Aksumite ware. An unusual complete bird shaped vessel (Fig. 2.19) and fragment of a

potential second example, both in a glossy red fabric, were identified as a 'unique' form. Rare examples of ceramic dice were also recovered from the Aksumite contexts at Matara (Anfray, 1966: 7-13; 2012: 40). Relevant imported ceramics included ribbed 'Mediterranean' amphorae, potentially from Egypt, African Sigillata ware and unidentified glazed ware from Sassanian Persia, dating to around the 7th century AD. A collection of amphorae were used to make a conduit for transferring water to the baptismal basin in the basilica (see Fig. 2.12 and Anfray, 2012: 29, 42-43).

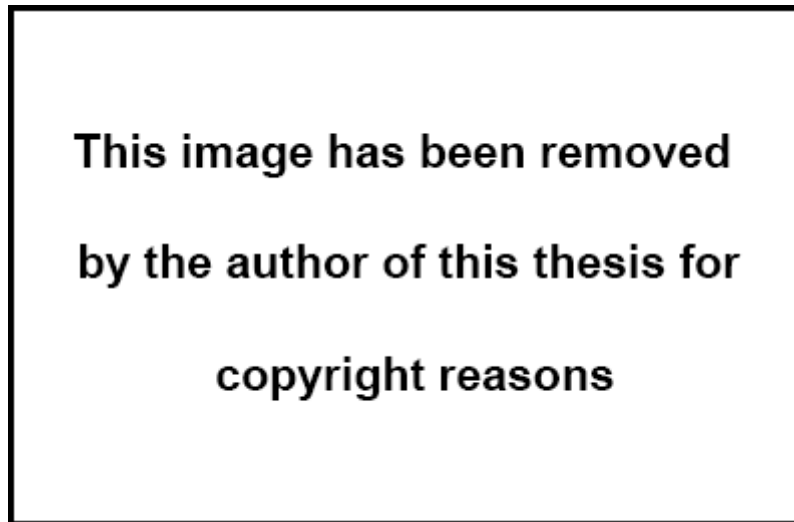


Figure 2.12: Conduit made from amphorae in the basilica at Matara (Anfray, 2012: 29)

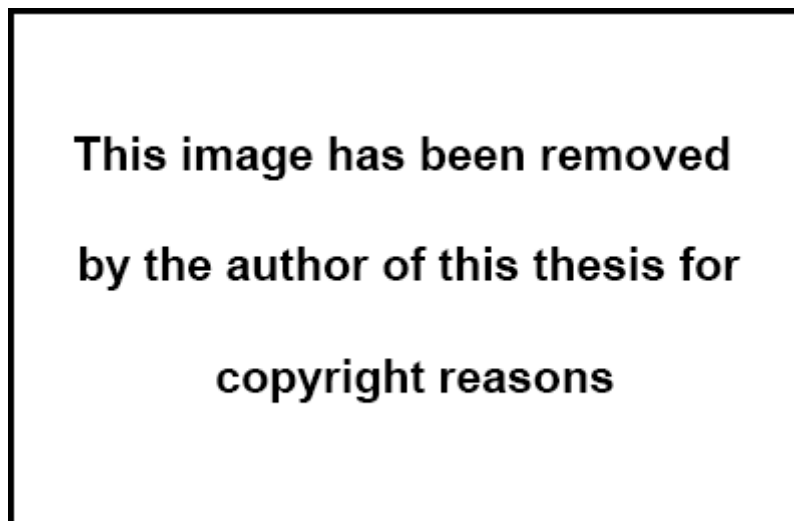


Figure 2.13: a) bowl with incised decoration round the rim and 'dimple' typical of Matara; b) examples of impressed cross decoration (Anfray, 2012: 38-39)

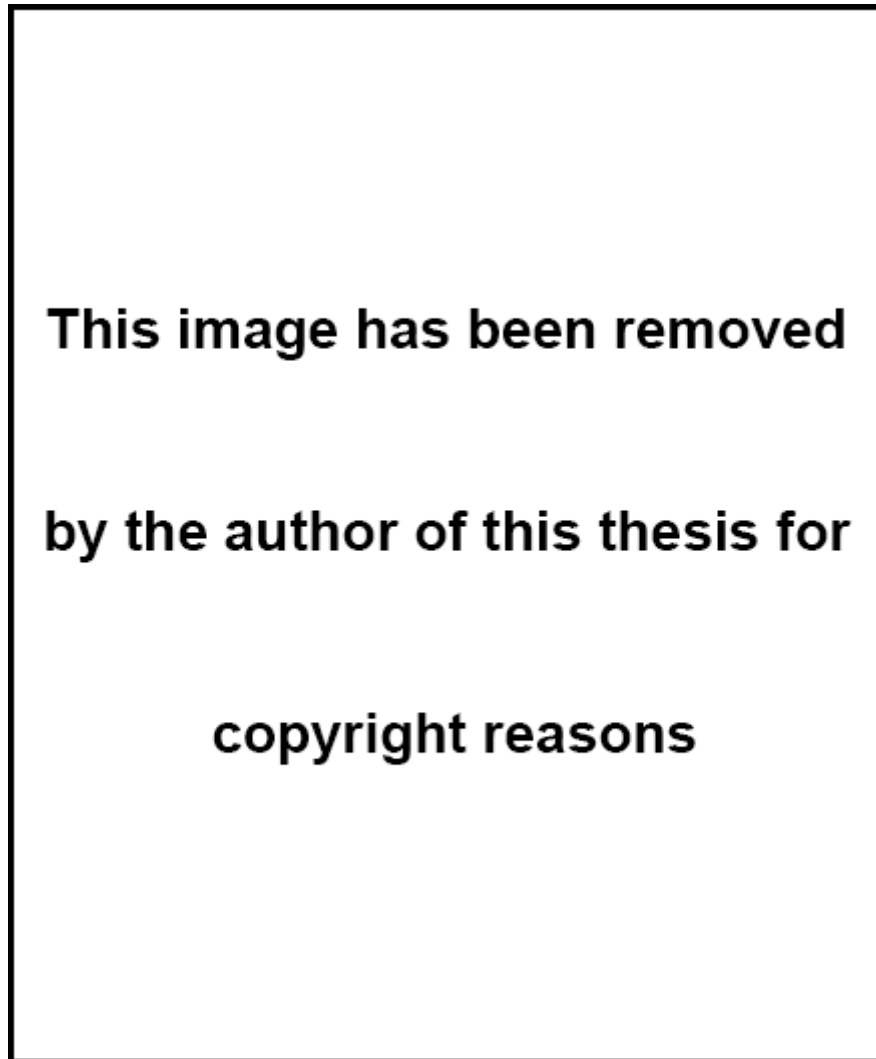


Figure 2.14: selection of sherds from Mifsas Baḥri a) bowl with 'inner lip' rim; b), c) sherds of Ayla-Aksum amphora; d) small bottle; e) carinated sherd with appliqué dots; f) Purple painted Aksumite ware bowl, g),h) Burnished ring bases; i),j) burnished sherds with 'burnished decoration'; k) Earthenware lid (Gaudiello & Yule, 2017)

2.2.4 Mifsas Baḥri

The site of Mifsas Baḥri is located close to the southern border of the Tigray region in northern Ethiopia (see Fig. 2.1). The site was largely dated to the Late Aksumite period (550 – 700 AD), although there was some evidence, particularly in the graveyard, for continued use in the post-Aksumite period (C-14 dated to the 11th – 15th century) (Gaudiello & Yule, 2017: 1, 272-273). Despite being identified as a 'Late Aksumite frontier community', the ceramics from Mifsas Baḥri were noted as being distinct compared to the typical Aksumite ceramics assemblages (Gaudiello & Yule, 2017: 237). Additionally, some decoration on burnished wares had interesting parallels with the local

ceramics from Harlaa (see Chapter 5.4.2 and 7.2.2). Both Late Aksumite and Post-Aksumite ceramics were identified in the excavation and survey assemblages as well as potential recent ceramics (Gaudiello, 2017a; 2017b).

The fabric colour ranged from reddish-brown to black to red to pink and could be burnished or slipped. The most common wares were Red-Brown and Brown wares which are used to produce many forms. Burnished and polished vessels were usually produced in a grey/black ware. The most common forms found at Mifsas Bahri were 'dishes, bowls, plates and carinated pots' which each had a variety of forms. Storage jars and bottles were less common and cups were rare. The open forms, bowls, dishes, cups and plates were all handmade, while the closed forms (bottles, jars and pots) were both coil and handmade, with the bases sometimes being formed using a mould. Despite this, coil-made vessels appeared rare as it was mentioned that only two coil-made examples were identified. Most bowls and dishes had burning on the exterior, which suggested that they were used for cooking. Carinated pots and bottles were usually burnished. Incised decoration was the most common decorative style at Mifsas Bahri, with 'vertically burnished stripes' (see Fig. 2.14i,j), appliqué ovoid 'dome-bosses' and appliqué ridges which may be further decorated with incised or punctate decoration also present. The burnished stripes decoration was a decorative style which had interesting parallels with Harlaa (see Chapter 5.4.2). Handles consisted of lug handles or 'horizontal strap handles' on bowls and vertical handles on the necks of jars, sometimes decorated with incised lines (Gaudiello, 2017a: 106-108).

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Figure 2.15: a) Flat plates from Mifsas Bahri; b) bowl forms from Mifsas Bahri (Gaudiello & Yule, 2017)

The ceramic assemblage from Mifsas Baḥri was quite fragmentary, which meant that only a few full vessel forms could be clearly identified. Despite this, twelve forms and a range of sub-forms were identified in the ceramic assemblage. Those for basins, closed pots, jars and bottles were primarily based on the form of the neck and rim, which were the only identifiable parts of these vessels remaining in the archaeological assemblage (Gaudiello, 2017b: 152). The plates (Fig. 2.15a) were identified as likely prototypes of the modern *mogogo* pans used for making *injera* bread (Gaudiello, 2017a: 107; 2017b: 152; see also Chapter 4.1.1). A wide range of shallow dish forms were identified and were noted as being rare at site 001, the main excavation unit, with most recovered as part of the survey. These dishes were typically at least partially burnished. (Gaudiello, 2017b: 152-153). The 'cups' were usually burnished and were similar in form to the bowls. They were distinguished from the bowls by having a diameter of less than 210 mm, with the 'small cups' having less than 130 mm diameter. These cups were interpreted as being used for serving (Gaudiello, 2017b: 153, 157). As was mentioned above, bowls appeared to have often been used for cooking and were the most common vessel form at Mifsas Baḥri, where they made up 25.37% of the sherds with identified forms (Fig. 2.15b). They were found in different fabrics and the finish ranged from rough to burnished, occasionally with horizontal lug handles. A collection of pots with inverted rims were identified as primarily used for storage, although some showed evidence for cooking. Basins were identified by large relatively straight mouths and were rare, with only five rims and a flat base identified. Small bottles were one of the more complete vessel forms present (see Fig. 2.14d)

Ring bases were found at Mifsas Baḥri, but appeared rare, with finer examples present on burnished sherds (see Fig. 2.14g,h). Rims were generally similar to the simple and tapered rim forms identified at Harlaa, with rarer examples of flat rims (see Chapter 5.6.4). Rims with lips were rare, and were primarily found on survey sites in the vicinity of Mifsas Baḥri. A single rim similar to the rare flat, inner lip form identified at Harlaa was also described at Mifsas Baḥri (see Fig. 2.14a). The form of the lids from Mifsas Baḥri (see Fig. 2.14k) were similar to examples found at other archaeological sites in the horn of Africa (e.g. see sections 2.10.1 [Fernandez et. al., 2017]; 2.8 [Website 1]; and App.Fig. VI.7), and so were not necessarily significant as indicators of particular

ceramic styles. Sherds of imported Aqaba ware were recovered from during the field survey (Gaudeillo, 2017a: 128, 144; Gaudeillo, 2017b: 150-153; see also Fig. 2.13b,c). Potential examples of Purple Painted Aksumite ware (Gaudeillo, 2017a 142-143; 2017b: 150, 152) were also recovered during the survey (see Fig. 2.14f).

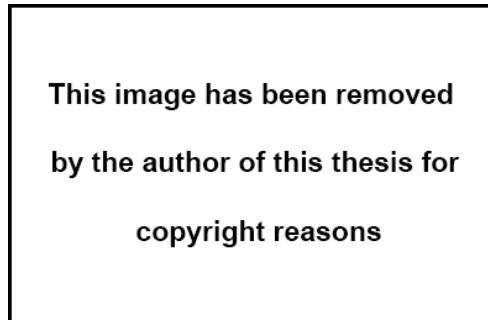


Figure 2.16: Unique thickened rim dating to the Aksumite period from the Gulo-Makeda region (D'Andrea et. al., 2008: 163)

2.2.5 Gulo-Makeda

The Gulo-Makeda survey (D'Andrea et, al., 2008) in north-eastern Tigray Region, Ethiopia, focused on the area as it was on the route between the Aksum/Yeha region and Adulis and the coast (see Fig. 2.1). The survey covered a wide range of sites from the prehistoric to the post-Aksumite period. Only late Aksumite and post-Aksumite sites will be considered here. There was limited discussion of the ceramics, particularly the Aksumite ceramics, as they were broadly similar to typical Aksumite wares which have been discussed elsewhere. Local variations were noted where relevant.

Aksumite ceramics were found at many settlement sites and artefact scatters identified during the survey. One of the most distinctive was the Late Aksumite painted pottery (Purple painted Aksumite wares from Aksum), 'characterised by precise decoration and depurated paste' (D'Andrea et. al., 2008: 161-162). It was argued that this was produced by specialised potters at Matara (Anfray, 1966; see also Chapter 2.2.3) as they were rare in the region around Aksum. The Ayla-Aksum ribbed amphorae discussed above (see 2.2.1, 2.2.2 and 2.2.10 below) were also found at several sites. There were no illustrations or photographs of either the Purple painted wares or Ayla-Aksum amphorae, and the only Aksumite wares illustrated were dated to the Classical Aksumite period (150 – 350 AD). Several new ceramic types were uncovered, however most were dated to the pre-Aksumite period. Only one ware from the

site of Ona Adi was potentially dated to the Aksumite period, although an exact date could not be ascertained. These sherds had several thick parallel ribs under a thickened rim, sometimes with traces of an external red slip (Fig. 2.16). The fabric paste had many mineral and vegetal inclusions. The use of a micaceous paste in ceramics, while known in the Aksum region was particularly prevalent around Gulo-Makeda, especially in the Post-Aksumite period. Unfortunately, there was minimal discussion of the Post-Aksumite ceramics from the Gulo-Makeda survey (D'Andrea et. al., 2008: 162-165, 168-169).

2.2.6 Adi Qeyeh Plateau

The Adi Qeyeh Plateau is located in Eritrea. The primary site on the Adi Qeyeh Plateau was Qohaito (see Fig. 2.1) which had dense archaeological features including monumental architecture, cisterns, a dam, and reservoir basin, as well as large artefact scatters. A joint project between the National Museum of Eritrea and University of Florida in 1997 surveyed the plateau, covering both Qohaito and a large collection of mound sites in the surrounding region (Curtis & Libsekal, 1999; 25-26). While the ceramic density on the mound sites was recorded, the primary goal of the project was to identify sites and key architectural features in the region. Therefore, there was only limited discussion of the ceramics recovered and observed during the survey (Curtis & Libsekal, 1999; 26, 28-29). Based on the Aksum excavations discussed above (Wilding, 1989; see also Chapter 2.2.1) four ceramic types were identified on the Adi Qeyeh plateau; Red Aksumite ware, Brown Aksumite ware and Grey/Black Aksumite ware. These wares were argued to have been produced locally at many Aksumite sites. There was limited discussion of the ceramics and the forms present and no photographs or illustrations. Therefore, while providing evidence for the presence of Aksumite ceramics in the region, the Adi Qeyeh survey did not provide any new information on Aksumite ceramic forms or dating. Two sherds of 'cream-colored ribbed amphorae' were recorded. While not identified, these were potentially Ayla-Aksum amphorae (Curtis & Libsekal, 1999; 29-30, see 2.2.10 below for description).

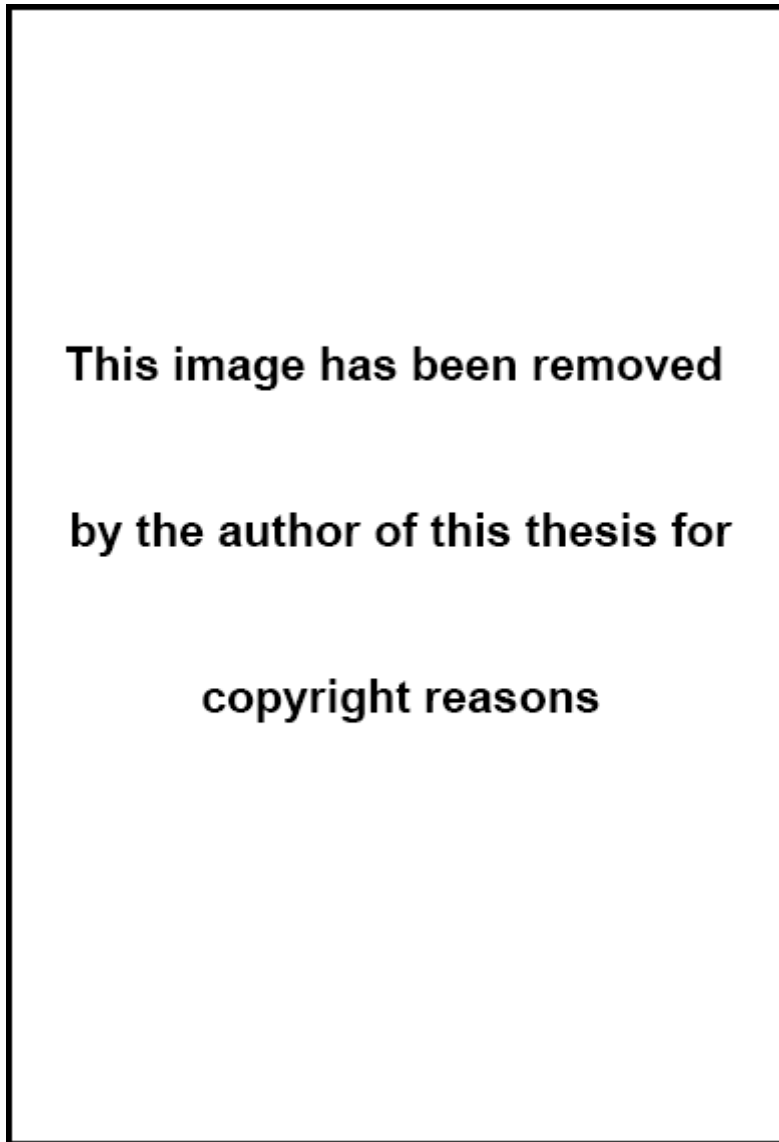


Figure 2.17: A selection of pottery from Wakarida; a),b),d),f): fine red ware; c),k)-r): common red ware; g),h): fine black ware; i),j): Fine painted ware (Aksumite purple painted ware?) (after Benoist et. al., 2016: 9)

2.2.7 Wakarida

Archaeological work was recently undertaken at Wakarida, eastern Tigray by the French Archaeological Mission (Benoist et. al., 2016). Wakarida was identified as a 'small urban centre' located slightly away from the main trade route between Adulis and Aksum and was dated to the Middle-Late Aksumite period (350/400 – 800/850 AD), and so largely fell within the scope of this review (Benoist et. al., 2016: 1-3). Two main phases were identified, with Period I broken down into two sub phases. Unfortunately, no clear dates for these periods were proposed.

The ceramics were classified into nine 'macroscopic groups', and as was expected, all the local wares appeared to have been handmade. The most common ware throughout the sequence was made of a red-orange fabric including both fine wares (Group 1-2), which had a well-levigated fabric with minimal inclusions and smoothed or burnished surfaces, and common wares with a coarser fabric (Groups 3, 5) (see Fig. 2.17a-d,f,k-r). The primary forms for the fine wares were shallow bowls, globular bowls and small pots. The common wares were much more varied, and included bowls of various sizes and forms, cauldrons and storage vessels, as well as specialised forms such as foot baths and ladles. Some open bowls and basins of both the fine and common wares had ring bases. Group 7 was described as a fine ware with a polished orange fabric painted with dark red to black patterns, primarily small bowls and pots, and was linked with the Aksumite purple painted ware (see Fig. 2.17i,j).

Group 4 consisted primarily of bottles in a fine, grey fabric covered in a burnished black slip (See Fig. 2.17g-h). These two groups were primarily present in small quantities in Period I.A. While present in Period I.A, 'Common incised ware' (Group 8) was much more common in Period I.B. This ware consisted of a friable red-brown fabric with mineral inclusions and vegetal prints. Their main form was irregularly shaped 'suspension vessels', presumably vessels with multiple handles for hanging. In Period II, a new grey-black ware was introduced (Group 6). It had a dense fabric, likely contained local blue schist inclusions, and was 'awkwardly shaped, with irregular walls, and has frequent fingerprints (Benoist et. al., 2016: 8).' The primary forms for this ware were large plates and cauldrons (Benoist et. al., 2016: 7-10). Parallels were drawn between many of forms and the forms of vessels from Aksum (Benoist et. al., 2016: 10). The final group (Group 9) consisted of 'ribbed amphorae', the identity of these amphorae is currently unclear with Aqaba amphorae, dating to the 7th century AD being the most likely (Benoist et. al., 2016: 8, 11).

There were almost no photographs of the ceramics, although there were illustrations of the key forms including profiles (see Fig. 2.17). While the illustrations were useful there was very limited discussion of the ceramic forms at Wakarida. At the recent 2019 Red Sea conference, Islamic period ceramics from Wakarida were mentioned, although there is nothing currently published on them (Teklehimanot, pers. comm. 2019).

2.2.8 Raheita

As part of their work at Adulis (see 2.2.2), Zazzaro undertook a survey of known sites along the Eritrean Coast. Apart from Adulis there was minimal discussion of ceramics from the sites. However, brief descriptions were made of ceramics from a few relevant sites. Zazzaro analysed sherds collected by Anfray from the site of Raheita (see Fig. 2.1) in Assab Bay which were held in the National Museum of Ethiopia in Addis Ababa. Most were poorly preserved, limiting identification. Some potential Late Aksumite purple painted wares, unidentified potential glazed Late Sassanian and early Islamic wares were briefly discussed (Zazzaro, 2013: 21, 23).

2.2.9 Elghena-Falcát

Zazzaro also discussed the site of Elghena-Falcát, (see Fig. 2.1) located some 30 km inland up the Falcát River in northern Eritrea (Zazzaro, 2013: 24). The site was visited by both Conti Rossini and Fattovich and was believed to be contemporary with the kingdom of Aksum, although no tighter date range was given. The primary feature of the site was stone mounds identified as burials based on the presence of human and camel bones. This suggested that the people buried here were likely not Christian. The ceramics from Elghena-Falcát were described as ‘...comparable to, according to Conti Rossini, to Aksumite pottery’ (Zazzaro, 2013: 24). A type of amphora made with a coarse, well fired fabric about 1 cm thick, red on the exterior and greyish on the interior with horizontal parallel deep incisions was noted to be similar to examples from Adulis, although it was not clear which type amphorae these were. Both large (up to 35 cm) vessels with smoothed exterior decorated with incised and punctate line decoration and smaller vessels in a coarser fabric decorated with horizontal incisions were noted (Zazzaro, 2013: 24).

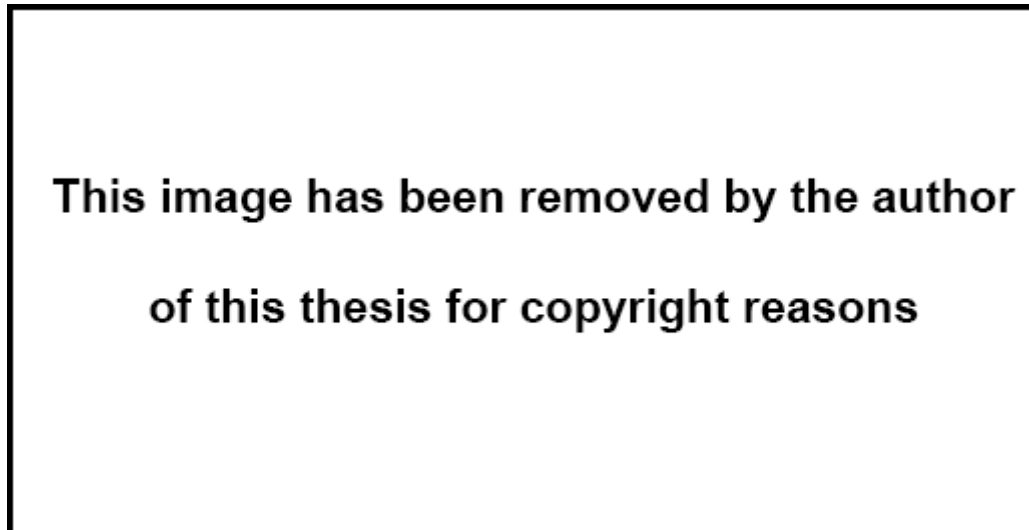


Figure 2.18: Globular Amphora and Ayla-Aksum Amphora (Pedersen, 2008: 83, 85)

2.2.10 Black Assarca Island Shipwreck

While not Ethiopian in origin, and dating to the 6th century AD, the Black Assarca shipwreck (Pedersen, 2008) provided useful information on the goods which were being traded in the Red Sea just prior to the beginning of the Islamic period, particularly with regards to amphorae. Three main forms of amphorae were found in the shipwreck. The most common was the Ayla-Aksum amphorae discussed above (see 2.2.1, 2.2.2, 2.2.5, and 2.2.6). These were narrow conical amphora with dark red/brown or occasionally light grey fabric and rilling around the vessels. Many vessels had a brown wash or slip (see Fig. 2.18). The second type had a globular form, with circular rilling on the face. They likely originated in Aila (distinct from Ayla) due to similar vessels being found associated with the kilns. The fabric was not listed for this type of amphora. A single example was found of a wider variant of the Ayla-Aksum amphora, made from the same brown fabric. Similar examples were known from Elephantine Island, Egypt dating from AD 550 – 750 (Pedersen, 2008: 84-86). A limited number of non-amphora sherds were also recovered, mainly consisting of fine rilled sherds of a similar fabric to the Ayla-Aksum amphorae, likely the Ayla Ware discussed above (see Chapter 2.2.2). A single thin neck sherd with a filter made from a light cream fabric had parallels from Aila (Pedersen, 2008: 87). No locally produced ceramics from the Horn of Africa were identified.

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Figure 2.19: a) Late Aksumite bird pot from Matara; b) Byzantine bronze bird lamp (Manzo, 2003)

2.2.11 General Aksumite literature

Manzo undertook a study of several Aksumite ceramic forms from different Aksumite sites to consider their origins as skeuomorphic imitations of glass and metal (Manzo, 2003). Manzo provided some interesting comparisons and potential links between some Aksumite vessel forms and Late Roman\Byzantine forms. Middle and Late Aksumite red-orange or black polished bowls with large ledge rims and ring or round bases were compared to bronze and silver late Roman and Byzantine ledge-rim bowls which were known to have been exported to post-Meroitic Sudan. They also had similarities to African Red Slip Ware bowls. The moulded and impressed decoration on the rim was also compared to middle 5th century African Red Slip Wares as well as 1st century AD glass bowls. Internal decoration on bowls consisting of geometric medallions with a cross surrounded by bands of beads or vegetal patterns were compared to Byzantine vessels likely used in liturgical practices as well as middle 5th century African Red Slip Wares (Manzo, 2003: 12). The Middle or Late Aksumite red polished pot in the form of a bird from Matara apparently imitated Early Christian bronze dove vessels from Byzantine Egypt (Manzo, 2003: 15-16). Although apart from the fact that both depicted birds, there were limited similarities between the forms of the vessels (see Fig. 2.19).

Overall, several Aksumite forms which were typical across the Aksumite sites. However, many sites additionally had their own unique wares, forms or styles distinctive to that site, such as the 'scratched top wares' at Adulis, the burnished decoration and carinated vessels at Mifsas Bahri, and the purple painted wares, which while found at many sites, were believed to have been produced in the Eastern Ethiopian highlands.

2.3 Dahlak Kebir

Dahlak Kebir is the largest island in the Dahlak archipelago, near Massawa on the Eritrean coast (see Fig. 2.1). It was part of the Aksumite kingdom until its collapse around AD 700 and the islands were known to have been a pirate base before being occupied by Muslims, eventually becoming an independent Sultanate (Insoll, 2001: 41; see also Chapter 1.4.1.2). A survey was undertaken at the village of Dahlak Kebir on Dahlak Kebir Island in 2001 by Timothy Insoll (2001). Due to the brief nature of the survey and the inability to export or remove any material, unglazed ceramics were not discussed, and only key diagnostic glazed ceramics were recorded. Those of relevance to the study included a collection of Chinese wares, likely 12th – 13th century in date. These consisted of sherds of celadon and whiteware, two with bluish tinge that may have been Qingbai or Ying-Ching. A sherd with a brown and olive glaze was possibly Dusun ware and a single unidentified black glazed sherd was also recorded. There were two sherds of Islamic Sgraffito ware with characteristic orange-brown fabric and green glaze. Of interest was the apparent lack of Turquoise glazed wares despite the presence of similar wares at Aksum (Insoll, 2001: 47-8).

2.4 Qwara Region

Surveys have been undertaken in the Qwara-Metema region in north-west Ethiopia on the Sudanese-Ethiopian borderland (see Fig. 2.1) between 2013 and 2016 (González-Ruibal & Falquina, 2017). Three key groups of sites were identified, the Gelegu Tradition, dated to 600 – 1300 AD (González-Ruibal & Falquina, 2017: 176-183), the Jebel Mahadid Tradition, dated to 1300 – 1650 AD (González-Ruibal & Falquina, 2017: 183-190), and the Funj Tradition dated to 1650 – 1900 AD (González-Ruibal & Falquina, 2017: 190-197). Only the ceramics associated with the first two 'traditions' will be considered here. Brief descriptions of the ceramics from all the periods, including fabric, key forms and decoration were provided as well as limited quantification of some forms and decorative styles. Detailed illustrations were provided of key forms and decoration and comparisons were made with contemporary sites in both the Sudan and Ethiopia.

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Figure 2.20: Vessels from the Qwara region survey (González-Ruibal & Falquina, 2017); a-e) Gebel Tradition vessels; f-k) Jebel Mahadid Tradition vessels; l) potential carinated vessel from Ethiopian Highlands

2.4.1 Gelegu Tradition Sites

The seven Gelegu tradition sites identified were generally small, between 1000 m² to 5000 m² in size (see González-Ruibal & Falquina, 2017: 175 for locations of sites). These were identified by artefact scatters and no structures were identified in either the surveys or test pits. Five test pits were undertaken at the site of Mahal Gerara and three at Selferedi-Kuter 4. Ceramics were

common and broadly similar across all the sites. The fabric was well levigated with fine to very fine quartz inclusions and was usually orange, although darker fabrics were present to a varying degree at all sites. The surface was polished or burnished as a finish. The majority of the vessels (90%) were open forms of basins, bowls or dishes. Decoration was primarily on the rim, consisting of finger or nail impressions (Fig. 2.20a-b). Some sherds, decorated with incised or punctate patterns (see Fig. 2.20c-e) were noted to be similar to Christian period ceramics from Sudan related to the Kingdom of Alodia (González-Ruibal & Falquina, 2017: 176-182).

2.4.2 Jebel Mahadid Tradition sites

Five sites were identified associated with the Jebel Mahadid Tradition (see González-Ruibal & Falquina, 2017: 175) and test excavations were undertaken at the site of Jebel Mahadid. Unlike with the Gelegu Tradition, these sites showed evidence for permanent structures and larger settlements. A distinct ceramic style was observed which was considered cruder compared to the previous Gelegu Tradition. The fabric was poorly sorted with mineral and straw inclusions. The fabric colour was similar, however the firing was more irregular, for which open bonfire firing was suggested. Vessel walls were thicker and the surface was generally rough, although the interior of some vessels was highly polished or burnished. Four main types were identified among the assemblage; shallow open bowls and plates similar in form to the Gelegu Tradition (Fig. 2.20f-h), bowls and plates with burnished interior which were identical to the Sudanese *doka* which was used for baking (Fig. 2.20i), deep bowls potentially used for baking stiff porridge (Fig. 2.20j), and hemispherical pots with protruding rims which were likely used for boiling and stewing (Fig. 2.20k). Decoration was rare, consisting of a few examples of incised and impressed decoration. A fine, red burnished carinated bowl (Fig. 2.20l) was identified as from the Ethiopian Highlands, used for cooking and serving stews and sauces (González-Ruibal & Falquina, 2017: 186-189).

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Figure 2.21: Unidentified Chercher mountains burial tumulus (Joussaume, 1974: Fig. 46); b) profile of dolmens with cists at Rare (Joussaume, 1974: Fig. 10)

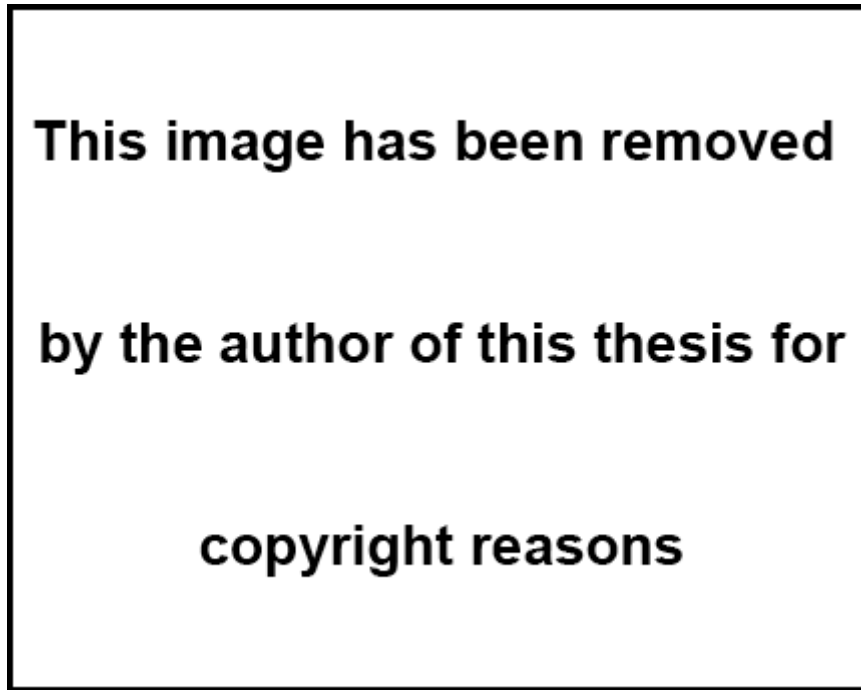


Figure 2.22: Key ceramic forms from burial tumuli at Raré and Sourré-Kabanawa (Joussaume, 1974: Fig.78)

2.5 Chercher Mountains sites

These sites situated in the Chercher mountains between Harar and Asbe-Tafari were of particular interest as they were both contemporary with and situated close to the site of Harlaa. While there have been several surveys of these sites (see Joussaume, 1974: 7-11; Joussaume, 1976; Chekroun et. al., 2011), the only excavations undertaken in the region prior to the current project at Harlaa were by Roger Joussaume (1974, 2014) in the early 1970s.

Joussaume identified three main types of sites, cyclopean walled villages, dolmens with cists (Fig. 2.21b) and stone tumuli or cairns (Fig. 2.21a). The dolmens were located closest to Harar and were associated with distinctive pottery. However, based on C14 dating, they were dated to 1300 – 2000 BC. There were later C14 dates from the dolmens, however, Joussaume argued that these were from later re-use of the sites, such as the deposition of a cache of 67 silver Ottoman coins dated to around 1500 – 1550 in a cist at Sourré-Kabanawa (1974: 101-103; 2014: 73-74, 94-95; see also Chapter 7.4.1.4). Therefore, only the cyclopean walled villages and tumuli will be discussed here, although, it must be noted that the dating of these sites was not clear. The architecture of the cyclopean walled villages had close parallels to Harlaa, with walls built from large blocks of worked masonry. The original excavation report

(Joussaume, 1974) provided a relatively detailed discussion of the results of the excavation and the key ceramic forms found at the different sites in the Chercher mountains, although quantification was limited. The more recent report (Joussaume, 2014) provided a revised and slightly condensed discussion and analysis of the dolmens, tumuli and the associated material. However, as the focus was on the megaliths in the Chercher mountains, there was limited discussion of the walled villages.

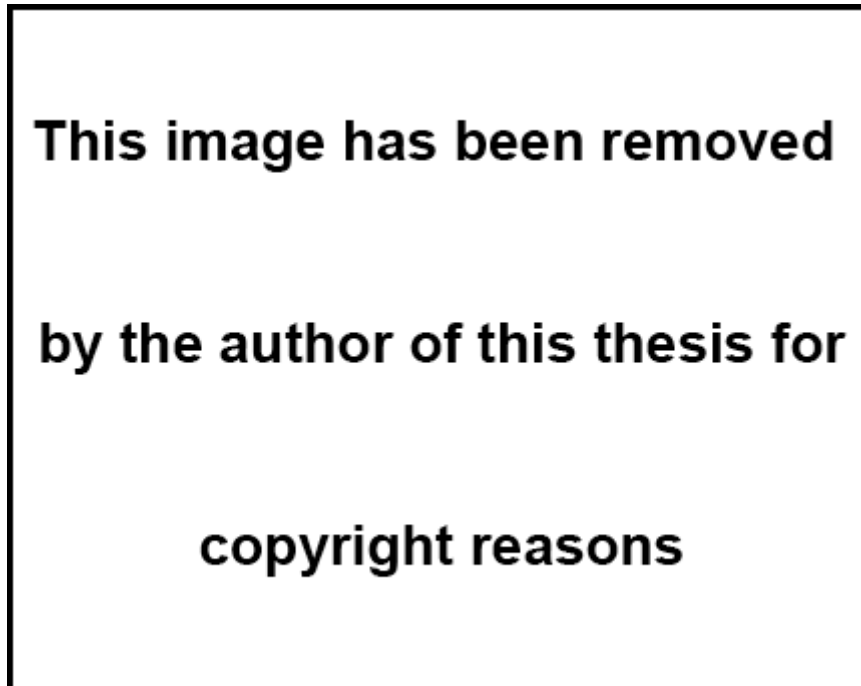


Figure 2.23: Selection of vessels from Raré (Joussaume, 2014: 103-104)

2.5.1 Raré, Sourré-Kabanawa and Hassan-Abdi tumuli

The burial tumuli at Raré (Dobba) and Sourré-Kabanawa were dated to the 8th – 12th century AD. The descriptions of the forms and decoration were quite detailed with good illustrations and photographs in the appendix, although description of fabrics was limited. Unfortunately, there was minimal quantification of the ceramics which would have been useful for comparing the Chercher Mountain sites to the Harlaa assemblage, as there were likely links between the two. As the ceramics were deposited whole and sealed in the burial context, many of the vessels were complete, or largely complete, allowing a good understanding of the vessel forms that were deposited in the burial tumuli. The ceramics at Raré and Sourré-Kabanawa were quite similar and the discussion on the Sourré-Kabanawa ceramics heavily referenced Raré (Joussaume, 1964; 2014: 120).

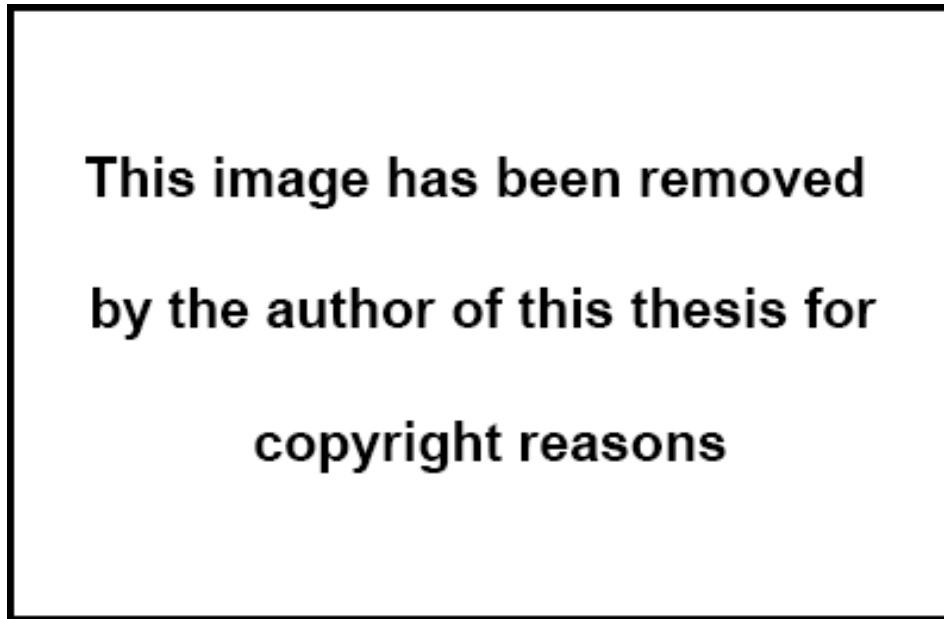


Figure 2.24: a) Extended bases from Raré; b),c) Bases with feet connected to a plate from Raré; d),e) Bowls with extended bases from Sourré-Kabanawa (Joussaume, 2014: 104-105, 141)

Two main forms were identified, open bowls and cups, and globular bodied jars with straight necks (See Fig. 2.22 and 2.23). The bowls were usually twice as wide as they were tall and often had a single vertical ear-shaped or “coiled” handle (Fig. 2.23e). The smaller bowls (sometimes referred to as cups) usually had a single tongue-shaped handle (Fig. 2.23d). A range of base forms were present on the bowls and cups. Rounded bases appeared the most common in the illustrations, but were not discussed. Small (‘a few millimetres tall’) ring bases and taller bases (Fig. 2.24a,d,e) were both present on the bowls. A selection of bowls had three or four feet connected to a circular or square plate at the bottom (Fig. 2.24b,c). This style of base seemed to be a distinctive form for these sites, although a similar form was identified at Harlaa (Joussaume, 1974; 2014: 102; see also Chapter 5.6.6 and 7.5.1). Carinated bowls were present, but rare (Fig. 2.23c,f). Those recorded had a black fabric and a well smoothed finish, which may potentially have been burnished (Joussaume, 2014: 102). The jars had three main forms, small (up to 18 cm rim diameter) and medium (above 24 cm rim diameter) jars with spherical bodies and straight necks which usually had one or two vertical handles, and sub-spherical jars with short necks (Fig. 2.23a,b). Decoration usually consisted of incised or punctate lines, the jars often had appliqué ridges round the neck join further decorated with impressed decoration. There were rare examples of jars

with a black slip through which incised lines radiated out from the neck (Joussaume, 2014: 112-114). The fabric was generally hard, but coarse, and colour was varied, from beige to black to red. The surface was generally well finished and was occasionally highly smoothed (Joussaume, 1974: 64-74; 2014: 114).

Unlike at Raré and Sourré-Kabanawa, the tumulus at Hassan-Abdi only contained a single burial. The ceramics from the tumulus at Hassan-Abdi were broadly similar to the forms from Raré and Sourré-Kabanawa with a few exceptions which were not clearly identified. A large 30 cm diameter bowl which was placed over the head had unusual appliqué and punctate decoration (Fig. 2.25), although a similar bowl was recovered from the upper levels at the Sourré-Kabanawa tumulus (Joussaume, 2014: 148-154).



Figure 2.25: Decorated bowl from Hassan-Abdi (Joussaume, 2014: 151)

2.5.2 Hassan-Abdi and Molé Walled towns

The cyclopean walled villages at Hassan-Abdi and Molé were dated to the 8th – 11th century AD. It was unclear which site the C14 samples for this date came from, although it was likely Hassan-Abdi. The discussion of the ceramics was noticeably less detailed than with the tumuli particularly with regards to forms. Joussaume suggested that the fragmentary nature of the sherds made reconstructing vessel forms challenging. The assemblages at the cyclopean walled villages were similar to those from the tumuli, with wide bowls and globular jars being the dominant forms, although platters and plates of various sizes were also present. The decoration and fabric were also similar to the examples from the tumuli. Bases occasionally had tall or short ring bases, although ring bases were rarer at Hassan-Abdi compared to Molé (Joussaume, 1974: 93-101).

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Figure 2.26: Selection of sherds from Raré (Joussaume, 2014: 106)

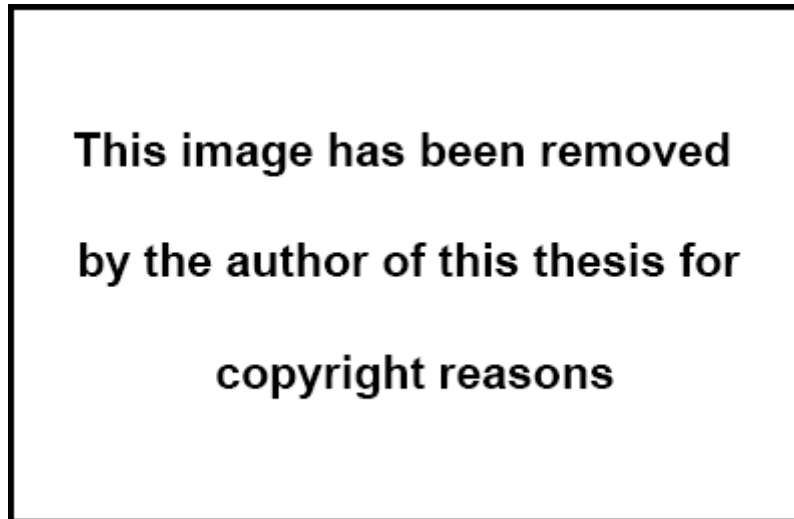


Figure 2.27: Vessels from Ketetiya held in the Museum of Däse (Poissonnier et. al., 2012): a) Carinated bottle No. 1; b) 'Flying saucer' pot No. 20; c) Carinated Bottle No.10; d) Carinated bowl No. 27; e) Jug No.2; f) globular bottle No. 24

2.6 The Shay Culture

The Shay culture was a 'new' Ethiopian culture identified by Fauvelle-Aymar and Poissonnier situated on the Eastern fringe of the central Ethiopian plateau (Fauvelle-Aymar & Poissonnier, 2012; Fauvelle-Aymar & Poissonnier, 2016) dated from the 10th – 14th century based on four radiocarbon dates, two from Tātär Gur and two from Ketetiya (Poissonnier, 2012: 102; Fauvelle-Aymar et. al., 2012: 139; Fauvelle-Aymar & Poissonnier, 2016: 64-65). Current research has focused solely on burial tumuli, which usually contained multiple burials and a variety of grave goods. These sites were of particular interest as they represented a 'Pagan' people in a period that was becoming increasingly dominated by the Christian and Muslim kingdoms. There was also evidence that the Shay sites were connected to the wider Red Sea trade network that Harlaa was part of. This could be seen through the presence of a large quantity of glass beads at Tātär Gur of Indo-Pacific and Middle Eastern origin (Fauvelle-Aymar & Poissonnier, 2016: 67-70; Insoll, in prep.). Additionally, there were links between the metal finds of the Chercher mountains and Shay sites. For example, the spiral silver Shay rings were identical to examples recovered from Raré and Sourré-Kabanawa (Poissonnier & Fauvelle-Aymar, 2012: Fauvelle-Aymar & Poissonnier, 2016: 67-70), which were potentially actually produced at Harlaa (Insoll, in prep.).

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Figure 2.28: Vessels recovered from the 2008 excavations at Ketetiya (Fauvelle-Aymar et. al., 2012): a) Globular bottle No. 2008-6; b) Carinated bowl with handle No. 2008-2

2.6.1 Ketetiya

Analysis of Shay culture material held at the Museum of Däse from excavations between 1997 and 2001 at burial tumuli at Ketetiya provided descriptions and measurements of 27 complete vessels (Poissonnier et. al., 2012; Fauvelle-Aymar, et. al., 2012: 131-132, 134). The photographs were detailed, although in greyscale. However, while height and maximum diameter were listed, scales were only included in close-up photographs. The key forms were ‘flying saucer’ jugs, carinated bottles, carinated bowls, globular bottles and jugs (see Fig. 2.27, 2.31 and 2.32). This classification of forms was discussed in more detail with regards to Tătar Gur (section 2.6.5 below; Fauvelle-Aymar & Poissonnier, 2016). The fabric of the saucers and carinated vessels was generally grey-black and was usually highly polished on the exterior. The globular vessel fabric was generally lighter and were not as highly polished, although there were examples that were similarly polished black (see Fig. 2.27e). Decoration consisted of incised geometric patterns and occasional moulded decoration, with patterns often revolving around threes. There were rare examples of cross decorations which suggested possible links with Christian kingdoms. Some vessels had evidence for red paint (e.g. Fig. 2.27c; Poissonnier & Fauvelle-Aymar, 2012: No. 10) on the exterior which was not visible in the photographs as they were in black and white. The majority of the vessels in the collection had handles; pierced flat lug handles (Fig. 2.27c) on the carinated vessels, and ribbon handles joining the neck and body on jugs and globular bottles (Fig. 2.27e,f). Excavations were also undertaken in 2008 at

Ketetiya and seven complete vessels were recovered (Fauvelle-Aymar et. al., 2012: 141-148). These vessels were recorded in the same manner as the assemblage from the Museum of Däse and were largely similar in form, except for a small globular bottle (Fig. 2.28a). The 2008 carinated bowl also had a small handle on the carination which was not present on the carinated bowl from the museum assemblage (Fig. 2.28b).

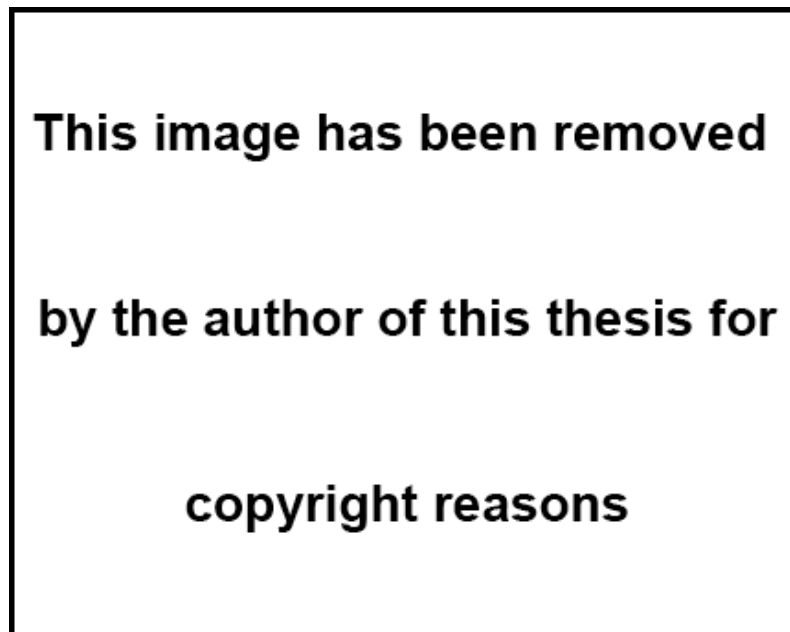


Figure 2.29: Vessels recovered from Qopros (Poissonnier, 2012a): a) Jug with handle; b),c) Bowls with ring bases; d) base, probably from a brazier

2.6.2 Qopros

Only four ceramic vessels were recovered from the burial tumulus at Qopros; two bowls with ring bases, one of which had crosshatched incised decoration above carination, a jug with a single 'unique' horizontal handle decorated with three rows of incised dashes on the neck and patterns of incised dashes on the body/shoulder. The final ceramic sherd was a foot base, interpreted as being from a brazier (see Fig. 2.29; Poissonnier, 2012a: 42-44).

2.6.3 Meshalä Maryam

A larger variety of ceramic forms were found at Meshalä Maryam tumulus 2. Three carinated vessels were present with a fine, highly burnished dark grey surface, which were examples of the 'flying saucer' jugs and carinated bottles. Five globular bodied jugs with handles were recovered, one of which was of a squatter form decorated with three embossed 'arrowheads'. Another

jug was decorated with appliqué and punctate arches while the final three were all decorated with burnished vertical lines on and unburnished body. This style of decoration had not been noted at any other Shay culture site. The most common type of vessel was small jugs with perforated tongue handles, usually with rounded bases, but occasionally flat. One of these jugs was decorated with the same burnished lines found on the jugs above. Several were decorated with appliqué blobs. Six of the jugs were decorated with irregular cross-hatched decoration on the upper body. It was unclear how this decoration was produced. The description indicated that it was produced by burnishing, similar to the decoration on the jugs discussed above. However, the decoration was also compared to one of the bowls from Qopros, where the decoration was formed by incisions. A bowl with an extended footring was identified as a brazier and was decorated with punctate decoration as well as the burnished lines discussed above (Poissonnier & Hirsch, 2012: 52-61).

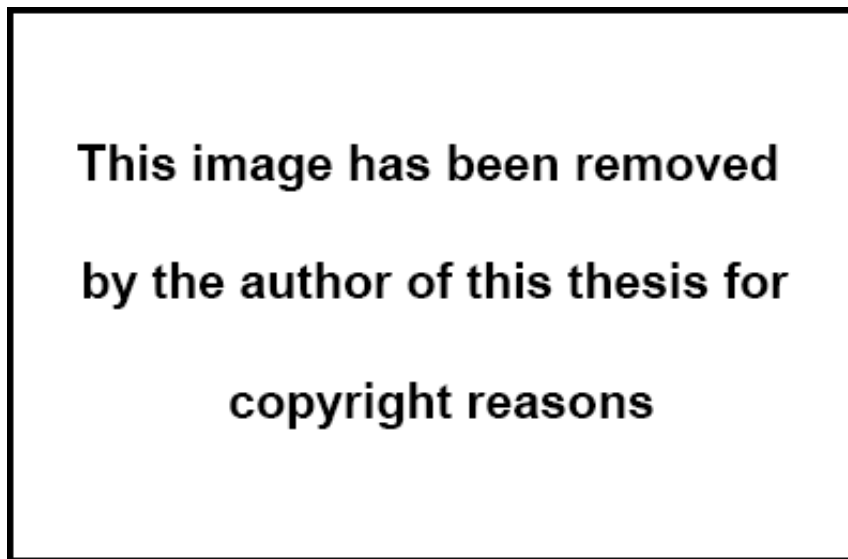


Figure 2.30: Collection of ceramics from Mähal Wänz (Poissonnier, 2012c: 112)

2.6.4 Mähal Wänz

A collection of vessels from a tomb at Mähal Wänz are held in the National Museum of Ethiopia (Poissonnier, 2012c: 122-125). A sample of seven vessels were selected by Poissonnier for analysis, although it was not stated how many vessels in total were in the assemblage (See Poissonnier, 2012c: 123-124 for photographs). The vessels showed evidence for prior use, which suggested that the vessels were not new when they were deposited in the

tomb. This was noted as unusual compared to other Shay culture sites, where there was no evidence for prior use. Incised decoration, which consisted of horizontal lines and arches, was found on all vessels except for No. 7. All the recorded vessels had a flat pierced lug handle except for No. 4. Two of the vessels (No. 1 and 6) had carinated bodies, with No. 6 being smaller with a longer, more pronounced neck. All the other vessels had globular bodies and necks. Vessel No. 7 was decorated with comb pricked patterns and 'crenelated' decoration on the end of the handle. Vessel No. 2 was also decorated with burnished lines on the body above the carination (Poissonier, 2012c: 122-125). While not mentioned, vessel No. 6 looked like it also had burnished lines on the neck. Based on the photographs, vessels No. 1, 2, 3, 4 and 7 likely had ring bases, although this was not discussed. None of the finely burnished, highly carinated vessels found at the other Shay culture were described from Mähal Wänz. A photograph of vessels taken at the site (Fig. 2.30) showed examples of large globular jars with necks, often with vertical handles, which were not discussed by Poissonier. The photographs of the selected vessels were quite detailed and were taken from multiple angles to show the form of the handle and decoration around the body.

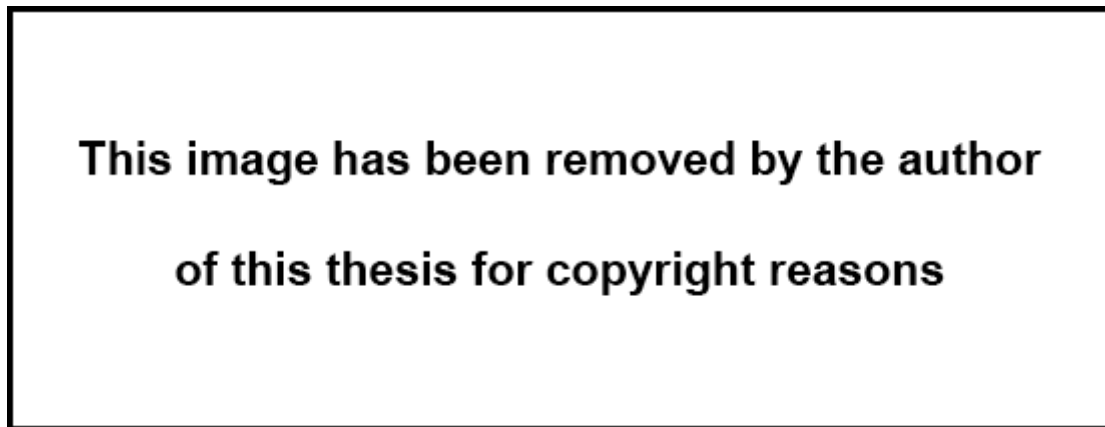


Figure 2.31: Carinated bottle from Ketetiya (Fauvelle-Aymar & Poissonier, 2016: 66)

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Figure 2.32: Selection of Shay vessels from Tätär Gur (Fauvelle-Aymar & Poissonnier, 2016: 69)

2.6.5 Tätär Gur

Excavations at the burial tumulus of Tätär Gur have provided a much larger assemblage of seventy four local ceramic vessels (Poissonnier, 2012b; Fauvelle-Aymar & Poissonnier, 2016). Two main categories of Shay pots were identified. The first was very distinctive heavily carinated vessels which were fired black and highly burnished (Fig. 2.32a,b). Decoration was common and

included scratches, incisions, reliefs and white painted reliefs, usually on the upper half of the body above the carination. The two main forms for this category were “flying saucer” vessels with a shorter neck (Fig. 2.32a), and taller necked carinated bottles (Fig. 2.32b). These vessels occasionally had handles, either joining the body and neck, or flatter ones with holes situated on the carinated rim. The second type consisted of globular bottles and jugs which were less burnished with a lighter fabric (Fig. 2.32c,e). They had similar forms of decoration, however impressed decoration was also common on the globular vessels (Fig. 2.32c-7,9; Poissonnier, 2012b; Fauvelle-Aymar & Poissonnier, 2016: 66-69). The report provided detailed illustrations of key forms (see Fig. 2.32), however, there was only a single photograph of a carinated vessel (from Ketetiya as opposed to Tătăr Gur, see Fig. 2.31), and none of the globular/open vessels, meaning the differences in surface finish and fabric were not clear. Descriptions of the various vessel forms were brief but useable alongside the illustrations. Descriptions of the fabric was limited, likely due to the fact that the majority of the vessels were complete, and overall the discussion of the local ceramics was limited. The chapter on Tătăr Gur in the monograph on the Shay culture (Poissonnier, 2012b) also had no photographs of the carinated vessels. However, it had many detailed illustrations of vessel forms and decoration.

This work has so far concentrated on Shay burial sites and it would be beneficial to have material from domestic contexts to compare with these assemblages. Additionally, several of the assemblages studied were museum collections with limited contextual information available. The identification of the Shay culture as an entity based purely on the assemblages from these burial sites has distorted our current understanding of this ‘culture’. Additionally, this likely did not represent the full assemblage of ceramics, rather only the vessel forms which were suitable for burial contexts have currently been recorded. While there were vessel forms which are found across multiple sites, each site tended to have particular forms of decorative styles which were distinctive to that site. This was compounded by the limited dating and the fact that the two sites radiocarbon dated had distinct ranges; 720–944 and 895–1020 AD for Tătăr Gur and 1170–1280 and 1300–1370/ 1380–1430 for Ketetiya, meaning the two sites were likely separated by at least 200 years. The layout of the chambers were also distinct between Ketetiya and Tătăr Gur (see Fig. 2.33).

An attempt was also made to link decoration on the Shay culture vessels with ethnographic examples of scarification on humans and cattle among the Mursi of southern Ethiopia. Parallels were made between patterns of appliqué dots and scarification and the incised 'arches' and patterns on both humans and cattle (Eczet & Poissonier, 2012). While there were some interesting similarities between the archaeological and ethnographic examples, links between such different contexts spatially, temporally, and socially were tenuous.

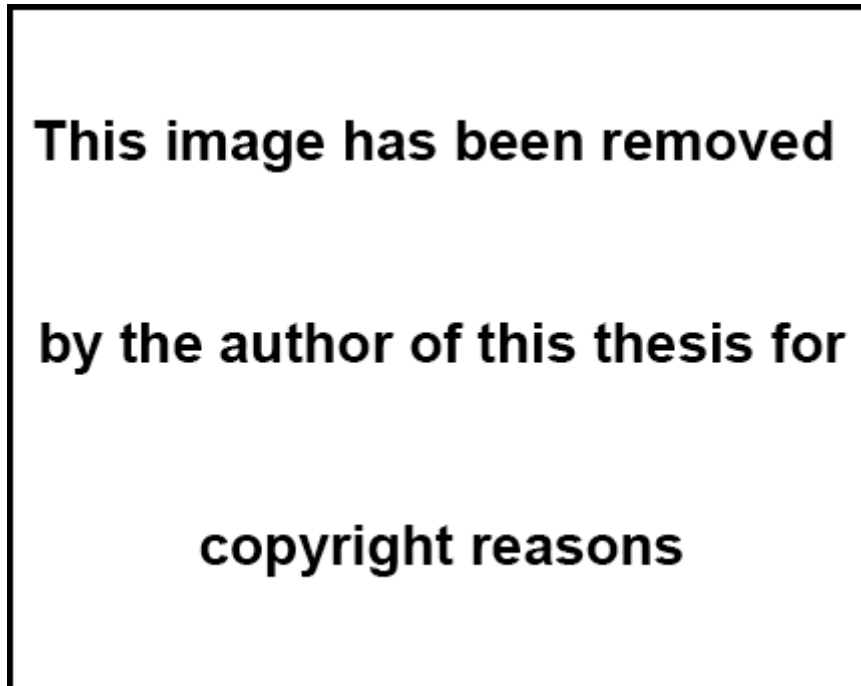


Figure 2.33: a) plan of the chambers under Ketetiya tumulus 2 (Fauvelle-Aymar & Poissonier, 2016: 65); Plan of the Tätär Gur tumulus (Fauvelle-Aymar & Poissonier, 2016: 67)

2.7 The Ifat Sultanate

Archaeological work has been undertaken at several sites within the historical Sultanate of Ifat in North Shoa, located in the north-east of Ethiopia from the 14th – 16th century (Fauvelle-Aymar et. al., 2006: 133; see also Chapter 1.4.1.2). Most of this work has been at mosques such as Nora, (Fauvelle-Aymar et. al., 2006; 2007; Fauvelle-Aymar & Hirsch, 2011b; Pradines, 2017; Khalaf & Insoll, 2019), Asbäri (Fauvelle-Aymar et. al., 2007), Goze, and Fäqi Däbbis (Poissonier et. al., 2011). The fact that these were religious structures as opposed to settlements, alongside a focus on the architecture of the medieval mosques, meant that there was little information available on the ceramics from these sites.

A collection of sites in the North Shoa region were surveyed in 2007, including mosques (such as Nora and Asbäri), cemeteries and towns (see Fig. 2.1). This survey included some limited discussion of ceramics (Fauvelle-Aymar et. al., 2007). A large number of ceramics, including handles were observed at the cemetery near Asbäri. In the associated ruined village large quantities of ceramic sherds were also observed. Sherds from large water jars similar to modern examples were identified based on handle fragments, and smaller globular pots were linked to the Chercher mountains sites (Fauvelle-Aymar et. al., 2007: 144-146). Well-fired pottery sherds with mineral inclusions were common at Nora. These were concentrated at a tumulus 200 m from the mosque on the edge of the necropolis. Based on the form, it was argued that this tumulus was similar to the burial tumuli from the Chercher mountains (Fauvelle-Aymar et. al., 2007: 154-155). Without any photographs or illustrations of the ceramics these links with the Chercher mountains could not be verified. While pottery sherds were mentioned at other sites, the limited descriptions provided here were all available from the publications of the survey.

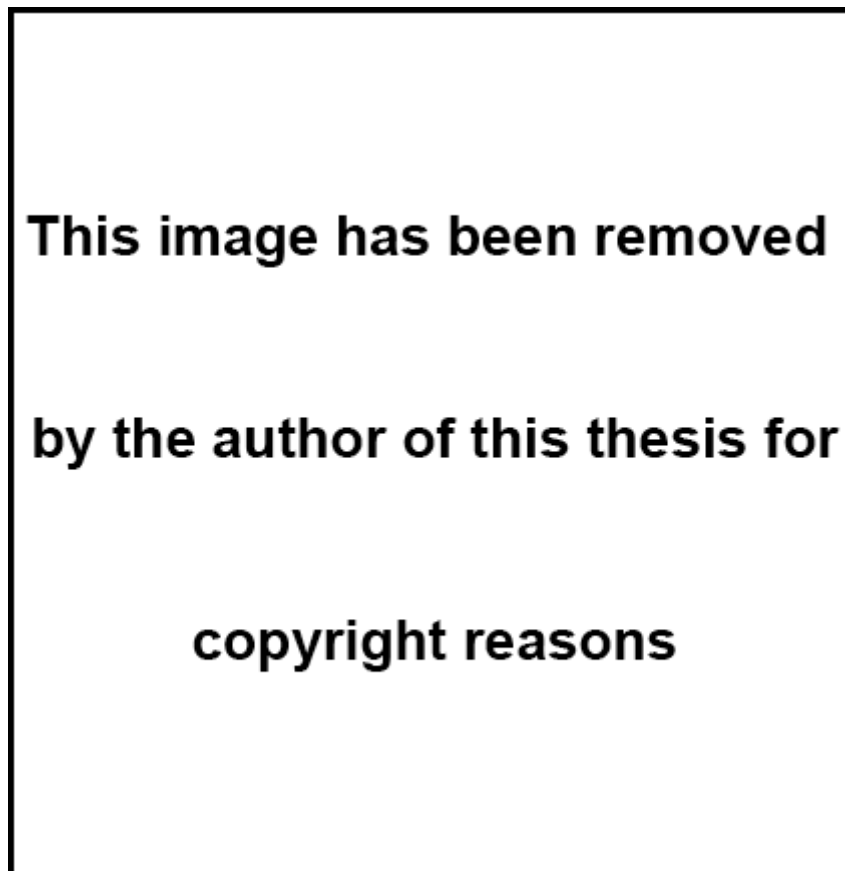


Figure 2.34: Ceramics from the upper levels of Fäqi Däbbis (Poissonier, et. al., 2011: 134)

The main site with any significant discussion of the local ceramics was the mosque of Fäqi Däbbis (see Fig. 2.1), dated to the 14th – 15th century (Poissonnier et. al., 2011: 135-136). The ceramics from Fäqi Däbbis were quite fragmentary, which meant that the forms identified were primarily based on rims. There was no description of the fabric of the ceramics. Rim forms from the occupation layer were quite varied; including rounded, flat, everted, bevelled, thickened and thinned rims. The most common forms were large open bowls and jars with rim diameters between 17 – 27 cm. Potential necks and rims from bottles were identified as was a shallow bowl 40 cm in diameter and a rim potentially from a dish for cooking the local *injera* bread (see Chapter 4.1.1). Handles were usually circular ribbon handles, or horizontal unpierced lug handles on bowls. The forms from the upper levels of the excavations (see Fig. 2.34) were noted as being distinct, although there was minimal discussion on the forms. Carinated vessels were mentioned, however they were not illustrated. Punctate decoration on flat rims was both discussed and illustrated and horizontal parallel incisions on both the interior and exterior under the rim were visible in the illustrations. It was argued that these ceramics had close parallels to ceramics from the Chercher mountains, particularly the Molé walled town (see section 2.5.3 above). However, these parallels were not clear with the current descriptions and illustrations available of the Fäqi Däbbis ceramics (see Fig. 2.34).

2.8 Somali Medieval Islamic Trading Towns

Also of interest were the ruined Medieval Islamic Towns which are found in the interior of Somaliland up to the Ethiopian border and on the Somaliland Red Sea coast (see Fig. 2.1). These towns were likely related to the Shoa, Ifat and Adal Sultanates which ruled the area from the late 9th century until the collapse of the Adal Sultanate in the 17th century (Insoll, 2003: 73, 76; Fauvelle-Aymar et. al., 2011; Braukämper, 1977a; 1977b; see also Chapter 1.4.1.2). They were of particular interest as these settlements formed part of the trade route inland from the Red Sea coast, starting at Zeila, which Harlaa was likely connected to (Insoll, et. al., 2016: 31; Insoll, 2017: 16; in prep.; see Fig. 7.28). Curle was one of the first to investigate the Somaliland medieval Islamic towns. Curle divided the sites into four groups, two of which were discussed in detail;

the inland settlements which consisted of 13 sites including Amud, Abasa, Qorgab and Aroqolab dated to the 14th – 16th centuries AD, and the coastal sites of Zeila and Saad-Din dated to 12th – 15th centuries AD (see Curle, 1937: 315-318 for full list of sites and groups). Additional surveys were undertaken by Huntingford (1978) and Chittick (1976) which also covered some of the Islamic sites in the region. Fauvelle-Aymar et. al. (2011) undertook work at several medieval Islamic sites in Somaliland in 2001, with the primary focus of the project on Zeila.

Excavations at several Somali Islamic trading towns in Somaliland began in 2015 as part of a Spanish project under González-Ruibal (González-Ruibal et. al., 2017). The sites investigated as part of this project included the towns of Bagan, Gidheys, Fardowsa and Qubuuraale as well as the caravansary site of Qalcadda and the port sites of Zeila, Bulhar, Berbera and Bandar Abbas. While only the preliminary report for the first two seasons (2015–2016) has been published, it provided the first proper analysis of the local ceramics from the region (see Chapter 2.8.1 and 7.5.2.1).

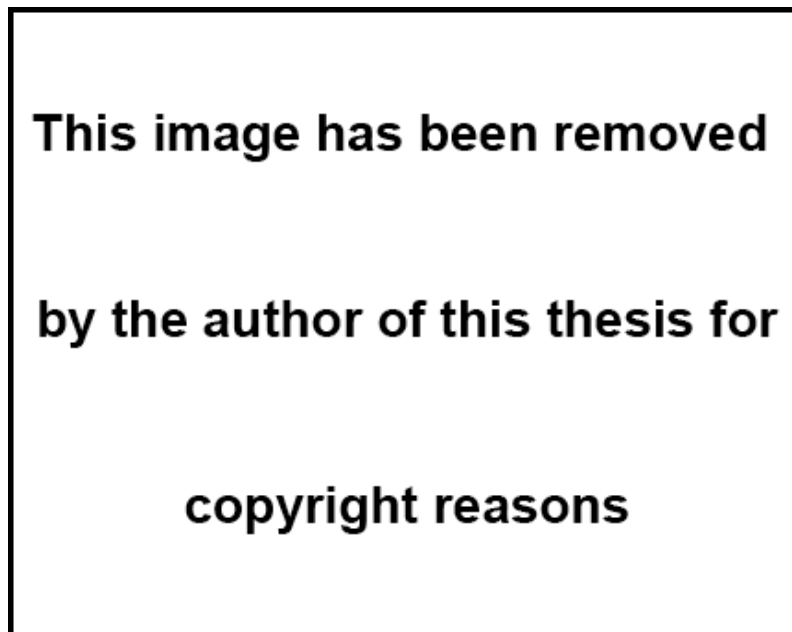


Figure 2.35: Possible Harari jar neck, sherd Af1935,0709.81 (Website 1)

2.8.1 Inland Towns and Caravanserais

These towns were first surveyed in 1934 (Curle, 1937) and while the survey primarily focused on the architecture of the sites, ceramics were recorded. Unfortunately, the discussion of the local ceramics was very limited. This was understandable however as the survey covered multiple sites and the

main goal was not ceramics, so the focus was on the easily identifiable imported ceramics. The local ceramics of the inland sites consisted of 'coarse hand-made pottery' in a variety of forms including plates with small handles and water bottles. Brown or black burnished pottery, sometimes with simple incised decoration, was found on most of these inland sites. Curle argued that at Abasa some of these vessels appeared to have been wheelmade. Burnished wares are no longer in use in Somaliland, but are still commonly used in Ethiopia (Curle, 1937: 320-321). Of particular interest was 'One piece, the ribbed neck of a black jar... is similar in type to a jar I saw used for storing honey in Harar in 1935' (Curle, 1937: 321). This likely referred to sherd Af1935,0709.81 in the British Museum collection (see Fig. 2.35; Website 1). The imported wares consisted of Chinese Celadon ware from the Song and Ming dynasties (12th – 15th cent) and blue and white porcelain (16th – 17th cent). 'Various types of brown, blue, grey and white, and mottle coloured glazed pottery' (Curle, 1937: 320) dating from the 13th – 18th cent were likely Middle Eastern in origin. Recent analysis of the British Museum collection by Insoll suggested that these included wares of Yemeni provenance (Insoll, pers. comm. 2019). At Aroqolab a small bowl with a fine green internal glaze was believed to be Egyptian dating to the 15th century or earlier (Curle, 1937: 320-321). Qorgab was also briefly visited by González-Ruibal et. al. in 2015-2016 and a single imported sherd of celadon was identified. The local ceramics included 'typical horizontal handles and thickened rims with incised or impressed decoration' (González-Ruibal et. al., 2017: 153). These were noted to be similar to the local ceramics from Bagan and Gidheys discussed below.

It was sometimes unclear as to which group of sites Curle was referring to as the discussion often switched rapidly between the groups. This was particularly applicable to a collection of sherds from grey-biscuit porous vessels; it was unclear if they were found only at Saad-Din (see 2.8.2 below) or also at the inland sites. The decoration on these sherds resembled Coptic interlacing work and apparently this type of vessel was undatable as 'such vessels are in use down to the present day in the Near East, the majority coming from Spain and India, but their use is confined to the Asiatic and European population' (Curle, 1937: 320). No photographs or illustrations of the sherds were included with the report. However, some of the material was collected and is currently

stored at the British Museum (Website 1). In the British Museum catalogue only a few of these sherds had their location listed beyond “Somalia”, and description in general was lacking. The photographs were high quality, although no scale was used.

These ceramics held in the British Museum were studied by Insoll in April 2019, whose notes were referred to here to expand upon the local ceramics recovered by Curle (Insoll, pers. comm. 2019). Fabric was generally sandy and colour varied from pale pink to brown to grey with a smoothed or slipped finish. Vessel forms identified included carinated bowls, bottle necks, single or twin pierced lug handles and ribbon handles. Several sherds were noted to have complex incised patterns on the exterior, sometimes with appliqué ridges. These ceramics and potential similarities with local ceramics from Harlaa will be discussed in Chapter 7.

Huntingford also visited the site of Amud in 1943 and undertook a survey of the site. Huntingford (1978) dated Amud to the 15th – 18th century AD. The discussion of the imported ceramics appeared to be based on Curle’s (1937) survey discussed above. However, there was more detail on the local ceramics, although there were still no illustrations or photographs included. The local ceramics were described as a ‘red, brown, and black ware, sometimes crudely glazed.’ (Huntingford, 1978: 186) This was the only mention of local glazed sherds in the region and if true is extremely interesting. However, it was more likely that these were either misidentified imported Middle Eastern wares or burnished sherds.

Another survey of the region was undertaken by Chittick (1976) as part of the British-Somali Expedition in 1975. This survey was primarily focused on Classical and pre-Islamic sites including those mentioned by Greek and Roman historians such as Strabo (Chittick, 1976: 117-120; Hamilton & Falconer, 2016), so was of limited relevance. The survey did cover Abasa, one of the primary inland Islamic towns recorded by Curle. However, the description of the ceramics was extremely limited and only imported ceramics were discussed. These consisted of 15th – 16th century Chinese and Islamic ceramics (Chittick, 1976: 128).

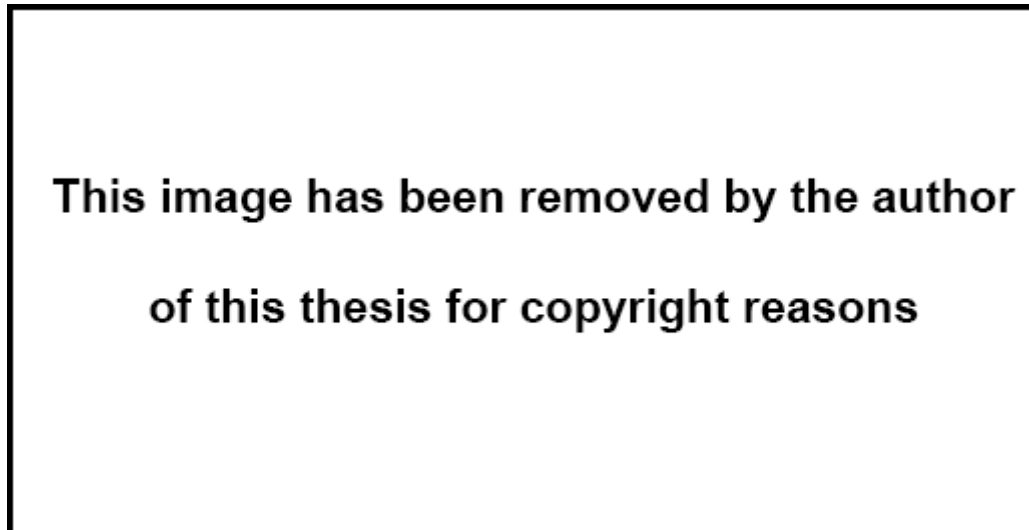


Figure 2.36: Imported ceramics and glass from Sheik with descriptions (Fauvelle-Aymar et. al. 2011: 42)

Fauvelle-Aymar et. al. (2011) also visited several of the inland Islamic towns, although ceramics were only discussed from two sites; Abasa and Sheik. Sheikh was another name for the site of Fardowsa discussed by González-Ruibal et. al. below (Fauvelle-Aymar et. al., 2011: 41). The assessment of Abasa leaned heavily on Curle and Chittick's visits to the site. The main ceramics present were simply described as abundant crude ceramics. It was noted that Chinese ceramics reported by Chittick were not found on the surface, it was unclear if the Islamic ceramics discussed by Chittick were present or not as no further information was given on them (Fauvelle-Aymar et. al., 2011: 37-40). Fauvelle-Aymar argued that Sheikh had its peak sometime between the 13th – 18th century. Local ceramics were not mentioned and the only discussion of the imported wares present was in the description of the photograph of the sherds which listed 15th century Khung ware (from Iran, cf. Rougeulle, 1999: 134) and later blue and white Chinese wares dating to the 15th – 16th century and 16th – 17th century (Fig. 2.36).

Several inland trade settlements including a caravanserai site were the focus of part of the Spanish project under González-Ruibal. The caravanserai site of Qalcadda as well as the inland towns of Bagan, Gidheys, Fardowsa and Qubuuraale (see Fig. 2.1) all had relatively similar local ceramics. These consisted of hand-made wares with smoothed surfaces fired an ochre to brown colour. The vessel forms were generally homogeneous and of limited styles. Lug shaped horizontal handles were common and rims were usually simple,

inverted or flat, thickened. The flat, thickened rims were often decorated with incised or roulette decoration (See Fig. 2.37). Except for incense burners (see Fig. 7.30), which were usually heavily decorated, decoration on the body was rare. At Fardowsa it was possible that wheel-made local ceramics were produced. At the Qalcadda caravanserai jars and containers were much more common than at the inland towns, likely due to the site's function. (González-Ruibal et. al., 2017: 151-154). It was interesting that the burnished sherds discussed by Curle did not appear to be present at these sites. While the analysis of the ceramics was limited due to being a preliminary report, the detailed drawings and profiles provided a useful basis for comparison with the Harlaa assemblage (See Chapter 5, 6 and 7).

2.8.2 Coastal Trade Ports

The town of Zeila (Fig. 2.1) still exists today, although in a much-reduced form, and in its heyday was likely a key trading port in the region. The nearby island of Saad-Din is now unoccupied, but was mentioned in historical sources (Curle, 1937: 316; e.g. Braukämper, 1977a: 29-30; see also Chapter 1.4.1.2 and 4.6). According to Curle, the same coarse hand-made pottery found at the inland sites was also present at these sites. The imported material also appeared to be largely similar to those recovered from the inland settlements (Curle, 1937: 320).

As part of their work in Zeila, Fauvelle-Aymar et. al. (2011) visited multiple sites around the town for surface collection and survey analysis. This included revisiting the refuse heaps near the Governor's House which had previously been visited by Curle. Most of the material identified at the Governor's House was blue and white Chinese wares dating to the 18th – 20th century. The presence of older ceramics was mentioned; however, the wares present were not discussed. Most of the ceramics observed during the survey appeared to be Chinese or Japanese ceramics from the 18th – 20th century. 'Ancient' Islamic and Chinese ceramics were also mentioned as part of the surveys. However, only a single potential Chinese qingbai sherd dating to the 15th century was discussed (Fauvelle-Aymar et. al., 2011: 31-37). More information on the ceramics was provided from results of the excavations which

were undertaken near the mosque 'with two mihrabs', although discussion of the ceramics was still minimal. Local wares with a red fabric and coarse inclusions were found throughout the excavation, and were the only ceramics recovered from the lowest levels. However, the only description of this ware beyond the fabric was that the sherds were 'thick', and no illustrations or photographs were provided. Imported wares included Yemeni Black on Yellow ware dated to the mid. 13th – mid. 14th century, and a single sherd of Iranian Khung ware. There was only a single photograph of nine sherds, of which three are labelled; two Yemeni Black on Yellow ware sherds and the Khung ware sherd (Fauvelle-Aymar et. al., 2011: 43-50).

Four coastal sites were investigated between the historic port sites of Zeila and Berbera as part of the Spanish project (González-Ruibal et. al., 2017). At Zeila only surface material was collected. There was no discussion of the local wares as no local hand-made wares were recovered from Zeila. The relevant imported ceramics included many fragments of Chinese Celadon as well as Turquoise glazed pottery and blue and white fritware from southern Iran dated from the 14th – 17th century (González-Ruibal et. al., 2017: 138-141). Very little evidence remained from the ancient medieval settlement at Berbera, although fragments of an imported wheel-made jar with wavy decoration from Zabid in Yemen were recovered (González-Ruibal et. al., 2017: 142; see also Ciuk & Keall, 1996 and Chapter 7.5.2.1 for detailed description of the Zabid ceramics). At Bandar Abbas, 10 km east along the coast from Berbera, the majority of the imported ceramics were wheel-made Yemeni domestic wares. Of particular note were a collection of 'cooking pots with edged rims and complex profiles' (González-Ruibal et. al., 2017: 143) which were possibly of Indian origin as well as a single undated red slipped sherd from Gujarat. Undated Iranian *sgraffiato* fine ware and Celadon, including early examples from 1000 AD, were also present. A small quantity of the hand-made local ceramics discussed above were also recovered. It was noted that the pottery assemblage was almost identical to that of Sharma in Yemen (Rougeulle, 2015a), dated to the 10th – 12th centuries, although Bandar Abbas may have lasted longer as indicated by the presence of Yemeni Yellow Mustard ware dated to the 13th – 14th centuries (González-Ruibal et. al., 2017: 143-144). The final coastal site investigated was Bulhar. Local hand-made ceramics were recovered which

included incense burners. The imported ceramics were primarily Yemeni wheel-made domestic wares and Yemeni Yellow Mustard ware (González-Ruibal et. al., 2017: 145-149; de Torrez et. al., 2017).

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Figure 2.37: Local ceramics from Fardowsa, (González-Ruibal et. al., 2017: 159)

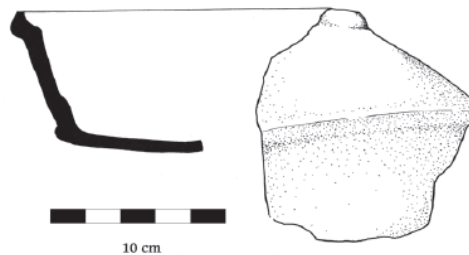


Figure 2.38: Carinated burnished sherd from unit AMNUR14[A] at Harar (Insoll, 2017: 205)

2.9 Harar

Harar (see Fig. 2.1) is a medieval walled town which rose to prominence as the capital of the Adal Sultanate in 1520 AD (Insoll, 2017; Insoll & Zekaria, 2019; see also Chapter 1.4.1.2). Harar was of particular interest as tradition suggested a link between Harar and the ‘ancient Harla’ people, for whom Harlaa was likely one of the key settlements (Braukämper, 1977a: 21; Chekroun et. al., 2011; Insoll, 2014; 2017b; Insoll & Zekaria, 2019; see also Chapter 1.4.1.3). Excavations were undertaken at Harar in 2014 and 2018 by Insoll as part of the *Becoming Muslim Project* (Insoll et. al., 2014; Insoll, 2017b; Insoll, 2018; Insoll & Zekaria, 2019). Prior to this, archaeological research in Harar was minimal, focused on the architecture and manuscripts (Insoll & Zekaria, 2019). The 2014

and 2018 season excavations focused on test excavations in various areas of the city, particularly mosques and shrines, aimed at dating the founding of the city (see Insoll et. al., 2014; Insoll, 2017; 2018 for locations of units).

Publications on the ceramics are currently limited (Insoll et. al., 2014; Insoll & Zekaria, 2019; Insoll, 2017b as well as Insoll, 2018a [Unpublished report]), however, a full publication is in progress (Insoll, in prep.). The ceramics from both the 2014 and 2018 excavations at Harar were also briefly studied during the 2018 field season and photographs taken of key sherds.

A range of ware types was identified, the most common recovered from archaeological deposits were black or red slipped wares, with brown slipped wares and brown or black burnished wares also commonly found. Carination was rare, with only a single example discussed in the reports (Insoll, 2017b: 204), and a further example from 2014 assemblage recorded during analysis in the 2018 season (see Fig. 7.26b). Both of these carinated sherds were black burnished (Fig. 2.38 & 7.26b). Useful illustrations of key forms, but no photographs, were included in the 2017 report on the 2014 excavations (Insoll, 2017b). Decoration was predominantly variations of incised lines, found across the surface finishes, with raised decoration also present on burnished sherds (Insoll, et. al., 2014; Insoll, 2017b). Imported ceramics were rare at Harar, with two undated likely Middle Eastern examples and a further unidentified sherd from 2014 (Insoll, 2017: 206-207) and two Middle Eastern and one Far Eastern sherd from 2018 which have not currently been dated (Insoll, 2018: 27). The local ceramics from Harar will be discussed further in Chapter 7 with regards to links with Harlaa.

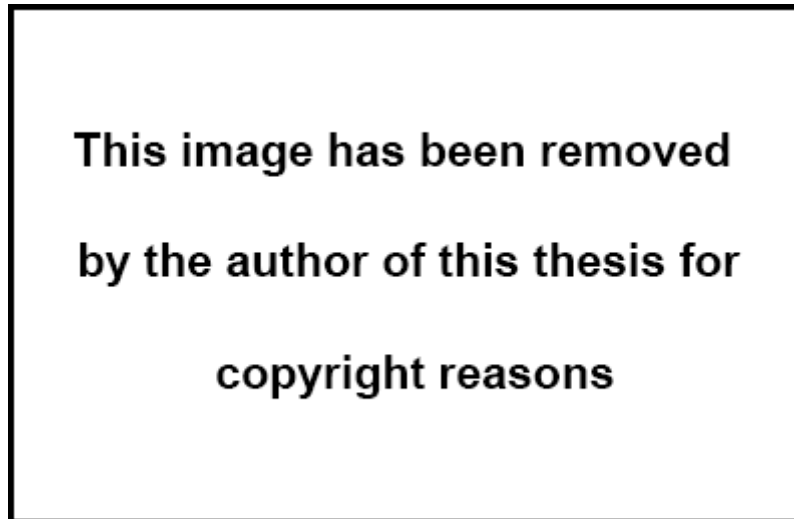


Figure 2.39: a) examples of stelae from Koticha Kesi; b) Small globular pots and shouldered bowls from Koticha Kesi (Kinahan, 2013: 368-369)

2.10 Janjero Kingdom

The site of Koticha Kesi, a hilltop burial complex with carved stelae (see Fig. 2.39a) in the Gilgel Gibe Valley (see Fig. 2.1), was abandoned around 1550 AD with the establishment of the Oromo Enyara monarchy in the region and the collapse of the Janjero Kingdom (Kinahan, 2015). While this site was dated to the end of the period under study, it was likely part of the same trade network as Harlaa, as seen through the presence of amber and glass beads from the Indian Ocean, likely accessed through Zeila (Kinahan, 2015: 355-356).

‘Shouldered’, or carinated bowls, were the most common form among the local ceramics. Jars with tall necks and narrow flared mouths and globular bowls were also present (See Fig. 2.39b). Decoration usually consisted of impressed dots or short lines on the upper half of the vessel, often revolving around patterns of threes. One vessel was described as burnished and it was noted that surface burnishing was often worn. However, it was not clear how common burnishing was. There were detailed descriptions of vessel sizes and forms with illustrations and profiles, but no photographs. Fabric type and colour was not discussed (Kinahan, 2015).

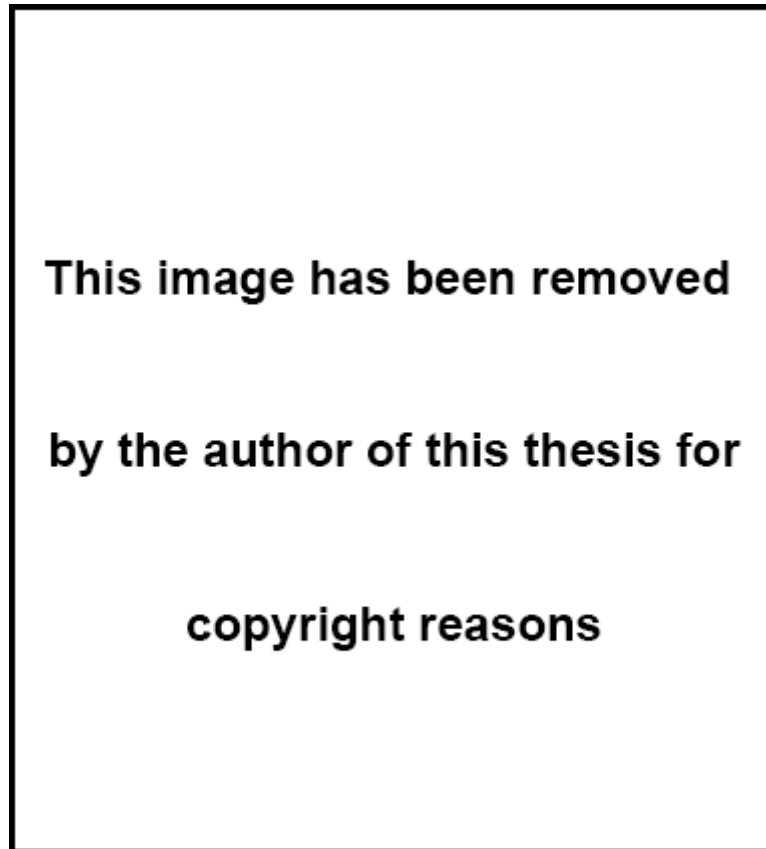


Figure 2.40: Ceramic forms from Tiya (Joussaume, 2007: 222)

2.11 Southern Stelae Sites

These sites consisted of a group of sites in Southern Ethiopia characterised by burials with elaborate carved stelae, dating from the 12th – 14th century AD (Joussaume, 1994; Joussaume, 2007; Joussaume, 2012; see Fig. 2.42).

2.11.1 Tiya

The site of Tiya (see Fig. 2.1) was characterised by stelae decorated with carved swords as well as dots and other designs whose meaning is still being debated. Both the monograph (Joussaume, 2007: 209-223) and the preliminary report (Joussaume, 1994) focused on the stelae and associated burials, which meant that the ceramics analysis was limited. The ceramics found alongside the burials had a black and highly smoothed (potentially burnished) surface. The decoration was varied with incised patterns of lines, impressed cord patterns and embossed patterns including 'buttons'. Based on the illustrations the key forms of the vessels were bowls and jugs. The bowls came in two main forms,

carinated bowls and relatively open globular bowls with rounded bases. The jugs had flared rims, and while the body forms were unclear they appeared globular (see Fig. 2.40). Handles were vertical, joining from the rim to upper shoulder or neck to shoulder (Joussaume, 1994). There were illustrations in the monograph (Joussaume, 2007: 222) also showing jugs with taller, straight necks, however there was minimal discussion and no quantification of the ceramics.

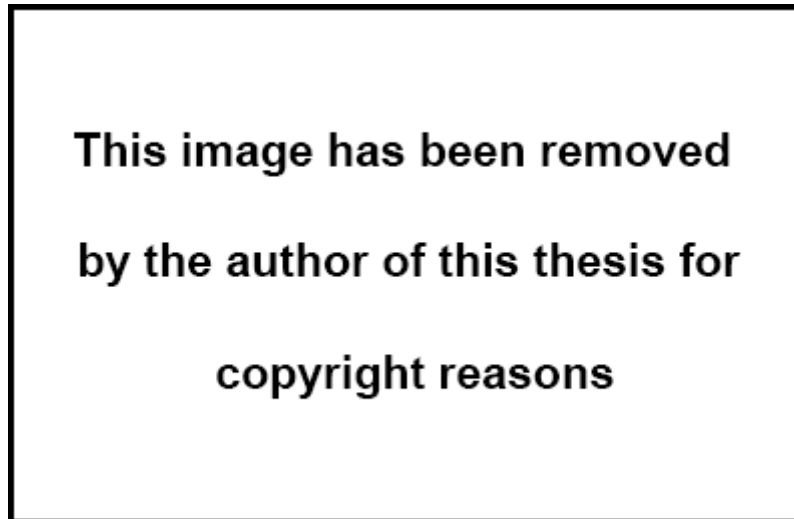


Figure 2.41: Round Bottom 'Vases' from Tuto Fela (Joussaume, 2012: 92)

2.11.2 Tuto Fela

Tuto Fela (see Fig. 2.1) is one of several sites with 'phallic stelae', although stelae with faces or simple crossed lines were also present. As with Tiya the main focus was on the stelae, although the monograph provided a more detailed analysis and typography of the ceramics than Tiya, as it provided some quantitative and statistical analysis as well as producing a more comprehensive typology alongside detailed photographs and illustrations (Joussaume, 2007: 148-165). In contrast to Tiya, the fabric was primarily a light orange buff colour and the main form was 'stereotypical ceramic vases with a rounded bottom and neck' and flared rims (Joussaume, 2012: 92). Decoration consisted of dots or incised lines on the upper body and neck, with occasional moulded decoration (see Fig. 2.41). These jars were found alongside the upper burials. While there were some similarities in the general form of the vases, the fabric and decorative styles were distinct from Harlaa.

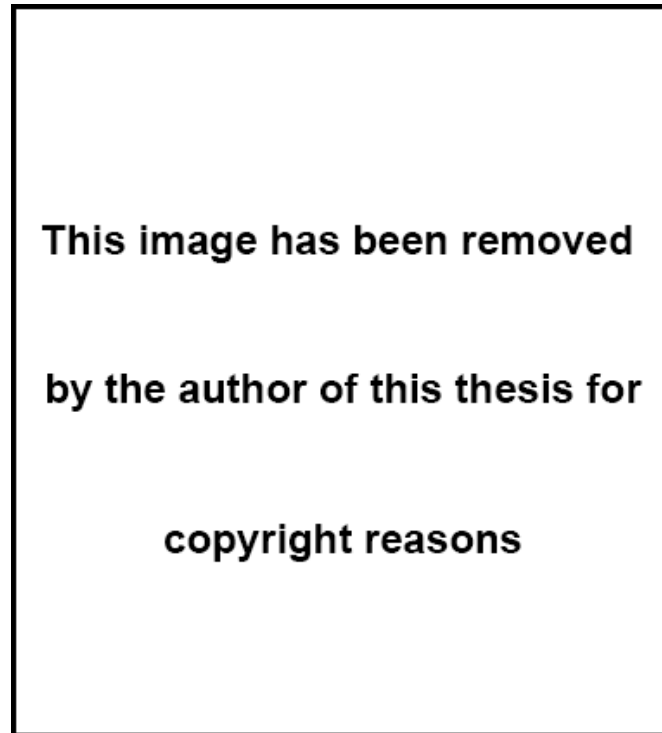


Figure 2.42: a) Stelae at Tuto Fela (Joussaume, 2007: cover); b) Stela from Tiya (Joussaume, 2007: 211)

2.12 Gondarine

The Gondarine period covered the rise of the Solomonid Dynasty in Ethiopia from 1632 AD – 1769. This period was well attested in historic sources from both within and without Ethiopia and much of the focus of work on the period has been on the impressive architecture to the detriment of the material culture (de Torrez Rodríguez, 2017; Fernandez et. al., 2017). The excavations at the Jesuit missionary sites of Gännätä Iyasus, Gorgora Nova, and Särka in the Lake Tana region (see Fig. 2.1) have produced a wealth of local ceramics. Most of the material collected was believed to post-date the actual Jesuit use of the site. However, despite this it was argued that the ceramics appeared largely uniform from the Middle Ages and the Jesuit period up to the modern day, and so were still considered significant with regards to the Gondarine pottery. This also meant that extensive use was made of contemporary ethnographic study of local Amharic pottery (Fernandez et. al., 2017: 159). While this material was dated to the very end of the period under study, it was still important to consider as there were certain interesting parallels between the Lake Tana and Harlaa assemblages despite the temporal and spatial distances (see also Chapter 5 and section 7.2.3).

The Gondarine local ceramics were all hand-made with no evidence for wheel-manufacture, which de Torrez Rodríguez (2017: 229) claimed 'remain absent from traditional pottery-making in most of Ethiopia'. The assemblage was divided into two broad categories; the first were vessels with smoothed surfaces which were fired in a range of colours, often on the same vessel. This made colour inefficient for classifying the ceramics and suggested that the vessels were open-air fired. The temper was also highly variable within this category. The second type had a finer fabric and were highly polished (burnished). Temper was not visible in the fabric, but based on ethnographic examples fine grog (ground pottery) was proposed (de Torrez Rodríguez, 2017: 229-231; Fernandez et. al., 2017: 162-164).

Handles were also divided by ware type; 'Medium or large pots usually have handles with circular and oval sections... In the case of the finer wares, knobs are far more common, appearing with or without holes and with horizontal or vertical perforation. When pieces are carinated, the knob is usually placed on it.' (de Torrez Rodríguez, 2017: 231). The decoration on the coarse wares was primarily incised decoration or moulded bands, while the fine wares were decorated with incised patterns. These ware types were interpreted as having different function, with the coarser wares primarily used as storage vessels and the fine wares used for consumption. In de Torrez Rodríguez' article (2017) there were detailed discussions and illustrations of various forms as well as useful discussion on possible manufacture methods. The excavation publication provided more detail on individual forms and their use organised by their presence on the sites excavated (Fernandez et. al., 2017). Both focused primarily on Gännätä Iyasus as it was the site where the most work had been undertaken and the typology of the ceramics for all the sites was based on the Gännätä Iyasus assemblage.

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Figure 2.43: Selection of ceramics from Gännätä Iyasus (de Torrez Rodríguez, 2017)

2.12.1 Gännätä Iyasus

The most recognisable coarse ware form was water containers and jars identified by large globular bodies and long straight necks (Fig. 2.43a,b), primarily 14 cm in diameter, but occasionally larger (up to 34 cm). These water jars usually had at least two large handles. Several smaller jar forms were identified and interpreted as used during meals, such as for serving water and beer. Large quantities of sherds from plates and dishes were recovered, most commonly in the 22-28 cm diameter range, but examples up to 35-40 cm diameter were also recorded. A wide range of forms were identified, with the most common form having a 'carinated contour' (Fig. 2.43e). These were interpreted as being used for serving based on the lack of sooting or burning, and their size suggested they were used for a single person, despite a tradition of communal eating both in the region and in monastery contexts. A wide range of forms of bowl were identified, the largest two forms, both roughly made, were interpreted as being used for mixing and cooking. The deeper form had large knobs as handles and occasionally had a spout. The smaller bowls were burnished and included undecorated hemispherical bowls with ring bases, which were one of the few forms for which no clear ethnographic forms were found. The final form was notable for being carinated, and while well burnished on the interior, the exterior was often burnt, which suggested that it was used for cooking (Fernandez et. al., 2017: 165-173).

One of the most common forms identified at Gännätä Iyasus were small (up to 11 cm tall) highly burnished cups with thin walls (Fig. 2.43g), occasionally decorated. Ring bases were common on the cups, but rounded bases were also present. The most common form found at Gännätä Iyasus was large dishes up to 60 cm in diameter with a burnished interior and evidence for firing on the

exterior (Fig. 2.43c,d). These were identified as *mugogo*, the dish used for producing *injera* (see Chapter 4.1.1). Other than the water jars discussed above, no large storage vessels were recovered from Gännätä Iyasus. While rare, a range of medium sized globular vessel forms broadly identified as cooking and storage vessels were identified. These usually had a coarse fabric, thick walls and were undecorated. Lids were primarily simple convex shaped with a knob handle in the middle (Fig. 2.43h). Of note was an unusual circular clay structure with many legs which has been interpreted as a table (Fig. 2.44). While significantly larger, this table had some interesting potential parallels with the 'stand bases' from Harlaa (Chapter 5.6.6). No other parallels to this table were found in the ethnographic or archaeological literature.

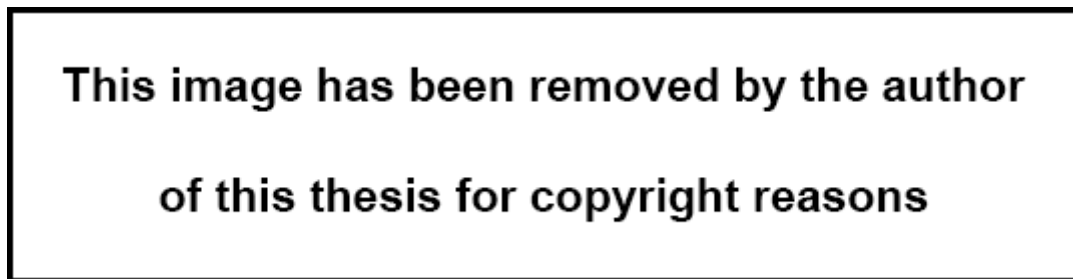


Figure 2.44: Clay 'table' from Gännätä Iyasus (de Torrez Rodríguez, 2017: 242; Fernandez et. al., 2017: 179)

2.12.2 Gorgora Nova

Compared to Gännätä Iyasus, a lower proportion of the finer burnished wares were present at Gorgora Nova as well as less variation in vessel forms. Almost no vessels for storing or transporting water were recovered at Gorgora Nova, and the large storage vessels absent at Gännätä Iyasus were also absent here. However, large plates were significantly more common than at Gännätä Iyasus, with most plates larger than 32 cm, up to a maximum of 74 cm (Fig. 2.45f). As with Gännätä Iyasus, there were a wide range of forms. These larger plates suggested that communal meals were more common at Gorgora Nova compared to Gännätä Iyasus. The bowl forms were largely coarse ware and distinct from Gännätä Iyasus, with larger bowls with rounded in-turned rims likely used for mixing and cooking (Fig. 2.45b,c), and smaller bowls (10-12 cm diameter) with a shallow form and thick walls having an unclear purpose, potentially for storing valuable ingredients such as spices (Fig. 2.45d,e). Small-medium cooking pots were identified by knobs or handles on the rim. An

unusual crude 'teapot' was also recovered (Fig. 2.45a). The forms of the lids recovered were identical to those from Gännätä Iyasus. The burnished fine wares were primarily 'glasses' (small cups) alongside a few examples of bowls and small plates. A fine bottle neck and a curved spout, compared to a teapot, and not a local form, finished in a fine red slip were also recovered (Fernandez et. al., 2017: 288-294).



Figure 2.45: Selection of ceramics from Gorgora Nova (de Torres Rodríguez, 2017)

2.12.3 Särka

Only limited test pits were excavated at Särka and in general the wares and forms recovered appeared similar to Gännätä Iyasus. Due to this, discussion on the ceramics from Särka was extremely limited. The exception was the bottom of test pit 3, which contained only a single fine ware sherd and many sherds from large, rough jars and containers. Unfortunately, the forms of the vessels could not be reconstructed from the sherds (Fernandez et. al., 2017: 386-390).

2.13 Dunjame

The site of Dunjame in East Gojjam (see Fig. 2.1) was occupied by the Agaw people, however Wondifraw and Beldados (2015) gave no indication as to the date of the site or the ceramics. The ceramics analysed were all surface collected. The fabric colour was varied, ranging from red to brown to black, occasionally on the same sherd. There was useful quantification of fabric types and associated forms, however the presentation of the data was sometimes

lacking. For example, the 'pie-chart' showing the proportions of the different fabric types has sections which did not match up to the proportions and did not contain all the fabric types (Wondifraw & Beldados, 2015: 98, Fig. 6). Burnishing was noted on the sherds, however, the extent this was present was not clear. Rims generally had lips and were decorated in a variety of forms, including vertical impressed lines, incised straight or wavy lines (Fig.2.43d), finger impressions, and appliqué clay balls on the lips. Handles were only found in red or brown fabrics and came in two main forms; crude knobs (Fig. 2.46e) and small 'ear-shaped' handles (Fig. 2.46f). Decoration on the body generally consisted of incised diagonal lines and geometric shapes, often triangles. Zig-zag lines and widely spaced parallel lines were also common (see Fig. 2.46a,b,d).

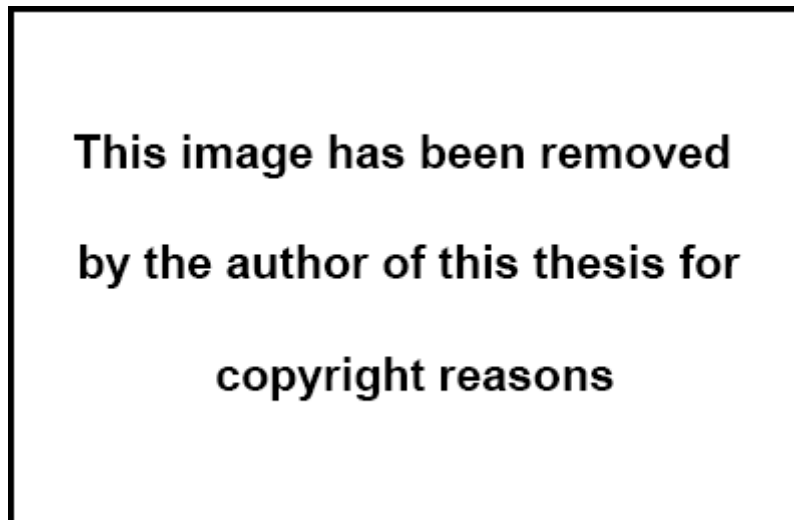


Figure 2.46: Selection of ceramics from Dunjame, a),b),d) incised decoration; c) 'impressed decoration on a neck; e) 'crude knob' handles; f) 'small handles' (Wondifraw & Beldados, 2015)

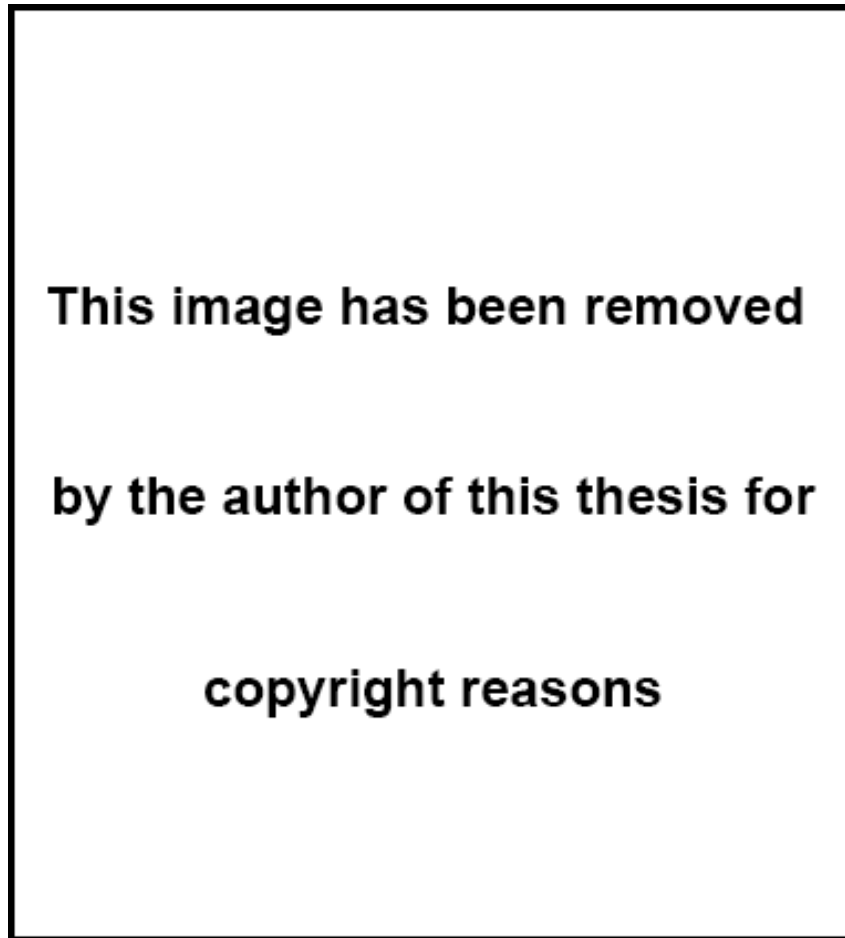


Figure 2.47: Decorated sherds, handles and 4-legged base from Handoga (Grau, 1989)

2.14 Handoga

Handoga is located in western Djibouti (see Fig. 2.1) and was excavated by Roger Grau (1976; 1989). Grau did not give a date for the site, however in Guthertz's review of the archaeology of Djibouti he referred to '*le site médiéval d'Handoga*' (2012:17). The validity of this medieval dating could not be verified however. The initial report (Grau, 1976) went into some detail on the site, although discussion on the ceramics was limited and preliminary.

In addition to material recovered from the excavation, a large quantity of ceramics were recovered from the surface, although only diagnostic sherds were kept. The fabric was beige coloured, and decoration was usually punctate decoration alongside incised decoration, which usually consisted of lines and commas, with rarer examples of 'herringbone zig-zag' patterns (Grau, 1976: 7; 1989; see Fig. 2.47). Incised decoration was also found on flat rims. The surface finish of the fabric was not clear, although one vessel was noted as

having a poor, improperly fired and unslipped fabric (Grau, 1976), which could suggest that a slipped finish was common. A variety of forms were identified, including jars with and without necks, both minor and heavily carinated vessels, the heavily carinated vessels usually had globular lug handles. There were rare examples of large ovoid cooking vessels with flared rims and pierced handles. The single largely complete vessel was an almost spherical globular jar with a spout and handles, and so was likely one of these cooking vessels. The handles were horizontal lug or pierced handles. There were several base sherds with feet including a tripod-footed base, a ring base with four square notches cut out and a base with four legs joined at the bottom, described as a 'crown base' (Grau, 1976) (see Fig. 2.47b, 7.37; App.Fig. VI.10). These bases may have had links with the Chercher mountain sites discussed above (section 2.5).

There was also evidence for some interesting uses of ceramics at Handoga. A hearth was made using the top of a vase, a large globular vase, missing the top of the neck was buried and filled with large amounts of ash, charcoal and animal bone, interpreted as a ritual offering. A jar was placed inside another buried jar which Grau argues may have been fired in place due to parts of the exterior merging with the surrounding earth (Grau, 1976: 6-7). The only imported material discussed was glass, for which no date is given (Grau, 1976: 8) The later paper summarising the site (Grau, 1989) was extremely limited and did not provide much new information, with very limited description of the ceramics, although there were some useful new illustrations.

2.15 Conclusion

While there have been a range of archaeological projects in the wider region under study there were clear biases towards certain areas and periods, particularly the Classical Aksumite kingdom. The quality of the analysis of the local ceramics was also often highly variable, with until recently the focus often being on the more recognisable imported wares and the architecture of the sites. The existing literature showed that the local ceramics in Medieval Ethiopia were highly varied even among sites and peoples who were in contact with each other. The literature also highlighted the fact that Ethiopia was not isolated during this period, but was part of a wider network stretching from China to India

to the Middle East to Arabia to Egypt and the Mediterranean. Within the Horn of Africa evidence showed that a main trade network ran from Zeila on the Red Sea Coast through the Islamic towns of Somaliland such as Amud, Abasa and Qalcadda to Harar and Harlaa then further inland to the Shay sites such as Tatar Gur and the Janjero kingdom as seen at Koticha Kesi (see Fig. 7.28 for map). This thesis will thus contribute to the understanding of the varied local ceramics of Medieval Ethiopia. The next chapter will discuss the literature surrounding ethnographic studies of pottery manufacture in Ethiopia and how it can contribute to interpreting the manufacture of the Harlaa ceramics. The ceramics highlighted here will be referenced during the ceramic analysis in Chapters 5 and 6 and will be brought back into the discussion in Chapter 7 through further comparison with the local ceramics from Harlaa.

Chapter 3: Methodology

3.1 Introduction

Ceramics are the most abundant artefacts found at archaeological sites and are used in a wide range of human subsistence and cultural activities (Rice, 1987: 24-25; Pikirayi, 2007; Orton & Hughes, 2013: 32; Villing & Spataro, 2015; Zdziebłowski, 2019). Africa has among the earliest pottery in the world, dating to 10,000 BC from Niger in West Africa (Gosselain, 2014: 1; Haour, 2003b: 207-209). Rice (1987: 3) claimed that 'Pottery was the first synthetic material humans created – artificial stone – and it combines the four basic elements identified by the Greeks: earth, water, fire, and air.' Indeed, in many societies around the world, including Africa, potters and their produce had special significance (cf. Gosselain, 1999; 2010; Haour et. al., 2010; Croucher & Wynne-Jones, 2006; Pikirayi, 2007; Insoll, 2015: 207; et. al., 2008: 130-133; Insoll, 2015: 206-207; Wayessa, 2015; Thebe, 2016). Thus, ceramics have long held an interest to archaeologists (cf. Shepard, 1957; Rice, 1987: 24; Barley, 1994: 9; Orton & Hughes, 2013: 3-4; Ashley & Grillo, 2015; Villing & Spataro, 2015). This chapter will outline the methodology used to analyse the local ceramics from Harlaa within the goals of the thesis as well as briefly outlining archaeological ceramic studies in Africa. The methodology used on the fieldwalking survey which collected ceramics for comparison with the excavation assemblages will also be outlined.

3.2 Ceramic Analysis

3.2.1 Ceramic collection and processing

The local ceramics from the 2015 and 2016 seasons had already been collected and processed prior to the start of this research (see Insoll, et. al., 2016; 2017). During the 2017 and 2018 seasons the local ceramics were collected and processed according to the existing system in use at the excavations at Harlaa. Excavation units were excavated by context and 100% of each archaeological context was sieved through a 3 mm mesh to ensure as much archaeological material was collected as possible. Faunal remains, local ceramics and small finds (including imported ceramics) were bagged separately

by context as they were recovered from either the trench or sieve. The local ceramics were washed and dried on-site with the assistance of local workers before being re-bagged in preparation for recording and analysis at the laboratory at the Authority for Research and Conservation of Cultural Heritage (ARCCH) in Addis Ababa.

3.2.2 Ceramic analysis methodology

The primary methodology for recording and analysing the local ceramics was based on standard approaches which have been suggested by many archaeological ceramicists (cf. Shepard: 1956; Rice, 1987: 309-345; 1996a; 1996b; Livingstone Smith & de Francquen, 2017; Orton & Hughes, 2013: 41-100, 275-286; Historic England, 2016). These suggested the key features of ceramic sherds to record for ceramic analysis and how to identify and record them. This included key features of the fabric, such as colour, hardness, inclusions and finish. Diagnostic features such as decorative styles, rim forms, handles, spouts, body modification including carination and piercings, and base styles and forms were also suggested as important to record and analyse. The method of recording the local Harlaa ceramics was largely based on Orton and Hughes *Suggested Recording Systems for Pottery from Archaeological Sites* (2013: 275-285), modified to fit with the goals of the project and the nature of the Harlaa ceramic assemblage. Ceramic analysis undertaken at other sites in Ethiopia (e.g. Joussaume, 1974; Phillipson & Phillips, 1998; Phillipson, 2000; de Torrez Rodríguez, 2017) and wider Africa (e.g. McIntosh, 1995; Insoll, 1996a: 111-114; Haour, 2003a; MacLean, 2000; Insoll, et. al., 2008; 2011) were also considered to identify the types of material expected as well as existing approaches to ceramic analysis in Africa (see 3.2.3 below). While no examples ended up being recovered from Harlaa, prior to the first field season research was undertaken into roulette decoration as it was a form of decoration that was widespread across Africa, although rarer in Ethiopia (cf. Soper, 1985; Gosselain, 2000: 195-200; Haour, et. al., 2010).

Initially an attempt was made to break down local ceramics from Harlaa by ware based on a combination of the fabric type, fabric colour and finish. However, the variable nature of the fabric colour and surface finish on the local

ceramic sherds, including on the same sherd, meant that these ware type classifications were abandoned as they were producing a proliferation of ware types, and did not provide useful categories for discussion and analysis and interpretation. Instead broad categories of ware types focusing on particularly diagnostic finishes, primarily burnished and un-burnished plainwares were used (see Chapter 5.3). Due to the fact that slips are often hard to identify, especially when the fabric clay is used as a slip (e.g. Shepard, 1956: 191-193; Haour, 2019: 141), slipped sherds were only separated into their own wares when they could be clearly identified. Similar broad divisions of wares have been used to classify local ceramics from other sites in Ethiopia, such as the Jesuit missionary sites in the north (cf. Fernández et. al., 2017; de Torrez Rodríguez, 2017; see also Chapter 2.12). Due to the size of the assemblage, fabric was only studied in detail while establishing the ware types at the start of the project and when it was required to confirm the ware. The range of fabric colours for each ware type were recorded using a Munsell Soil Colour Chart. Inclusions were identified visually using both the naked eye and a 10x hand lens. A selection of ceramic sherds were also selected for Scanning Electron Microscope (SEM) and Energy Dispersive Spectrometry (EDS) analysis in 2018 to confirm the inclusions and makeup of the fabric (cf. Tite, 1992; Froh, 2004; Orton & Hughes, 2013: 182-185; Quinn, 2013; Frahm, 2014). The analysis was undertaken in August 2019 with the assistance of Dr. Hong Chang at the University of Exeter Imaging Suite (see Appendix II and Chapter 5.2.3).

For each context the local ceramics were divided by ware type then further sub-divided into diagnostic and non-diagnostic sherds. Diagnostic sherds were any sherd which had features which could be used to inform about the manufacture, form or features of the vessel it came from. This included decorated sherds, rim sherds, handles, spouts, carinated sherds and bases. All diagnostic sherds were recorded by ware type. Data recorded included the ware category, type and style of any decoration visible, rim form, angle and diameter (when measurable), base form and diameter (where applicable and measurable), the presence and form of handles, the presence of body modification such as carination or piercings, neck sherds and manufacturing evidence such as thickening or finger marks. Additionally, any sherds with evidence for residue or vitrification were recorded, although analysis of the

residue was outside of the scope of this thesis (see Chapter 7.3.1). As there was limited time during the field seasons for recording and analysis and it was impossible to export material from Ethiopia for analysis, all diagnostic sherds were photographed. This meant that photographs were available for use for all the diagnostic sherds and any descriptions could be confirmed or clarified visually without physical access to the assemblage. Additionally, due to the size of the assemblage and time constraints, the diagnostic sherds were not marked individually, but were bagged separately from undiagnostic sherds. The photographs allowed each diagnostic sherd to be later identified and located despite not being marked. The number of non-diagnostic sherds for each ware type was counted, but not photographed. Both the diagnostic and non-diagnostic sherds were intended to be weighed by ware in addition to counted to provide an additional method of comparing and quantifying the size of assemblages. However, due to issues with the scales in the first field season and later time constraints, this was not possible. A range of rim forms were identified. However, as the local ceramics from Harlaa were all handmade, rim forms were quite variable and there was variation within each rim form. While rim diameters were recorded where possible, again due to the handmade nature of the ceramics, most of the rims were not perfectly circular and so it must be acknowledged that there was likely a degree of variation from the recorded rim diameters.

The diagnostic sherds and their features were recorded, initially into a physical notebook before being copied into an Excel database upon return to the UK. Profiles were drawn in pencil of all key rim forms identified as well as any other rims or diagnostic sherds which were considered significant. The pencil illustrations were digitally inked using Adobe Illustrator and full profile drawings were produced. The processes for the illustrations and digital inking were based on established methods (cf. Griffiths et. al., 1991; Dobie & Evans, 2010; Orton & Hughes, 2013: 93-103; Woelfel, 2014). Diagnostic sherds were given a unique identifying code based on their context and primary photograph. For example, sherd HAR17(B)3-36a is diagnostic sherd 36a from context 3 in excavation unit HAR17(B).

The chronological sequence used for the ceramic analysis was based on the jewellery workshop (Unit [B]), where the majority of the local ceramics

analysed were recovered. The chronology was developed by Insoll through a combination of stratigraphy, C14 dating, imported material and architectural features (see Insoll, 2018b). This chronological stratigraphy was used as the basis for considering changes over time in the local ceramics, primarily through quantitative analysis.

Quantitative analysis and 'modern' statistical thinking were brought to the larger attention of archaeologists in 1953 with Spaulding's paper *Statistical techniques for the discovery of artifact types* (1953; see also Aldenderfer, 1998: 91). Quantitative methods of analysis 'are those that manipulate numbers and use measurements in the research process... to obtain insight into some phenomenon or process' (Aldenderfer, 1998: 93). Quantitative analysis considers data on variables of the objects and artefacts. VanPool and Leonard (2011: 5-6) highlight the fact that quantitative methods are concerned with data and that the artefacts themselves are not data. Rather the data is the observations and measurements made on the artefacts by the archaeologist undertaking the analysis of the assemblage, and their goals will influence what data and variables are recorded (Stephen, 1997; VanPool & Leonard, 2011; Orton & Hughes, 2013: 21-22). Quantitative analysis can consider the spread of a particular variable on a specific artefact type, how that variable changes across different contexts, parts or phases across a site or how different sites compare.

The primary goal of the quantitative analysis of the local ceramics was to investigate changes in the use of the site and the validity of the local ceramics as chronological indicators. Therefore, the local ceramics were grouped according to the phases identified by Insoll (2018b) for the analysis. Some phases were further broken down into sub-phases where distinct changes in the local ceramics were visible within a phase (see Chapter 5.1.1). This ensured that there was a sufficient density of diagnostic sherds for comparison both within the phases and between the various phases. This analysis which considered the quantitative changes in features (or variables) of the local ceramics between phases allowed changes in the typology of the local ceramics to be identified. These changes could be further considered with reference to the introduction of Islam and Islamisation at Harlaa.

3.2.3 Ceramic studies in Africa

Existing literature on approaches to and methodologies in ceramic analysis in Africa will be briefly highlighted to situate this project within the wider context. Gosselain and Livingstone Smith (2013) provided a useful, if brief, outline of ceramic studies over the last century in Africa. Archaeological pottery studies in Africa began among Egyptologists in the early 1920s, with the first classification of sub-Saharan ceramics, although rooted in colonial racial concepts, in the late 1920s by Laidler in South Africa, shortly followed by the Egyptologist Caton-Thompson's work at Great Zimbabwe in 1939, helping prove the African origins of the complex. However, ceramic analysis remained largely descriptive. In the post-war period there was an increased interest in the archaeology of Africa, particularly with regards to post-Stone Age Africa. Despite the expansion of interests, Africanist ceramic methodologies and theories remained under-developed. Since the 1970s there has been an explosion of new research and theoretical discussion, with new areas of research, particularly in West Africa (cf. Gally et. al., 1998; MacLean, 2000; Haour, 2003a; 2011; Haour et. al., 2019; Mayor, 2003; 2010; 2011; Gijanto, 2011; Giblin & Remigius, 2012; MacDonald, 2011; 2013), opening up, applying more detailed analysis and focuses and approaches to understanding ceramics (Pikirayi, 2007: 287-288; Gosselain & Livingstone Smith, 2013). Both Wynne-Jones and Fleisher (2015: 526-529) and Ashley and Grillo (2015) have also outlined developments in ceramic studies focusing on eastern Africa. Recently Wilmsen et. al. (2019) have used petrographic analysis of ceramics and clay sources to investigate connections and the exchange of ideas, clay and pottery between potters from three sites in eastern Botswana. Interestingly, in Rice's overview of pottery and its history in *Pottery Analysis: A Sourcebook* (Rice, 1987: 3-3-27), while there were regional discussions on Europe and the Mediterranean, The Near East, Far East, and the New World, the African continent was entirely absent outside of north Africa, considered in its Mediterranean context. While African ceramics were discussed elsewhere in the volume, this showed a surprising absence of interest in the study of African

ceramics in the wider ceramic studies literature even in the late 1980s, which is now being addressed.

Ethnoarchaeology has played a significant role in African ceramic studies, particularly considering ceramic *chaînes opératoires*, the processes undertaken to produce a vessel from procuring the clay to post-firing modifications, as well as the social significance of ceramics (e.g. Lyons, 2007; Mayor, 2011; Wayessa, 2011; Gosselain & Livingstone Smith, 2013: 119-120; Arthur, 2014; Fredriksen & Bandama, 2016; Gosselain, 1999; 2014; 2018). These ethnoarchaeological approaches to ceramics were not as applicable to the local ceramics from Harlaa as there is no current local ceramic production and the modern Oromo inhabitants are unrelated to the medieval inhabitants of Harlaa (Anfray, 1990: 226; Chekroun et. al., 2011; Insoll, 2017; see also Chapter 5). Additionally, it is not yet clear who, if anyone are the modern descendants of the 'Harla people' (see Chapter 1.4.1.3). Interest has also emerged in the materiality of African ceramics in archaeological and ethnographical contexts (cf. Sterner, 1989; Gosselain, 2000; Gosselain et. al., 2019; Mayor, 2003; 2010; 2011; Croucher & Wynne-Jones, 2006; Ashley, 2010; Kohtamaki, 2010; Fredriksen, 2011; Giblin & Remigius, 2012; Insoll, 2015: 206-249; Haour et al., 2019a; 2019b).



Figure 3.1: Fields and terracing around Harlaa

3.3 Survey

3.3.1 Field survey methodology

Archaeological survey can have a wide range of goals, and different methods of survey are better suited to particular goals. The aim of the fieldwalking survey undertaken at Harlaa was to collect surface archaeological ceramics for comparison with the excavation assemblage to assess the viability of surface collections of local ceramics for chronological dating at Harlaa. This type of survey is what Banning (2002: 27-29) termed 'prospection' survey, whose goal is '...to find archaeological materials of a particular type or age, or that can be used to test very specific hypothesis.' As the goal of the survey was to collect archaeological material, physical fieldwalking survey was required and the approach had to ensure that a sufficient density of material was collected for comparison with the excavation assemblage and between transect units. As the primary aim was to compare surface collected material with the excavation assemblage, test pitting was not required and was outside the scope of the survey project.

The landscape around Harlaa is heavily worked, consisting of terraced fields (See Fig. 3.1, 1.1, 1.2 and 6.3). During the fieldwork season (late January – March) most of the fields were bare and freshly disturbed, having recently been harvested. This means that fresh material had been brought to the surface; indeed, ceramics were a common sight on the surface across most of the village and surrounding fields. However, the farming and the terracing have heavily disturbed the archaeological material, particularly that which has been collected by fieldwalking, with the terracing in particular having truncated and moved archaeological material around.

The decision was made to undertake single transects across fields in different parts of the site, with the extent of each transect arbitrarily limited by the boundaries of the modern field system. The placement of transects depended on where permission could be gained from landowners to survey and collect material. However, transects were able to be placed in different parts of the site to investigate the distribution of the ceramics across Harlaa. Each transect consisted of a series of connected square (3x3 m) or rectangular (3x5 m) units. Both 3x3 m and 3x5 m units were tested to find a balance between the density of material recovered and the granularity of units for observing changes across transects and identifying potential features (see Chapter 5). The surveys showed that at Harlaa 3x3 m units provided a sufficient density of material for analysis and discussion. Three meters was used as the basis of the transect units as this was the rough width of the terracing at Harlaa, which made transects both across and down terraces easier to plot. The large rectilinear connected units meant that all material along the transect was recovered, ensuring a sufficient quantity was recovered.

The fieldwalking was undertaken with the assistance of a single worker, Ibrahim Ali. Each transect unit was measured using a hand-tape and marked out using pegs, with the start and end point of the transect and position of each unit recorded using a handheld GPS. All archaeological material on the surface was collected and bagged, with the fieldwalkers walking back and forwards across the unit until no more archaeological material could be easily seen on the surface. Notes were made of any unusual features within a unit, such as a recently dug pit or patches of gravel. Units which were partially obstructed, usually by undergrowth or terracing walls, and the extent of the obstruction,

were also recorded and taken into account when assessing the density of material within a transect unit. The ceramics were cleaned, recorded and analysed as described above, while non-ceramic material was cleaned, briefly recorded and photographed as their analysis was outside the scope of this thesis.

In addition to the field survey undertaken as part of this thesis, further surveys were undertaken at Harlaa by Khalaf and Insoll to identify and record visible archaeological features, delimit the extent of the site and the extent of destruction of archaeological remains. However, no local ceramics were recovered from these surveys for analysis (cf. Insoll et. al., 2017; Insoll, 2018; 2019; Khalaf & Insoll, 2019).

3.3.2 Field survey and identification

Survey is an important aspect of archaeology, in preparation of archaeological excavation, to further inform on excavation results, and as a means to investigate sites in their own right (Lewarch & O'Brien, 1981; Banning, 2002; Bintliff, 2005; White & King, 2016; Khalaf & Insoll, 2019). Therefore, it is important to consider the limitations and advantages of archaeological survey (Redman, 1987; Ammerman & Feldman, 1978; Lewarch & O'Brien, 1981; Bower, 1986; Banning, 2002; Banning et. al., 2006; 2011). As surface artefacts are affected by many factors; geological, cultural, human intervention, and methodological, the extent to which surface assemblages can accurately depict a site must be considered (Ammerman & Feldman, 1978; Stanislawski, 1978; Bower, 1986: 25-26; Wandsnider & Camilli, 1992; Bintliff, 2005; Navazo, & Díez, 2008; Johnson, 2014).

Work has been undertaken by multiple archaeologists (e.g. Ammerman & Feldman, 1978; Wandsnider & Camilli, 1992; Bintliff, 2005; Fowler, 2011; Johnson, 2014) considering surface collections and the extent that they accurately represented the assemblage of a site as well as their use and viability in identifying and locating buried features. Johnson (2014) tested the correlation of surface and buried artefacts at the site of Popola in Mexico. In addition to the work on Popola, Johnson outlined existing work on this subject and the occasionally differing results produced. Many authors have discussed

the negative correlation between surface assemblages and buried structures and working areas (Redman & Watson, 1970; Ammerman & Feldman, 1978; Stanislawski, 1978; Hutson et. al., 2007; Fowler, 2011; Johnson, 2014).

Studies have also shown that surface collections may be similar to material in the immediate sub-soil, while those below 0.25-0.5 m show little to no correlation to the surface finds (Redman & Watson, 1970; Hutson et. al., 2007; Johnson, 2014: 277-278). An important argument as to why there is a negative correlation between subsurface structures and activity areas and surface artefacts is that these sites would have often been kept clean during their use (Deal, 1985; Stanislawski, 1978; Johnson, 2002; Johnson, 2014: 277). Johnson's conclusion at Popola concurred with existing understanding that there are issues of correlation between surface artefact assemblages and sub-surface assemblages and features. Large scale surface collections correlate with the primary types found at a site in general, however, this correlation does not extend to individual structures or units. Additionally, Johnson highlighted the fact that a high sherd density on the surface was not necessarily indicative of a similar density underground and that surface collections under-represented the diversity of sub-surface artefacts (Johnson, 2014: 287) Therefore, while still useful, care must be taken when considering how the results from surface collected materials fit into the wider understanding of a site and their association with sub-surface features.

In South Africa Fowler (2011) considered the patterns of ceramics at the site of Ndongondwane and the extent to which they accurately represent the use of areas of the site. While this approach relied largely on excavation assemblages from across the site, it showed that by considering the types of ceramics recovered and their fragmentation, broad functional areas could be identified across the site.

3.3.3 Field Survey in Africa

In the African context, surface survey methods have differed depending on region and research goals, although the majority have focused on locating and identifying archaeological sites in the landscape. While there are too many to review here, a few of particular significance will be highlighted. In his 'survey

of surveys' Bower (1986) outlined the progress of archaeological surveys in Africa until the mid. 1980s. A more recent review of archaeological survey and reconnaissance and its methodological development, focused on eastern Africa was undertaken by Wynne-Jones and Fleisher (2015: 529-531). In West Africa surveys in the Guringin Valley in Mali identified a range of settlement sites from the Neolithic to the present. Surface collected material was used to identify metallurgy and analysis of the collected ceramics identified variation between the sites (Loukou et. al., 2013). Recent surveys in the Puntland region of Somalia, represented some of the first archaeological work in the region, aimed at locating and recording stone cairns, although there was little discussion of the methodology (Bortolini et. al., 2019). As part of the *Crossroads of Empires* project an intensive survey was undertaken along the Niger River Valley in northern Benin including remote sensing, GIS and field walking survey to locate and identify sites and collect archaeological material from identified sites (Haour et. al., 2011; Khalaf, 2016; Khalaf et. al., 2019). McIntosh and McIntosh have undertaken extensive surveys in the Niger Delta region of West Africa since 1977, focused on identifying archaeological sites, in particular settlements, within the region. The goal of these surveys and the identification of a range of sites was to consider the development of urban centres and 'the city' within the region (McIntosh, 1999; & McIntosh, 1984; 2002). Aerial photography was used to identify sites and potential areas for further survey. Two main areas were identified as suitable for survey based on identification on aerial photographs; *discrete mounds in the floodplain* and *other upland areas*, with 20% of each area randomly selected for walking survey. Testing had shown that sites were not locatable on the floodplain itself, so no surveys were undertaken there. Sites identified through the aerial photography were transect walked to collect surface material and record the presence of features (McIntosh & McIntosh, 1984: 81-84, 87-89).

3.3.3.1 Field Survey in Ethiopia

In Ethiopia archaeological surveys have formed a part of many projects (see Chapter 2). Most of these have focused on large scale surveys attempting to identify sites in a region as opposed to the smaller scale field survey focused

on collecting material which was undertaken at Harlaa. Surveys at Aksumite sites included the Adulis project (Peacock & Blue, 2007; see Chapter 2.2.2) which surveyed Adulis and the surrounding region, aimed at investigating sites and collecting materials. A variety of sampling methods were used at different sites. All the diagnostic sherds from Diodorus Island were collected, while at Dese, due to the limited time '[a] small sample of the featured sherds to be found on the main Dese site (A) were retained and a few representative pieces were taken from the other Dese site (B)' (Peacock & Blue, 2007: 79). At Galala the collected survey material consisted of sherds from the eastern hill and sherds at the foot that had washed down. This was limited due to extensive military mining of the area during the Ethiopia-Eritrea war (Peacock & Blue, 2007: 79). At Adulis itself, a more rigorous survey sampling method was undertaken due to the density of material. The site was divided up into a grid of 20 m squares with 47 squares forming two transects and a concentration in the south west corner of the site. A group of five people collected all material they could find in each square within seven minutes. The goal of this survey was to assess the density and distribution of ceramics from different periods at Adulis (Peacock & Blue, 2017: 86-93).

While undertaken in 1974, the results of the surveys on the Shire plateau between Aksum and Yeha were not published until 2005 (Michels, 2005; Phillipson, 2008; see Chapter 2.2.1). The survey methodology was clearly outlined including the recording methods used in the field. The survey region, covering 714 square km was broken up into 5 km x 5 km zones which were further broken down into smaller 1 km x 1 km areas. 28% of the survey region was surveyed, with 65% of the areas selected randomly and the remainder selected for specific goals. Where possible, and depending on the size of the site identified, one or more 10 x 10 meter units would be selected for surface collection for which 'A shoulder-to-shoulder skirmish line of crew members would then be deployed to recover every artefact on the surface of the ground...' (Michels, 2005: 7). Finneran et. al. (2003; Finneran, 2005) also undertook archaeological survey in the Shire region, which aimed to identify and record sites in the area. It was not clear how sites were located during the survey, however, they were plotted both on a map and using a hand-held GPS as well as recording features of the sites. While prehistoric sites were identified

through lithic scatters, no systematic surface collection was undertaken. Surveys were also undertaken in the region surrounding Aksum to investigate potential routes for trade in the landscape and changes in settlement distribution, although the report has no discussion of the survey methodology (Sernicola & Phillipson, 2011).

Wider surveys were also undertaken in the region surrounding Mifsas Baḥri (Gabriel et. al., 2017; Gabriel & Yule, 2017; Mortimer, 2017a; 2017b; see Chapter 2.2.4). Surveys in the Lake Ḥashenge Area in 2014 identified a large number of sites. The methodology used was not discussed, however the GPS location of each site, material present and the routes taken across the whole survey were recorded (Gabriel et. al., 2017). Further surveys in 2014 concentrated in the landscape around Mifsas Baḥri were focused on locating, recording and observing sites identified using Google Earth satellite imagery. Issues with intensive terracing of the landscape impacting the results of the survey were noted (Gabriel & Yule, 2017). The approach to collecting material was not discussed for either survey. In the 2015 season further fieldwalking surveys were undertaken in the immediate vicinity of Mifsas Baḥri. 33 zones of various sizes were 'walked intensively with the specific aim to collect all pottery, lithics (flint and chert), obsidian, and worked stone.' The survey team consisted of three archaeologists, five university students assisted by '...a number of local children aged between 4 to 12 years old (Mortimer, 2017a).'

The 1997 Survey in the Adi Qeyeh area (Curtis & Libsekal, 1999; see Chapter 2.2.6) was also a wider survey focused on identifying sites, and consisted of 'a systematic archaeological transect survey' of eight transect lines 200 m apart covering approximately 2.5 km² and a wider general reconnaissance survey in a five kilometre radius centred on the transect survey. Artefact recovery was not a goal of the survey, but artefact density and key artefacts were recorded.

Surveys have also been undertaken around some Medieval Christian churches, such as by Finneran (2012) at the Lalibela rock cut churches, which aimed to better situate the churches within their landscape. This survey included collecting oral history in addition to visiting and recording previously identified sites in the region and identified new sites through a 'systematic foot survey undertaken along transects to the west, east and north of the town'

(Finneran, 2012: 84). Any sites located were photographed and recorded using a GPS. Additional small scale 'unsystematic field walking' was undertaken at identified sites to assess the density of archaeological features and material. It was noted that only limited chronological observations could be made due to the lack of comparative material.

Outside of Aksumite sites, much of the survey work in Ethiopia and Eritrea has focused on prehistoric or Islamic sites. Many surveys have been undertaken to locate and identify Palaeolithic and prehistoric sites including lithic scatters (e.g. Jeschofnig & Humphreys, 1976; Bon et. al., 2006; Beyin & Shea, 2013), rock shelters (e.g. Fernández et. al., 2007; Hildebrand & Brandt, 2010) and rock art (e.g. Tesfay, 2000; Assefa et. al., 2014). A survey was undertaken in the Kafa region by Hildebrand and Brandt (2010; Hildebrand et. al., 2010) focused on identifying rock shelters which included test excavations at identified sites. The use of rock shelters and lithic tools in the region was identified from the prehistoric period up until the 19th century. Insoll undertook a brief survey at Dahlak Kebir (Insoll, 2001; see also Chapter 2.3). A range of architectural features were recorded and a large quantity of archaeological material was observed on the surface. Due to the brief nature of the visit and the fact that material was not able to be removed, no systematic survey method was used to collect surface archaeological material. Brief observations were made on the various kinds of material present. The *Agaw* site of Dunjame was identified as part of a larger archaeological survey in East Gojjam and was the focus of a more dedicated survey (Wondifraw & Beldados, 2005; see Chapter 2.13). The report focused on the ceramics collected, and the only description of the collection methodology was that '[t]hese sherds were then carefully collected and sorted. (Wondifraw & Beldados, 2005: 94)'.

Surveys were undertaken between 2013 and 2016 in the Qwara-Metema region of north-west Ethiopia, on the border with Sudan, by González-Ruibal and Falquina (2017; see also Chapter 2.4). While the methodology used was not discussed, the goal of the survey was to identify sites in this borderland region and assess how the people living there developed and interacted. 69 sites from the Middle Stone Age up until the Second World War were identified, with 23-25 settlement sites from the Gelegu, Jebel Mahadid, and Funj

Traditions (see Chapter 2.4 for dates) considered with respect to the nature of societies of this frontier region.

Surveys focused on Islamic mosques have also been undertaken across Ethiopia. Again, these generally had a different focus compared to the fieldwalking survey undertaken at Harlaa, aiming to record and identify sites and standing architectural features. A survey in the North Shoa region (Fauvelle-Aymar et. al., 2007; see Chapter 2.7) covered three main sites, Asbäri, Mäsal and Nora. It was unclear how each site was located, however, they were all surveyed to assess the size of the sites, architectural features present and components of the sites. Surface material was noted during the surveys, however no methodology was given for its acquisition. A further detailed topographic survey was made at Nora using a tachymeter and GPS using tri-dimensional plotting, consisting of 900 points around the site and a further 310 around the mosque area (Fauvelle-Aymar et. al., 2006).

The Somaliland Islamic trade towns, have been repeatedly visited and surveyed as parts of wider surveys (eg. Curle, 1937; Chittick, 1976; Huntingford, 1978; Fauvelle-Aymar et. al., 2011; see Chapter 2.8). However, there has been little rigorous methodological approach to these surveys, which were focused on recording architectural features and general collection of surface material. A survey of sites identified as relating to the Harla people undertaken by Chekroun et. al. (cf. 2011; see also Chapter 1.4.1.4) was focused on identifying and locating 'Harla type' sites and recording key architectural features.

3.4 Conclusion

Having outlined the methodologies used for both the ceramic analysis from collection to processing to recording and analysis as well as the methods and processes of the field survey, the next chapter will consider and review existing literature on ethnographic analysis and discussion of ceramics from Ethiopia as well as historical ethnographic sources which may be relevant to the local ceramics from Harlaa.

Chapter 4: Ethnographic Ceramic Studies Review

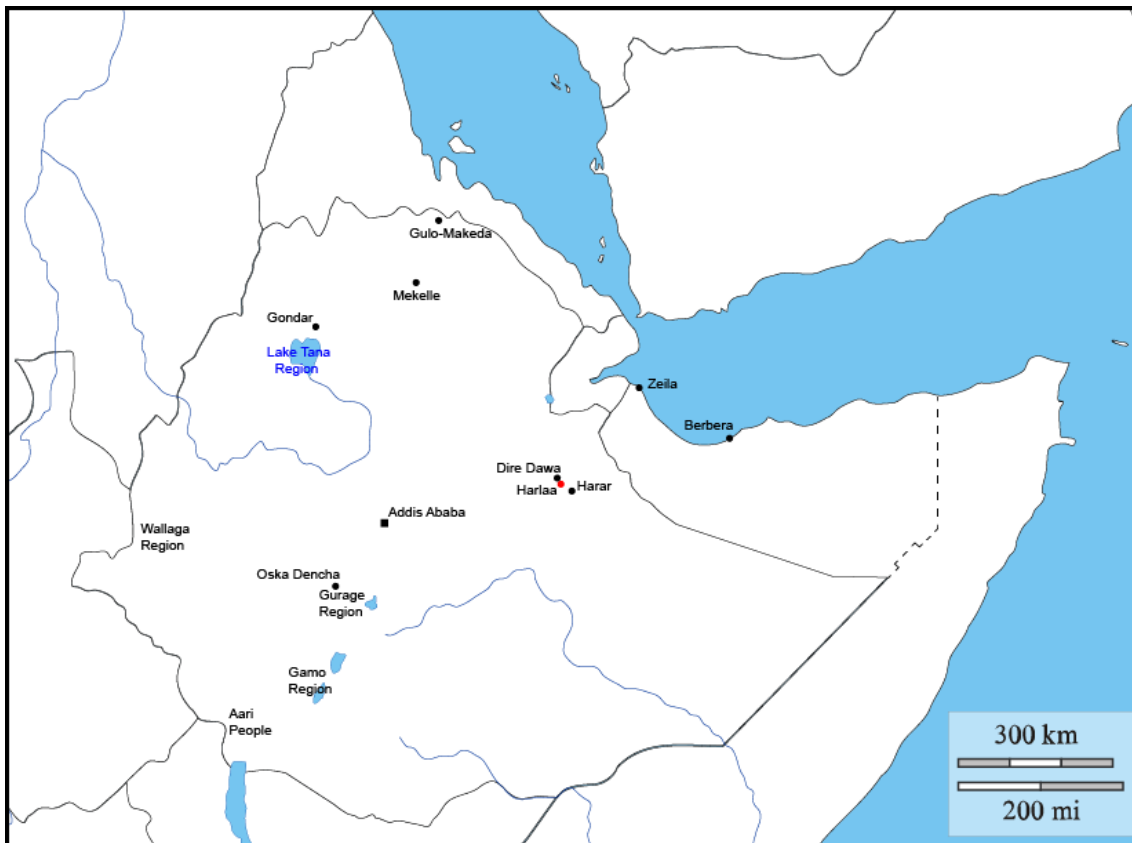


Figure 4.1: Map of places and areas discussed in the chapter (base map from d-maps.com [Website 7])

4.1 Introduction

Ethnographic study of Ethiopian pottery manufacture has largely focused on certain areas, particularly northern, central and western Ethiopia. These ethnographic studies are becoming increasingly important as local pottery manufacture has entered a decline as traditional ceramics are being replaced by imported plastic, tinware and enamel (Cassiers, 1971: 46; Arthur, 2013: 5; Kaneko, 2014: 59). These studies have focused on Christian and indigenous belief populations in Ethiopia, and unfortunately none of the literature discussed below dealt with exclusively Muslim groups.

At least in the Christian regions of Ethiopia, there has long been a tradition of the *buda* or 'evil eye', and that those who possessed it had the power to change forms. Professions such as ironworking and blacksmithing (see Haaland, 2004: 77; et. al., 2004a), and to a lesser extent pottery manufacture were believed to be cursed by the 'evil eye', and so were looked down upon as lower members of society (JDC Archive, 2013; Cassiers, 1971:

45; Haaland et. al., 2004b; Lyons & Freeman, 2009: 80-82). Cassiers (1971) notes that due to this potters have often lived in their own communities on the edge of settlements. Women are often potters, although men may share the work or produce the largest vessels, such as at the Sambo Monastery in northern Ethiopia. There, the monks prepare the clay and fire the vessels, while the nuns form the vessels. In areas with Jewish populations they also often ended up being potters and smiths (Kaplan & Rosen, 1996: 172-173; Quirin, 1998; JDC Archive, 2013). While important to consider, it is unlikely that the *buda* tradition would have had as significant an impact among the predominantly Muslim population that would have been present at Harlaa and Harar. However, while Caulk (1977) did not discuss potters, he did mention 'outcast, but tolerated, groups of blacksmiths living in the countryside (374)' among the Oromo surrounding Harar prior to the arrival of the Egyptians around 1875. This suggested that transformative craftspeople such as potters and blacksmiths may have had a similar marginal status in the region. Although this was among the later Oromo, not the inhabitants who would have been in the region during medieval Harlaa.

It has been believed that the potter's wheel was introduced to Ethiopia relatively recently (e.g. Cassiers, 1971) in part due to the prevalence of hand-made wares in Ethiopia as is seen in this chapter. A stone potter's 'slow wheel' was recovered from Beta Giyorgis at Aksum. However, the wheel could not be rotated fast enough to be used to throw a vessel and so is not indicative of typical 'wheel-made' vessels (Phillipson & Aregay, 2014).

4.1.1 Ethiopian Cuisine

As ceramics are commonly used in the preparation and consumption of food, modern Ethiopian cuisine will be briefly outlined. While there is no single 'Ethiopian cuisine' as there is significant variation between different regions and groups (e.g. Lyons, 2007), there are still some broad trends in Ethiopian foodways. Spiced stews, called *wot* (or *wat*) locally are the most common staple food across Ethiopia, made with legumes (usually lentils), vegetables, and occasionally meat. The predisposition for vegetarian stews is in large part due to the frequent fasting days of the Ethiopian Orthodox Church, during which

meat is forbidden. *Wot* is usually eaten with *injera*, a large, flat, pancake like bread, traditionally made from fermented teff, but also made from various grains such as sorghum, barley and wheat when teff is unavailable (Johnston, 1844b: 90-91, 173; Stewart & Getachew, 1962; Kebede, 1992; Kelsey, 2003: 342; Lyons & D'Andrea, 2003; Maundu & Imburmi, 2003; D'Andrea, 2005; Lyons, 2007; Daba, 2017).

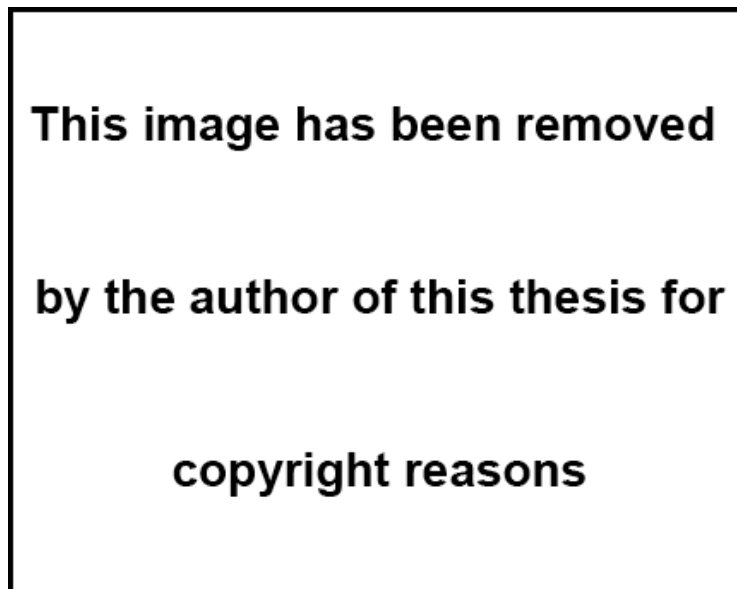


Figure 4.2: Photographs of the stages of production for large plates (de Torrez Rodríguez, 2017: 8) a);b) grinding pot sherds for use as grog temper; c) drying plates in the sun prior to firing; d) firing the plate over an open bonfire

4.2 North-eastern Ethiopia

In his work on the local ceramics from Historic Jesuit Missionary sites in the Lake Tana region of north-eastern Ethiopia, de Torrez Rodríguez (2017) also considered ethnographic pottery in the region among the mainly Ethiopian Orthodox Christian population, including historic sources such as Almeida's *History of Ethiopia* (Beckingham & Huntingford, 1954), which noted a lack of kilns, both for cooking and pottery manufacture. This suggested that a form of open-air bonfire made from wood and/or dung was used to fire the vessels, a method discussed by other authors here (cf. Lyons & D'Andrea, 2003; Wayessa, 2011; Arthur, 2013; Anjum, 2013). This firing method would produce very variable fabric colour both across vessels and on individual vessels, which is seen on both the material from the Lake Tana region (de Torrez Rodríguez 2007: 7-8) as well as the Harlaa assemblage (see Chapter 5). de Torrez

Rodríguez (2017: 7-8) also recorded contemporary pottery making from near Gondar including the production method for large plates, from grinding potsherds for use as temper (Fig. 4.2a,b), sun drying the plates (Fig. 4.2c) and firing them on an open fire (Fig. 4.2d). While no examples of large plates were recovered during the 2015-2018 seasons analysed in Chapter 5, a few examples were recovered during the 2019 season, which indicated that large plates were present at Harlaa.



Figure 4.3: a) Potter making a baking girdle in a sand mould (Lyons & Freeman, 2009: 83); Potter using a pot as a mould (Lyons & Freeman, 2009: 84)

Lyons has undertaken ethnoarchaeological projects among potters of the primarily Ethiopian Orthodox Christian Agame people in the Tigray region of northern Ethiopia, primarily in 12 villages in the Gulo-Makeda region. As was the case with the majority of Ethiopian potters, the Tigray potters are women. Baking girdles were produced by domestic potters for personal use. They were made using a clay with a talc temper and were formed in a sand mould (see Fig. 4.3a) or in a woven mould filled with hearth ash. Unlike bread-baking girdles, these were unburnished. (Lyons & D'Andrea, 2003; Lyons & Freeman, 2009: 82-83; Lyons, 2007: 357-360). These were dried in the sun for at least day before firing using a small amount of straw fuel on the roasting surface (Lyons & Freeman, 2009: 86-87). When the domestic potters produced other vessels, they often used existing vessels as a mould (See Fig. 4.3b). Domestic potters tended to work inside their compound, out of sight of their neighbours to avoid the stigma of *buda* (Lyons & Freeman, 2009: 86). 'Market potters'

produced a wide variety of vessels using a mixture of lump-forming and coils, where the base of the pot was formed from a lump, then built up using the coil technique. They claimed that schist temper was preferred for vessels for containing liquids over the talc temper. Ox ribs, or pieces of metal were used to scrape the vessel exterior and a pebble was used to smooth the surface. Bone rib scrapers and pebbles used as tools were recovered from the jewellery workshop at Harlaa, as well as astragali bones which showed evidence of wear from being used as smoothing tool (see Chapter 7.2.3). Vessels were fired in dedicated firing pits up to 3 m in diameter and 1 m deep, the firing process lasted several hours using dung and wood and sometimes ran over night (Lyons & Freeman, 2009: 87-88). The Agame pottery recorded was usually black and unburnished, while contemporary pottery produced in Western Tigray was red and burnished, and a talc temper was not used (Lyons, 2007: 364).



Figure 4.4: a) Traditional Beta Israel ceramics from near Gondar (JDC Archives, 2013); b), c) Beta Israel Ceramics with figurine handles (Cassiers, 1971), d) Example of a vessel from Sambo Monastery (Cassiers, 1971)

Cassiers (1971) briefly discussed the ceramics produced at the Ethiopian Orthodox Sambo Monastery in North eastern Ethiopia (exact location unclear). This was one of the few places in Ethiopia where men took an active role in the production of pottery. The clay was carefully aged for several months and the vessels were well fired. Cassiers claimed that the pottery is 'the only kind which has so far proved resistant to breaking or melting at high temperatures. It would be difficult for even an expert to ascertain that Sambo pottery is made by hand

and not the wheel' (1971: 46). As can be seen in Fig. 4.4d the Sambo pottery could have elaborate forms and was sometimes burnished a light orange colour.

Messing (1957) discussed pottery manufacture by Beta Israel (Ethiopian Jewish) women in Northern Ethiopia. The paste was produced from a mixture of three clays and the vessels were formed using the coil technique on a circular wooden plate. The walls were smoothed using a piece of bamboo, leather or pottery sherd, and the pot was sometimes burnished using semi-dried cow-dung. The vessels were fired using cow-dung as fuel. There were two methods of waterproofing after firing, the first involved reheating the vessel before pouring milk into it and quickly swirling it around. The second method used the resin from the leaves of the *ketketa* bush which grows on the high plateaus, or alternatively euphorbia in the valleys, to produce a 'crude glaze'. The Jewish potters were also one of the only groups who produce clay statuettes, and some vessels were decorated with these figures (Fig. 4.4b&c), such as on the handles of lids (Cassiers, 1971: 46). However, prior to the 1940s–60s the Beta Israel potters primarily produced wares for domestic use, and only started producing these figurines for the tourist trade (Kaplan & Rosen, 1996: 173-175; Pankhurst & Pankhurst, 2004: 42). While Messing did not describe the forms of the vessels, examples from the JDC Archives had pots which were often decorated with incised and punctate patterns and vases with flat bases, rough globular bodies with flared necks and simple rims (see Fig. 4.4a). The examples provided by Cassiers (see Fig. 4.4b&c) were of a higher quality; a carinated handled bowl and a coffee pot with an orange fabric, both with lids with figurine handles.

The Beta Israel were particularly seen as possessors of the *buda*, but it was unclear if pottery became stigmatised due to its association with the Beta Israel, or the Beta Israel became associated with the *buda* due to taking up pottery manufacture (Quirin, 1998: 208-209; Lyons & Freeman, 2009: 80; Dubois, 2008: 16-17). In the oral traditions of the Beta Israel, tradition claimed that after they were denied land due to refusing to convert to Christianity during the reign of Yeshaq (1413-30 AD), 'they were working as carpenters and builders and the women were doing pottery work' (Quirin, 1998: 200-201) as most other work was unavailable to them. From 1755 – 1900 the Beta Israel lost

their place as masons, carpenters and soldiers as the power and wealth of the state declined in the region, '[h]ence, they reverted more completely to the occupations of blacksmith, potter and weaver and were increasingly labelled *budā*'... [t]hough *budā* usage had been widespread in north-west Ethiopia, the *budā* stereotype fastened particularly on Beta Israel in the era of political instability of the early nineteenth century, as it increasingly became an ideology of separation' (Quirin, 1998: 208-209).

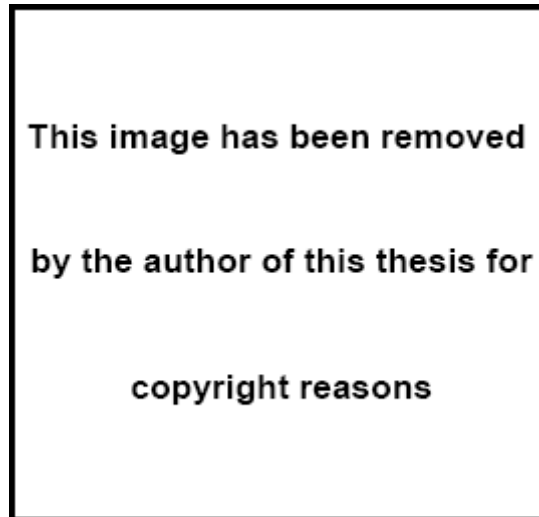


Figure 4.5: Potter from an unspecified location forming an animal food container (Dubois, 2008: 6)

Dubois' UNESCO report on Ethiopian traditional crafts (2008) provided a few interesting observations on contemporary Ethiopian potters. Potters from Lalibela traditionally formed vessels by having the clay static on a stand and physically circling round continuously to produce the vessel; a process which was observed to cause back issues (Dubois, 2008: 2). Additionally, there was a description of a household potter from an unspecified location 'modelling animal food containers out of mud mixed with cow dung (Dubois, 2008: 5).' It was not mentioned how these vessels are finished, or whether they were fired or sun-dried (Fig. 4.5).

While Anjum's MPhil thesis (2013) mostly focused on pottery manufacture in south Asia, there was a chapter on a project undertaken by the author in the town of Mekelle in Tigray alongside a group of women potters. The aim of the project was to improve to quality and variety of the pottery to compete with Chinese imports. Anjum noted that that there was no evidence for glazes used on locally produced ceramics (2013: 92-93). This accords with the

glazing of ceramics being unknown in sub-Saharan Africa until recently. Anjum mainly followed one potter, who performed all the work herself, including collecting and preparing the clay. The clay used was a mix of three types from two different sources, one of which was a ball clay and the other a shale type clay. The clay was collected and prepared in small batches as it was transported by hand (Anjum, 2013: 93, 95-96). Prior to the project the potter had only made coffee pots. All the vessels were formed using a combination of hand building and press moulding, with no wheel (see Fig. 4.6a). Anjum went into some detail on the process of forming the vessels: 'The pot begins with an 8 cm ball of clay, which is not too wet. Dry clay is sprinkled on the ground; the ball is made into a round slab, and then wrapped around a round mould, which becomes the fired hollow bottom piece of coffee pot. The rest of the pot is built with small (5 cm) coils and small slabs... Around the neck she carefully executes a pattern with coils and her needle tool. It takes her about 45 minutes to 1 hour to make each pot' (Anjum, 2013: 98). The pots were fired in batches of 20 in a pit outside the workshop (Fig. 4.6c).

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of this thesis for copyright reasons**

Figure 4.6: Potter from Mekelle (Anjum, 2013: 95): a) forming a coffee pot; b) the potter's tools; c) firing the pots

4.3 Northern and Central Ethiopia

A women's pottery cooperative in the Kechene district of the Gulele sub city on the northern outskirts of Addis Ababa was discussed in Dubois' UNESCO report (2008), as well as in another report focused specifically on the cooperative (Anbesa & Exodus-E.C.S., 2006). Dubois (2008: 25-27) noted that '[i]n Ethiopia there had never been any systematic encouragement to develop the basic pottery craft into an art form and its shapes remain strictly utilitarian, adapted to home needs.' This meant that '[t]he process of traditional pottery-making is primitive and exhausting' (Dubois, 2008: 25-27). The Anbesa report again highlighted the fact that that potters were primarily women, and that

craftsmen were generally of a lower class. Clay was collected from the river's shingle bed and dried before being pulverised in a large wooden mortar and pestle. Once powdered, the clay was kneaded with water before being formed into shape. The vessels were dried for several days before being engraved (if required) and finally fired, usually in 'rudimentary ovens' consisting of a hole in the ground and covered with dung as a fuel. It was noted that '[t]hese potters have a peculiar technique of conferring [*sic*] a black finish to the pottery, which usually is originally red. The objects are greased before being put in the oven, and after the baking they are left chilling under a mound of dried eucalyptus leaves. Once cold, they come out of the ashes black coloured' (Anbesa & Exodus-E.C.S., 2006).

In the areas studied by Cassiers (1971), primarily northern and central Ethiopia, the potters usually sat on the ground, moulding the pottery with their bare hands (see Fig. 4.7a). Both coil and lump techniques were known and both straw and grog made from crushed pottery sherds were used as temper. The body was smoothed using a knife-shaped piece of bone or bamboo and a piece of goat hide. Handles, spouts, stands and lids were produced separately and attached to the body. The vessels were sun dried for a few hours prior to firing. The 'glossy black finish' (potentially burnish) was produced as follows; 'while still half dry, the pots are rubbed with a mixture of red soil and water, to which oil is added. They are then placed in the sun. Following this operation, they are baked on a wooden fire, with a light covering of cow dung and eucalyptus leaves to protect them from the flames' (Cassiers, 1971: 46). This description was similar to the process described above for the Kechene women's pottery cooperative. This firing never exceeded 300–350°, which meant that the pottery was often brittle and fragile. At this stage the pots still had a matte red finish. The black burnished finish was produced by rubbing the surface of the baked pots with *Galaba* pods, which had the additional advantage of making the pottery slightly more waterproof. This was unlikely to be the same method used at Harlaa (see Section 5.3) as the black-red-brown variable firing colouring suggested that the burnishing was applied after the vessels were dried, but prior to firing. In addition, the burnished sherds from Harlaa generally appeared harder than was described here (see Chapter 5.2 and 7.2.3 for more detail). It

was unfortunate that Cassiers did not provide more detail on who the people she was discussing were, their beliefs, and where they were located.

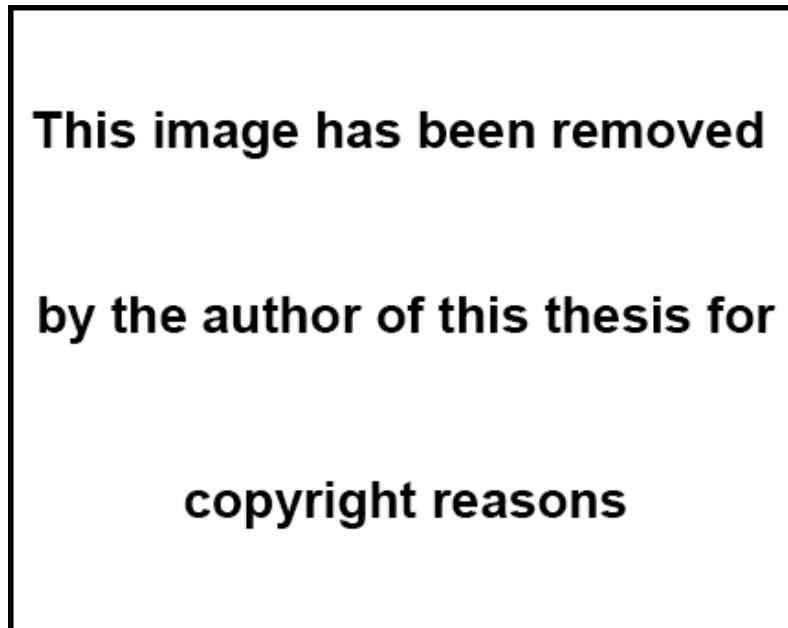


Figure 4.7: a) Ethiopian Potter (Cassiers, 1971: 45); b),c) Gurage vessels with non-clay additions (Cassiers, 1971); d) Decorated vessel from the Gamo (Arthur, 2014: 113); e) Gurage pot with pierced knob handles (Cassiers, 1971)

4.4 Southwestern Ethiopia

In parts of Ethiopia, particularly the south, non-clay elements were often incorporated into vessels. These included leather or straw stands and straps, which may be decorated with cowrie shells (Fig. 4.7b,c). Many cowrie shells have been recovered at Harlaa (e.g. Insoll, 2017a; 2018a; 2019; et. al., 2017; in prep), but there is currently no evidence for their use to decorate pottery. This may be due the fact that the ethnographically recorded materials for attachment were usually organic, and so would not be preserved at Harlaa. Gurage pottery when not in use was hung from walls by strings attached through small pierced knobs. While these knobs were initially purely utilitarian for the purpose of hanging the vessels, they are now an important decorative feature of Gurage pottery (Cassiers, 1971: 46). The pierced lug handles found at Harlaa (see Chapter 5.6.2.1), while different in appearance to the Gurage examples (see Fig. 4.7e), may have had a similar purpose for storage.

Arthur (2002; 2013; 2014) undertook an ethnographic study among the Oromo speaking Gamo of Southwestern Ethiopia which provided a detailed

overview of the pottery *Chaîne Opératoire*. The beliefs of the Gamo were not discussed, although it was mentioned that the introduction of Christianity was impacting pottery production (Arthur, 2003: 23). The Gamo potters were women, and undertook all aspects of production, from collecting the clay and wood, to forming and firing the vessels, to taking them to market. They produced ceramics all year round, only slowing during the rainy season due to difficulties with collecting clay and drying the vessels (Arthur, 2013: 8-9; 2014: 108). Each potter had between one and five clay sources depending on their access to land. Some potters added temper in the form of mined aplastics or grog (crushed pottery) if required (Arthur, 2002: 334). It was also noted that they often had to learn two different methods of producing pottery, one in their place of birth and one in their husband's community (Arthur, 2013: 12; 2014: 108).

Arthur recorded variation in styles of pottery between different villages, which represented different potter's personal styles. Villages without resident potters who acquired their pottery from markets had a higher variation of styles. The vessels were produced 'using a combination of hand-building, coil and scrape and paddle and anvil techniques' (Arthur, 2014:109). A piece of leather was used to help form the neck and rim, while the outside of the vessel was thinned using a bamboo stick and the interior using half a *kayshe* seedpod. Arthur noted 14 distinct forms of pottery vessels, with only nine being used throughout the region. In both the 2002 and 2013 article Arthur went into detail on the different manufacture processes for the different vessel forms (cf. 2002: 336; 2013: 14-17 for more detail). Once sun-dried, the vessels were burnished using a quartzite stone which was often an heirloom passed down from the mother or mother-in-law. Husbands occasionally assisted in the burnishing process (Arthur, 2013: 17). Vessels were decorated with a combination of comb-stamping (using sheep teeth attached to a stick or two iron prongs), appliqué (either embossed rings round the vessel or three to nine small projections on the upper wall) and rippling (tight incisions round the vessel) (see Fig. 4.7d). The positioning and style of decoration varied by both village and potter. Firing was a two stage process, with the vessel first being smoked and heated around a hearth for about four hours to dry out the clay before being transferred to an open fire outside for the full firing (Arthur, 2013: 17). After firing the potters applied a combination of *etema* (juice from the ensete plant), cow

dung and smudge (fine ash) to the exterior and interior of the vessels 'to give the vessel strength and beauty' (Arthur, 2013: 20).

Wayessa (2011, 2015) undertook an ethnographic study among the Macca Oromo in the South-west Highlands of Ethiopia. While the Wallaga Macca Oromo are predominantly Christian, with a small Muslim minority, many traditional Oromo practices were still observed. Pots were heavily personified by the Wallaga, with different parts of the pot associated through terminology with different parts of human anatomy. This was in part due to the Oromo creation myth in which humans were created from clay figurines (Wayessa, 2015, 395-397). As with most of the Ethiopian ethnographic studies discussed, potters were primarily women. Wayessa provided a detailed *Chaîne Opératoire* of the local pottery manufacture. After the clay was collected it was fermented for 2-3 days before temper was added. While the exact composition depended on both the form and function of the vessel, temper consisted of a mixture of grog, sand and *teff* straw. Three methods of fabrication were used; moulding, drawing from a lump and coiling, and coiling with a moulded bottom, with different methods being used for different types of vessels (Wayessa, 2011: 310; 2015: 394).

The main decorative styles on Wallaga pottery were appliqué, burnishing and punctate. The appliqué decoration consisted of lugs, the number of which had special significance, or crushed coils round the neck. Punctate decoration was applied to vessel lids and handles and was produced with a pointed stick, Wayessa argued that this decoration has links with Oromo girl's facial cicatrisation related to puberty and coming of age. Burnishing was produced by rubbing the dried surface of the vessel with a pebble (Wayessa, 2011: 311-315). The pots were dried in the shade or in special drying structures out of the sun. This was due to the pots being treated metaphorically 'like a baby' and so were kept out of sight of strangers and the sun. The potters associated leaving a pot in the sun to leaving a naked new-born baby in direct sunlight. The eyes of strangers were viewed as powerful and 'able to harm babies and wet pots', and the breaking of a pot due to a stranger's eyes was likened to murder (Wayessa, 2015: 397). Prior to firing the pots were warmed for about 15 minutes to remove any excess moisture. The pots were fired in a firing pit with a small piece of slag from an iron smith in the base of the pit to protect the vessels from witchcraft. The fuel consisted of straw and naturally fallen dried wood and was placed

above and below the vessels, with the firing process taking 30 minutes to an hour, until the pottery became red (see Fig. 4.8).



Figure 4.8: Pots after firing from the Macca Oromo (Wayessa, 2011: 319)

Kaneko's (2009; 2014) ethnographic study of Aari potters in Southwestern Ethiopia primarily focused on the transmission of knowledge from mother to daughter, however, some information on the pottery *Chaîne Opératoire* and vessel forms was provided. Once again, women were the primary potters, although their husbands occasionally assisted. The vessels the Aari potters produced were primarily earthenware vessels used for cooking (Kaneko, 2009: 383). Similar to the vessels produced by the Gamo above, the bottom of the vessel was formed separately through drawing from a lump, with the rest of the vessel built up from this (Kaneko, 2014: 59). At least 60 types of pots were recorded as used by the Aari people, each with a specific use, 2/3rds of which were used as cooking utensils. The *bun-til* or 'coffee leaves pot' was usually the first pot a young potter made, and they generally progressed from learning how to make smaller vessels to larger ones (2014: 65-66). 'Crystals' (likely a form of quartzite) were used for burnishing the pots as a finish (Kaneko, 2014: 64).

Haaland (2004; et. al., 2004a; 2004b) while primarily focusing on studying ironworking, did provide some useful insights into the links between ironworking and pottery among the Tsara people. This was relevant due to the evidence of metalworking at Harlaa, although at Harlaa it appeared to largely be related to jewellery manufacture. The study was undertaken among the Oromitic Tsara speaking people of the village of Oska Dencha in Southwestern

Ethiopia. Their beliefs were not clearly outlined, although the presence of aspects of indigenous belief were mentioned (Haaland et. al., 2004b: 83). Here there was once again a gender divide, with pot making primarily the task of women, while men undertook forging and smelting. However, at Oska Dencha all three groups fell under a social identity termed *mana*, one of the lower standings. This status was in large part due to the *buda* tradition discussed above. At Dawro, another Oromitic village, forgers were seen to be one of the highest occupational groups, while smelting and pottery manufacture remained low (Haaland et. al., 2004b:149, 156-157). Pot making and smelting were seen as linked as both involved transforming a natural resource (ore and clay) into cultural products (iron and pots) through fire. Additionally, there were links between the two as the furnace for iron smelting was constructed from the same clay used for pottery manufacture, and these were both vessels which are used to transform things (ore to iron and grain to porridge/beer) (Haaland et. al., 2004b: 157, 160-161). Unfortunately, due to the focus on ironworking, there were no descriptions of the local ceramics or their manufacture methods.

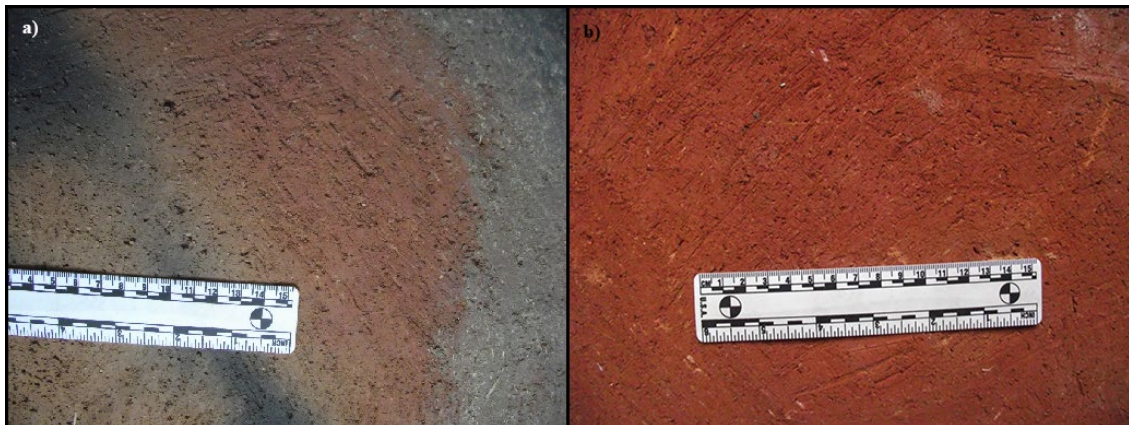


Figure 4.9: Close up of the rough bases of injera plates from the ARCCH Oromo ethnographic collection a) plate 2013-21; and b) plate 2013-4

4.5 Chartered City of Dire Dawa

Of particular note was a collection of vessels held in the ARCCH ethnographic store in Addis Ababa which were collected by anonymous researchers in the Chartered City of Dire Dawa district, where Harlaa is located. While these ceramics were Oromo, and so certainly post-date the historical Harlaa, they were of interest both as the closest spatially to Harlaa, and to consider alongside the survey assemblage to identify potential Oromo ceramics

collected during the survey. These Oromo ethnographic ceramics were briefly analysed and recorded during the 2019 field season with the permission of Ms. Endeshash Abate. A total of 14 vessels (not counting lids or sets of stands separately) were part of the Oromo Dire Dawa collection which consisted of four *injera* plates (one of which had an unfired lid), two sets of three stands for *injera* plates (called *goolicha* in Amharic [Dubois, 2008: 7]), a small *injera* plate, a large handled water jug, a large *tejj* jar, a *doro wot* pot with lid, a *shiro wot* pot with lid, a large open pot (for which the small *injera* plate was used as a lid) and two “frying pans” (See Appendix I). Unfortunately, the researchers did not leave any records of the manufacture processes or exactly where they were the vessels were collected. Based on the modern population they were likely produced by Islamic communities.

One unfortunate issue with the ceramics was that many of them had been painted with a red acrylic paint at some point, which obscured the surface finish. This was unlikely to have been the case when they were in use, particularly for vessels used for cooking. The paint also obscured much of the evidence for the manufacture processes. Only two of the vessels were clearly burnished, the *doro wot* pot and its lid (Accession Code: 1089a/b) and the large open pot (Accession Code: 73-03-3743). The other vessels were either smoothed earthenware or obscured by the paint. Many of the vessels, including the burnished examples, had roughened parts of the exterior, usually on the base or bottom half of the vessel. This finish was similar to examples found on many of the Earthenware/Plainware sherds from throughout the sequence at Harlaa (see Fig. 4.9, 4.10 see also Fig. 5.8e, 7.6 and 7.20a,c). The handles consisted of unpierced lug handles (primarily on the bowls) and circular ribbon handles (on the large jars and lids). Decoration was limited, consisting of appliqué ridges which were occasionally incised. The *injera* plates had a unique tapered rim suited to their use as large plates (Accession Codes: 2013-4a, 2013-21, No. 3, No. 1), while the rest of the Plainware vessels had simple, flat or flat lipped rims. The *doro wot* (Accession Code: 1089a) and *shiro wot* (Accession Code: 2013-15a) pots had unique triangular tapered rims and were also the only vessels with carination. All the vessels had rounded bases and there was no evidence for ring bases among the Dire Dawa Oromo vessels. The sun-dried lid for *injera* plates (Accession Code: 2013-4b) had large straw

temper visible and was likely formed over a woven frame (Abate, E., pers. comm.). This lid was a type of object associated with the use of the ceramic vessels which would rarely survive in the archaeological record at Harlaa.



Figure 4.10: Sherd HAR18(B)24-04 from Harlaa; large Earthenware/ Plainware body sherd with roughened exterior

4.6 Historical Sources

From the 14th century travellers from Europe and the Islamic world have recorded their travels and experiences in Ethiopia. Unfortunately, while many of these travellers left detailed memoirs of their travels, there was usually very little information on the local ceramics, and even less on their production. Many of these travellers mentioned the low status of artisans, including potters, which was discussed in the modern ethnography. For example, Charles Johnston, a British Naval surgeon who visited the kingdom of Shoa in Ethiopia in 1841 made a few brief comments on the local pottery, noting that the production of earthenware vessels was the domain of women (Pankhurst, 1959: 470). James Bruce, a Scottish Lord who went in search of the source of the Nile in Ethiopia from 1769-72 (Beckingham, 1964: 1-10) additionally brought up the fact that the Beta Israel produced superior ceramics compared to other Ethiopians despite being considered lower class citizens (Pankhurst, 1961: 287, 392).

The local ceramics used in feasts, particularly those with the Christian Ethiopian Emperor, were repeatedly described as black earthenware by many of the travellers. These included Manoel de Almeida, a Jesuit Father who was in

Ethiopia from 1624–33, who noted that the food ‘...comes in bowls of black clay. This is the dinner service of the poor and rich... (Beckingham & Huntingford, 1954: 63)’. Prutky, a Franciscan priest who visited Ethiopia in 1751, in contrast claimed that ‘The poor use crockery of black earthenware, the rich plain glass (Arrowsmith-Brown, 1991: 281)’. However, in the annotations Pankhurst noted that glass was rarely used, so the rich using glass was likely incorrect (Pankhurst, 1991: 281), and father Almeida’s assessment was correct. Father Francisco Alvares, who accompanied the 1520 Portuguese Embassy to Ethiopia made repeated references to the black earthenware, noting that it was well made, and often described it as like black jet or amber (e.g. Beckingham & Huntingford, 1961: 234, 337, 354, 363-364, 438). These were likely related to the black burnished wares which are still produced today, particularly as coffee pots and bowls for *shiro wot*. Alvares made mention of several different forms of burnished vessels; small sauce dishes (1961: 234), small cups (1961: 354), ‘little round porringers’ (1961: 438), small bowls (1961: 438), and large wine jars (about 18 pints volume), about which ‘the Ethiopians say that those jars are very large ox horns’ (1961: 337), which provided some indication of the form of these wine jars.

Charles Johnston travelled through ‘the country of Adal’ from 1842 to 1843 on his way to the Kingdom of Shoa, one of the principal kingdoms which made up the Christian Ethiopian Empire at the time, although it still had a large Muslim population (see 1.4.1.2). At the port of Tajourah, Johnston observed the use of a broken jar outside a building in the sheik’s compound for the faithful to perform ablutions, although he also noted that large skins were used to carry water in Tajourah as opposed to water jars (1844a: 9-10, 51). Red earthenware vessels were repeatedly mentioned for cooking, both on the coast and during Johnston’s travels inland (e.g. 1844a: 44, 78, 254, 291 307, 453), including ‘...a long-necked, globular, earthenware vessel, of common red clay, into the mouth of which was stuffed a quantity of dried grass, to act as a strainer (Johnston, 1844a: 44)’, used to serve coffee. The coffee was poured into small cups of a similar fabric which were compared to flowerpots in form. The nomadic ‘Bedouin’ were noted to have distinct ceramics. When observing a loaded camel, Johnston recorded ‘Black earthenware pots, contained in a kind of cage protectors made of some flexible shrub... (1844a: 287)’. While ceramics were

referenced many times once Johnston entered the Christian territories, the descriptions were extremely brief, simply describing pots, jugs and dishes as 'earthenwares' if the ware was described at all (e.g. 1844b: 28-29, 90-91, 139, 172). Of note were the description of a flat dish and plate used for making *injera* and its use (cf. Johnson, 1844b: 253) and 'immense earthenware jars' which were used for extracting salt from saltpetre (Johnson, 1844b: 261), which provided useful descriptions of the use of some of these vessels.

The French Scientific Mission to Ethiopia in 1839-43 included a brief description of pottery manufacture in the region around Gondar; 'Potters made jars to hold grain which were merely dried in the sun, and also jars to hold mead, beer or water which were burnt in wood embers carefully prepared (Pankhurst, 1959: 480)'. This largely fits with the methods described in the modern ethnographic studies, although except for those used for animal feed, all the ethnographic vessels were usually fired.

Father Alvares mentioned that in a letter to the king of Portugal, Emperor Lebna Dengal of Ethiopia requested craftsmen and artificers, including '...men who can make sheet lead and earthenware... (Pankhurst, 1959: 308).' This showed that the Ethiopian Emperor was looking to improve and adapt the local ceramics, although these potters from Portugal never arrived. In addition to the local ceramics, there were observations on imported ceramics which are worth mentioning. While discussing trade, Pankhurst brought up Tomé Pires' description of merchants from Cairo in the Red Sea from 1512-15. In this Pires noted that the imports to the ports of Zeila and Berbera, on the Somaliland coast, included '[f]rom India ...coarse pottery similar to that of Seville (Pankhurst, 1961: 357).' While not local ceramics, it was interesting that coarsewares were being imported in addition to the finer Chinese and Islamic glazed wares. Johnston's travels in Adal appear to suggest that *injera* was not consumed in the region, as the local bread was described as 'dusty' (e.g. 1844a: 52, 189) and bread similar to *injera* was not described until he entered the Christian regions (e.g. 1844a: 487; 1844b: 76, 90-91, 173).

While interesting, the historic sources were only of limited use while considering the local ceramics in medieval eastern Ethiopia, due to the limited interest that the various travellers had in ceramics. The more detailed descriptions of foods and feasts, which were not discussed here, will be of

some use when considering foodways at Harlaa in Chapter 7, although again their applicability is limited due to primarily being from the Christian regions of Ethiopia. There were likely differences in the foods consumed between Christian Ethiopia, where the travellers spent the majority of their time, and the Muslim regions which Harlaa was part of.

4.7 Conclusion

In conclusion, despite the richness of ethnographic work undertaken in Ethiopia, studies looking at ceramics and their production were surprisingly limited. Those available tended to focus on Christian peoples in the north of Ethiopia or the various Oromo groups throughout Ethiopia. These studies do show that certain elements are found throughout Ethiopia. Potters are overwhelmingly women and potters were generally considered a lower class. Clays were usually collected and prepared locally by the potter or a close associate and mixing of clays from multiple sources was not uncommon. Vessels were generally formed by hand without a wheel and were fired in open-air bonfires. Plainwares and burnished wares were usually both used and had different uses. However, considerable variation could also be seen. Decoration varied significantly, even between closely associated groups. The temper used also varied greatly depending on requirements and what was available. There were also a surprising amount of different techniques used for creating the burnished finish on vessels, despite burnishing being so common. The forms of vessels created, how they are used and the significance of, and interpretation of, different vessel also varied greatly depending on local traditions. This ethnographic literature will be relevant when considering manufacture and firing methods at Harlaa in Chapters 5 and 7, as well as vessel form and function in Chapter 7. The Oromo ethnographic ceramics from near Dire Dawa held in the ARCCH store will be briefly considered in Chapter 6 while discussing the surface collected ceramics from Harlaa and potential recent ceramics recovered as part of the fieldwalking survey.

The next chapter will study the local ceramics recovered from the 2015-2018 season excavations at Harlaa, the results of the ceramic analysis undertaken and to begin considering how the local ceramics can be used as chronological indicators.

Chapter 5: Excavation Ceramics Analysis

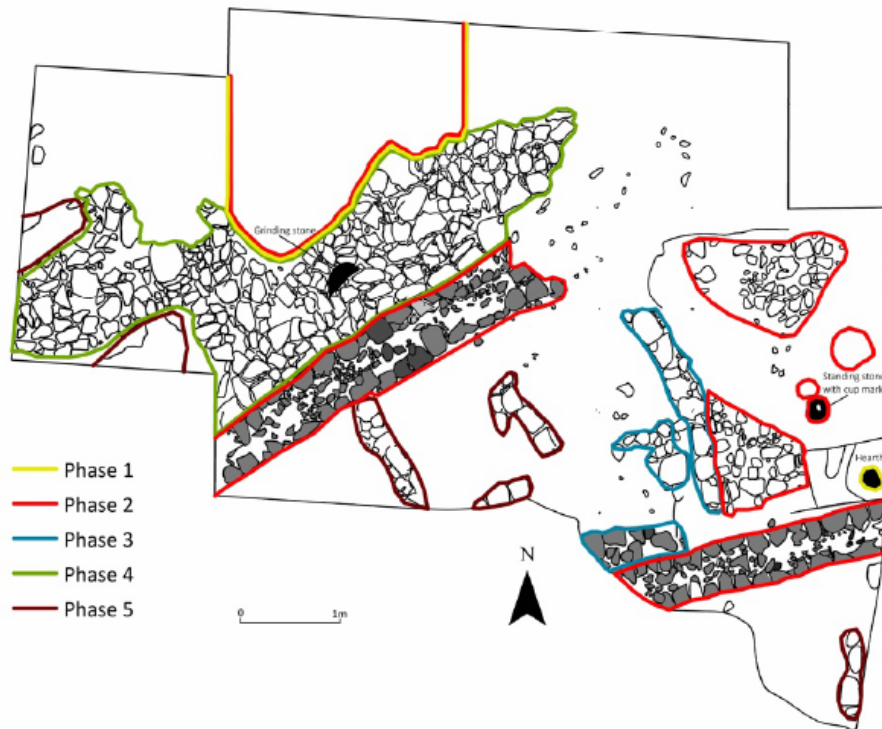


Figure 5.1: Plan showing the phases of Unit(B), the jewellery workshop, features and structures (Insoll, 2018b: 16)

5.1 Introduction

A total of 12506 local ceramic sherds were recovered and analysed as part of the excavations in the 2015-2018 seasons at Harlaa. 5114 sherds during the Harlaa 2018 season, with 4291 from HAR18(B) and 823 from HAR18(E), 4234 from the Harlaa 2017 season in HAR17(B) and 2422 sherds from the Harlaa 2016 season in HAR16(A). The ceramics from the 2015 season were culled of most of the non-diagnostic sherds prior to recording and analysis for this thesis, so only 736 sherds were analysed, with 101 from HAR15(A), and 635 from HAR15(B). The ceramics from context HAR16(A) 2 were lost in 2016 during an evacuation from the site due to a state emergency. Context HAR18(B) 13 ceramics were also misplaced during the 2018 season. No material was collected from HAR18(E) 1 as it was considered too disturbed (see App. Table III.1-6 for number of sherds by context for HAR15[A], HAR15[B], HAR16[A], HAR17[B], HAR18[B] and HAR18[E] and Table 5.4 for count of diagnostic sherds). Unit (A) was in a mosque, Unit (E) was in what has been

interpreted as a domestic building, while Unit (B) (consisting of HAR15[B], HAR16[A], HAR17[B] and HAR18[B]) were all in different parts of what was interpreted as a jewellery workshop (see App.Fig. III.1; also Insoll et. al., 2016; Insoll, 2017; Insoll, 2018a; Insoll 2018b; Chapter 1.4.2).

| Phase | Context/Unit | | | | Date (AD) |
|-------|--------------|----------|-------------|-----------|--|
| | HAR15(B) | HAR16(A) | HAR17(B) | HAR18(B) | |
| 5a | 1-3 | 1-2 | 1-2, 16 | 1 | Late 13 th – 14 th cent. |
| 5b | 4-5 | 3-6 | 3-6, 17-19 | 2-4 | Late 13 th – 14 th cent. |
| 4 | 6 | 7 | 21 | 5-6 | Mid/Late 13 th – Early 14 th cent. |
| 3 | 7-9 | 8-9 | 20 | - | Late 12 th – Late 13 th cent. |
| 2a | 10 | 10-12 | 7-10, 22-23 | 7-15, 17 | 11 th – Mid 13 th cent. |
| 2b | - | - | 11-14 | 16, 18-22 | 11 th – Mid 13 th cent. |
| 1a | - | - | 15, 24 | 23-24 | 7 th – 10 th cent. |
| 1b | - | - | - | 25-27 | 7 th – 10 th cent. |

Table 5.1: Jewellery workshop (Unit[B]) phases with associated contexts, see Fig. 5.1 for plan and App.Table III.7 for C14 dates (after Insoll, 2018b)

5.1.1 Jewellery Workshop Phases and Stratigraphy

Five distinct phases of occupation have been identified in Unit(B), the jewellery workshop (see Fig. 5.1, Table 5.1 and Insoll, 2018b for more detail). These phases ranged in date from the late 13th – 14th century AD to the 7th – 10th century AD (see Table 5.1 for phases, dates and associated contexts and App.Table III.7 for radiocarbon dates). For this ceramic analysis the larger phases were further broken down along stratigraphic lines. Phase 5 was the most recent phase dating to the late 13th – 14th century AD and was represented by cellular buildings partially built onto the Phase 2 floor. This Phase was sub-divided into two sub-phases for the ceramic analysis, Phase 5a and 5b. Phase 5a represented the upper contexts which had shown evidence of disturbance and potential modern contamination, while Phase 5b was the deeper potentially uncontaminated contexts. Phase 4 was dated to the mid/late 13th – early 14th century AD and was associated with an area of stone slab flooring, an earth floor and packing layers of faunal remains. Phase 3 was dated to the late 12th – late 13th century AD and consisted of walls built within the Phase 2 walls. Phase 2 was dated to the 11th – mid 13th century AD and was

represented by the large Harlaa-type walls and a schist floor as well as the upper layers of the deep stratigraphy.

Phase 2 was also divided into two sub-phases for the ceramic analysis, Phase 2a and Phase 2b. Phase 2a consisted of the contexts associated with the main workshop structure and the upper levels of the Phase 2 contexts in the deep deposits. These included two pit features (HAR18[B] 10-13 and HAR18[B] 14-15 and 17) associated with joining ceramic sherds and jewellery working deposits. Phase 2b consisted of the lower Phase 2 contexts in the deep deposits into which the pits included in Phase 2a were dug. These Phase 2b contexts included multiple working levels. Phase 1 was the earliest phase, dated to the 7th to 10th centuries AD and consisted of deep deposits including four working areas. For this ceramic analysis Phase 1 was broken down into two sub-phases, Phases 1a and 1b. Phase 1a represented the upper contexts of the phase visible in HAR17(B) and HAR18(B). Phase 1b included the deepest contexts in the Phase 1 deposits which had a notable absence of burnished sherds in the ceramic assemblage and were identified stratigraphically by an orangey gravelly soil (see Fig. 5.1 for plan showing the jewellery workshop phases).

While Phase 5a was separated as it showed particularly strong evidence for disturbance, there appeared to have been a degree of disturbance across the upper levels of the site, likely from activity associated with farming. This could be seen through a selection of Black/Brown Burnished ware sherds with incised decoration from HAR16(A) 9 (Phase 3) and HAR17(B) 6 (Phase 5b) which were connecting sherds from the same vessel (see App.Fig. III.2). Figure 5.2 shows the proportion of the jewellery workshop assemblage for each phase. HAR15(B) was not included in this graph or in the general discussion below as the culling of non-diagnostic sherds would have distorted the proportions of the wares.

As chronological phases had yet to be produced or applied to Unit(E), context groups (of two or three contexts) were used instead of phases. A similar approach was used for Unit(A), although a single AMS radiocarbon date from the lowest context (HAR15[A]10 provided an AD 1155-1255 range, which fits with around Phase 3 in the jewellery workshop chronology (see App.Table III.7).

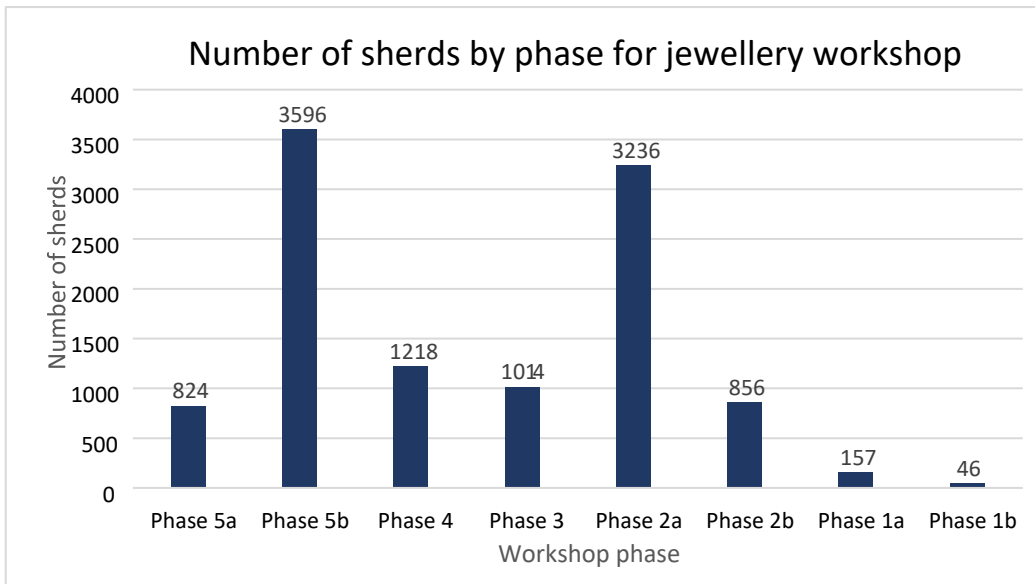


Figure 5.2: Number of sherds present in each phase of Unit(B) (jewellery workshop) for the uncultured units: HAR16(A), HAR17(B) and HAR18(B)

5.2 Fabric and Manufacture

5.2.1 Fabric

The fabrics were very variable, particularly with regards to colour, so the decision was made not to standardise the fabrics by fabric colour. The inclusions and temper were recorded based on Orton and Hughes' (2013; 281) classification: very fine; up to 0.1 mm, fine; 0.1 to 0.25 mm, medium; 0.25 to 0.5 mm, coarse; 0.5 to 1 mm and very coarse; larger than 1 mm. The visible temper and inclusions usually consisted of coarse – very coarse grit (see section 5.2.3 for more detail on inclusions), although there was evidence for very coarse organic temper in some Earthenware/Plainware sherds. Mica was a common inclusion the fabric across the wares. Some sherds, usually Earthenware/Plainware, have a very high proportion of mica, although the amount of high mica sherds was not recorded outside of diagnostic sherds for Earthenware/Plainware sherds. The fabric was generally quite dense across all ware types.

5.2.2 Manufacture

All the locally produced sherds appeared to be from hand-made vessels, although the manufacture process is an area for further study as few sherds showed any evidence for the methods used to form the vessel. While the exact

source is unknown, based on geological analysis by Asfawossen (pers. comm. 4/3/19), and the thin section analysis below (see section 5.2.3) the clay used came from local sources. The clay was likely kaolinite from weathered granite and collected from hollows near the site of Harlaa (A. Asfawossen pers. comm. 4/3/19). Based on the quality of the fabric and the variable firing colour as well as the ethnographic data, it is likely that the pottery was fired in open bonfires rather than in kilns (see Chapter 7.2.3 for more detail on manufacture).

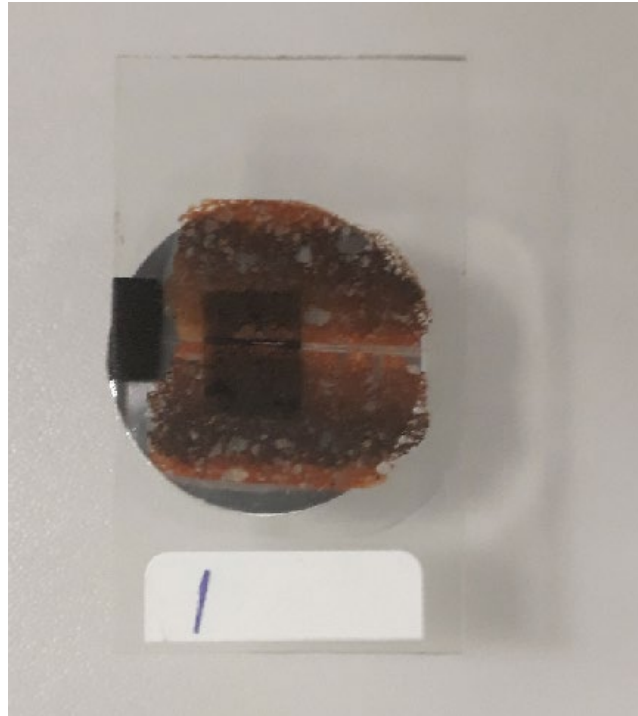


Figure 5.3: Sample 1 (Earthenware/Plainware from Phase 1b) thin section slide mounted on stand in preparation for SEM analysis

5.2.3 Ceramic Petrography

5.2.3.1 Introduction and methodology

A total of 12 sherds were selected for petrographic analysis, ten from Harlaa (nine from HAR18[B] and one from HAR17[B]), one from the site of Hubeyta on the road between Harlaa and Harar (see Fig. 7.23) and one from Bahrain in the Gulf. The result of the analysis of the latter two will be discussed in more detail in their respective sections in Chapter 7 (Chapter 7.4.1.2 and 7.5.3.6). The ten sherds from Harlaa were a combination of Earthenware/Plainware and Black/Brown Burnished ware, the two most common ware types at Harlaa and included sherds from across the phases of the jewellery workshop (see App. Table II.1). These sherds were selected to allow

comparisons between the fabrics of the burnished wares and the Earthenware/Plainware, as well as investigating potential changes in the fabric across the phases.

Thin section slides were created from each sherd. The decision was made not to coat the thin section slides for the SEM (Scanning Electron Microscope) analysis as testing showed that there was not a significant charge build-up which would impact the analysis. While mounting the slides for the SEM analysis a piece of conductive tape was added connecting the top of the slide, close to the sample, down to the stand to aid in reducing charge build up in the sample (see Fig. 5.3). A small piece of copper sheet was also attached to this tape on the sample for calibrating the SEM beam. SEM backscatter photographs were taken of each sample at a 60x scale, with additional higher resolution images taken of any interesting features or inclusions where required. EDS (Energy Dispersive Spectrometry) spectra were taken of key inclusions identified in the backscatter images, as well as of the fabric. It was not possible to collect geological samples of identified minerals from the region, and no EDS analysis has been undertaken on samples from the region. Therefore, the spectra were compared to databases of common mineral spectra (e.g. Website 3; 5), as well as cross referencing mineral databases (Website 3; 4; 6) alongside articles on specific mineral EDS analysis for rarer minerals, to identify the inclusions present in the fabric of the Harlaa ceramics.

5.2.3.2 SEM and EDS analysis results

One of the most common inclusions found in the Harlaa fabrics was quartz (e.g. App.Fig. II.2), which was identified in every sample, except for Sample 11, an Earthenware/Plainware sherd from Phase 2a. Quartz may have still been present in Sample 11 and was simply missed during the EDS analysis due to quartz appearing similar to anorthite feldspar in the backscatter images. As has been discussed above (see section 5.2.1), mica was often visible in the fabric to the naked eye. Inclusions formed of many thin sheets were visible in the SEM photographs for all the Harlaa fabrics (see Fig. 5.4). While examples were not analysed for every sample, those which were analysed were all identified as biotite mica (e.g. App.Fig. II.5) except for

spectrum 85 from Sample 3 (Black/Brown Burnished ware from Phase 2b, see App.Fig. II.20) which could have been impure or weathered biotite as it was on the surface of the sherd. The spectrum was also close to altered phlogopite (Aldega et. al., 2009: 702, Fig. 9B), another mica from the opposite end of the phlogopite-biotite series, which was another potential identification (Bishop et. al., 2003: 125; Website 2; 6).

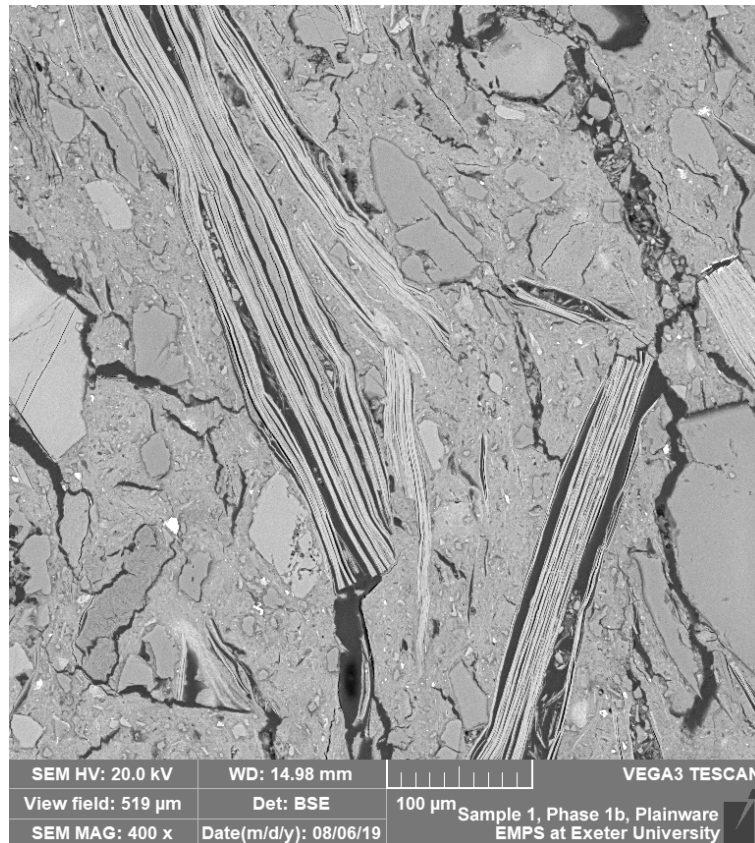


Figure 5.4: Close up backscatter image of Sample 1 (Earthenware/ Plainware from Phase 1b) showing many biotite mica inclusions

Various feldspars were also present in the fabrics from Harlaa. Feldspars are the most abundant group of minerals in the Earth's crust. There are two main groups of feldspars, the alkali feldspar series with potassium feldspars (or K-Feldspars), such as orthoclase at one end and albite (sodium rich feldspars) at the other, and the plagioclase feldspars between albite and anorthite (calcium rich feldspars) (see App.Fig. II.45). Feldspars readily alter and decompose into clay minerals, so it was expected that feldspar inclusions would be commonly found in the fabric of poorly sorted clays (Hodges, 1976, 23-24; Rice, 1987: 35; Bishop et. al., 2003; 136-139; Greenwood & Earnshaw, 1984: 414-415; Website 2; 6). The most common type of feldspar present was alkali feldspars similar to

anorthoclase, a K-feldspar leaning feldspar (e.g. App.Fig. II.7) The main clay mineral that K-feldspars alter into is kaolinite (Bishop et. al., 2003; 136; Website 6), which was likely the clay mineral in the Harlaa ceramics. An example of anorthite, a calcium rich plagioclase, was identified in Sample 11 from Phase 2a (see App.Fig. II.15), and two examples of higher sodium plagioclase feldspars were identified in Sample 7 (Phase 5b) and Sample 11 (Phase 2a) (e.g. App.Fig. II.15). These three minerals; quartz, biotite mica and feldspars were common inclusions throughout the wares and chronological sequence at Harlaa, and form the main visible inclusions, however there were additional smaller inclusions which were potentially focused in the fabrics of ceramics from particular phases.

Small zircon grains (<0.2 mm) were identified in 4 samples (e.g. App.Fig. II.2), Sample 1 (Earthenware/ Plainware from Phase 1b), Samples 11 and 12 (Earthenware/ Plainware and Black/Brown Burnished ware respectively from Phase 2a) and Sample 7 (Burnished ware from Phase 5b). Zircon is one of the most common accessory minerals in igneous rocks and is also found in some metamorphic rocks such as schist and gneisses. This fit with the proposal above that the source of the clay used was kaolinite from weathered granite (see 5.2.1). Due to its high hardness zircon is often found in sedimentary deposits from these rocks, which was likely how these grains entered the clay used for these vessels (Bishop et. al., 2003: 100; Website 2; 6). Small grains of ilmenite (< 0.2 mm) or a similar titanium-iron oxide (e.g. App.Fig. II.10) were also identified in Sample 10 (Black/Brown Burnished ware from Phase 2a), Samples 2 and 3 (Earthenware/ Plainware and Black/Brown Burnished ware respectively from Phase 2b) and Sample 6 (Black/Brown Burnished ware from Phase 3). Ilmenite is a common accessory mineral in igneous rocks, including granite, and therefore is also common in associated sediments (Bishop et. al., 2003: 46; Website 2; 6). A single example of a small (<0.1 mm) monazite-(Ce) grain was identified in Sample 2 (Phase 2b) (see App.Fig. II.24). Monazite is a relatively common rare-earth phosphate mineral and is often found in association with ilmenite in alluvial sands (Bishop et. al., 2003: 46, 86; Website 6).

A collection of iron oxide inclusions were identified in six samples across the sequence (e.g. App.Fig. II.2); Sample 1 (Earthenware/Plainware from Phase

1b), Sample 2 (Earthenware/Plainware from Phase 2b), Sample 6 (Black/Brown Burnished ware from Phase 3) and Samples 7, 8 and 9 (one Black/Brown Burnished ware and two Earthenware/Plainware respectively from Phase 5b). These inclusions were likely impure magnetite or impure hematite. Since magnetite is often associated with ilmenite, impure magnetite is the more likely identification (Bishop et. al., 2003: 43, 45-46; Website 3,4). The example from Phase 3 (see App.Fig. II.10) had a higher proportion of titanium in comparison to the other iron oxides, but not as high as in the ilmenite spectra. This was likely a titaniferous magnetite, another mineral on the ilmenite series (Dobrovine, 2004). Two high carbon inclusions were identified in an Earthenware/Plainware Sample 2 from Phase 2b and a Black/Brown Burnished ware (Sample 7) from Phase 5b, which likely represented the remains of organic inclusions, although the identity of the original organic inclusions could not be identified from the form of the inclusions.

A selection of inclusions could not be clearly identified. Three rounded inclusions in the fabric of samples from Phase 1b (Sample 1, Earthenware/ Plainware), Phase 2b (Sample 3, Black/Brown Burnished ware), and Phase 2a (Sample 10) were potentially stilpnomelane, a mineral associated with sedimentary iron banded formations and metamorphic rocks such as schists and slates (Website 2, 6). However, it was not a clear match and the crystal formation of the inclusions was not typical for stilpnomelane. Two inclusions in Earthenware/Plainware samples from Phase 5b (Samples 8 and 9) were unidentified. They had a similar composition to stilpnomelane, however, the spectra were clearly distinct to stilpnomelane and no match could be found (e.g. see App.Fig. II.13). An inclusion in Sample 12 (Earthenware/ Plainware from Phase 2a) was likely on the olivine series, close to fayalite. Fayalite is common in volcanic rocks such as basalt and granite and is often associated with other minerals present as inclusions at Harlaa such as quartz, ilmenite and magnetite (Bishop et. al., 2003: 96; Website 2; 6). Finally, an inclusion in Sample 10 (Black/Brown Burnished ware from Phase 2a) could not be clearly identified. The closest parallel to the spectrum was found on the enstatite-ferrosilite series (See hypersthene, Website 3; 4), although exact parallels could be found, especially with the clear calcium peaks (see App.Fig. II.13).

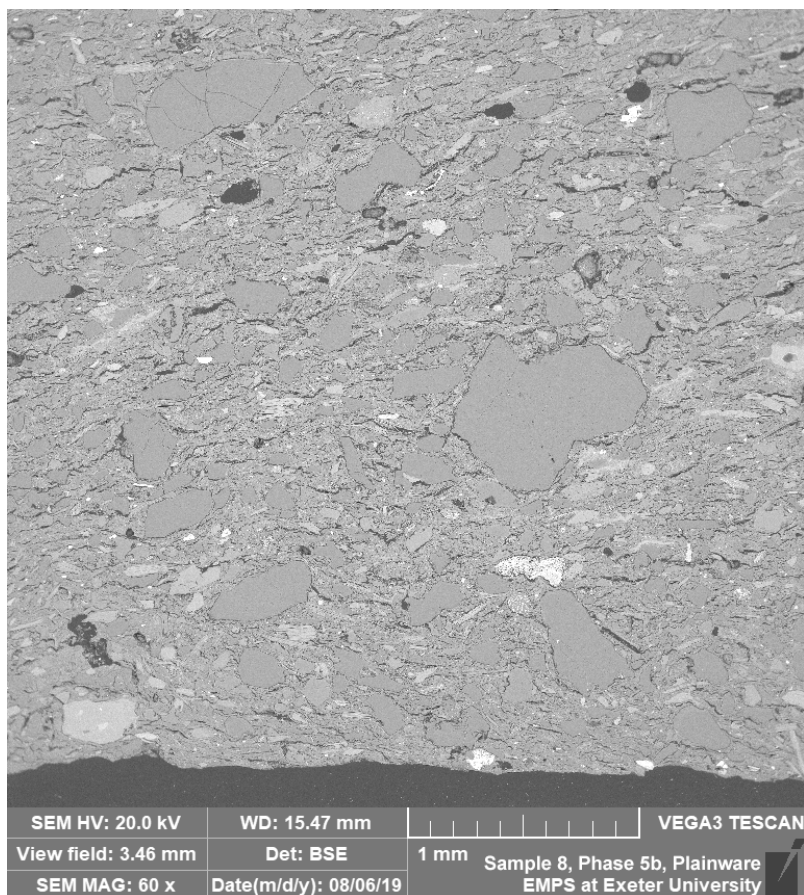


Figure 5.5: Backscatter image of Sample 8 (Earthenware/Plainware from Phase 5b) showing potential mixing of clays visible as lighter patches in the clay matrix

No noticeable distinction could be made between the inclusions present in the fabrics of the Black/Brown Burnished ware and the Earthenware/Plainware samples. This suggested that similar clays were used to produce the two wares. It was interesting that most of the varied inclusions were focused in the early phases at Harlaa. Small Zircon grains were focused in Phases 1b and 2a, with a single sample from Phase 5b, ilmenite was found in the fabrics from Phase 2a and 2b and the potential stilpnomelane was present in fabrics from Phase 1b to 2a. The small iron oxide inclusions were found throughout the sequence, but all three samples from Phase 5b contained iron oxide inclusions. Both the unidentified inclusions similar to stilpnomelane were also from Phase 5b. These changes in inclusions could suggest that there was a change in the source of clay used at Harlaa around Phase 2a/2b to a different, but related source. Alternatively, it could have represented a change in the processes of processing the clay for use, although, the continued presence of larger

inclusions makes this less likely. As the mineral inclusions all fit with material which could enter naturally from the local geology no inclusions could clearly be identified as temper added to the clay. It is important to note that due to the nature of the HAR18(B) assemblage, and the fact that the samples were selected prior to the establishment of the phases present in HAR18(B), the samples analysed did not include any examples from Phase 4, and only a single example from Phase 3 (collected from HAR17[B]), which may have limited the identification of changes in the fabric.

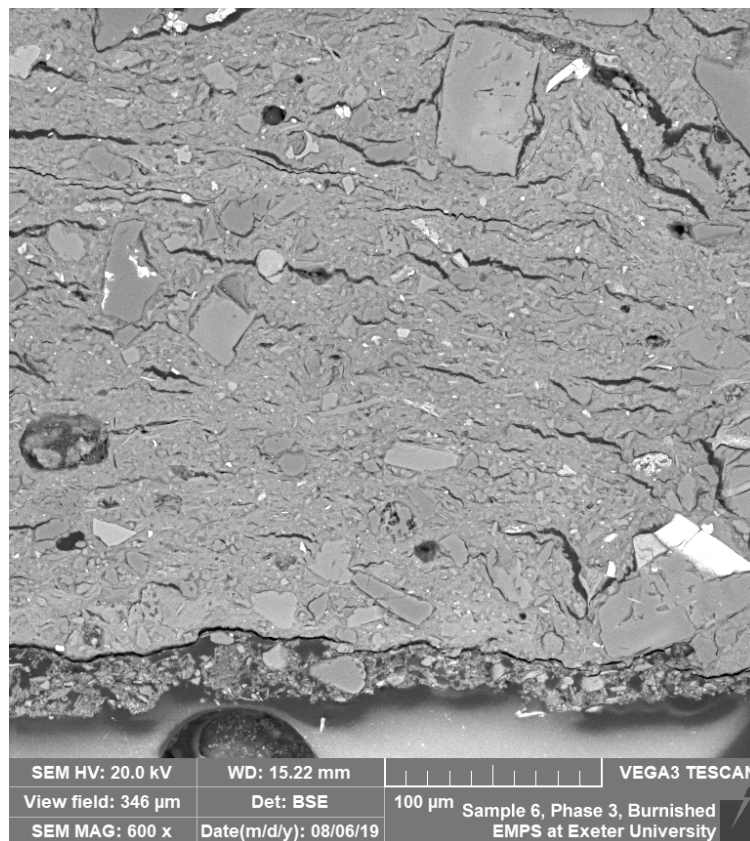


Figure 5.6: Close up backscatter image of deposit on exterior of Sample 6 (Black/Brown Burnished ware from Phase 3)

5.2.3.3 Conclusion

The fabric of the Harlaa ceramics appeared quite poor quality. In the SEM photographs abundant small (<0.1 mm) inclusions were visible in the fabric in addition to larger (0.5 – 1mm) inclusions and the large inclusions up to 0.5 cm and above which were visible to the naked eye. Additionally, many voids were visible in the fabric. These voids were usually thin and elongated, roughly parallel to the body of the vessel. This form of void fits with the vessels potentially being formed by pulling from a lump. Some samples contained

larger, irregular voids, particularly Samples 1 and 11 (Black/Brown Burnished ware and Earthenware/ Plainware from Phase 2a) and to a lesser extent Samples 1, (Phase 1b Earthenware/ Plainware), 2 (Phase 2b Earthenware/ Plainware) and 7 (Phase 5b Black/Brown Burnished ware). As these were primarily from the earlier phases, this could suggest that improvements were made to the preparation of the clay and manufacture procedure. Based on the backscatter SEM photographs, only Sample 8 (Earthenware/Plainware from Phase 5b) showed potential evidence for the mixing of different kinds of clays (see Fig. 5.5). No evidence could be found for the use of a slip on the Black/Brown Burnished wares, although if the slip was produced using the same clay it would be hard to identify. A deposit was found on the exterior of one burnished sherd, Sample 6 (Black/Brown Burnished ware from Phase 3). This deposit was not evenly distributed across the surface and contained many small inclusions (see Fig. 5.6). It was unclear what the deposit represented based on the spectrum, as it did not match the clay spectra and had a high carbon content, but may simply represent the remains of the deposits collected on the exterior during the use of the vessel. Overall, the inclusions identified and the broad spectra of the fabric support the theory that the clay used was a locally sourced kaolinite-based clay from weathered granite (Asfawossen, pers. comm. 4/3/19).

| Unit | Earthenware/ Plainware | | Black/Brown Burnished | | Light Brown Burnished | | Red Burnished | | Black Slipped | | Brown Slipped | | Unidentified | Total | |
|----------|---------------------------|-------|--------------------------|-------|--------------------------|------|------------------|------|------------------|------|------------------|------|--------------|-------|-------|
| | | | | | | | | | | | | | | | |
| HAR15(A) | 87 | 86.1% | 11 | 10.9% | 1 | 1.0% | 1 | 1.0% | 1 | 1.0% | 0 | 0.0% | 0 | 0.0% | 101 |
| HAR15(B) | 287 | 45.2% | 299 | 47.1% | 46 | 7.2% | 2 | 0.3% | 1 | 0.2% | 0 | 0.0% | 0 | 0.0% | 635 |
| HAR16(A) | 1768 | 73.0% | 536 | 22.1% | 72 | 3.0% | 20 | 0.8% | 16 | 0.7% | 0 | 0.0% | 10 | 0.4% | 2422 |
| HAR17(B) | 3298 | 77.9% | 768 | 18.1% | 106 | 2.5% | 12 | 0.3% | 30 | 0.7% | 8 | 0.2% | 12 | 0.3% | 4234 |
| HAR18(B) | 3619 | 84.3% | 496 | 11.6% | 135 | 3.1% | 16 | 0.4% | 9 | 0.2% | 1 | 0.0% | 15 | 0.3% | 4291 |
| HAR18(E) | 666 | 80.9% | 140 | 17.0% | 9 | 1.1% | 3 | 0.4% | 1 | 0.1% | 0 | 0.0% | 4 | 0.5% | 823 |
| Total | 9725 | 77.8% | 2250 | 18.0% | 369 | 3.0% | 54 | 0.4% | 58 | 0.5% | 9 | 0.1% | 41 | 0.3% | 12506 |

Table 5.2: Quantity and proportion of sherds by ware

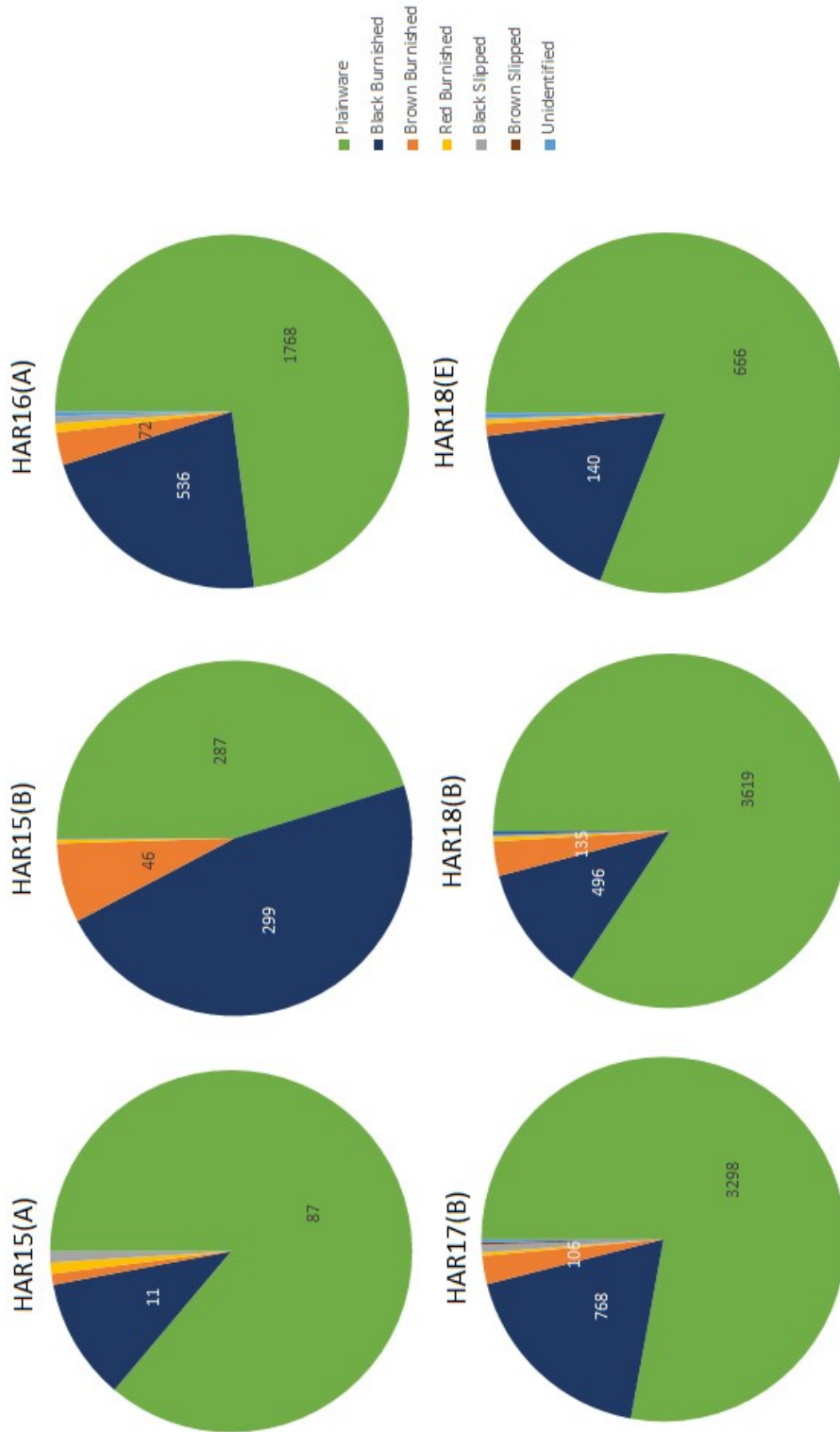


Figure 5.7: Charts showing the proportions of ware types for HAR18(B), HAR18(E), HAR17(B), HAR16(A), HAR15(A) and HAR15(B) see Table 5.2 for sherd counts and proportions and App. Table III. 1-6 for counts by context

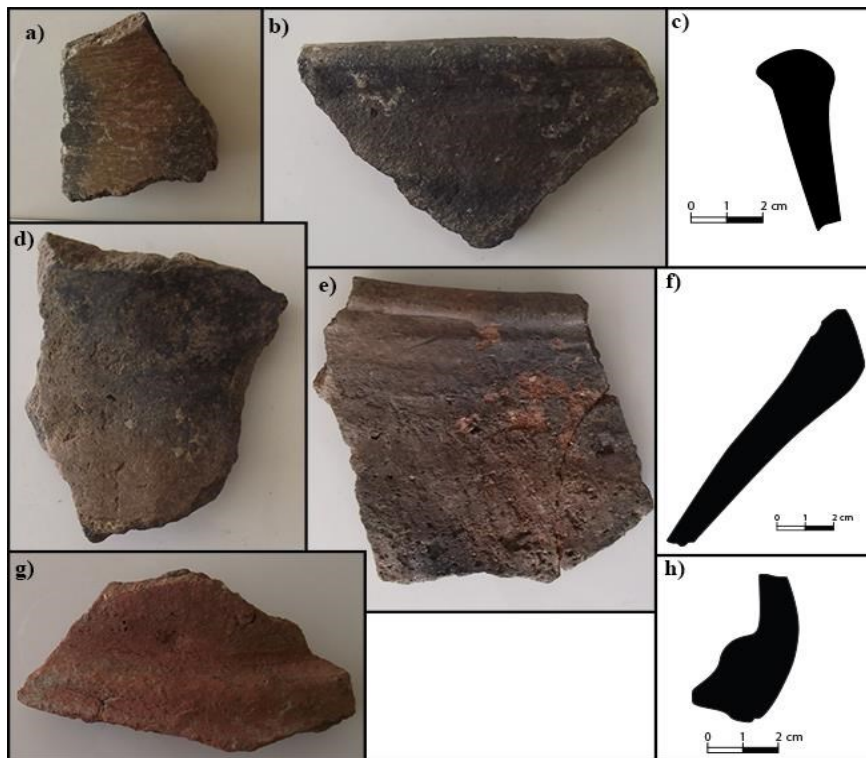


Figure 5.8: a) Light Brown Burnished body sherd fading to Black Burnished on edges; b), c) Black Earthenware/Plainware Rim, sherd HAR17(B)8-17; d) Brown/Black Earthenware/Plainware body sherd; e), f) Red/Brown/Black Earthenware/Plainware rim with voids, sherd HAR17(B)6-27 (see Fig. 7.20c for full profile); g), h) Red Earthenware/Plainware neck join HAR17(B)6-20a

5.3 Ware Types

5.3.1 Introduction

Six ware type categories were identified in the Harlaa assemblage in addition to a range of unidentified wares. The most common ware types were Earthenware/Plainware (78%) and Black/Brown Burnished ware (18%), followed by Light Brown Burnished ware (3%), which may be a sub-type of Black/Brown Burnished. Small quantities of Red Burnished ware, Black Slipped ware and Light Brown Slipped ware were also recovered as well as a collection of unidentified wares (see Table 5.2).

HAR15(A) and HAR15(B) were culled of non-diagnostic body sherds prior to analysis, so unfortunately quantitative analysis of the ware types would have some biases. This could be seen in the fact that in HAR17(B) 33% of Black/Brown Burnished ware sherds were diagnostic, while only 12% of Earthenware/Plainware sherds were diagnostic. This shows that the culling of non-diagnostic sherds could distort the proportions of ware types. Despite being

culled HAR15(A) had a higher proportion of Earthenware/Plainware (86%) and lower proportion of Black/Brown Burnished ware (11%) and Light Brown Burnished ware (1%) than HAR16(A) and HAR17(B) (see Fig. 5.7). This may suggest that the burnished wares were primarily for the consumption of food, and therefore not suitable for a mosque context. HAR15(B) actually had a higher proportion of Black/Brown Burnished ware sherds (47%) than Earthenware/Plainware (45%). Light Brown Burnished ware (7%) sherds were also abnormally high (see Fig. 5.7 and Table 5.2). This was likely due to the culling and the discrepancy in proportion of diagnostic sherds between burnished wares and Earthenware/Plainware discussed above.

5.3.2 Black/Brown Burnished Ware

Burnished black or very dark brown (N3, N2.5, 10YR3/1, 7.5YR-5/4, 10R3/1) on the exterior and smoothed, slipped or burnished on interior. The fabric was usually a similar colour to the burnishing; black, dark grey or dark brown, but was also occasionally red (98 [12.8%] red fabric sherds in HAR17[B], 59 [11.9%] red fabric sherds in HAR18[B] and 14 [10%] in HAR18[E]). As can be seen in Fig. 5.9, there was no clear pattern to the red fabrics for Black/Brown Burnished wares in HAR17(B) or HAR18(B); for example HAR17(B) 12 had none, while HAR17(B) 13 had the highest proportion of red fabric (40%). Phases 5a and Phase 4 did appear to have had a higher proportion than other phases (see Fig. 5.9). It was likely that this red fabric was due to variable firing conditions rather than a deliberate style or manufacturing method such as a slip. The fabric was usually quite dense with a medium to coarse inclusions, rarely very coarse. Mica was a common inclusion at Harlaa and Black/Brown Burnished ware occasionally had high mica (28 sherds in HAR17[B], 38 in HAR18[B] and two in HAR16[A]), which was visible through the burnishing. This high mica fabric was noticeably less dense and more friable than the standard burnished ware fabric. In the jewellery workshop units this fabric was found primarily in Phase 2, being more common in Phase 2a, with small quantities present in Phase 5a, 5b and Phase 1a. High mica Black/Brown Burnished ware sherds were also present in HAR18(E) (8 sherds, 5.7%). There were Black/Brown Burnished ware sherds which faded to the Light Brown

Burnished ware discussed below (5YR4/3, 7.5YR5/4), so it is possible that the two were the same ware with variable firing (see Fig. 5.8a). The distinction between the two was based on the fabric and surface colours with Light Brown Burnished ware usually having a lighter brown fabric similar to the surface.

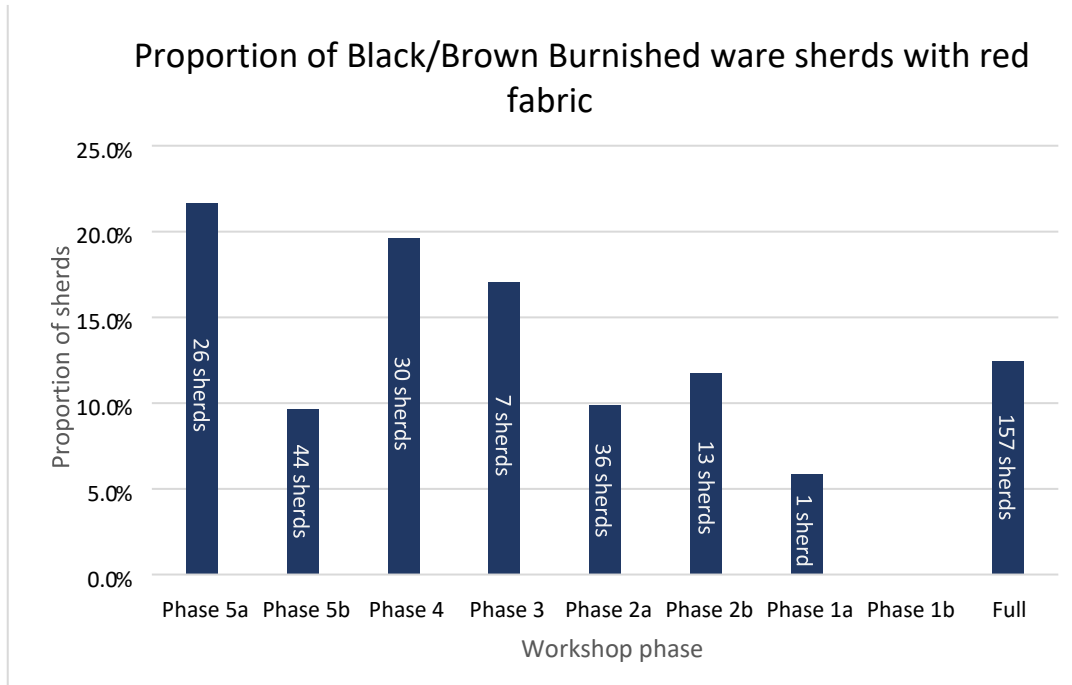


Figure 5.9: Proportion of red fabric Black/Brown Burnished ware sherds by phase for HAR18(B) and HAR17(B)

The Black/Brown Burnished ware type was found throughout all the phases and units with the exception of Phase 1a. In Unit(B) Black/Brown Burnished ware made up 12% (497 sherds) of the wares in HAR18(B), 18% in HAR17(B) (766 sherds), and 22% (536 sherds) in HAR16(A). The lower proportion in HAR15(A) (11%, 11 sherds) despite being culled of non-diagnostic sherds may suggest that uses of this ware were less suitable for the mosque. The high proportion in HAR15(B) (47%, 299 sherds) was likely anomalous due to the culling of non-diagnostic body sherds. Black/Brown Burnished ware made up 17% of the sherds in HAR18(E). Black/Brown Burnished ware sherds were more common in HAR16(A) compared to HAR17(B) and HAR18(B) (22% to 18% and 12%) which suggested that they were more common in Phases 5-2a, which HAR16(A) covered.

5.3.3 Light Brown Burnished Ware

Burnished light brown (5YR4/3, 7.5YR5/4) on the exterior and smoothed, slipped or burnished on the interior. The fabric was usually a similar colour to the burnishing; light brown or reddish-brown, and was noticeably lighter than the above Black/Brown Burnished ware. The fabric was generally quite dense with medium to coarse inclusions, rarely very coarse. There were sherds which faded to the Black/Brown Burnished ware (see Fig. 5.8a), so they may have been the same ware with variable firing. The distinction between the two for the analysis classification when a sherd faded from one to the other was based on the internal fabric colour, with the Black/Brown Burnished ware having much darker fabric. This ware type was found throughout the units and was the third most common ware type, which made up 2.8% of the un-culled assemblage from the jewellery workshop (HAR16[A], HAR17[B] and HAR18[B]). There was a decline in the amount of Light Brown Burnished ware sherds in Phase 2b and Phase 1 (see Fig. 5.11). Only a single Light Brown Burnished ware sherd was recorded from HAR15(A) in the Wall Cleaning context (W.C.) and it made up only 1.1% of sherds (9 sherds) in HAR18(E).



Figure 5.10: Carinated Red Burnished sherd HAR17(B)5-20 (Phase 5b)

5.3.4 Red Burnished Ware

Burnished red to reddish-orange (10R4/6, 2.5YR4/6, Fig. 5.10), occasionally one side was Light Brown Burnished (see section 5.3.3 above). Fabric ranged from red-red/pink to light orange (2.5YR 5/4, 2.5YR 4/3). The fabric was generally dense with medium to coarse inclusions, rarely very coarse. This ware type was quite rare and was concentrated in more recent contexts (Phase 3-5), although was found in small quantities throughout. A sherd from Phase 5a (HAR17[B] 2), was later worked into a disc possibly for

use as a gourd stopper (see App.Fig. III.5 and Chapter 7.3.2.1). These 51 sherds made up 0.5% of the non-culled workshop assemblage. This ware type was much more common in HAR16(A) (20 sherds, 0.8%) compared to HAR17(B) (14 sherds, 0.3%), and was found in every context in HAR16(A) except for HAR16(A) 12. Red Burnished only made up 0.4% of the HAR18(B) assemblage, but like HAR16(A), they were found throughout the assemblage, except for Phase 1a and 1b. This suggests that the Red Burnished ware, while having a long presence, was a more recent development as it was primarily associated with Phases 2-5. There were two Red Burnished ware sherds from HAR15(B) 6 and 8 (Phase 3), a single example from HAR15(A) 8 and three from HAR18(E). Additionally, while all Red Burnished ware sherds from HAR17(B) were purely red, there were several examples from HAR16(A) and HAR15(B) which faded to Black/Brown Burnished ware and a single example which faded to Light Brown Burnished ware.

5.3.5 Black Slipped Ware

A smoothed black slip (N3, N2.5) over a red or light brown (7.5YR 4/2, 2.5YR 4/4) fabric. The fabric was generally less dense than the burnished wares and had medium to coarse inclusions, occasionally very coarse. This ware type was concentrated around Phases 4-5 in the jewellery workshop and made up 0.5% of the non-culled assemblage (53 sherds). Heavily worn Black/Brown Burnished ware sherds sometimes looked similar to Black Slipped ware, which may be an explanation for the rare examples from earlier phases, particularly Phase 2a and 2b. Only a single Black Slipped ware sherd was recovered from HAR18(E), from the most recent context; HAR18(E) 2.

5.3.6 Light Brown Slipped Ware

Buff to light brown slip (10YR6/4, 7.5YR3/1) over a black to dark brown fabric. The fabric was generally quite dense and had a medium to coarse inclusions, rarely very coarse. This ware only made up 0.2% of the local ceramics (9 sherds) in HAR17(B), which was concentrated in Phase 5a, with a smaller presence in Phase 5b. This meant that Light Brown Slipped ware was a recent development in the sequence. As it was primarily present in Phase 5a,

which has evidence for disturbance, it may have largely post-dated the Harlaa period. No Light Brown Slipped ware sherds were recovered from HAR15(A), HAR15(B) or HAR16(A), although a single example was recovered from HAR18(B) in Phase 5b. Examples were found during the fieldwalking survey (see Chapter 6), which again supported Light Brown Slipped ware having been a recent ware type.

5.3.7 Earthenware/Plainware

Fabric colour was very variable, ranging from black to grey (2.5Y-4/1. N2.5) to brown (7.5YR5/3) to red (2.5YR-4/4, 7.5YR 6/4), often on the same sherd, as can be seen in Fig. 5.8b,d,e&g, with red the most common. The surface was usually smoothed at least on the interior and could be slipped in a similar clay to the fabric. However, slips can be hard to identify, especially when the same clay is used (cf. Shepard, 1956: 191-193; Haour, 2019, 141), so the decision was made not to separate out the slipped wares except where they were clearly slipped (Black Slipped [section 5.3.5] and Light Brown Slipped [section 5.3.6]). This ware was often fired multiple colours and was sometimes different on the interior and exterior of the vessel. The fabric ranged from medium to hard and generally had medium to coarse inclusions visible, although very coarse inclusions were not uncommon. It occasionally had very coarse organic temper, likely a form of a grass or straw, which was visible as voids in the fabric and on the surface (see Fig. 5.8e). A small collection of Earthenware/Plainware sherds (11 sherds from HAR18[B] and one from HAR17[A]) were burnished on the interior. These sherds had a roughened exterior, with the burnish usually being similar in colour to the Light Brown Burnished ware. This inner burnish was likely to improve the retention of liquids in the vessel. These inner burnished sherds were found in all phases except for Phase 3 and Phase 1a, and so were likely not indicative of any phase of use. Earthenware/Plainware was the most common ware type in all units, contexts and phases with the exception of HAR15(B), which as discussed above was likely anomalous due to sherd culling.

5.3.8 Unidentified

41 unidentified wares were recovered during the excavations which included a variety of unique ware types present as only a couple of sherds in one or two contexts, these are shown in Table 5.3. Twelve of the unidentified wares were likely examples of other local wares which were worn, damaged or misfired (see App.Fig. III.3). These included a selection of overfired or highly vitrified sherds which were likely originally burnished wares. It was not usually clear whether this over-firing occurred during the original firing, the use of the vessel, or after it was broken. These over-fired sherds consisted of one from Phase 5a (HAR17[B]16-10), four from Phase 5b (HAR17[B]4-49a/b/c, and HAR16[A]4-30) and two from Phase 3 (HAR16[A]9-64a/b). Unidentified worn sherds were recovered from Phase 5b (HAR16[A]5-11) and Phase 4 (HAR18[B]6-49a/b/c and HAR16[A]7-18). The unique unidentified wares will be discussed in more detail in the general discussion section below (section 5.3.9.4).

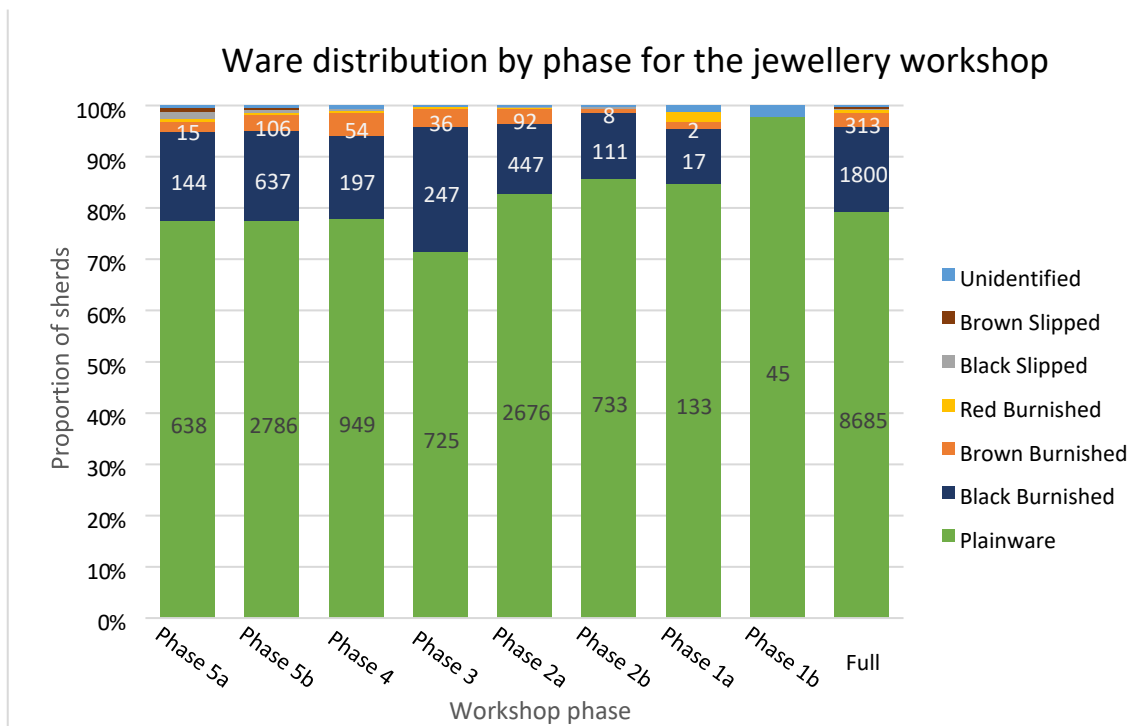


Figure 5.11: Proportion of ware types by phase for Unit(B) (jewellery workshop) (Excluding HAR15[B])

| Phase | Code | No. | Description |
|----------|---------------|-----|---|
| Phase 5a | HAR18(B)1-30 | 1 | Red burnished (10R 4/3) exterior with high mica |
| Phase 5a | HAR18(B)1-31 | 1 | Roughly burnished dark red (10R 3/3) exterior, dark brown (2.5YR 3/1) interior |
| Phase 5a | HAR17(B)2-27 | 1 | Light grey (5Y 5/1) 10mm thick smoothed on one side, rough/coarse on other, pink granite inclusions |
| Phase 5a | HAR17(B)16-10 | 1 | An overfired possible rim sherd in a grey (10YR 5/1) fabric and slip |
| Phase 5b | HAR18(B)2-25 | 1 | Flat, out-turned rim roughly burnished dark red |
| Phase 5b | HAR18(B)4-42 | 1 | Red fabric slipped and Burnished Light Brown (10YR 7/4), neck join and pierced lug handle |
| Phase 5b | HAR18(B)4-35b | 1 | Unidentified rim in a light cream/pink coarse fabric |
| Phase 5b | HAR17(B)4-48 | 1 | Light-pinkish fabric (5YR 6/3) with very fine temper and a red slip |
| Phase 5b | HAR17(B)4-49 | 3 | light brown/black slipped sherds including a ring base which appear to have been partially vitrified |
| Phase 5b | HAR17(B)5-37 | 1 | fine, light-coloured (7.5YR 7/2) fabric with a very light brown (7.5YR 7/3) burnish |
| Phase 5b | HAR16(A)3-17 | 1 | Very fine, well sorted red fabric (2.5YR-4/4) |
| Phase 5b | HAR16(A)4-30 | 1 | Unidentified vitrified sherd |
| Phase 5b | HAR16(A)4-31 | 3 | Dark brown (10R3/1) less dense well sorted fabric |
| Phase 5b | HAR16(A)5-11 | 1 | Unidentified sherd with heavy iron deposition, high mica, fine dense fabric |
| Phase 4 | HAR18(B)5-51 | 1 | Very fine, well sorted, dense high mica light grey (5Y 6/1) body with incised decoration |
| Phase 4 | HAR18(B)5-53 | 1 | Fine, well sorted red fabric, with a bright red, smoothed, likely painted exterior |
| Phase 4 | HAR18(B)6-49 | 3 | Possible worn Red Burnished sherds, 3 simple rims |
| Phase 4 | HAR16(A)7-19 | 1 | Very fine fabric, highly smoothed grey (5YR 5/1) sherd, 2 clear layers in fabric |
| Phase 4 | HAR16(A)7-18 | 1 | Pierced lug handle, likely very worn burnished sherd |
| Phase 3 | HAR16(A)9-64 | 2 | Unidentified over-fired burnished sherds |
| Phase 2a | HAR18(B)7-19 | 1 | Fine black plainware fabric with light brown, glazed or potentially residue on interior |
| Phase 2a | HAR18(B)10-38 | 1 | Light dusty pink (2.5YR 5/2) burnished body |
| Phase 2a | HAR18(B)14-16 | 1 | Finely sorted, medium density red-brown (10R 3/2) |
| Phase 2a | HAR18(B)17-18 | 1 | Light brown (10YR 6/3) exterior black fabric & interior, well sorted but not dense fabric, organic inclusions |
| Phase 2a | HAR17(B)7-30 | 1 | Highly smoothed red body sherd with reduced core |
| Phase 2b | HAR17(B)13-08 | 2 | Fine-medium black fabric with a light buff slip which has been highly smoothed, almost burnished |
| Phase 1a | HAR17(B)15-10 | 2 | Dark purple (2.5YR 3/2) sherds with fine, rarely medium inclusions, a very dense fabric slipped black |
| Phase 1b | HAR18(B)27-02 | 1 | Deep red (10R 4/6) medium density, well sorted fabric |
| - | HAR18(E)7-14 | 2 | Simple, in-turned rims, diam: A=11cm, B=11cm Light brown slip over coarse fabric |
| - | HAR18(E)9-07 | 1 | Dark purple body with black slip |

Table 5.3: Unidentified wares from Harlaa excavation units (see App.Fig. III.3-4 for photographs)

5.3.9 General Discussion

5.3.9.1 Earthenware/Plainware

As was discussed above, Earthenware/Plainware was the most common ware type found at Harlaa. In the jewellery workshop Phases 5a, 5b and 4 all have a very similar proportion of Earthenware/Plainware sherds at 77.4%-77.9% of the phase assemblage, this was close to the average proportion for the Full workshop assemblage (79.3%). Phase 3 had the lowest proportion of Earthenware/Plainware sherds at 71.6%. The proportion of Earthenware/Plainware sherds increased through Phases 2a-1b, until it made up 97.8% of the Phase 1b assemblage, with the only other ware present being a single unidentified sherd (See Fig. 5.11). Both smoothed and slipped and roughened Earthenware/Plainware sherds were found across all phases of the jewellery workshop indicating that the range of Earthenware/Plainwares were used throughout the sequence.

5.3.9.2 Burnished wares

The burnished wares discussed here consist of Black/Brown Burnished ware, Light Brown Burnished ware and Red Burnished Ware. Phase 3 contained the highest proportion of Black/Brown Burnished wares at 24.3% of the assemblage. Prior to Phase 3 there was a decline in the proportion of Black/Brown Burnished ware until Phase 1a, which contained no Black/Brown or Light Brown Burnished wares. This correlated with the increased proportion of Earthenware/Plainware sherds through the associated phases. Light Brown Burnished wares peaked at 4.4% in Phase 4, then also generally declined through the sequence. There was also a noticeable drop in Light Brown Burnished wares in Phase 5a (1.7%) compared to Phase 5b (3.0%). Red Burnished wares were found in small quantities throughout the phases of the jewellery workshop with the exception of Phase 1b, making up 0.5% of Phase 5a and 0.6% in Phase 5b and Phase 4 before which they declined until Phase 1a, where Red Burnished wares made up 1.9% of the assemblage, which was more than the 1.3% Light Brown Burnished ware, although admittedly this represented only three Red Burnished ware sherds compared to two Light Brown Burnished ware sherds. Additionally, these three Red Burnished sherds

were all from HAR17(B), while none were recovered from Phase 1a in HAR18(B).

5.3.9.3 Black Slipped and Light Brown Slipped wares

Both Black Slipped and Light Brown Slipped wares were both most common in Phase 5a, where they made up 2.0% and 0.7% of the assemblage respectively. Both were also present in Phase 5b in much smaller proportions (0.6% Black Slipped ware and 0.1% Light Brown Slipped ware), while Black Slipped ware continued into Phase 4 (0.4%). Black Slipped ware was also present in small quantities in Phase 2a and 2b (0.1% in each). These may either have represented very worn Black/Brown Burnished ware sherds with red fabric, which as discussed above sometimes looked similar to Black Slipped ware, or an earlier appearance of Black Slipped ware in Phase 2. It was also interesting that nine of the ten Light Brown Slipped ware sherds from the excavation units were recovered from HAR17(B), with the final example from HAR18(B), which may actually be an imported local ware from the Inland Somali Trading Towns (see section 5.4.8 below; also see Chapter 2.6 and 7.5.2.1; and González-Ruibal et. al., 2017). If Light Brown Slipped ware was a more recent ware, this may have been due to the disturbance and removal of the surface soil each successive season of excavation. Although this would not explain the absence from HAR16(A).

5.3.9.4 Unidentified wares

The variety of unidentified wares recovered from the excavations will be briefly discussed. Two sherds from Phase 1a (HAR17[B]15-10a/b) and sherd HAR18(E)9-07 from HAR18(E) 9, the bottom context from the Unit (E) domestic structure, had a dark purple fabric with occasional coarse-very coarse quartz inclusions and a smoothed black slip on the exterior and interior (App.Fig. III.4a-b). Due to their location, these could represent rare examples of a very early local ware type. A sherd from Phase 2a (HAR18[B]14-16) had a similar coloured fabric, but much finer, without the coarse quartz inclusions and no slip (App.Fig. III.4c-d). There were also two sherds, one from Phase 5b (HAR16[A]3-17) and one from Phase 1b (HAR18[B]27-02) with a much more

well sorted vibrant red fabric compared to the normal wares. Three sherds from Phase 5b (HAR16[A]4-31a/b/c) were made from a fine, well-sorted medium density dark brown fabric (App.Fig. III.4j). A light grey sherd from Phase 4 (HAR16[A]7-19) had a very fine, well sorted fabric with two clear layers in the fabric and a well smoothed surface (App.Fig. III.4k-l).

Two sherds, one from each of Phase 5b and 2a were burnished sherds of an unusual colour. The Phase 5b example (HAR17[B]5-37) was a very light brown, almost cream fabric and burnish, while the Phase 2a example (HAR18[B]10-38) was light dusty pink in colour. An unidentified sherd from Phase 2a (HAR17[B]7-30) had a fine fabric with few inclusions and a well smoothed, dense red surface with a reduced, black, less dense core. A thick, light grey unidentified sherd from Phase 5a had coarse granite/quartz inclusions and was smoothed on one side and rough on the other. An unidentified rim from Phase 5b (HAR18[B]4-35b) had a light pink fabric with coarse inclusions. Two rim sherds from HAR18(E)7-14 had a black fabric with coarse quartz inclusions which had been crudely slipped with a light brown slip. These were much coarser and friable than the typical Light Brown Slipped ware identified. A sherd from Phase 2a was of a similar fabric to the Earthenware/Plainwares and was fired black with an unusual interior surface (HAR18[B]7-19). The interior either has an unusual industrial residue, been crudely glazed, or slipped and highly burnished light brown (App.Fig. III.4g-h; also see Chapter 7.3.1.2).

A sherd with a light pink very fine fabric and a red slip on the exterior from Phase 5b (HAR17[B]4-48) was potentially an unidentified imported sherd. A sherd with a fine, well sorted red fabric and bright red burnished or painted exterior from Phase 4 (HAR18[B]5-53) also had similarities to imported painted sherds. A sherd from Phase 5a (HAR18[B]1-30) was the only Red Burnished sherd with high mica. Two sherds, one from Phase 5a (HAR18[B]1-31) and one from Phase 5b (HAR18[B]2-25) were roughly burnished red on the exterior, with gaps in the burnishing clearly visible. A sherd from Phase 5b had a red fabric which had been slipped and burnished Light Brown. This was the only Light Brown Burnished ware sherd with red fabric that showed evidence for being slipped and not fading to red on the surface. A sherd from Phase 4 (HAR18[B]5-51) had a fine, well sorted dense light grey fabric with smoothed surfaces and a wavy incised pattern (App.Fig. III.4e). This decoration had similarities to

examples from Yemen (see Chapter 7.5.3), although the fabric colour was different. Several connecting sherds (HAR18[B]17-18) were recovered from an unidentified ware in HAR18(B) 17 (Phase 2a). This ware had a fine, well sorted, but not dense fabric with a light brown exterior and black interior. The surface was smoothed, but showed evidence for voids from organic temper (see App.Fig. III.4f). Finally, there were two thick sherds from Phase 2b (HAR17[B]13-08a/b) with a fine, dense fabric fired light brown on the exterior and a reduced black core. Some of these unidentified sherds may have been examples of rare locally produced wares, other were potentially imported from other parts of the Horn of Africa, or unidentified imported wares from the wider Indian Ocean trade network (see App.Fig. III.3-4 for examples of unidentified wares).

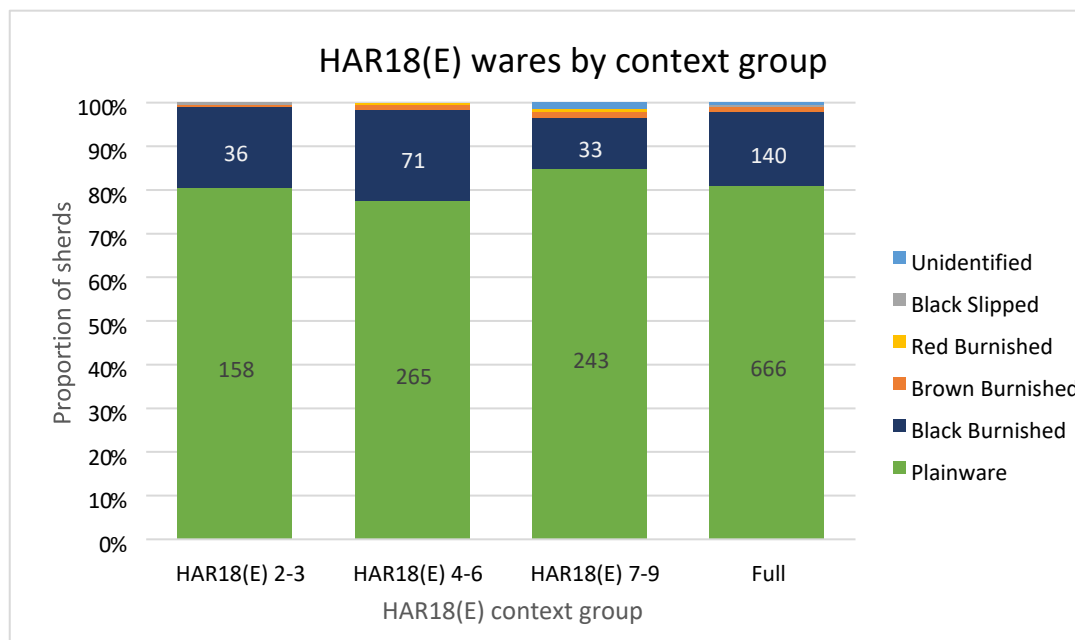


Figure 5.12: Proportion of wares by context group for HAR18(E), see App.Table III.6 for table of sherds quantities

5.3.9.5 HAR15(A), HAR15(B) and HAR18(E) wares

It was challenging to draw any conclusions on the distribution of ware types from HAR15(A) and (B) due to the culling of non-diagnostic sherds. However, the absence of Light Brown Burnished sherds in Phase 5a in HAR15(B) may have been significant considering that it was also absent in HAR16(A) and generally had a low proportion in Phase 5a (See Fig. 5.11). Also, HAR15(B) 4 (Phase 5a) contained the only Black Slipped sherd from

HAR15(B), which fit with the other jewellery workshop units. HAR15(A), in the mosque, had interesting concentrations of Black/Brown Burnished wares around HAR15(A) 1-2 and 6-9, and again the single Black Slipped sherd was from an upper context; HAR15(A) 2.

HAR18(E), in what was interpreted as a domestic building, had similar proportions of Earthenware/Plainware in the two upper context groups; 80.2% in HAR18(E) 2-3 and 77.7% in HAR18(E) 4-6, while the deepest context group (HAR18[E] 7-9) had a slightly higher proportion of Earthenware/Plainware at 85.0% (See Fig. 5.12). The proportion of Light Brown Burnished ware sherds was generally lower than in the jewellery workshop, with 0.5%, 1.2% and 1.4% in HAR18(E) 2-3, 4-6 and 7-9, while the jewellery workshop assemblage averaged at 2.8% Light Brown Burnished ware. Small quantities of Red Burnished ware were present in HAR18(E) 4-6 and 7-9, while the single Black Slipped ware sherd was from HAR18(E) 2-3, which fit with it being a more recent ware type. HAR18(E) was on a steeper slope than the jewellery workshop, this alongside the absence of material from context HAR18(E) 1 may explain relative lack of Black Slipped ware sherds in HAR18(E) (see Chapter 3.3 and 6.2.2-3)

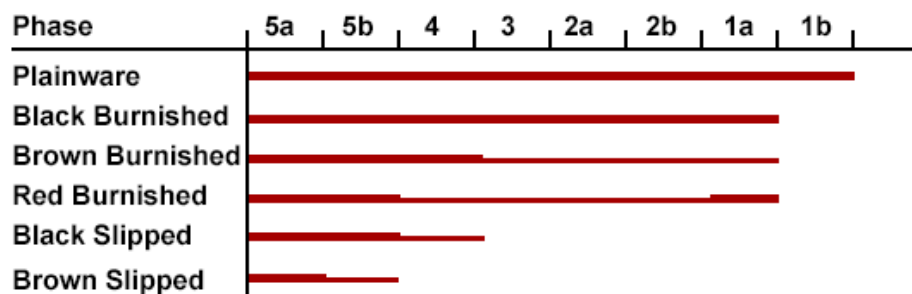


Figure 5.13: Proposed chronology for the ware types at Harlaa from Unit(B), (jewellery workshop) (see Table 5.1 for phase dates)

5.3.10 Conclusion

Therefore, ware types do provide some indication of chronology at Harlaa (see Fig. 5.13). Light Brown Slipped ware was heavily concentrated in Phase 5a with a small presence in Phase 5b, suggesting a late 13th – 14th century AD or later date. Black Slipped ware was concentrated in Phase 5 and potentially Phase 4 which would be indicative of a late 13th – 14th century AD, potentially mid-13th century date. The significance of the presence of small quantities of Black Slipped wares through to Phase 2 (11th – mid 13th cent. AD)

was unclear, but may suggest that this ware type extended further back in time. Lower proportions of burnished wares, particularly Light Brown Burnished ware may indicate Phase 2-3 (11th – mid 13th century AD and late 12th – late 13th century AD). The significance of Red Burnished ware is currently unclear as it was present in small proportions throughout the phases with concentrations in different units in different phases. This suggested that Red Burnished ware may simply be a rare burnished ware variant found alongside the other burnished wares.

| Unit | Diagnostic | | Body | | Total |
|------------------------|------------|----------|--------|----------|-------|
| | Sherds | Percent. | Sherds | Percent. | |
| HAR16(A) | 538 | 22.2% | 1884 | 77.8% | 2422 |
| HAR17(B) | 757 | 17.9% | 3477 | 82.1% | 4234 |
| HAR18(B) | 748 | 17.4% | 3543 | 82.6% | 4291 |
| HAR(B) Total | 2043 | 18.7% | 8904 | 81.3% | 10947 |
| HAR18(E) | 141 | 17.1% | 682 | 82.9% | 823 |
| Un-Culled Total | 2184 | 18.6% | 9587 | 81.4% | 11771 |
| HAR15(A) | 88 | 87.1% | 13 | 12.9% | 101 |
| HAR15(B) | 598 | 94.2% | 37 | 5.8% | 635 |
| Full Total | 2870 | 22.9% | 9636 | 77.1% | 12506 |

Table 5.4: Proportions of Diagnostic and body sherds by excavation unit. Note: high proportion of HAR15(A)/(B) diagnostic sherds was due to culling of non-diagnostic sherds prior to analysis

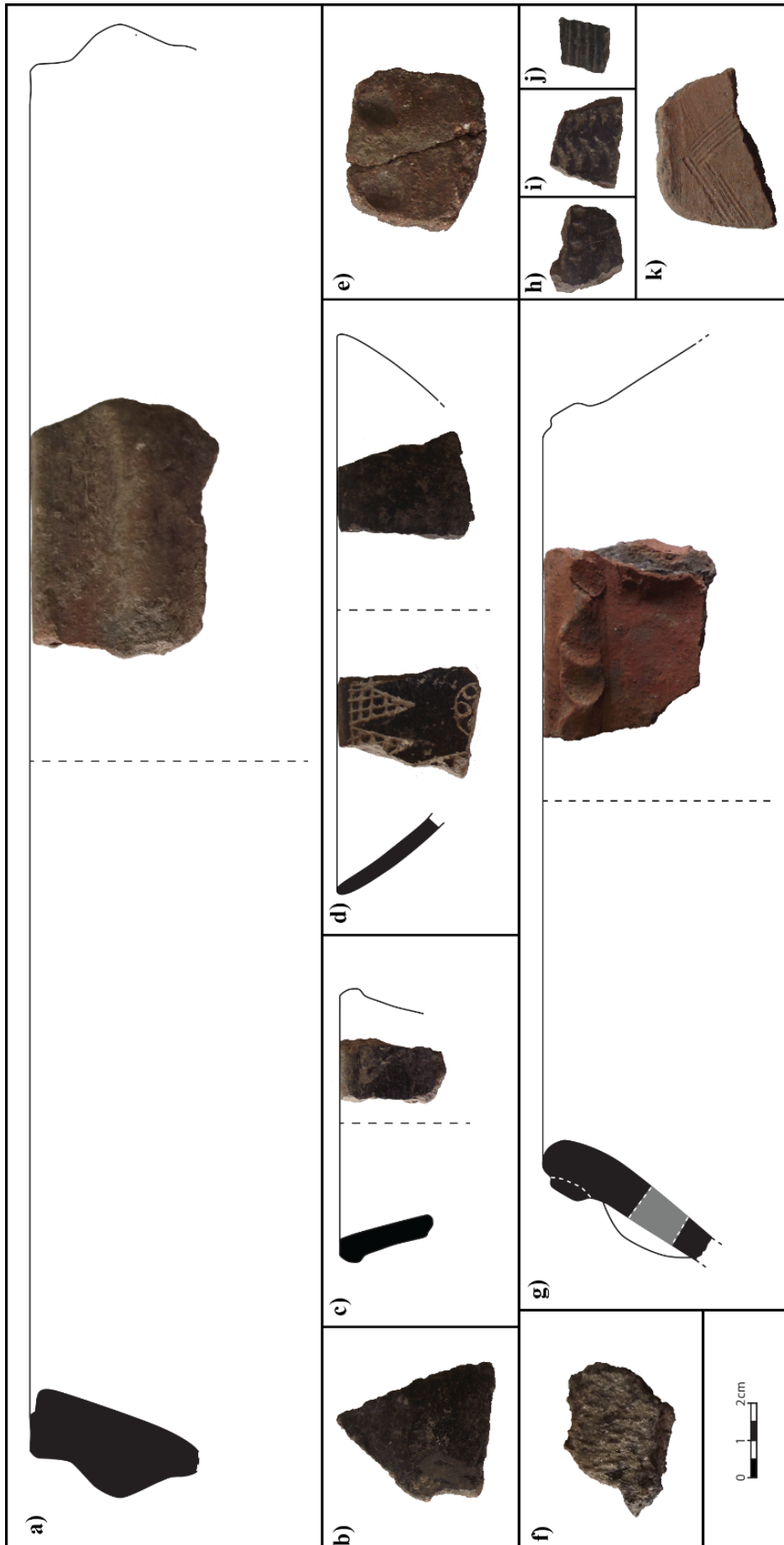


Figure 5.14: Decorated sherds from the jewellery workshop: a) rim with appliqué ridge (HAR17[B] 6); b) un-burnished pattern decorated body (HAR17[B]8-02); c) un-burnished pattern decorated body with rim (HAR17[B]8-06); d) complex incised body with rim (HAR17[B]5-08); e) finger pressed body (HAR17[B]5-25b); f) comb pricked body (HAR17[B]3); g) rim with finger pressed appliqué ridge under rim (HAR16(A)9-54); h) punctate body (HAR17[B]5-01c); i) incised body (HAR7(B)5-01b); j) incised body (HAR17[B]3-02b); k) comb grooved body sherd (HAR18(B)9-20a)

| Unit | Black Burnish | Brown Burnish | Red Burnish | Black Slipped | Brown Slipped | Plainware | Unident. | Total |
|------------|---------------|---------------|-------------|---------------|---------------|-----------|----------|---------|
| HAR16(A) | 48 | 8 | 1 | 2 | 0 | 21 | 1 | 81 |
| HAR17(B) | 60 | 7 | 2 | 0 | 2 | 36 | 0 | 107 |
| HAR18(B) | 33 | 13 | 1 | 0 | 1 | 32 | 1 | 81 |
| HAR15(B) | 52 | 5 | 1 | 0 | 0 | 23 | 0 | 81 |
| HAR15(A) | 3 | 0 | 0 | 0 | 0 | 6 | 0 | 9 |
| HAR18(E) | 11 | 3 | 0 | 0 | 0 | 7 | 0 | 21 |
| Total | 207 | 36 | 5 | 2 | 3 | 125 | 2 | 380 |
| Percentage | 54.47% | 9.47% | 1.32% | 0.53% | 0.79% | 32.89% | 0.53% | 100.00% |
| Ware | 7.83% | 8.95% | 8.33% | 3.64% | 33.33% | 1.02% | 5.41% | 2.46% |

Table 5.5: Number and proportion of decorated sherds

5.4 Decoration

5.4.1 Introduction

Decorative techniques were quite varied in the Harlaa assemblage, with 11 distinct types. A total of 380 sherds from Harlaa showed evidence for some form of further decoration. With the exception of HAR15(A), which only contained ten decorated sherds, and appeared to have had a much higher proportion of Earthenware/Plainware, all units had a higher proportion of decorated burnished ware sherds than Earthenware/Plainware. This was despite the fact that Earthenware/Plainware generally made up about 73%-78% of the assemblage. This suggested that burnished ware vessels were much more likely to be decorated than Earthenware/Plainware. 81 sherds from HAR18(B), 107 sherds (2.8% of total assemblage) from HAR17(B), 81 sherds from HAR16(A), 81 from HAR15(B), 9 from HAR15(A) and 21 from HAR16(E) had decoration (see Table 5.5 for breakdown by ware type).

The decorative styles present in the Harlaa assemblage were 'un-burnished' patterns, incised, punctate, finger impressed, comb impressed, appliqué, pinched, mat pressed, moulded, and covered and pierced (see Fig. 5.14-18 and App.Fig. III.6-8,11). Sherds sometimes had multiple different decoration types present, in this case they were included for each decoration style present in the quantification below. The small quantity of decorated sherds for Red Burnished ware, Black Slipped ware and Brown Slipped ware made drawing conclusions on their decorative styles unfeasible, so they will not be considered in any great depth. Despite the fact that it was only present on

burnished wares, the most common decorative style from the excavations across all ware types was un-burnished patterns, found on 140 sherds (see Table 5.6). The next most common were incised and punctate decoration, found on 125 and 74 sherds respectively (see Table 5.7 and 5.8).

| Phase | Black Bur. | Brown Bur. | Red Bur. | Black Slipped | Brown Slipped | Plainware | Unident. | Total |
|----------|------------|------------|----------|---------------|---------------|-----------|----------|-------|
| Phase 5a | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| Phase 5b | 37 | 3 | 0 | 0 | 0 | 0 | 0 | 40 |
| Phase 4 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Phase 3 | 24 | 3 | 1 | 0 | 0 | 0 | 0 | 28 |
| Phase 2a | 27 | 12 | 1 | 0 | 0 | 0 | 0 | 40 |
| Phase 2b | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| Phase 1a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR15(A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR18(E) | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| Total | 116 | 22 | 2 | 0 | 0 | 0 | 0 | 140 |

Table 5.6: Distribution of un-burnished decoration by ware type

5.4.2 Un-burnished Decoration

The 'un-burnished' style was only found on burnished wares as it was not suitable for other ware types. This style consisted of patterns in un-burnished lines on the body (See Fig. 5.14b,c and Fig. 5.24). This effect appeared to be produced by painting or dripping the burnished surface with either water or a slip, roughening the burnish prior to firing to produce a pattern. See Table 5.6 for a break down by phase. The patterns were usually zig-zags (32%), simple curved or straight parallel lines (53%), or complex patterns (7%). There did not appear to be any pattern to the distribution of the styles of un-burnished decoration across the phases (see App.Fig. III.9).

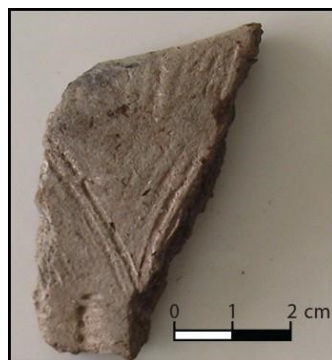


Figure 5.15: Possible Somali comb grooved sherd HAR17(B)4-30 (Phase 5b) (no profile)

| Phase | Black Bur. | Brown Bur. | Red Bur. | Black Slipped | Brown Slipped | Plainware | Unident. | Total |
|----------|------------|------------|----------|---------------|---------------|-----------|----------|-------|
| Phase 5a | 8 | 0 | 0 | 0 | 1 | 7 | 0 | 16 |
| Phase 5b | 25 | 3 | 3 | 0 | 1 | 16 | 1 | 49 |
| Phase 4 | 8 | 1 | 0 | 1 | 0 | 6 | 1 | 17 |
| Phase 3 | 12 | 2 | 0 | 0 | 0 | 5 | 0 | 19 |
| Phase 2a | 8 | 1 | 0 | 0 | 0 | 6 | 0 | 15 |
| Phase 2b | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Phase 1a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR15(A) | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 6 |
| HAR18(E) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 64 | 8 | 3 | 1 | 2 | 45 | 2 | 125 |

Table 5.7: Distribution of incised decoration by ware type

5.4.3 Incised Decoration

Incised decoration was found across all ware types, with no significant proportional bias towards any particular ware type (See Table 5.7). The incised decoration was usually simple parallel incised lines or dashes such as shown in Fig. 5.14i,j, although there were examples of complex incised designs, usually on burnished ware sherds (see Fig. 5.14d). On burnished ware sherds the incisions were usually applied after the surface has been burnished, although there were rare examples which appear to have been burnished (and possibly slipped) after the grooving. While the sherds were usually incised using a sharp stick-like object, there were occasional examples with comb-grooved decoration (six sherds; four Earthenware/Plainware, one Black/Brown Burnished ware and one Light Brown Burnished ware; see Fig. 10f for an example). An Earthenware/Plainware example from HAR16(A) 4 (Phase 5b) was grooved using a comb (see Fig. 5.15) and was possibly a local vessel from the Somali Islamic towns, as a similar decorative style is found there (de Torres, 2017, pers. comm. 25/11/17).

| Phase | Black Bur. | Brown Bur. | Red Bur. | Black Slipped | Brown Slipped | Plainware | Unident. | Total |
|----------|------------|------------|----------|---------------|---------------|-----------|----------|-------|
| Phase 5a | 6 | 0 | 0 | 1 | 0 | 1 | 0 | 8 |
| Phase 5b | 8 | 0 | 0 | 0 | 1 | 10 | 0 | 18 |
| Phase 4 | 5 | 1 | 0 | 0 | 0 | 5 | 0 | 11 |
| Phase 3 | 6 | 0 | 1 | 0 | 0 | 2 | 0 | 9 |
| Phase 2a | 7 | 3 | 0 | 0 | 0 | 6 | 0 | 16 |
| Phase 2b | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Phase 1a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR15(A) | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| HAR18(E) | 4 | 0 | 0 | 0 | 0 | 2 | 0 | 6 |
| Total | 36 | 4 | 1 | 1 | 1 | 31 | 0 | 74 |

Table 5.8: Distribution of punctate decoration by ware type

5.4.4 Punctate Decoration

Decoration consisting of punctate dots (see Fig. 5.14.h and Fig. 5.16) was found on most ware types (see Table 5.8). The punctate decoration was mainly located on the body, or rarely, on appliqué ridges or the rim. The punctate decoration was likely made using a small twig or stick as opposed to a comb as they were often irregularly spaced and usually circular in form (39 sherds, 56%). Triangular and rectangular punctate decoration (24 sherds 34%) showed evidence for worked sticks or metal rods also used to produce punctate decoration. Rare examples with unusually shaped impressions showed that a variety of tools were experimented with. A unique Light Brown Burnished ware sherd from HAR18(B) 10 (Phase 2a), which also had appliqué decoration, had punctate decoration which appeared to have been produced with a roughly snapped stick as the impressions of the fibres could be seen (Fig. 5.16a,b). An Earthenware/Plainware example from HAR18(B) 6 (Phase 4) had ~5 mm u-shaped punctate decoration (Fig. 5.16c,d). An example from HAR17(B) 13 (Phase 2b) may have been produced with a piece of straw, as the impression of the outer layer was visible (Fig. 5.16e). The punctate decoration ranged in diameter from ≤ 2 mm to larger than 1 cm in size, although they were generally less than 2 mm (34 examples, 47%) or between 2 mm and 5 mm (29 examples, 40%) in size. The punctate decoration was generally quite shallow, but there were some examples with deep holes (see App.Fig. III.8). This decorative style was common on both Black/Brown Burnished ware and Earthenware/Plainware.

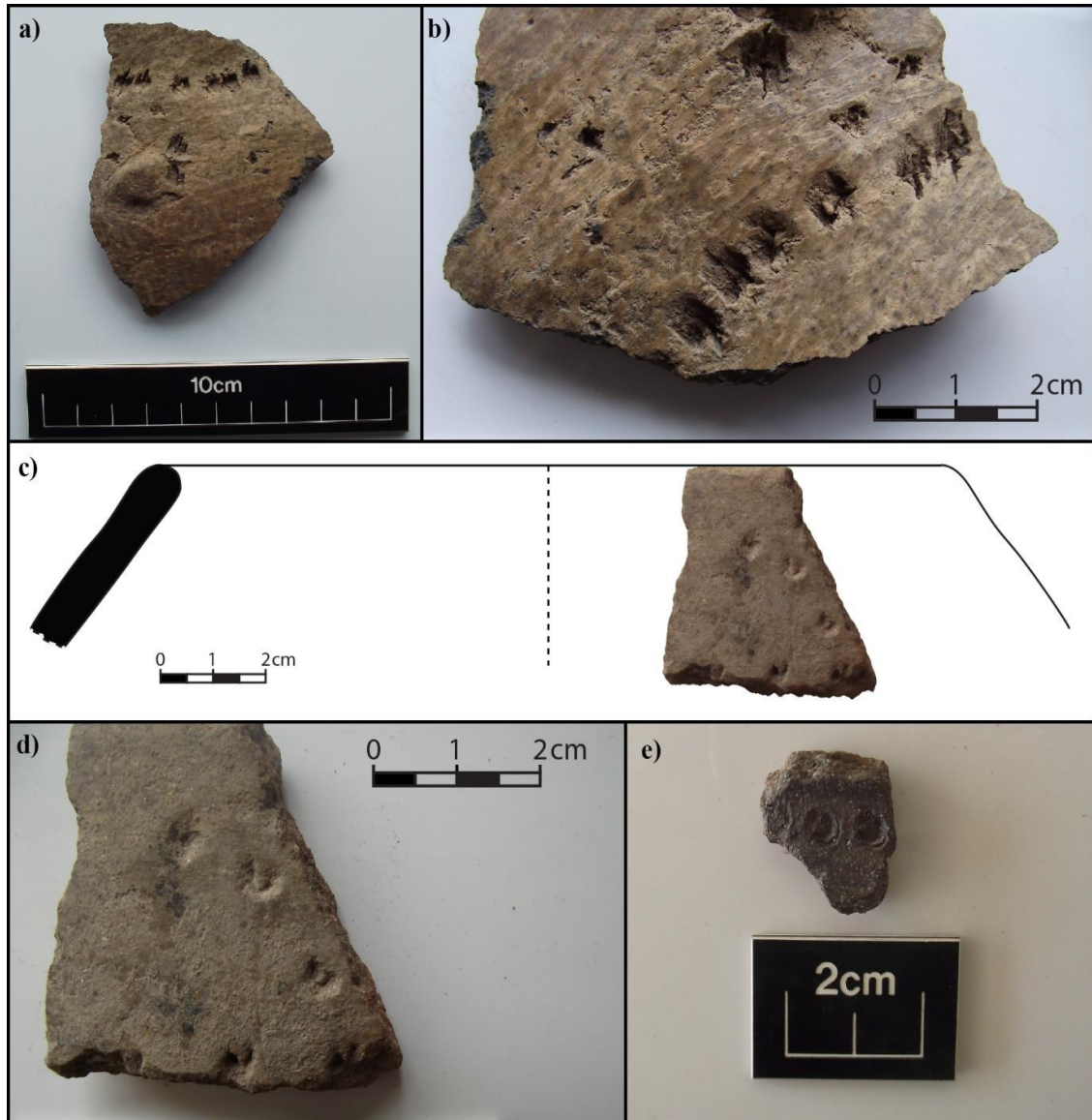


Figure 5.16: Examples of punctate decoration styles; a),b) sherd HAR18(B)10-16, Light Brown Burnished ware body sherd with appliqué decoration and crude punctate decoration; c),d) sherd HAR18(B)6-36, Earthenware/Plainware Simple, In-turned rim with semi-circular punctate decoration; e) Sherd HAR17(B)13-03, Earthenware/Plainware body sherd potentially produced with a “straw”

| Phase | Black Bur. | Brown Bur. | Red Bur. | Black Slipped | Brown Slipped | Plainware | Unident. | Total |
|----------|------------|------------|----------|---------------|---------------|-----------|----------|-------|
| Phase 5a | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 |
| Phase 5b | 3 | 0 | 0 | 0 | 1 | 9 | 0 | 13 |
| Phase 4 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 5 |
| Phase 3 | 1 | 0 | 0 | 0 | 0 | 10 | 0 | 11 |
| Phase 2a | 0 | 2 | 0 | 0 | 0 | 11 | 0 | 13 |
| Phase 2b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR15(A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR18(E) | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 4 |
| Total | 7 | 3 | 0 | 0 | 1 | 40 | 0 | 51 |

Table 5.9: Distribution of appliqué decoration by ware type

5.4.5 Appliqué Decoration

Appliqué decoration was found on 50 sherds, heavily favouring Earthenware/Plainware (see Table 5.9). Appliqué decoration on Earthenware/Plainware usually consisted of a raised ridge (87%) as shown in Fig.14a. This ridge was often further decorated with incised (six examples), punctate (three examples) or finger impressed (11 examples) decoration. The appliqué decoration was usually found just under the rim, or on neck joins (see Fig.14.a,g). The appliqué decoration on burnished wares consisted of seven examples on Black/Brown Burnished wares and three on Light Brown Burnished wares, of these, one of the Black/Brown Burnished ware examples (Phase 3) and two of the Light Brown Burnished Ware (Phase 4 and 2a) consisted of appliqué dots on the rim. The remaining burnished ware examples were decorated with appliqué dots except for a Black/Brown Burnished ware example from HAR18(E) 3 with perpendicular appliqué ridges and punctate decoration (see App.Fig. III.6). The single Light Brown Slipped ware example from HAR17(B) 2 (Phase 5a) was a punctate decorated ridge. While most of the ridges were clearly appliqué, it was not always clear and some may have actually been moulded from the body of the vessel.

| Phase | Black Bur. | Brown Bur. | Red Bur. | Black Slipped | Brown Slipped | Plainware | Unident. | Total |
|----------|------------|------------|----------|---------------|---------------|-----------|----------|-------|
| Phase 5a | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Phase 5b | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| Phase 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Phase 3 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 |
| Phase 2a | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| Phase 2b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR15(A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR18(E) | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 3 |
| Total | 2 | 0 | 0 | 0 | 0 | 15 | 0 | 17 |

Table 5.10: Distribution of finger pressed decoration by ware type



Figure 5.17: Earthenware/Plainware body with possible woven mat impressed sherd HAR16(A)5-04 (Phase 5b)

5.4.6 Finger Impressed

There were 17 examples of finger impressed decoration from Harlaa (see Fig. 5.14e,g). Except for single Black/Brown Burnished ware examples from HAR16(A) 11 (Phase 2a) and HAR18(E) 2 they were all Earthenware/Plainware (see Table 5.10). The Black/Brown Burnished ware example from HAR16(A) 11 (Phase 2a) was a large detached extended foot ring (see App.Fig. III.7). While the example from HAR18(E) 2 had finger impressions, including the nail visible, on the body. Eleven of the Earthenware/Plainware examples of finger impressed decoration (73%) were on appliqué ridges (see Fig. 5.14e).

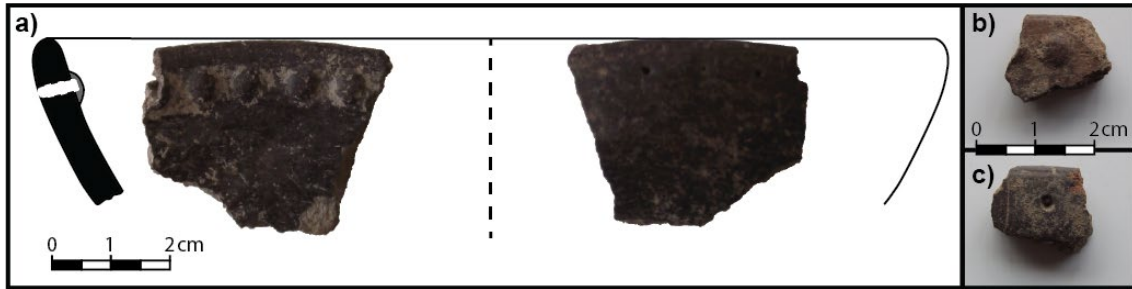


Figure 5.18: a) Pierced and covered Black/Brown Burnished ware sherd HAR17(B)5-09; b),c) small pierced and covered Black/Brown Burnished ware rim sherd HAR18(B)10-10

5.4.7 Other Decoration

In addition to these main forms of decoration, a collection of rarer decorative styles were present. There were three comb impressed sherds from HAR17(B) all in Phase 5b, only found on Earthenware/Plainware sherds. The comb impressed decoration had very tight impressions, often overlapping, creating a rough surface (see Fig. 5.14f). Interestingly, this decoration was not found in any other season or unit. There was a single Earthenware/Plainware sherd decorated with pinched decoration on the rim from Phase 5a (HAR17[B] 16). Two unusual Black/Brown Burnished ware rim sherds from HAR17(B) 5 (Phase 5b) and HAR18(B) 7 (Phase 2a) had small (~1 mm) pierced holes under the rim which were covered with blobs of the fabric on the interior. This decoration was classified as 'pierced and covered' (see Fig. 5.18). A single sherd from Phase 5b (HAR16[A]5-04) had possible woven mat impression on the interior (See Fig. 5.17).

5.4.8 Rim Decoration

The majority of decoration was on the body of vessels, and decoration only rarely appeared on the rims (24 sherds, 5.3% of decorated sherds from the jewellery workshop, and one from Unit[E] [4.5%]; see App.Table III.9). Decoration on rims was usually incised (15 of 25 decorated rims, 60%). Four decorated Earthenware/Plainware rims were recovered from HAR18(B), three incised and one finger pressed. A single Light Brown Slipped ware rim was decorated with incisions and may potentially have been an example of a Somali rim (see 7.5.2.1 below). A single Black/Brown Burnished ware incised rim was also recovered from HAR18(B).

There were five Earthenware/Plainware rims in HAR17(B) with incised decoration as well as Earthenware/Plainware sherd HAR17(B)16-9 (Phase 5a) with a pinched rim mentioned previously. A single Black/Brown Burnished ware sherd from Phase 3 had light slip lines going over the rim. Finally, there was the Light Brown Burnished ware thickened rim from Phase 2 with appliqué dots on the rim discussed above (see App.Fig. III.11). Three of the incised rims were some variation of flat rim, while the other two were simple rims.

There were five decorated rims from HAR16(A), one Earthenware/Plainware with incised decoration and one with punctate decoration from Phase 5b, and three from Phase 3; one Light Brown Burnished ware with incised decoration from; a rounded, lipped Earthenware/Plainware rim with incised decoration; and a Black/Brown Burnished ware rim with light slip decoration. There were two Earthenware/Plainware examples from HAR15(B); an incised and a punctate example, both from Phase 5b as well as a Light Brown Burnished ware rim with appliqué dots from Phase 4. The single decorated rim from HAR15(A) was an Earthenware/Plainware incised rim from HAR15(A) 5.

It is possible that this style of decoration developed due to contact with the Somali Islamic trading towns excavated by González-Ruibal et. al. (2017), where incised, punctate and roulette decoration on flat rims was common among the local ceramics (González-Ruibal et. al., 2017; see also Chapter 2.8 and 7.5.2.1). These towns were believed to have been in use from the 13th – 16th century AD (González-Ruibal et. al., 2017; 168). Indeed, it was possible that some of the rims discussed here may be from these towns or imitations, in particular HAR18(B)4-21, HAR17(B)3-13, HAR16(A)4-28, HAR16(A)6-36 (Phase 5b) and HAR18(B)5-50 (Phase 4).

While decorated rims were found from Phase 2b to Phase 5a, no burnished decorated rims were recovered from later than Phase 4, and four of the seven burnished ware examples were from Phase 3, two of which were unburnished pattern lines going over the rim. All three rims decorated with appliqué dots were burnished wares, and the two burnished ware examples of punctate decorated rims were both Phase 5b. The incised rims with potential parallels with the Somaliland Islamic towns were all Phase 5b-4, which would fit with the date of the Islamic towns. Therefore, while a small sample size is involved, some potential trends could be seen in the decorated rims.

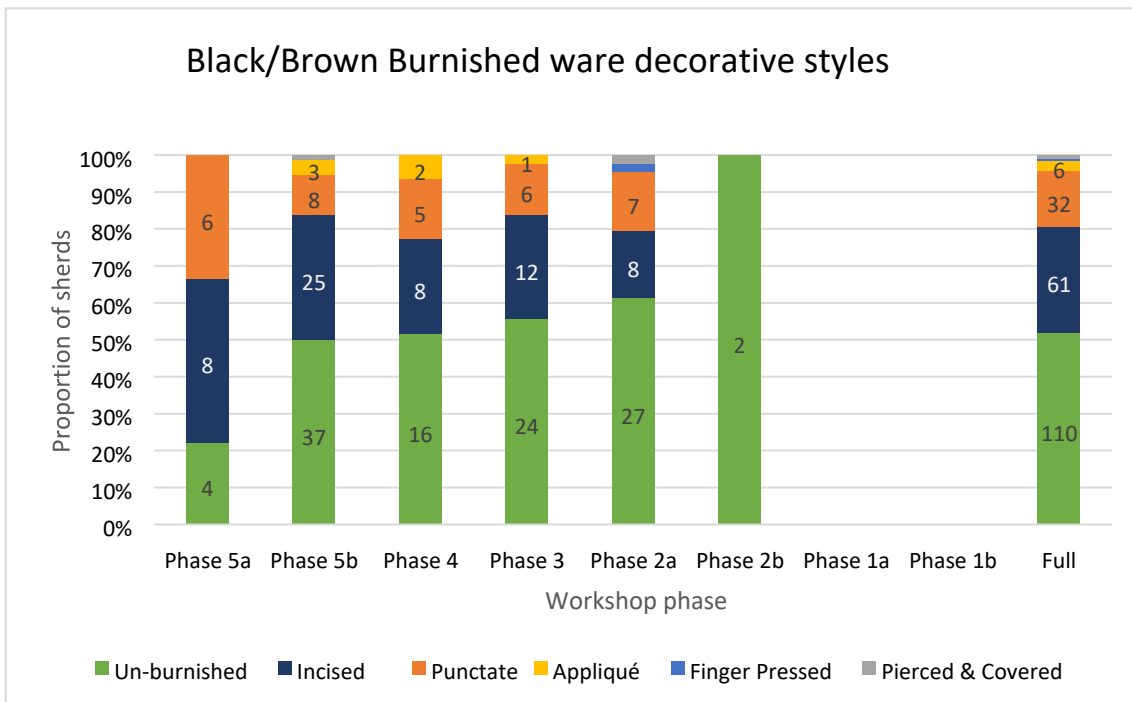


Figure 5.19: Proportions of decorative styles for Black/Brown Burnished ware sherds from Unit(B) (jewellery workshop)

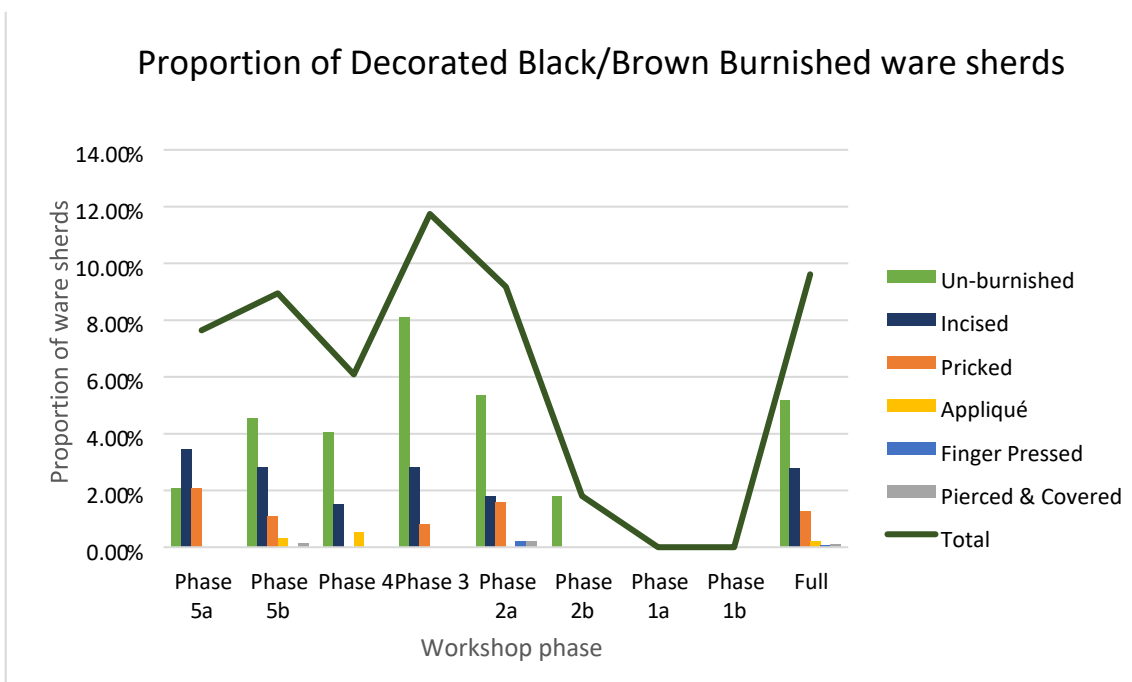


Figure 5.20: Proportions of decorated Black/Brown Burnished wares as a proportion of Black/Brown Burnished ware sherds by phase for Unit(B), (jewellery workshop) (Excluding HAR15[B])

5.4.9 Discussion

5.4.9.1 Black/Brown Burnished ware decorative styles

Figures 5.19 and 5.20 show the proportion and distribution of the decorated sherds in the jewellery workshop by phase. As could be seen, no decorated Black/Brown Burnished ware sherds were recovered from Phase 1a or 1b, even though Black/Brown Burnished ware was present in Phase 1a. Un-burnished pattern decoration was the most common decorative style in all phases except for Phase 5a. Only sherds decorated with un-burnished sherds were present in Phase 2b. With the exception of Phase 4, which had a lower proportion of decorated Black/Brown Burnished ware sherds compared to Phase 5b or Phase 3, the proportion of un-burnished style decorated sherds increased relative to other decorative styles throughout the earlier phases of the sequence, even while the overall proportion of decorated sherds decreased from Phase 3 through to Phase 2b. Appliqué decorated sherds were concentrated in Phase 5b and Phase 4, with a single example also present in Phase 3. The single possible comb-grooved Black/Brown Burnished ware sherd was from Phase 5a. Simple, complex and dashed incised styles were found across all phases, while zig-zag incised decoration was only found in Phase 5b and Phase 3 (see App.Fig. III.10). Both semi-circular Black/Brown Burnished ware punctate decorated sherds were from Phase 4. The single finger pressed Black/Brown Burnished ware sherd from the jewellery workshop was from Phase 2a, and was on an extended ring base (see App.Fig. III.7).

5.4.9.2 Light Brown Burnished ware decorative styles

Only 33 examples of decoration on Light Brown Burnished wares were recorded from the jewellery workshop whose distribution can be seen in Fig. 5.21. The low number of decorated sherds limited the conclusions that could be drawn. However, some observations were still able to be made. Like with Black/Brown Burnished wares, un-burnished patterns were the most common style. As with Black/Brown Burnished ware the exception to this was Phase 4, which had a low proportion of decorated sherds (3.7% of Light Brown Burnished ware sherds compared to the assemblage average of 9.3% decorated Light Brown Burnished ware sherds). Phase 2a had a very high proportion of un-

burnished pattern decorated sherds (see Fig. 5.21), while the only decorated sherd from Phase 2a was an un-burnished pattern sherd. The appliqué decorated sherd from Phase 4 fits with the Black/Brown Burnished ware distribution, although the Phase 2a examples were interesting. Punctate decoration appeared to be less common on Light Brown Burnished ware compared to Black/Brown Burnished ware.

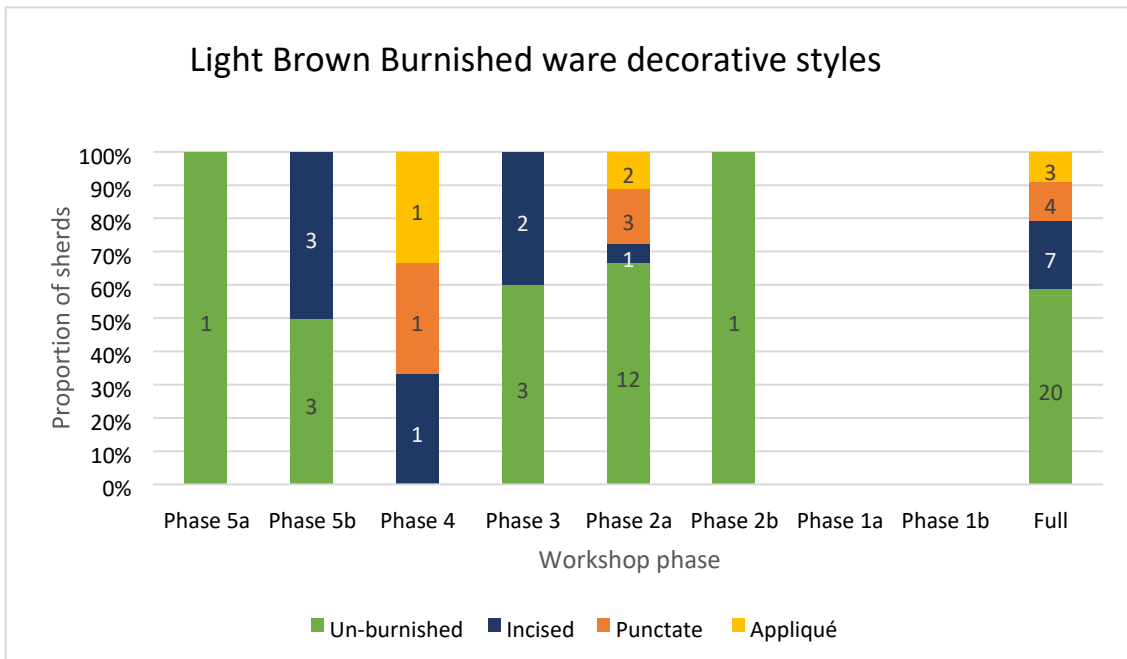


Figure 5.21: Proportions of decorative styles for Light Brown Burnished ware sherds from Unit(B) (jewellery workshop)

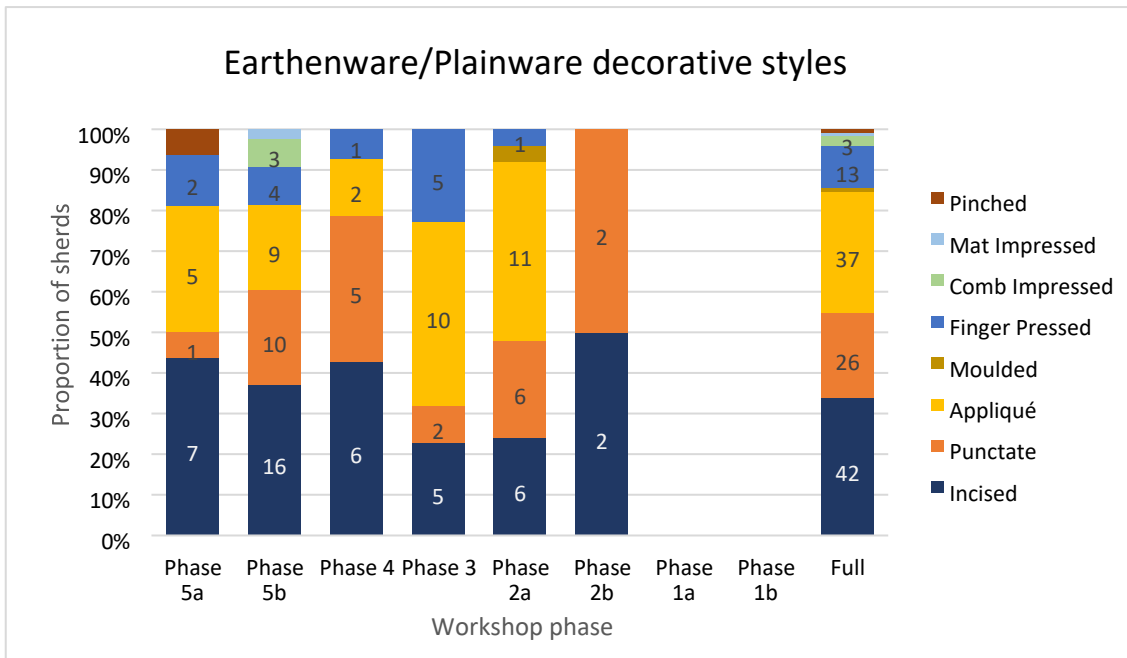


Figure 5.22: Proportions of decorative styles for Earthenware/Plainware sherds from Unit(B) (jewellery workshop)

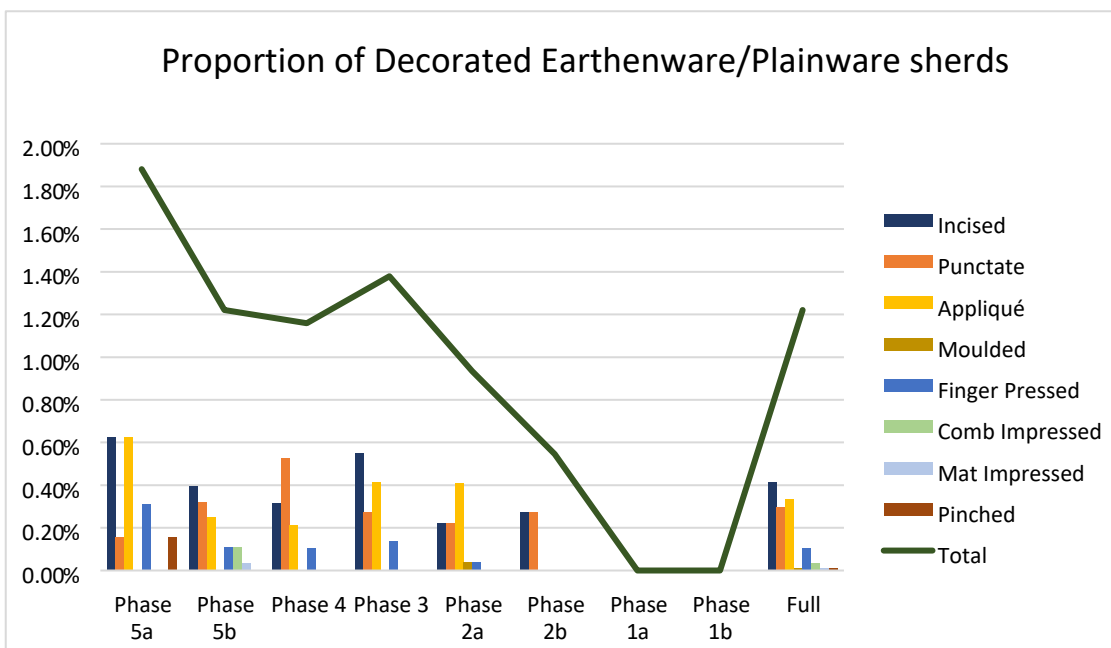


Figure 5.23: Proportions of decorated Earthenware/Plainware sherds for Unit(B) (jewellery workshop) (Excluding HAR15[B])

5.4.9.3 Earthenware/Plainware decorative styles

As can be seen in Fig. 5.23, the proportion of decorated Earthenware/Plainware sherds (averaging at around 1.2% of Earthenware/Plainware sherds) was much lower than Black/Brown Burnished ware (averaging at around 10% of Black/Brown Burnished ware sherds). The proportion of decorated sherds

generally declined from Phase 5a to Phase 2b, with an additional drop around Phase 5b-4. As with the burnished wares, there were no decorated sherds in Phase 1a or 1b. Incised, punctate, appliqué and finger pressed decoration were all common across Phase 5a-2a (see Fig. 5.22). Comb grooved decoration was found in Phase 5b, which fit with the burnished wares, but was also found in Phase 2a on Earthenware/Plainware. Dashed and complex incised decoration was much rarer on Earthenware/Plainware than Black/Brown Burnished ware. Complex incised decoration was present in Phase 5a, Phase 5b and Phase 2a, while dashed decoration was only found in Phase 5b (see App.Fig. III.12).

Appliqué decoration was particularly common in Phase 3 and Phase 2a, although it made up the largest proportion of Phase 5a (see Fig. 5.22 and 5.23). Single examples of appliqué dots were found in Phase 5a, Phase 3 and Phase 2a. Both finger pressed and undecorated appliqué ridges were found in all phases with appliqué decoration, while incised ridges were only found in Phase 5a and 5b and single examples of punctate decorated ridges in Phase 3 and 2a (See App.Fig. III.13). These concentrations of incised and punctate decorated appliqué ridges were interesting. However, they only represented five and two examples respectively. Finger pressed decoration on the body was found in Phase 5a and Phase 5b. Most of the unusual decorative styles; pinched, comb impressed and mat impressed were concentrated in Phase 5a and 5b. Pierced sherds were found throughout Phase 5a-2a, being most prevalent in Phase 5b and Phase 4. Only punctate decoration and incised decoration were found in every phase containing decorated Earthenware/Plainware sherds.

HAR18(E) contained three Earthenware/Plainware sherds with appliqué ridges, one of which was further incised, two punctate decorated sherds, and two finger pressed sherds. HAR15(A) only contained three incised and three punctate decorated Earthenware/Plainware sherds.

5.4.9.4 Decorative styles on other wares

The five decorated Red Burnished ware sherds consisted of three examples of incised lines, one with un-burnished lines, and one with both un-burnished lines and punctate decoration. The Red Burnished ware sherds with incised decoration were all from Phase 5b, while the un-burnished pattern

examples were from Phase 3 and 2a. The distribution of these decorative styles broadly correlated with the other burnished ware decorative styles. The three Light Brown Slipped ware decorated sherds consisted of a sherd with a punctate decorated appliqué ridge from Phase 5b and two sherds with incised decoration from Phase 5a and Phase 5b. Two unidentified sherds had incised decoration, one from Phase 4 and one from Phase 2a.

5.4.9.4 Decorated rims

The decorated rims were found in every phase except for Phases 1 and 2. The possible Somali rims discussed above were all from Phase 5a-4. No decorated burnished ware rims were recorded from Phase 5a or 5b. The three Light Brown Burnished ware decorated rims consisted of the two with appliqué dots discussed above from Phase 3 and 2a and an incised rim from Phase 3. Out of the four decorated Black/Brown Burnished ware rims, there were two Black/Brown Burnished ware examples with un-burnished lines on the rim, both from Phase 3, as well as the rim with appliqué dots. Finally, there was a single incised Black/Brown Burnished ware rim from Phase 2a. All rims decorated with appliqué dots were of a burnished ware. The two Earthenware/Plainware punctate decorated rims were both from Phase 5b, while the two finger pressed lips were from Phase 3 and Phase 4. Out of the 25 decorated rims, 17 were on some variant of flat rim, with the five simple rims all having incised decoration (see App. Table III.9).

5.4.10 Conclusion

In conclusion decorative styles appear to be of limited use for dating at Harlaa. The distinctive un-burnished decoration appeared to have a long use throughout Phases 2b-5. The absence of any decorated sherds from Phase 1a or 1b was interesting. However, this may potentially have been due to the low proportion of sherds from these phases compared to the others (see Fig. 5.2). Unusual decorative styles were potentially indicative of Phase 5, when it is possible that the potters were experimenting with a wider range of decorative techniques. Burnished ware decorated rims were only recovered from Phase 4 or earlier.



Figure 5.24: Black/Brown burnished sherd HAR17(B)14-02 (Phase 2b) with un-burnished line decoration radiating from piercings near the rim

| | Black Burnished | Black Slipped | Plainware | Total |
|-----------------|------------------------|----------------------|------------------|--------------|
| Phase 5a | 0 | 0 | 1 | 1 |
| Phase 5b | 3 | 1 | 14 | 18 |
| Phase 4 | 1 | 0 | 5 | 6 |
| Phase 3 | 0 | 0 | 4 | 4 |
| Phase 2a | 0 | 0 | 7 | 7 |
| Phase 2b | 1 | 0 | 0 | 1 |
| Phase 1a | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 |
| Workshop | 5 | 1 | 31 | 37 |
| HAR15(A) | 0 | 0 | 1 | 1 |
| HAR18(E) | 0 | 0 | 5 | 5 |
| Total | 5 | 1 | 37 | 43 |

Table 5.11: Pierced sherds by phase

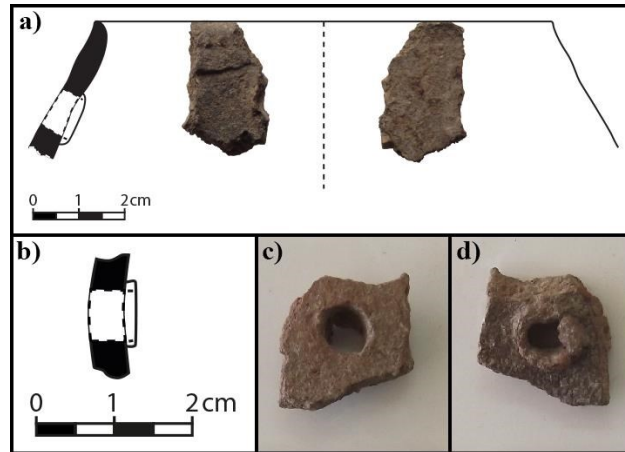


Figure 5.25: a) Sherd HAR18(B)14-11, Earthenware/Plainware Tapered, In-turned rim with piercings; b) Profile of sherd HAR17(B)21-15, Plainware/Earthenware pierced body sherd; c) Exterior of sherd HAR17(B)21-15; d) Interior of sherd HAR17(B)21-15

5.5 Body Piercings

5.5.1 Introduction

Piercings, defined as holes pierced through the vessel before it was fired, were present on a selection of sherds from Harlaa (see Fig. 5.24 and 5.25). While they may potentially have had decorative uses, they also likely had practical purposes, such as for “steamers” or for joining cords for hanging for storage or securing lids (see Chapter 4), therefore piercings were included separately from decoration. The uses and potential indicators of foodways of the body piercings will be discussed in Chapter 7.

5.5.2 Piercings

A total of 43 sherds from Harlaa had piercings on the body (see Table 5.11). A selection of other sherds had piercings (such as ledges on lids or on ring bases), however, only body piercings will be considered here, and other piercings will be considered separately below as part of their main form. The majority of pierced sherds (37 sherds) were Earthenware/Plainware, with five Black/Brown Burnished ware examples and a single Black Slipped pierced sherd. Most of the Black/Brown Burnished ware pierced sherds were from Phase 5b and Phase 4. A single Black/Brown Burnished ware pierced sherd from HAR17(B) 14 (Phase 2b) had two small (3 mm) piercings close to the rim (see Fig. 5.24). These may have represented a tie for securing a lid as they do not appear to have had any cooking or pouring function. This sherd was also

decorated with un-burnished pattern lines radiating from the piercings. The Black Slipped ware pierced sherd was from HAR17(B) 6 (Phase 5b). The Earthenware/Plainware pierced sherds are found from Phase 5a to Phase 2a.

15 Sherds from the jewellery workshop (13 Earthenware/Plainware and two Black/Brown Burnished ware) and three from HAR18(E) showed evidence for having multiple piercings, usually close together. 21 sherds (48.8%) had the piercings close to the rim. Some of these, such as the Black/Brown burnished ware sherds discussed above were likely used for securing lids. However, many were larger and likely had additional uses. Both of multiple piercings and piercings near the rim were found throughout the phases with Earthenware/Plainware pierced body sherds, although no sherds with multiple piercings were recovered from Phase 3.

5.5.2.1 Piercing Diameters

The piercings were usually circular, and the diameter of the piercings ranged from 0.3 cm to 2.8 cm. Most piercings were less than 1 cm in diameter and the sides of the piercings were usually smooth, which meant that the exact tool could not be identified, although it was likely a small, smooth circular object such as a straw, small stick, or needle. The vessels were usually pierced from the exterior to the interior prior to firing, as evidenced by the build-up of clay often surrounding the interior of the piercings which would have been produced during the piercing process (see Fig. 5.25).

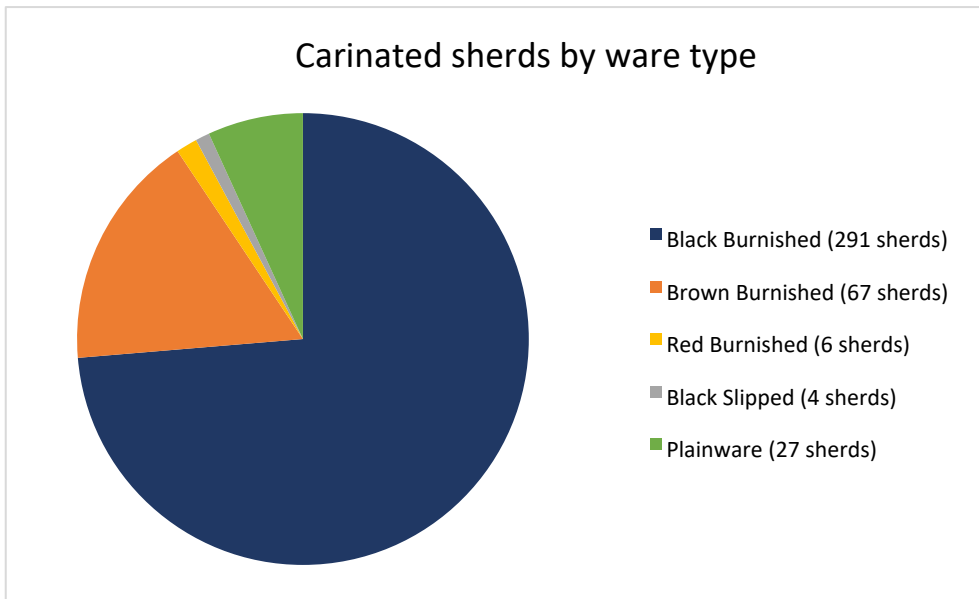


Figure 5.26: Carinated sherd ware type for Unit(B) (jewellery workshop) (see App. Table III.10 for breakdown of carinated sherds by phase)

5.6 Forms

The main forms present in the Harlaa assemblage were carinated bodies; a variety of handles types; flat, moulded and ring bases; a wide variety of rim forms; spouts; lids and stand bases.

5.6.1 Carination

5.6.1.1 Introduction

A total of 417 sherds from Harlaa showed evidence for carination. Carination was overwhelmingly associated with burnished wares, with 92% of carinated sherds (385) being some form of burnished ware (see Fig. 5.26). Carinated sherds made up 11.0% of the Black/Brown Burnished ware sherds, 16.6% of the Light Brown Burnished ware sherds, and 10.4% of the Red Burnished ware sherds, but only 0.21% of the Earthenware/Plainware sherds from the unculled jewellery workshop units.

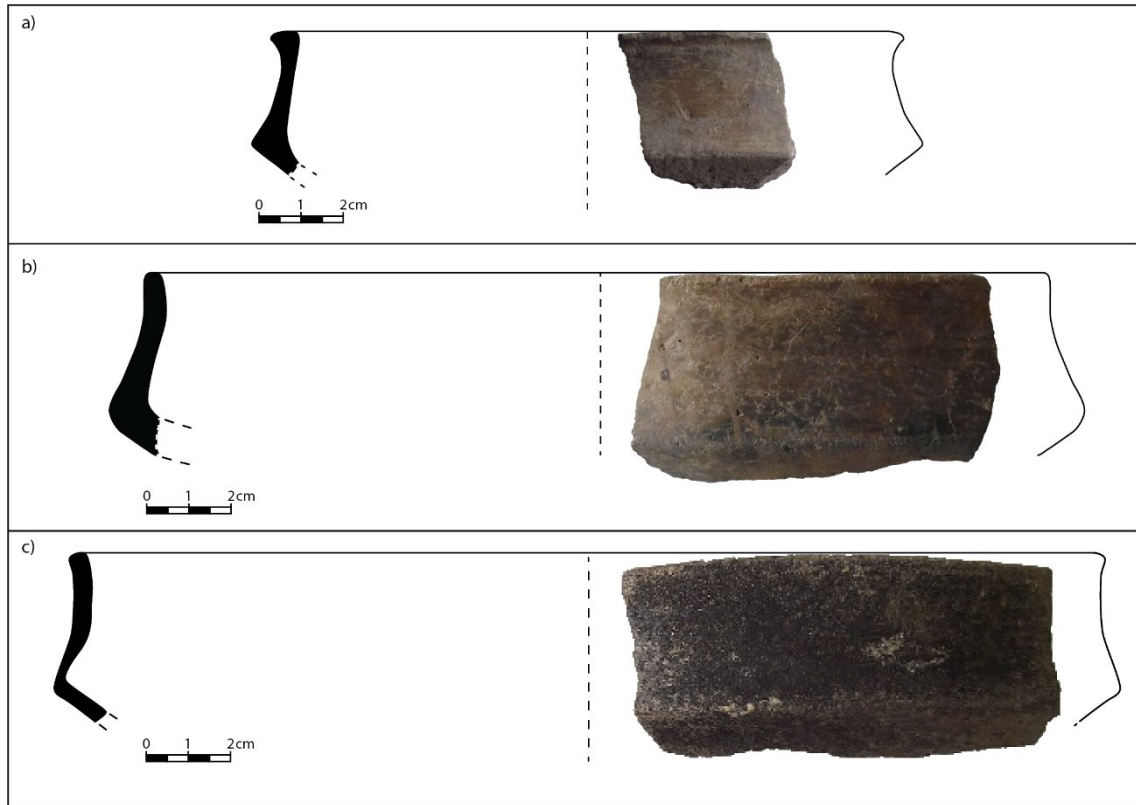


Figure 5.27: Examples of carinated vessels from Harlaa: a) Light Brown Burnished ware sherd HAR16(A)4-08 with Type B carination (Phase 5b); b) Light Brown Burnished ware sherd HAR17(B)9-04 with Type A carination (Phase 3); c) Black/Brown Burnished ware sherd HAR17(B)7-09 with Type A carination (Phase 3)

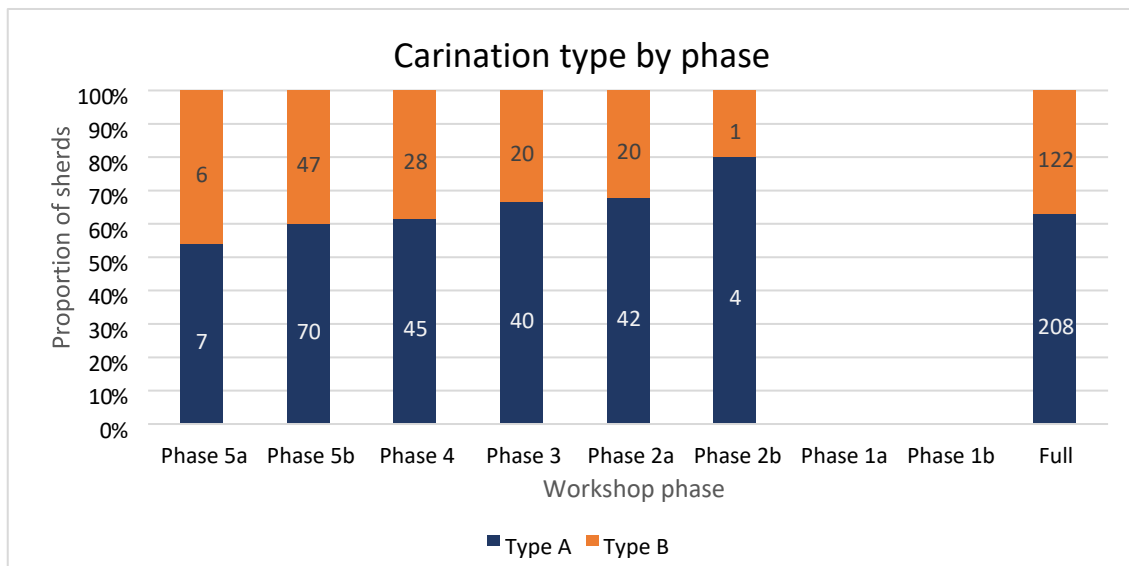


Figure 5.28: Carination type by phase for Unit (B) (jewellery workshop) for all ware types, not including unidentifiable carination type sherds

5.6.1.2 Carination Types

Two primary forms of carination were identified, designated Type A (See Fig. 5.27b,c) and Type B (See Fig. 5.27a and Fig. 7.5). Type A carination was sharper and generally had a similar body thickness through the carination. Type B carination had a shallower internal curve and the outside of the carination had been thickened. Across the full assemblage Type A carination was the most common, making up 53% (220 sherds) of the carinated sherds. 30% (127 sherds) were Type B, with the remaining 70 carinated sherds having unidentifiable carination form (17%). Light Brown Burnished ware sherds were more likely to be Type B in comparison to Black/Brown Burnished ware (37% Light Brown Burnished ware compared to 28% Black/Brown Burnished ware). The two Black Slipped ware sherds with identifiable carination had Type B. The Earthenware/Plainware carination was evenly split between Type A and Type B, with 12 of each and three unidentifiable. There did not appear to be any strong divide in the distribution of the carination types across the phases. Although significantly Type B carination did become progressively more common towards the later contexts (see Fig. 5.28).

5.6.1.3 Discussion

Carinated sherds were present in every phase of the jewellery workshop with the exception of Phase 1a and Phase 1b (see Fig. 5.29). Black/Brown Burnished ware and Light Brown Burnished ware carinated sherds were present in every phase with carinated sherds except for Phase 2b, which only contained Black/Brown Burnished ware carinated sherds. Earthenware/Plainware carinated sherds were found in small quantities in all the phases except for Phase 4. Phase 4 and Phase 3 contained the highest proportion of carinated sherds at 3.6% and 3.9% of sherds respectively. This was interesting as Phase 4 had a noticeable decline in the proportion of decorated sherds among the burnished wares. The decline through Phase 2a and 2b and absence from Phase 1 was consistent with other features of the ceramics such as decoration.

The four carinated sherds from HAR15(A) were all Black/Brown Burnished ware and the three identifiable sherds were all Type A. HAR18(E) contained 18 carinated sherds, 16 Black/Brown Burnished ware, one Light

Brown Burnished ware and one Black Slipped ware. The Black Slipped Ware carinated sherd was a Type B sherd from HAR18(E) 2-3 which fit with both Black Slipped ware being a recent ware type and the other Black Slipped ware carinated sherds being Type B. The Light Brown Burnished ware sherd was from HAR18(E) 7-9, while the Black/Brown Burnished ware sherds were found throughout the unit, and more heavily favoured Type A carinated sherds (75% of the 12 identifiable carinated sherds) than was expected based on the jewellery workshop. Carinated sherds made up about 2% of the total HAR18(E) assemblage and 11% of the burnished wares sherds.

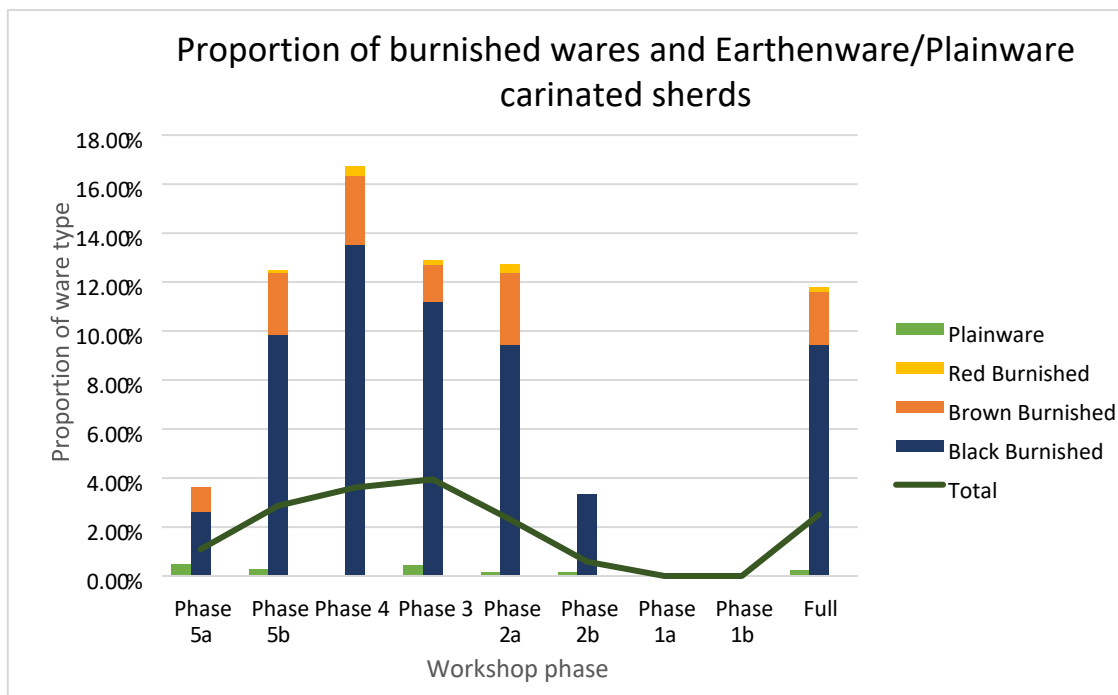


Figure 5.29: Proportion of carinated sherds for burnished wares and Earthenware/Plainware from Unit(B) (jewellery workshop) (Excluding HAR15[B])

5.6.1.4 Conclusion

An absence of carinated sherds was potentially indicative of Phase 1a or 1b, while a high proportion of carinated sherds (roughly 3.7% of total assemblage) could be representative of Phase 3 or 4. An absence of carinated Earthenware/Plainware sherds may indicate Phase 4, although the low number of Earthenware/Plainware carinated sherds limits this interpretation. The proportion of carinated sherds in HAR18(E) (2.2% of total wares and 11.2% of burnished wares) was closest to Phase 2a (2.3% of total assemblage and 12.7% of burnished wares) or a combined Phase 5 (2.5% of total Phase 5a and

5b combined assemblage or 10.8% of burnished wares). However, there was no clear match, which suggested that the relative proportions of carinated sherds were not necessarily significant for dating.

5.6.2 Handles

There were a total of 335 handle sherds in the Harlaa excavation assemblage. Two primary types of handles were present; pierced lug handles and circular ribbon handles. In addition there were five examples of tapered lug handles, two hemispherical handles (both from HAR18[B]), two small ribbon handles (HAR18[B] and HAR18[E]) and single examples of an Earthenware/ Plainware folded ribbon handle (HAR17[B] 4), and an unpierced lug handle (HAR18[B]). Three of the tapered lug handles were recovered in HAR15(B) and one in each of HAR16(A) and HAR17(B). Unidentified handles were fragments, primarily handle joins, where the form of the handle could not be ascertained. The dominant handle type at Harlaa was the circular ribbon handle, of which there were 238 examples (71%), with only 54 pierced lug handles (16%) (see Fig. 5.30).

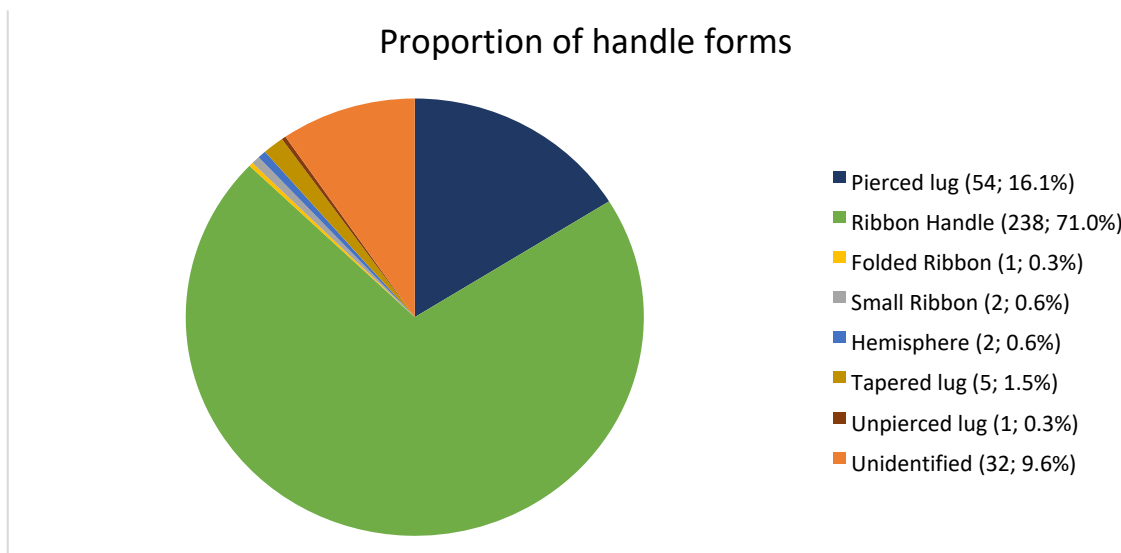


Figure 5.30: Proportions of handle forms

| Phase | Black Burnished | Brown Burnished | Black Slipped | Earthenware/ Plainware | Unidentified | Total |
|-----------------|-----------------|-----------------|---------------|------------------------|--------------|-------|
| Phase 5a | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 5b | 16 | 5 | 1 | 3 | 1 | 26 |
| Phase 4 | 6 | 3 | 0 | 2 | 0 | 11 |
| Phase 3 | 3 | 0 | 0 | 1 | 0 | 4 |
| Phase 2a | 5 | 3 | 0 | 2 | 0 | 10 |
| Phase 2b | 0 | 0 | 1 | 0 | 0 | 1 |
| Phase 1a | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 |
| Workshop | 30 | 11 | 2 | 8 | 1 | 52 |
| HAR15(A) | 1 | 0 | 0 | 0 | 0 | 1 |
| HAR18(E) | 1 | 0 | 0 | 0 | 0 | 1 |
| Total | 32 | 11 | 2 | 8 | 1 | 54 |

Table 5.12: Pierced lug handle ware types (see App.Fig. III.14 for graph)

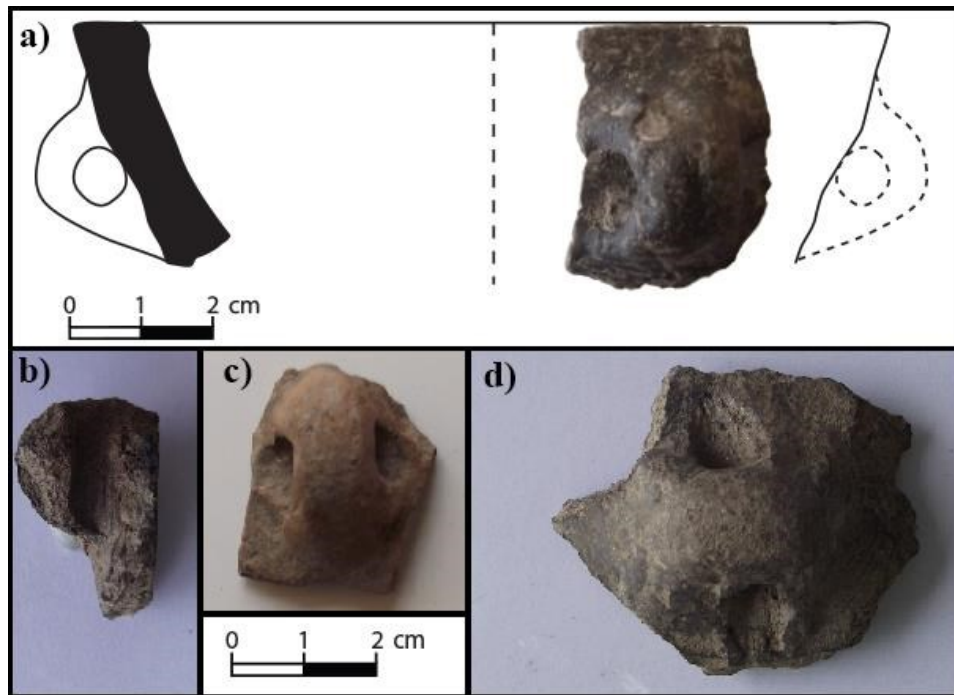


Figure 5.31: pierced lug handle examples, a) Sherd HAR17(B)18-05, Black/Brown Burnished ware Flat, Inner-Lip, In-turned rim with pierced lug handle (Phase 5b); b) Sherd HAR16(A)6-08, Black/Brown Burnished ware broken pierced lug handle (Phase 5b); c) Sherd HAR18(B)9-13, Light Brown Burnished ware pierced lug handle (Phase 2a); d) Sherd HAR16(A)5-03 Black/Brown Burnished ware pierced handle (Phase 5b)

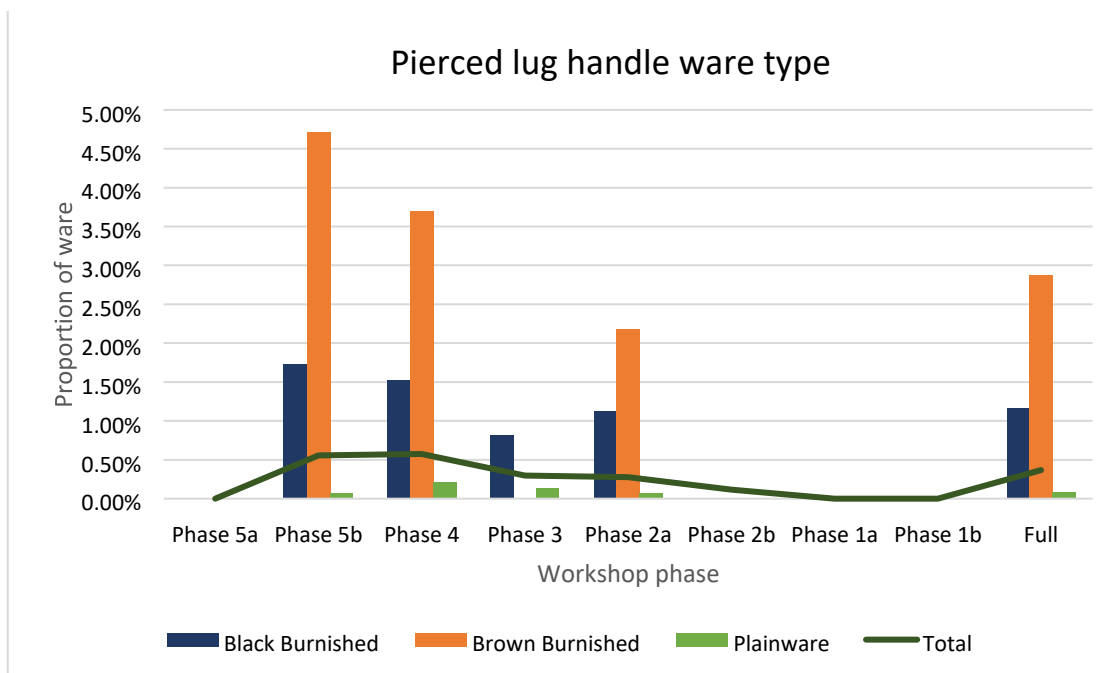


Figure 5.32: Pierced lug handles as proportion of ware by phase for unculled Unit(B) (the jewellery workshop) (excluding Black Slipped ware) (See Table 5.12 for count of pierced lug handles by phase)

5.6.2.1 Pierced lug handles

As shown in Table 5.12, pierced lug handles were primarily associated with the burnished wares as there were 32 Black/Brown Burnished ware (59.3%) examples and 11 Light Brown Burnished ware (20.4%) with only eight and two examples from the Earthenware/Plainware (14.8%) and Black Slipped (3.7%) ware categories respectively as well as a single unidentified ware, likely a damaged burnished ware. The absence of pierced lug handles in Phase 1a and 1b, fits the hypothesis that there was a change in the style of burnished wares visible through the deep stratigraphy (see Fig. 5.32), which has been seen previously with both the carinated and decorated sherds. The presence of a single Black Slipped ware (potentially worn red fabric Black/Brown Burnished ware) from HAR17(B) 14 as the only pierced lug handle in Phase 2b may represent an anomalous contamination from Phase 2a or the start of the introduction. The Earthenware/Plainware pierced lug handles were found in small quantities throughout Phase 5b to Phase 2a. Phase 5b and Phase 4 had very similar proportion of pierced lug handles at around 0.6% of the full phase assemblage. Phase 3 and Phase 2a also had similar proportions of pierced lug handles at 0.3% of the total sherds in the phase. An Earthenware/Plainware

example from HAR17(B) 5 (Phase 5b) was unusual because it had two “ears” to the side of the handle (see App.Fig. III.15). There were two examples of twin pierced lug handles from the jewellery workshop; a Black Slipped ware twin pierced lug handle from HAR16(A) 4, and an Earthenware/Plainware ware example HAR18(B)4-29 (both Phase 5b). These twin pierced lug handles consisted of two joined pierced lug handles side by side, likely used for hanging the vessel or securing a lid (see Fig. 5.33). A single Black/Brown Burnished ware twin pierced lug handle was recovered from each of HAR15(A) and HAR18(E).

A Light Brown Burnished pierced lug handle from HAR17(B) 19 (Phase 5b) suggested that the pierced lug handles were formed separately and attached to the body rather than extruded from the vessel (See Fig. 5.34a). In addition, the piercings in the handles appeared to primarily have been pierced with or built around a stick rather than moulded from a strip or ‘sausage’ of clay.

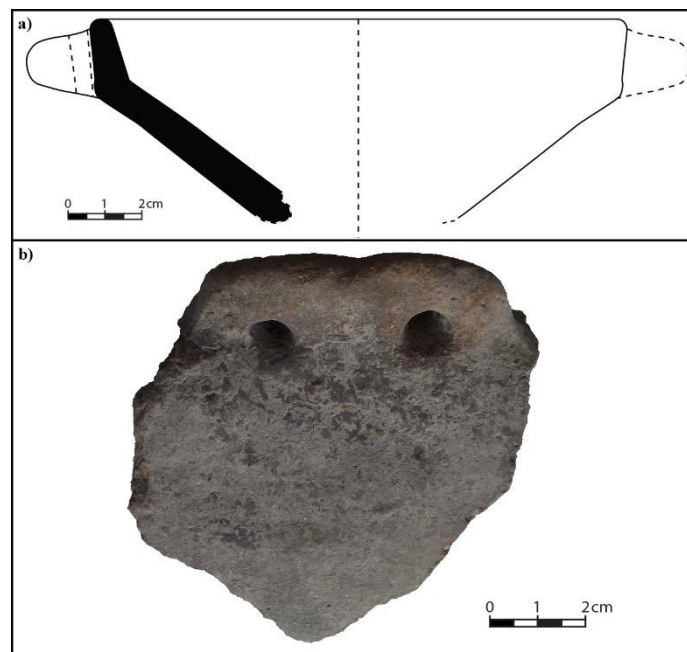


Figure 5.33: Sherd HAR18(B)4-29, Earthenware/Plainware carinated sherd with twin pierced lug handle

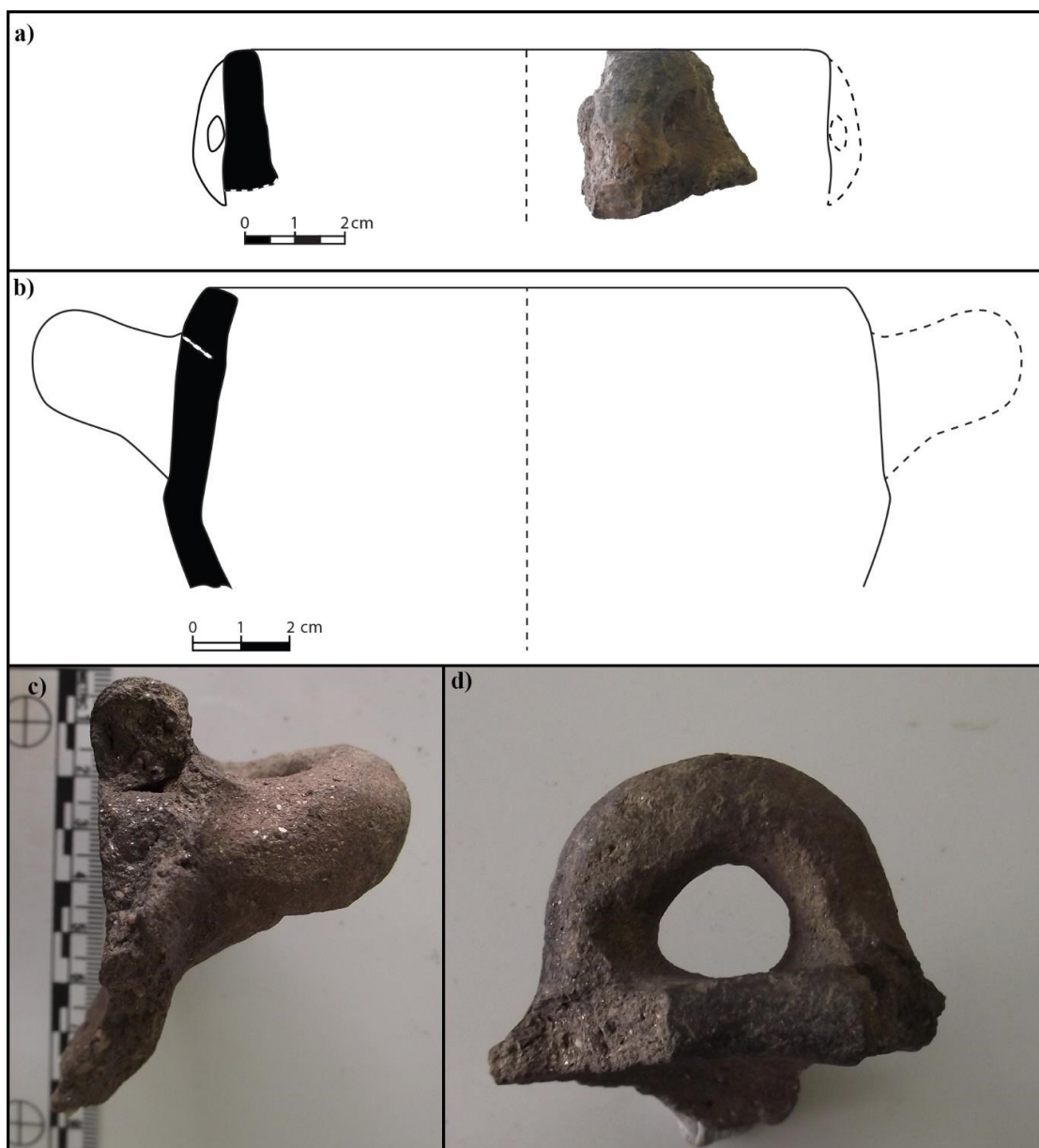


Figure 5.34: a) *Light Brown Burnished ware pierced lug handle profile HAR17(B)19-07 (Phase 5b); b),c),d) Plainware ribbon handle HAR17(B)15-05 (Phase 1a) with voids from pierced handle join*

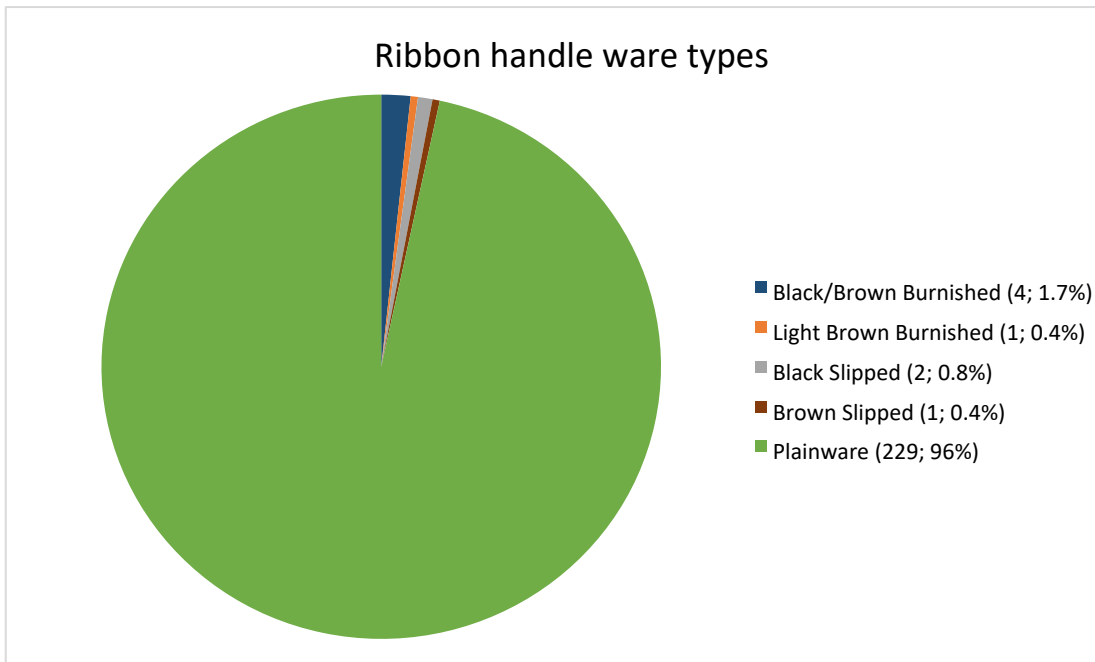


Figure 5.35: Proportions of ribbon handles

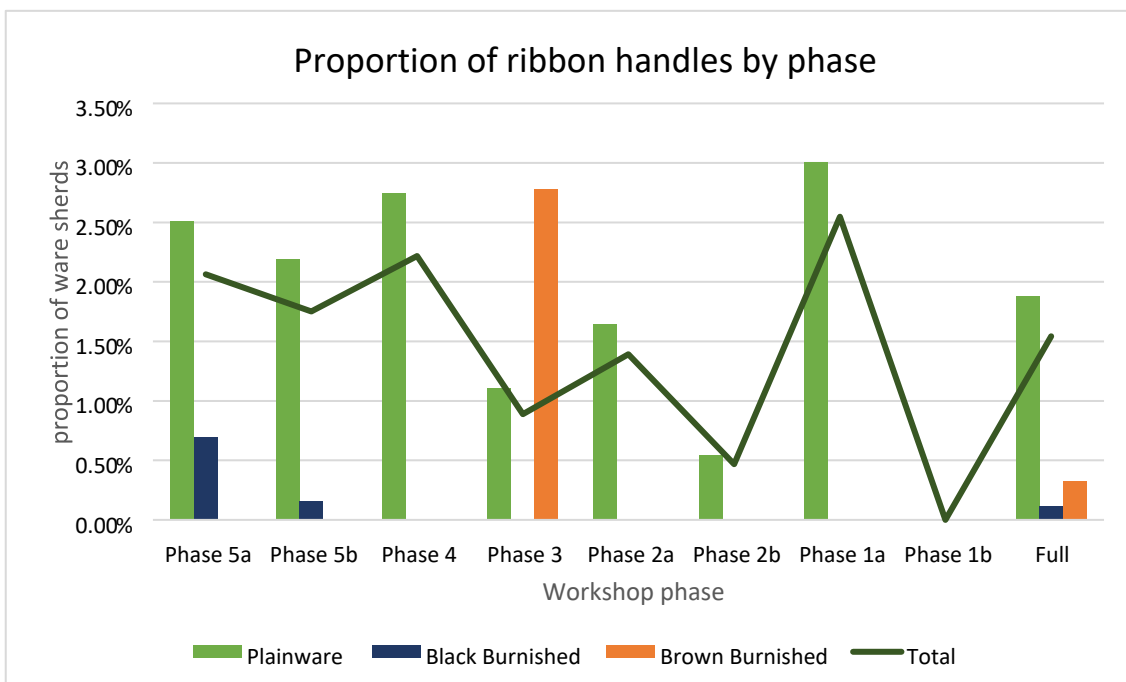


Figure 5.36: Ribbon handles as proportion of ware by phase for Unit(B) (jewellery workshop) (excluding HAR15[B]) (See App. Table III.11 for count of ribbon handles by phase)

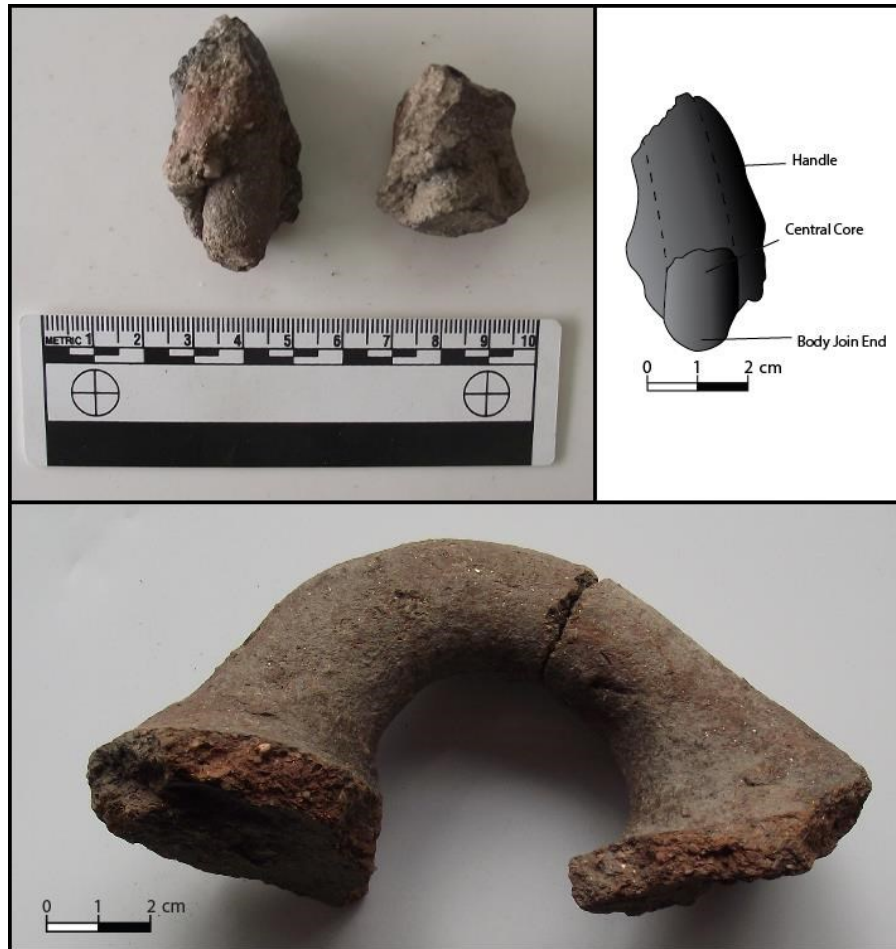


Figure 5.37: a) ribbon handle fragments showing join and manufacture (HAR17[B]3-36a and HAR17[B]3-36b); b) Ribbon handle join HAR17(B)3-36a; c) Complete ribbon handle from HAR18(B)

5.6.2.2 Ribbon handles

The ribbon handles were overwhelmingly associated with Earthenware/Plainware (See Fig. 5.35; with 229 of the 238 ribbon handle fragments being Earthenware/Plainware (96%). Four Black/Brown Burnished ware circular ribbon handles were recovered, focused in the more recent phases of Phase 5a and 5b. A single Light Brown Burnished ware ribbon handle was also recovered from Phase 3. The two Black Slipped ware circular ribbon handles were from Phase 4 and Phase 2a. Ribbon handles were found in every phase with the exception of Phase 1b. As seen in Fig. 5.36, the proportion of ribbon handles varied by phase, with no clear pattern. Phase 1a actually had the highest proportion of ribbon handles at 2.5%, while Phase 2b had the lowest proportion at 0.5%. This variation was potentially related to changing uses of the unit. HAR15(A) contained eight Earthenware/Plainware ribbon handles

while HAR18(E) contained 11 examples. For HAR18(E) this was 1.65% of Earthenware/Plainware sherds and 1.35% of all sherds, which was very close to the 1.64% and 1.35% from Phase 2a.

The handles were usually attached directly to the body without piercing (see Fig. 5.37a,b), although there were examples which appear to have been pierced (see Fig. 5.34b,c). The ribbon handle was formed by creating a “sausage” of clay around which the handle is built up and smoothed into the body (see Fig. 5.37a,b).

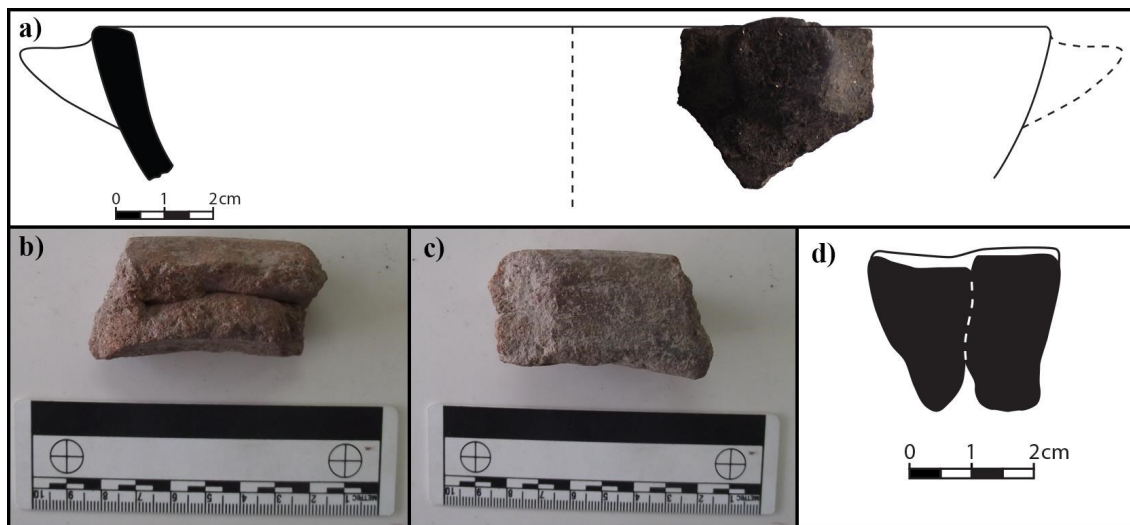


Figure 5.38: a) Plainware tongue handle HAR17(B)14-07 (Phase 2b); b),c),d) folded ribbon handle HAR17(B)4-64 (Phase 5b)

5.6.2.3 Other handles

These rarer handle forms were only present in Earthenware/Plainware. The folded ribbon handle was formed from a flat piece of clay which was folded in half to produce a roughly square profile ribbon. This handle was thicker than the circular ribbon handles and was found in Phase 5b (see Fig. 5.38b-d). The tapered lug handles were roughly triangular in profile, and unlike the more common lug handles was a solid handle with no hole. One example was found in HAR17(B) 14 (Phase 1a) (see Fig. 5.38a). However, the other examples were concentrated in Phase 3 (three examples) with the final tongue handle from Phase 5b. These may be related to the shallow open bowls with single handles from the Chercher mountain sites (see Chapter 2.5 and 7.4.1.4). The hemispherical handles were large unpierced appliqué additions to the side of the vessel (See Fig. 5.39) with single examples from Phase 5b and Phase 4. The single unpierced lug handle from Phase 2a appeared similar to the

unpierced lug handles apart from the lack of piercing. The small ribbon handles also appeared similar to pierced lug handles, however unlike the pierced lug handles these were formed from a small 'sausage' of clay in a similar manner to the larger ribbon handles. One example was from Phase 2b in the jewellery workshop, while the other was from HAR18(E).

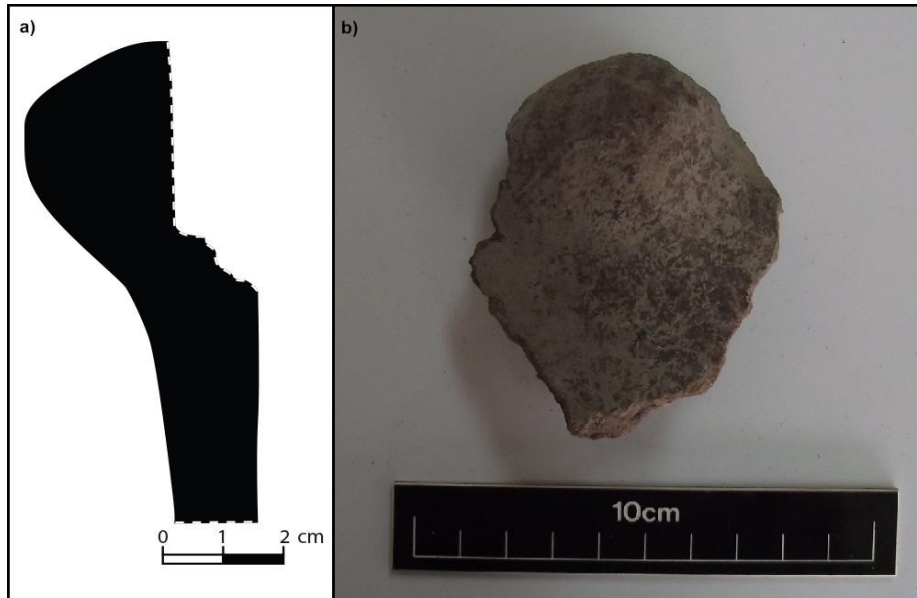


Figure 5.39: Earthenware/Plainware appliqué hemispherical handle HAR18(B)4-26 (Phase 5b)

5.6.2.4 Conclusion

Burnished ware ribbon handles were likely associated with Phase 5a-3, with the rare examples of Black/Brown Burnished ware ribbon handles only present in Phase 5a-5b, and Light Brown Burnished in Phase 3.

Earthenware/Plainware ribbon handles were found throughout the entire workshop sequence with the exception of Phase 1b. Pierced lug handles, both in burnished wares and Earthenware/Plainware were primarily associated with Phase 5a-2b. The rare examples of tapered lug handles were found across the sequence, although concentrated in Phase 3. The two hemispherical handles were from Phases 5b and Phase 4. The small ribbon handle from Phase 2b may have represented an early experiment in methods of producing pierced lug handles. However, the low quantity of these rarer handle forms recovered makes any chronology based upon them speculative.

| | Black Bur. | Brown Bur. | Red Bur. | Black Slipped | Brown Slipped | Plainware | Unident. | Total |
|--------------|------------|------------|----------|---------------|---------------|-----------|----------|-------|
| Phase 5a | 7 | 2 | 0 | 1 | 0 | 8 | 0 | 18 |
| Phase 5b | 30 | 6 | 1 | 8 | 2 | 37 | 1 | 85 |
| Phase 4 | 19 | 6 | 0 | 1 | 0 | 8 | 0 | 34 |
| Phase 3 | 20 | 4 | 0 | 0 | 0 | 20 | 0 | 44 |
| Phase 2a | 23 | 5 | 0 | 1 | 0 | 24 | 0 | 53 |
| Phase 2b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Full | 99 | 23 | 1 | 9 | 2 | 97 | 1 | 234 |
| HAR15(A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR18(E) | 4 | 1 | 0 | 0 | 0 | 1 | 0 | 6 |
| Total | 103 | 24 | 1 | 9 | 2 | 98 | 1 | 240 |
| Percentage | 42.9% | 10.0% | 0.4% | 4.6% | 0.8% | 40.8% | 0.4% | 100% |

Table 5.13: Ring base sherds by ware type, see App.Fig. III.16 for graph

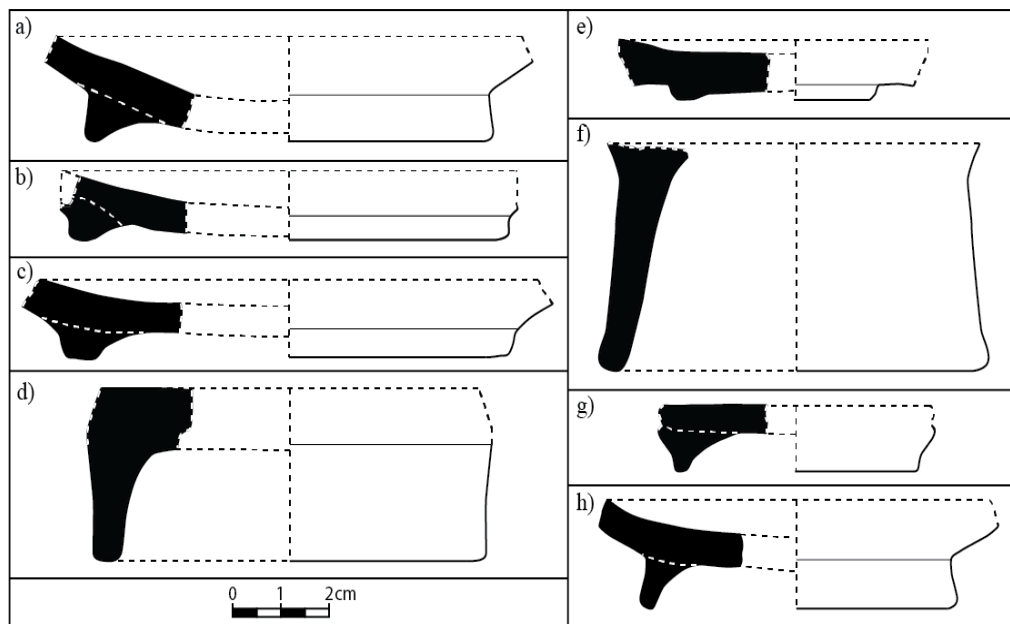


Figure 5.40: Ring base forms; a) Earthenware/Plainware angled ring base HAR17(B)3-30a; b) Black Brown Burnished ware simple ring base HAR17(B)8-04b; c) Earthenware/Plainware simple ring base HAR16(A)8-25a; d) Earthenware/Plainware extended ring base HAR16(A)9-49; e) Black/Brown Burnished ware short-flat ring base HAR17(B)80-4a; f) Black/Brown Burnished ware extended ring base HAR16(A)8-06; g) Black/Brown Burnished angled ring base HAR17(B)18-04; h) Black/Brown Burnished ware angled ring base HAR16(A)8-07

5.6.3 Bases

A total of 240 ring bases (168 ring base fragments from the unculled assemblage made up 1.5% of the assemblage) were recovered from Harlaa (see Fig. 5.40 for examples). As seen in Table 5.13, ring bases were found across all fabric types, with the majority of sherds from Black/Brown Burnished ware (103 sherds, 43%) and Earthenware/ Plainware (98 sherds, 41%), although this was to be expected as they were the main ware types. Ring bases made up 3.4% of the Black/Brown Burnished ware assemblage and 0.8% of the Earthenware/ Plainware. Fragments of detached foot rings showed that they were often formed separately and attached rather than being pulled directly from the body. Table 5.13 shows the number of ring base fragments recovered from each excavation unit and phase; of note was the absence of any ring bases recovered from HAR15(A).

5.6.3.1 Ring base wares

There was little distinction between the presence and absence of ring bases of different ware types across the phases. Earthenware/Plainware, Black/Brown Burnished ware and Light Brown Burnished ware ring bases were present throughout Phase 5a–Phase 2a, while Black Slipped ring bases were present in Phase 5a – Phase 4 and Phase 2a, the main phases which contained Black Slipped ware sherds. Phase 4 had a higher proportion of Black/Brown Burnished ware and Light Brown Burnished ware compared to Earthenware/Plainware. While the proportion among the individual wares varied, as seen in Fig. 5.41, the proportion of ring bases as a whole remained largely consistent across Phase 5a to Phase 3, at around 1.7%-2.0% of the phase sherd assemblage. There was a slight drop in Phase 2a to around 1.5% before ring bases disappeared completely across Phase 2b-1b. This drop was much sharper than was seen in other forms such as decoration and carination, which had a more gradual decline in the early phases as opposed to remaining largely constant before disappearing. This may have suggested a more dramatic change in the local styles with the introduction of ring bases.

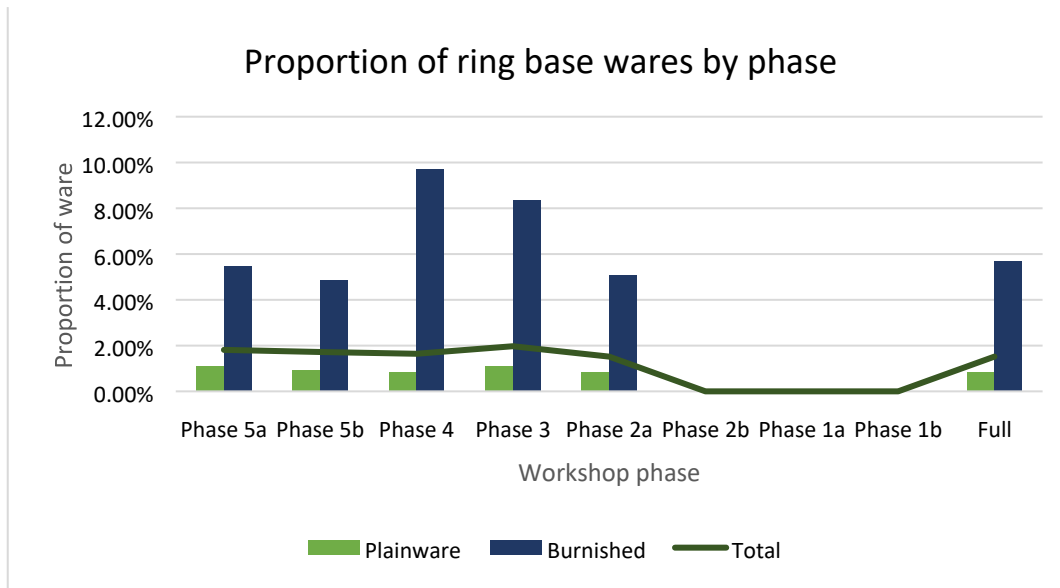


Figure 5.41: Ring bases by phase as proportion of ware sherds for Unit(B) (jewellery workshop) for main ware types (Excluding HAR15[A])

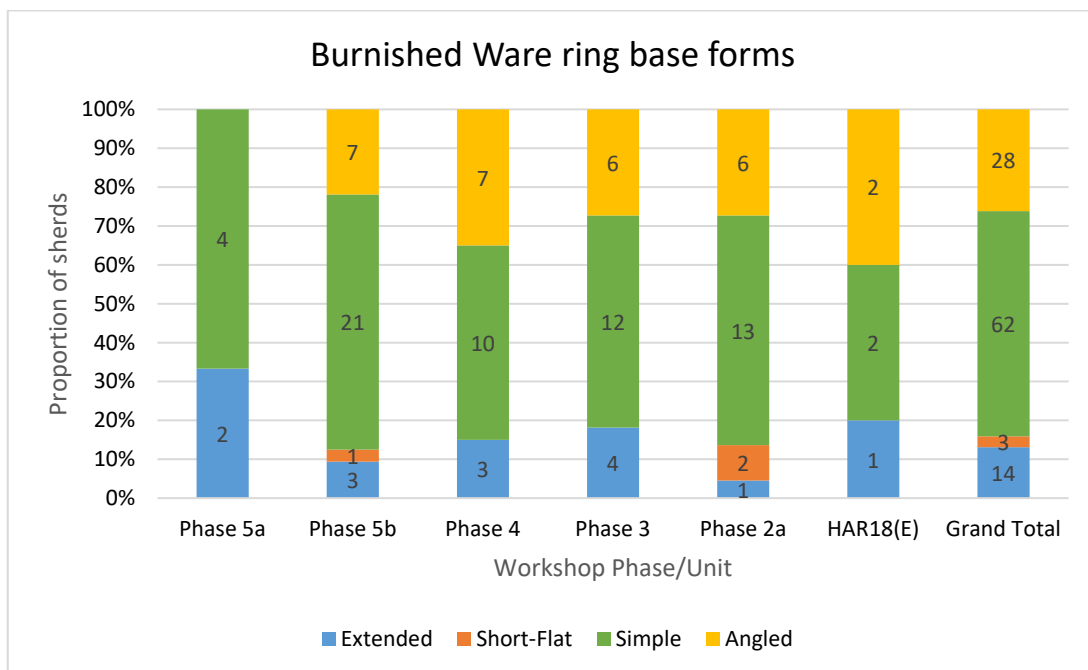


Figure 5.42: Ring base forms by phase for burnished wares

5.6.3.2 Ring base forms

As has been discussed before, the local ceramics from Harlaa were all hand-made which meant that there was a large degree of variation in the forms. Despite this, four broad categories of ring base form were identified: extended, short-flat, simple and angled as well as ring bases which were unidentifiable due to damage. Extended ring bases had tall rings over 2 cm in height (see Fig.

5.40d), and were sometimes in excess of 5 cm tall (see Fig. 5.40f), they usually had a form similar to the simple rims discussed below. Short-flat ring bases in contrast had very short, flat rings, often only a 2-3 mm tall (see Fig. 5.40e). Simple ring bases were fairly straight relative to the body and faded into the body on both the exterior and interior (see Fig. 5.40b,c). Finally, angled ring bases were slightly angled outwards with a sharper join onto the body at the exterior, usually tapered towards the foot and were generally thinner than the simple ring bases (see Fig. 5.40a,g,h). They were also sometimes slightly taller than the simple ring bases, although not as tall as the extended ring bases. Simple and angled bases were generally closest in form to the imported Chinese and Islamic ware bases (see Chapter 7.5.3 and 7.6).

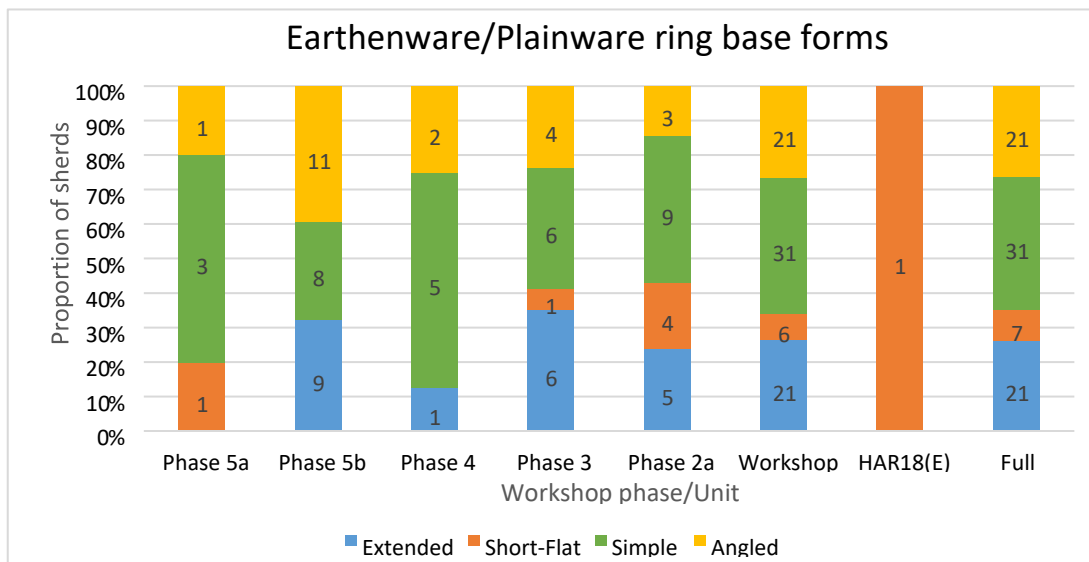


Figure 5.43: Ring base form by phase for Earthenware/Plainware

5.6.3.2.1 Ring base form discussion

All four ring base forms were found in the Earthenware/Plainware, Black Slipped and Black/Brown Burnished wares. While no short-flat ring bases were recorded from the Light Brown Burnished ware, the other ring base forms were present. The single Red Burnished ware ring base unfortunately had an unidentified form, while the two Light Brown Slipped ring bases were a simple and an angled ring base. All the forms were found across all the phases with ring bases for both Earthenware/Plainware and Black/Brown Burnished ware except for Phase 4, which contained no short-flat ring bases, and Phase 5a, which had no extended ring bases. Simple ring bases were the most common

ring base form at Harlaa, and made up 41.3% (100 sherds) of the total ring bases including unidentified ring bases (50.5% of identified ring bases) (see App.Fig. III.17 and App.Table III.12-13). Simple ring bases were the most common ring base form across all phases of the burnished ware ring bases. They were most common in Phase 5a and 5b followed by Phase 2a, with Phase 4 having the lowest proportion. Burnished ware extended ring bases were found throughout the sequence but were rarest in Phase 2a. In contrast to the burnished wares, Phase 4 had the highest proportion of Earthenware/Plainware simple ring bases and 5b the lowest proportion.

5.6.3.3 Ring base diameters

Diameters were recorded for all measurable ring bases (178 of 240, 74%); 39 of the 61 ring bases from HAR18(B), 53 of the 66 ring bases from HAR17(B), 29 out of 39 from HAR16(A), 55 out of 68 from HAR15(B) and three out of six from HAR18(E). The most common ring diameter range was 7-8 cm, with a total of 91 sherds (51% of the 178 measured sherds from Harlaa) within this range. This was the most common diameter for all ware types and both measurable Brown Slipped wares and four of the eight Black Slipped ware ring bases were in this range. Figures 5.44 and 5.45 show the spread of ring base diameters by phase for Black/Brown Burnished ware and Earthenware/Plainware. The median ring base diameter was 8 cm for all Earthenware/Plainware phases except for Phase 5a, and all Black/Brown Burnished ware except for Phase 5a and Phase 5b. Interestingly, both Black/Brown Burnished ware and Earthenware had smaller diameter ring bases most prevalent in Phase 5a, one of the most recent phases.

Earthenware/Plainware had the largest ring bases in Phase 5b and Phase 2a while the larger Black/Brown Burnished ware ring bases were found in Phase 5b and Phase 4 (see Fig. 5.44 and 5.45). The largest Earthenware/Plainware ring bases were in the 17-18 cm range, while the largest Black/Brown burnished ware ring bases were 15 cm in diameter. This fits with large storage vessels primarily being Earthenware/Plainware vessels. The ring base diameters were concentrated in the 7-9 cm range across most phases for both Earthenware/Plainware and Black/Brown Burnished ware. The main exceptions

were Earthenware/Plainware ring bases from Phase 2a and Phase 5a, with Phase 5a having a noticeably lower quartile spread at 5.75-7.75cm, which was well below the 8 cm median for all other Earthenware/Plainware ring bases. While Phase 2a Earthenware/Plainware ring bases had a median diameter of 8 cm, the upper quartile was 10 cm.

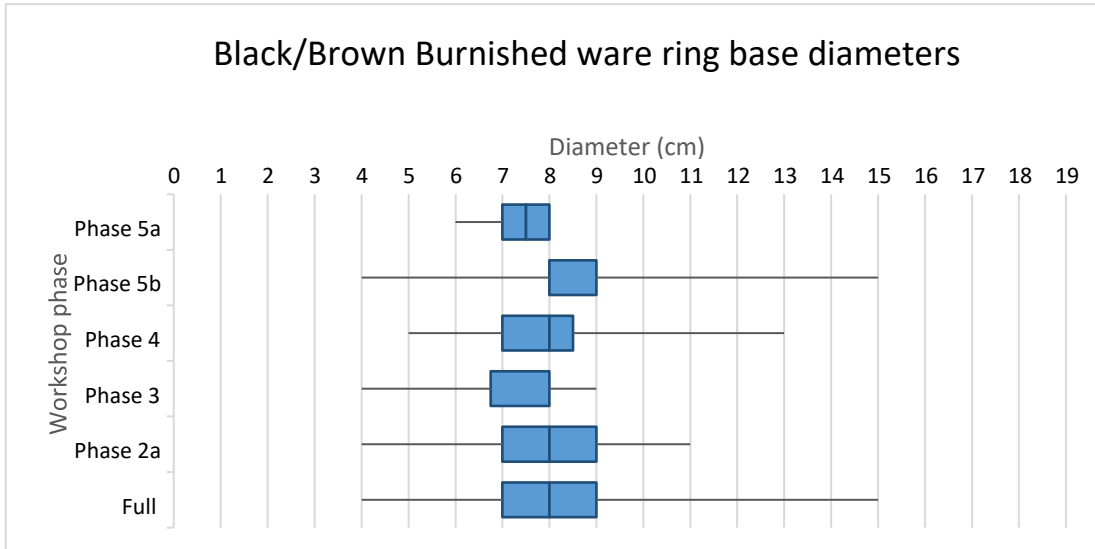


Figure 5.44: Box-plot of ring base diameters by phase for Black/Brown Burnished ware. Note: Phase 5b’s median was 9 cm, while Phase 3’s median was 8 cm

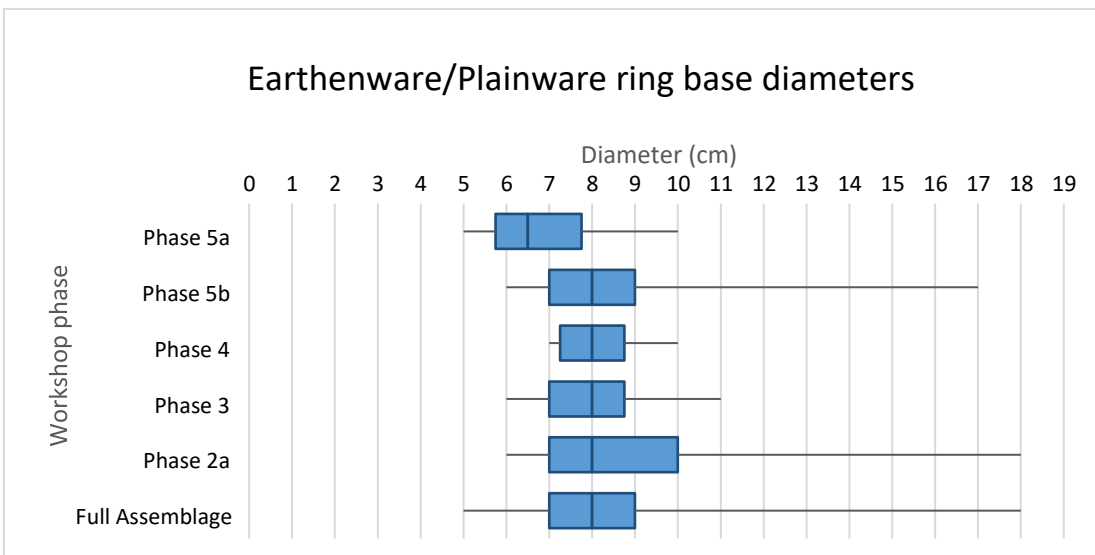


Figure 5.45: Box-plot of ring base diameters by phase for Earthenware/Plainware

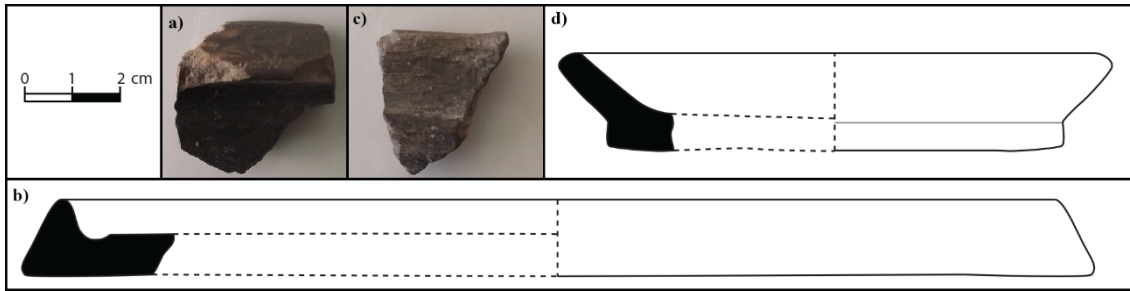


Figure 5.46: Flat bases a), b) Sherd HAR17(B)2-07, Black/Brown Burnished ware Flat base with unique rim (Phase 5a); c), d) Black/Brown Burnished ware Sherd HAR17(B)18-06 (Phase 5b)

5.6.3.4 Other Bases

There were ten sherds from flat bases among the Black/Brown and Light Brown Burnished ware sherds (see Fig. 5.46 for examples). These consisted of one example from Phase 5a, four from Phase 5b, one from Phase 4, and four from Phase 3. In addition, two Earthenware/Plainware flat bases were found, one in each of HAR17(B) 19 (Phase 5b) and HAR16(A) 11 (Phase 2a). This suggested that these flat bases were a more recent development in the sequence. Several sherds had the full profile from the rim to the base. Sherd HAR17(B)2-07 (Phase 5a) was of a unique form and had a rim diameter of 21 cm, and a base diameter of 23 cm. A sherd without the full profile had an external base diameter of 38 cm (see App.Fig. III.18). While some of these sherds were from small vessels, and potentially from shallow bowls or cups, a couple were larger which may be from wide flat dishes. It is possible that this was related to the introduction and consumption of Injera at Harlaa as part of a range of foodstuffs consumed, although they were generally smaller than ethnographic and other archaeological examples (see Chapter 7.3.3 below and section 4.1).

There were four sherds from concave moulded bases in the Earthenware/Plainware fabric from HAR17(B) 4, HAR17(B) 17, (both Phase 5b) HAR16(A) 8 and HAR16(A) 9 (both Phase 3) with diameters of 6 cm, 8 cm, 9 cm and 7 cm respectively (See Fig. 5.47). These diameters fit within the most common diameters for the ring bases. It was likely that many of the local vessels from Harlaa had rounded bases, however only a few sherds showed direct evidence for this as it was hard to distinguish between body sherds and

sherds from rounded bases. However, there were some potential examples, such as a large sherd (HAR17[B]15-04, Phase 1a, see Fig. 5.48).

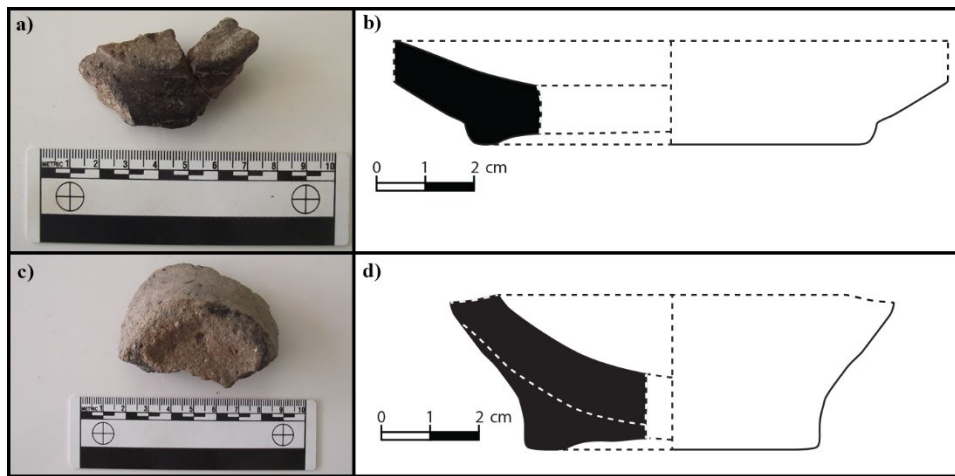


Figure 5.47: a), b) moulded base HAR17(B)17-12 (Phase 5b); c),d) moulded base HAR17(B)4-22 (Phase 5b)

5.6.3.5 Conclusion

It appeared that there was a clear break with the introduction of ring bases around Phase 2a, which meant that ring bases are indicative of this or a more recent phase. Unfortunately, the introduction of ring bases covered all of the major ware types as soon as ring bases were introduced. Additionally, while ring base diameters may be able to provide evidence for vessel use among the wares and potential Islamic influence, there were no strong indicators of any relevant variation between phases which could be used as chronological indicators. Also of interest was that while Islamic imports were found in Phase 2b, the earliest Chinese imports recovered were all from Phase 2a (Parsons, in prep, see also Insoll 2018b and App.Table III.8).

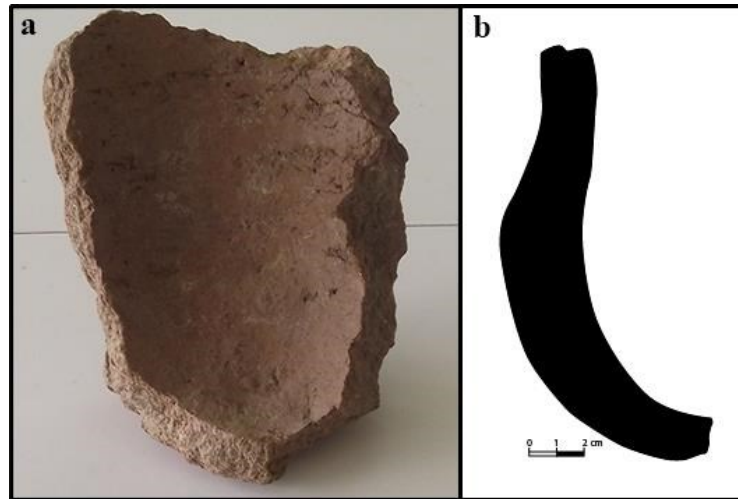


Figure 5.48: Example of an Earthenware/Plainware rounded base, HAR17(B)15-04 (Phase 1a)

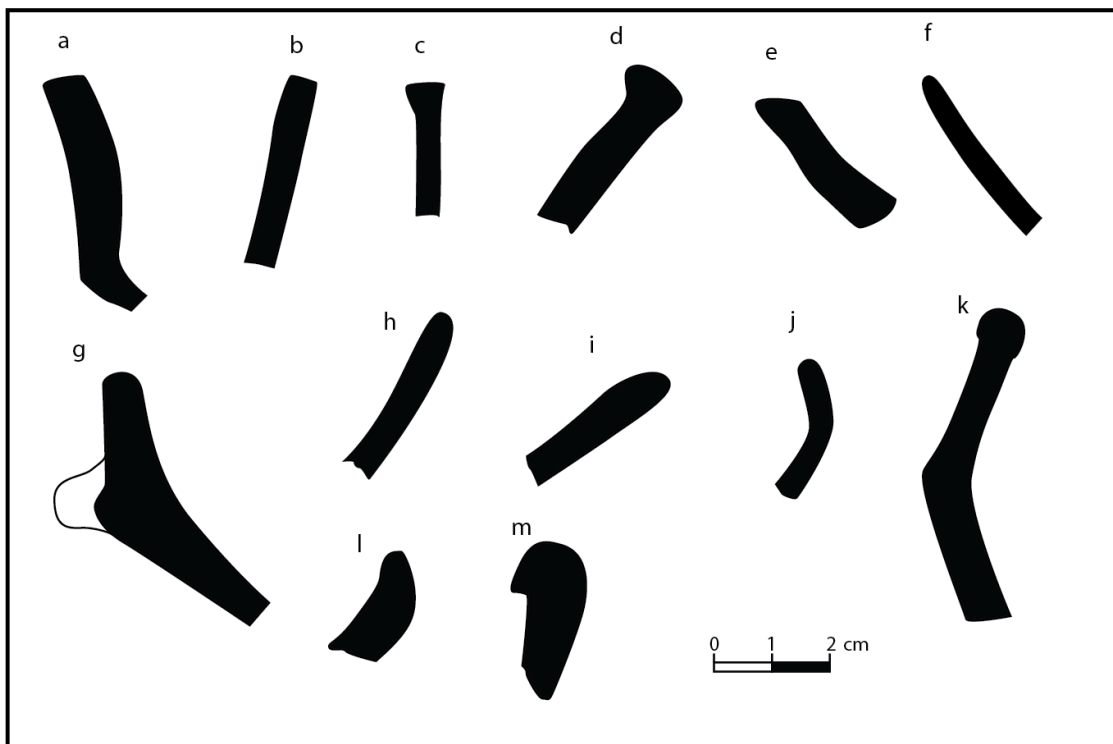


Figure 5.49: Selection of key rim forms: a) Flat, Out-turned; b) Flat, In-turned; c) Flat, Lip, Straight; d) Flat, Lip, In-turned; e) Flat, Angled, Out-turned; f) Simple, Out-turned; g) Simple, Out-turned; h) Simple In-turned; i) Simple, Closed; j) Simple, Flared, In-turned; k) Rounded, Thickened, In-turned; l) Tapered, Flared, In-turned; m) Rounded, Lip, In-turned

5.6.4 Rims

5.6.4.1 Introduction

A total of 1463 rim sherds were recovered from the jewellery workshop units, 64 from HAR15(A) and 78 from HAR18(E). A range of different styles of rim were identified. The key forms identified were Flat, Flat Lipped, Flat Thickened, Flat angled, Flat Inner Lip, Simple, Tapered, Rounded Lipped, and Rounded Thickened. Additionally, the rims were angled out-turned, straight, in-turned or closed (see Fig. 5.49 for examples of rim forms). Rims which were too damaged to enable a clear assessment of angle or rim form were classified as “Unidentified”. Unique rims were special individual rims which had features such as ledges or unique forms. These rim forms were broad categories as the local ceramics were handmade, which meant that the local rim forms were highly variable across the assemblage and even occasionally on the same sherd.

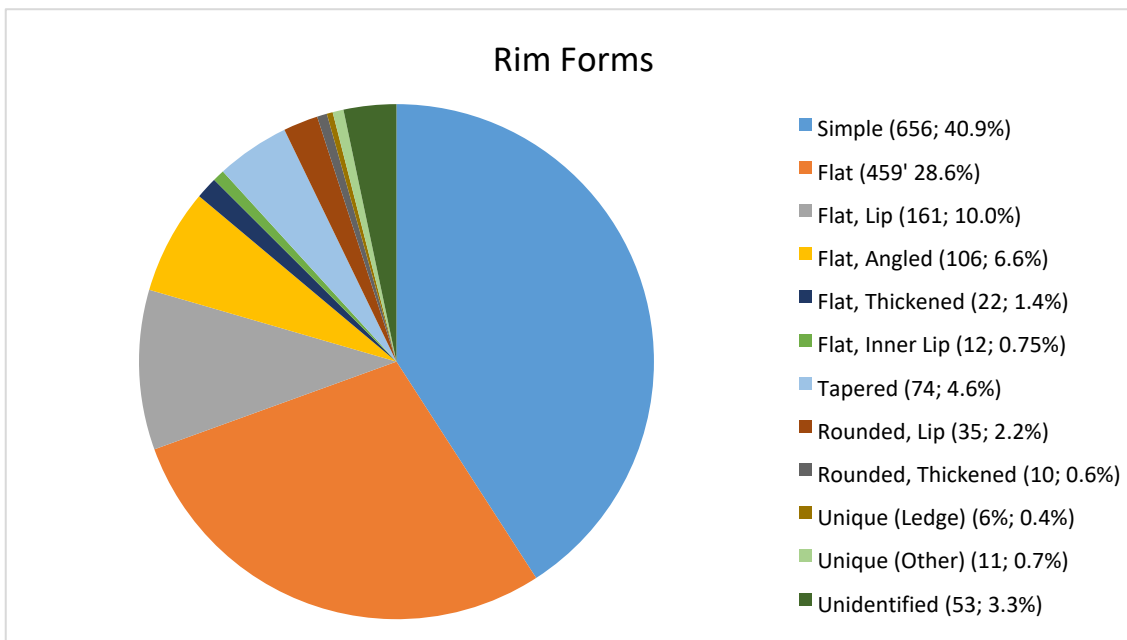


Figure 5.50: Proportion of rim forms

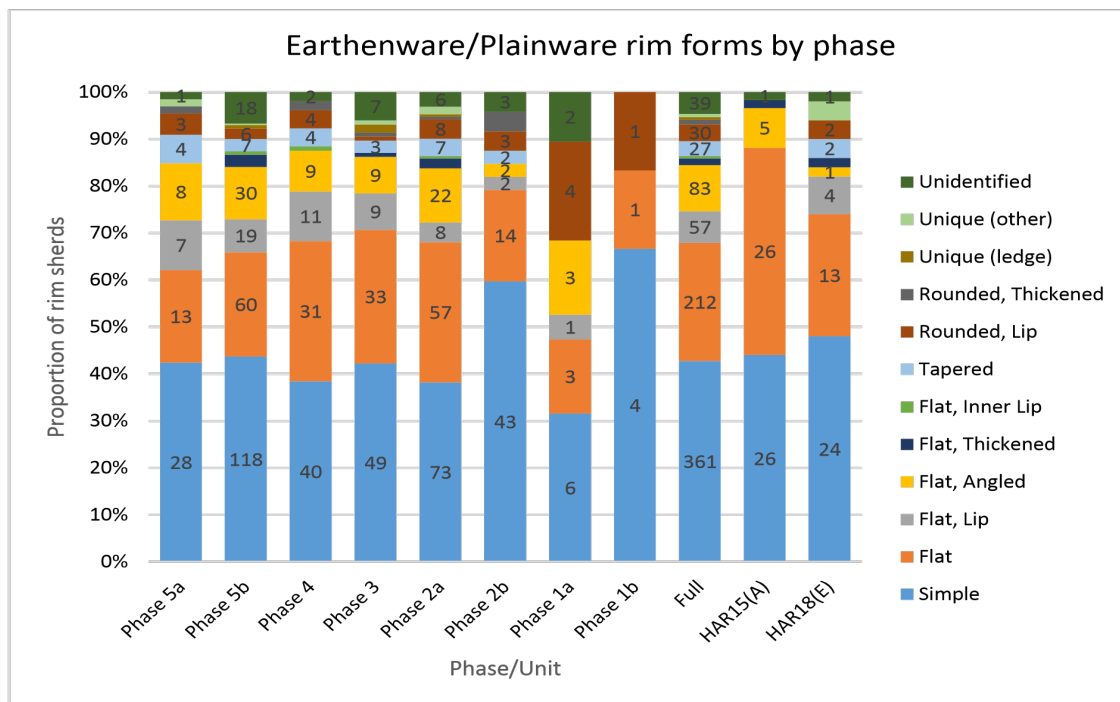


Figure 5.51: Proportions of identified Earthenware/Plainware rim forms (see App. Table III.14 for full sherd breakdown by phase)

5.6.4.2 Rim Forms

The most common rim form was Simple rims (656 sherds) followed by Flat rims (459 sherds). Flat, Lipped, (161 sherds) and Flat, Angled (106 sherds) rims were also fairly common (see Fig. 5.50). Most of the rim forms were found throughout the phases (Fig. 5.51 and 5.52, see Fig. 5.48 for rim forms).

5.6.4.2.1 Earthenware/Plainware Rim forms

Plainware rims forms were quite varied. In the jewellery workshop Simple (361 sherds, 42.7%) and Flat (212 sherds, 25.1%) rims remained the dominant rim forms throughout the phases. Flat, Angled (83 sherds, 9.8%) rims were the next most common rim form followed by Flat, Lipped (57 sherds, 6.8%) rims (see App. Fig. III.19). The remaining rim forms were only present in small quantities (see Fig. 5.51). Simple and Flat rims were present in all phases and together made up around 60-70% of the rims in each phase. Phase 2b and 1b had a much higher proportion of Simple rims compared to other phases, where they made up 62.3% and 66.7% of the identifiable rim sherds respectively, although the low number of Plainware rim sherds in Phase 1b (six sherds) likely distorted the results from Phase 1b. Flat, Angled and Flat, Lipped rims were

found in all phases with the exception of Phase 1b. Additionally, no Flat, Lipped rims were recovered from HAR15(A). Phase 2b had a much lower proportion of both Flat, Angled and Flat, Lipped rims compared to other phases. The proportion of Flat, Angled rims in HAR18(E) was also lower than the jewellery workshop phases. Rounded, Lip and Tapered rims were found in small quantities in all phases, except for Phase 1a and 1b, which contain no tapered rims. Earthenware/Plainware Flat, Inner Lipped rims were only found in Phase 5b and Phase 4.

Earthenware/Plainware Flat, Angled rims were much more likely to be Out-turned than any other rim form. Most rim forms had around 30%-40% Out-turned rims while 80% of the Flat, Angled rims were Out-turned. Flat, Angled, Out-turned rims were found throughout Phase 5a-1a, although in slightly lower proportion in Phase 2b and 1a. These rims may have related to simple open bowls (see Chapter 7.2.2). No strong patterns could be seen in any of the other Earthenware/Plainware rim forms.

5.6.4.2.2 Burnished ware rim forms

Due to the small number of Light Brown Burnished ware sherds and potential links between the ware types, Black/Brown Burnished, Light Brown Burnished wares as well as the small quantity of Red Burnished ware rims will be considered together, although any differences will still be highlighted. In contrast to the Earthenware/Plainware rims, only three main rim forms made up almost 85% of the burnished rims in the jewellery workshop. These were Simple rims (37.4%, 225 sherds), Flat rims (32.3%, 194 sherds) and Flat, Lipped rims (15.3%, 92 sherds). The next most common rim form was Tapered rims at 6.5% (39 sherds). Thus, in contrast to the Earthenware/Plainware rims some clear differences could be seen (see App.Fig. III.20). Flat, Angled rims were much rarer in the burnished wares (17 sherds, 2.8%), compared to Earthenware/Plainware rims where they were the third most common rim form. Conversely Tapered rims and Flat, Lipped rims were more common among the burnished wares than the Earthenware/Plainwares.

Out of the twelve Red Burnished ware rims the majority were Simple (six examples) or Flat (four examples) with single examples of Tapered and Flat,

Inner Lipped rims. This broadly fit with the expected burnished ware distribution, although the absence of Flat, Lipped rims was interesting. Among the Light Brown Burnished ware rims Simple rims were slightly more common at 43.9% of rims (43 sherds). Simple and Flat rims were found across all phases that contained burnished ware sherds with the exception of Phase 1a, which only contained two burnished rim sherds, a Light Brown Burnished ware Simple and a Black/Brown Burnished ware Rounded, Thickened rim. The only other burnished ware Rounded, Thickened rim was a Black/Brown Burnished ware rim from Phase 5b. Tapered rims and the small number of Flat, Angled rims were also present in all phases with the exception of Phase 1a. Tapered rims were slightly more common in Phase 5a and Phase 5b and Flat Angled rims in Phase 5a, 5b, 2a and 2b. Flat, Lipped rims were absent from Phase 2b and Phase 1a. The burnished ware Flat, Inner Lipped rims were present in Phase 5b, 4 and 3 which was a similar distribution to the Earthenware/Plainware Flat, Inner Lipped rims (see Fig. 5.52). One of the Unique Black/Brown Burnished ware rims from Phase 5b (HAR15[B]5-15, see Fig. 7.43), had interesting parallels to forms from Gujarat (see Chapter 7.5.4.3 and Fig. 7.43). HAR18(E) only contained the main common burnished ware rim forms; Simple, Flat, Flat Lipped and Tapered rims, although Flat rims were rarer than in the jewellery workshop contexts. Only five burnished ware rims were recovered from HAR15(A). These were all Black/Brown Burnished ware and consisted of four Flat rims and one Simple rim.

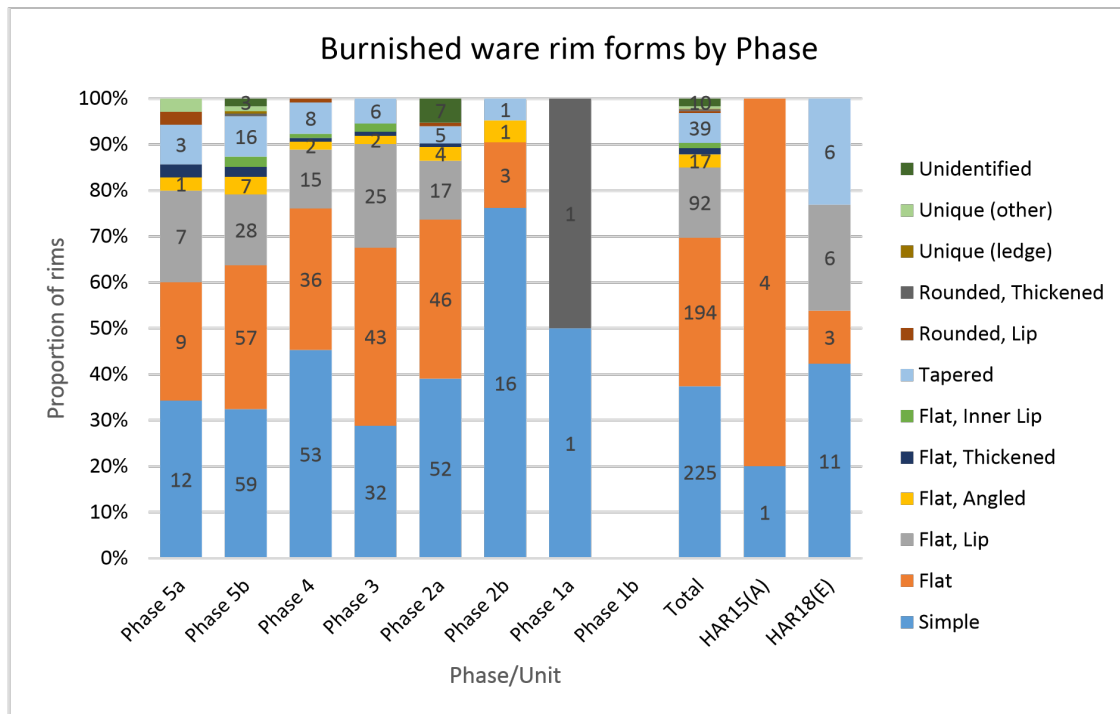


Figure 5.52: Proportions of identified burnished wares rim forms

5.6.4.2.3 Other ware rim forms

The nine Black Slipped ware rim sherds were mostly Flat rims (five examples) with two examples of each of Simple and Flat, Lipped rims, with both Flat, Lipped rims from Phase 5b. The three Light Brown Slipped ware rims were all from Phase 5b, and consisted of single examples of Simple, Flat, and Flat, Inner Lipped rims. The Light Brown Slipped ware Flat, Inner Lipped rim from Phase 5b fits with this form being a more recent form as seen among both Earthenware/Plainware and burnished wares. The unidentified ware rim sherds consisted of three Simple rims, likely from overfired or damaged burnished ware sherds from Phase 4 and a Flat rim, likely also from an overfired burnished ware sherd in Phase 3. The final unidentified sherds were from Phase 5b and consisted of a Flat rim from a roughly burnished red sherd, a Flat, Lipped rim with a pressed lip from a fine brown fabric and an unidentified rim in a light pinkish fabric (see App.Fig. III.3-4).

5.6.4.2.4 Discussion

While most of the rim forms were broadly homogenous and found throughout the phases, some interesting chronological patterns could still be observed. Flat, Inner Lip rims in particular were concentrated in Phase 5b, 4 and Phase 3. The earlier phases of the jewellery workshop appear to have had a smaller range of rim forms compared to the later phases. This was particularly noticeable in Phase 1a and Phase 1b, and to a lesser extent in Phase 2b. The limited rim forms in Phase 1a and 1b (Simple, Flat, Flat Lipped, Flat Angled and Rounded Lipped in Earthenware/Plainware and Simple and Rounded, Thickened in the burnished wares) may partly be due to the low number of rim sherds from these phases. Only 19 (Phase 1a) and six (Phase 1b) for Earthenware/Plainware and two (Phase 1a) and none (Phase 1b) for the burnished wares, while most phases had at least 50 examples for both ware groups. However, there did appear to be a general decrease in the variety of rim forms. Thus, an absence of Tapered Earthenware/Plainware rims may be indicative of Phase 1a or 1b. An absence of Flat, Lipped burnished ware rims could suggest Phase 2b or earlier, while burnished ware Rounded, Lipped rims were potentially indicative of more recent phases, particularly Phase 5a.

| | Black Bur. | Brown Bur. | Red Bur. | Black Slip | Brown Slip | Plainware | Unident. | Total |
|----------|-------------------|-------------------|-----------------|-------------------|-------------------|------------------|-----------------|--------------|
| Unit(B) | 391 | 80 | 9 | 6 | 3 | 645 | 2 | 1136 |
| HAR15(A) | 3 | 0 | 0 | 0 | 0 | 49 | 0 | 52 |
| HAR18(E) | 22 | 0 | 0 | 0 | 0 | 36 | 2 | 60 |
| Total | 416 | 80 | 9 | 6 | 3 | 730 | 4 | 1248 |

Table 5.14: Measured rims by ware type for each excavation unit

5.6.4.3 Rim Diameters

Rim diameters were recorded for 1136 rims from the jewellery workshop contexts and a further 112 from HAR15(A) and HAR18(E), divided by ware type as seen in Table 5.14. These 1248 measurable rims represented 77.8% of the total rims recovered at Harlaa. As the Harlaa local ceramics were handmade, rim diameters can be challenging to measure accurately as the rims were rarely perfect circles. Rim diameters were less likely to be directly useful as chronological indicators compared to other vessel forms as the rim diameter alongside the rim angle would be strongly tied to vessel use. However, rim

diameters could still potentially provide an insight into changing uses of areas of the site over time as well as potentially to investigate changing foodways of the inhabitants of Harlaa. Thus, the significance of the rim diameters will be considered again in Chapter 7.

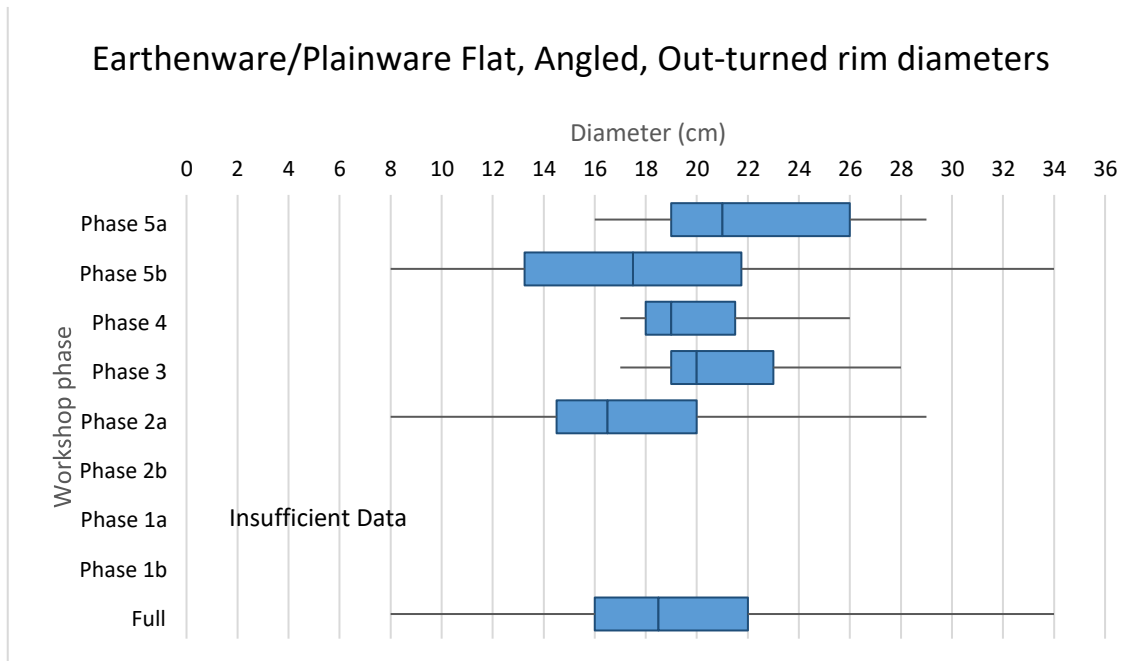


Figure 5.53: Box-plot of Earthenware/Plainware Flat, Angled, Out-turned rim diameters from Unit(B) (jewellery workshop)

5.6.4.3.1 Plainware rim diameters

Out of the 954 Plainware rim sherds recovered (845 from the jewellery workshop, 59 from HAR15[A] and 50 from HAR18[E]), rim diameters were recorded for 730 (75.7%) of them (645 from the jewellery workshop, 49 from HAR15[A] and 36 from HAR18[E]). The Earthenware/Plainware rims were further divided by both rim form and rim angle to investigate patterns in particular styles of rim. In Phase 4 both Simple and Flat out-turned rims were heavily concentrated above 20 cm in diameter and had the highest proportion of rims over 20 cm in diameter out of the phases with sufficient Earthenware/Plainware rims for analysis (see App.Fig. III.21-22). Additionally, both Flat, Lip, In-turned rims from Phase 4 were large 38-39 cm rims, likely from large storage vessels. The Earthenware/Plainware Flat, Angled, Out-turned rims discussed above were concentrated in the 16-20 cm diameter range across all phases, with a concentration also present in the 26-30 cm range, particularly in Phase

5a and Phase 2a. Phase 5b also had a wider range around the main concentration from 11-25 cm diameter range (see Fig. 5.53).

Earthenware/Plainware Flat, In-turned rims had their median diameter around 19 cm in Phase 2a-4, although the actual range of rim diameters varied, with Phase 2a having a particularly wide spread (see Fig. 5.54).

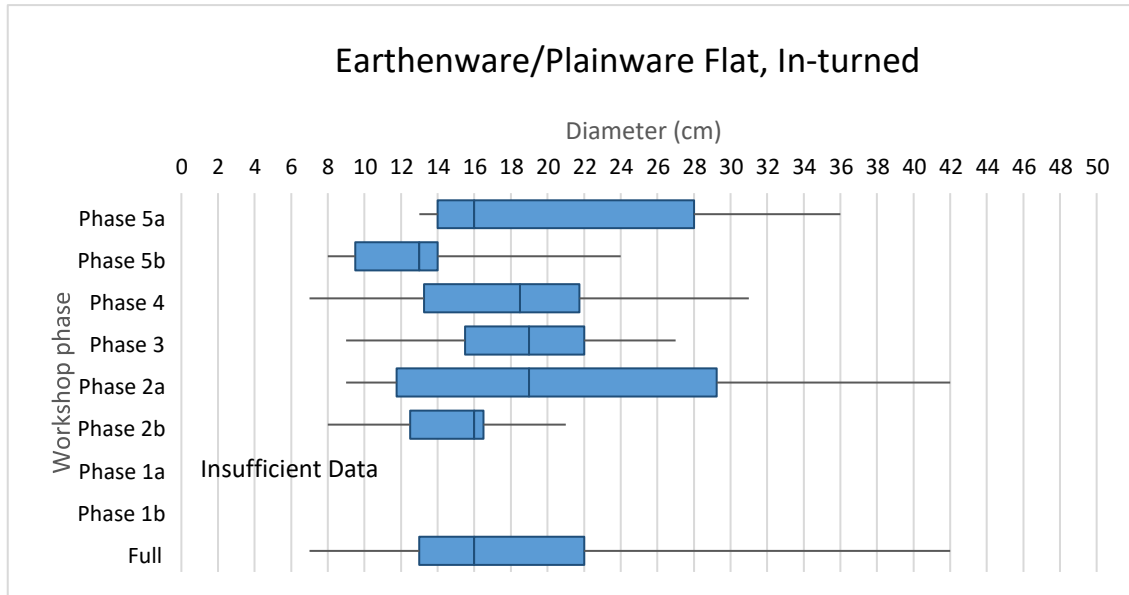


Figure 5.54: Box-plot of Earthenware/Plainware Flat, In-turned rim diameters from Unit(B) (jewellery workshop)

Earthenware/Plainware Out-turned rim diameter ranges were very similar for Phase 5a and Phase 5b. Phase 4 had a much higher median (25 cm diameter) and more concentrated Quartiles (21-27 cm) than other phases. This fits with the Simple and Flat Out-turned rims discussed above. The median diameter of Earthenware/Plainware In-turned rims was concentrated between 14-16 cm for all phases which had sufficient measured rims. Despite having a lower median rim diameter compared to Out-turned rims, In-turned rims had higher maximum rim diameter. This was likely related to two groups of vessel forms; smaller consumption, serving and cooking vessels and larger storage vessels. This was seen through small concentrations of larger rim diameters, particularly 36-40 cm diameter rims in Phase 5a and Phase 4 and smaller rims in the 26-30 cm diameter in most phases, particularly Phase 3 and Phase 2a.

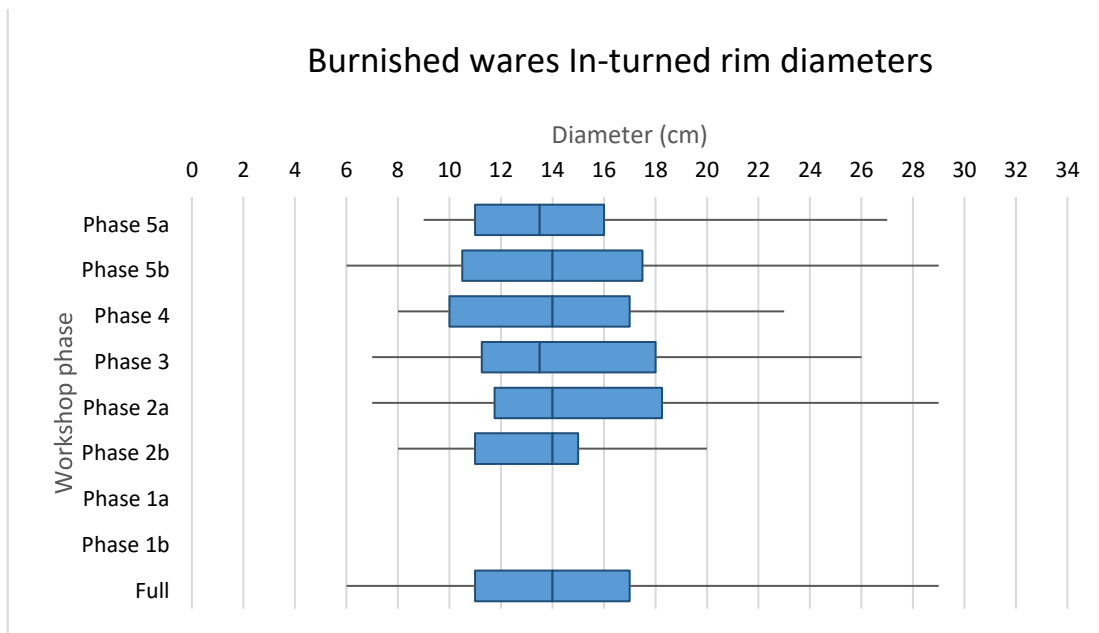


Figure 5.55: Box-plot of burnished wares In-turned rim diameters from Unit(B) (jewellery workshop)

5.6.4.3.2 Burnished wares rims

Out of the 521 Black/Brown Burnished ware, 100 Light Brown Burnished ware and 12 Red Burnished ware rims a total of 416 Black/Brown Burnished ware rims, 80 Light Brown Burnished ware and nine Red Burnished Ware rims had their diameters recorded (79.8% of burnished wares rims).

The burnished ware in-turned rims all had similar median diameters at 14 cm or 13.5 cm and broadly similar quartiles with the exception of Phase 2b, which had a much more concentrated diameter range (see Fig. 5.55). Phase 5a and 2b both had a much higher proportion of 11-15 cm diameter in-turned rims compared to other phases, which had around 35% of burnished ware in-turned rims of 11-15 cm diameter. Phase 5b and Phase 4 had a slightly higher proportion of smaller 6-10 cm diameter in-turned rims compared to other phases, while Phase 2a had the highest proportion of 21-25 cm rims. Phase 2a and Phase 5a had slightly higher proportions of 26-30 cm rims compared to the other phases. The larger diameter burnished ware in-turned rims (26-30 cm) were a single Simple rim in Phase 5a and a single Flat, Lipped rim in Phase 3 (see App.Fig. III.24). Flat, In-turned rims had a larger diameter than other rim forms in Phase 3 and Phase 2a. Out-turned rims showed more variability over the phases than In-turned rims. Phase 2a had notably lower rim diameters

compared to the other phases. The median rim diameter steadily climbed from Phase 2b through to Phase 4 (see Fig. 5.56). This was potentially due to the introduction of new foodways with the arrival of Islam into the region (see Chapter 7.6).

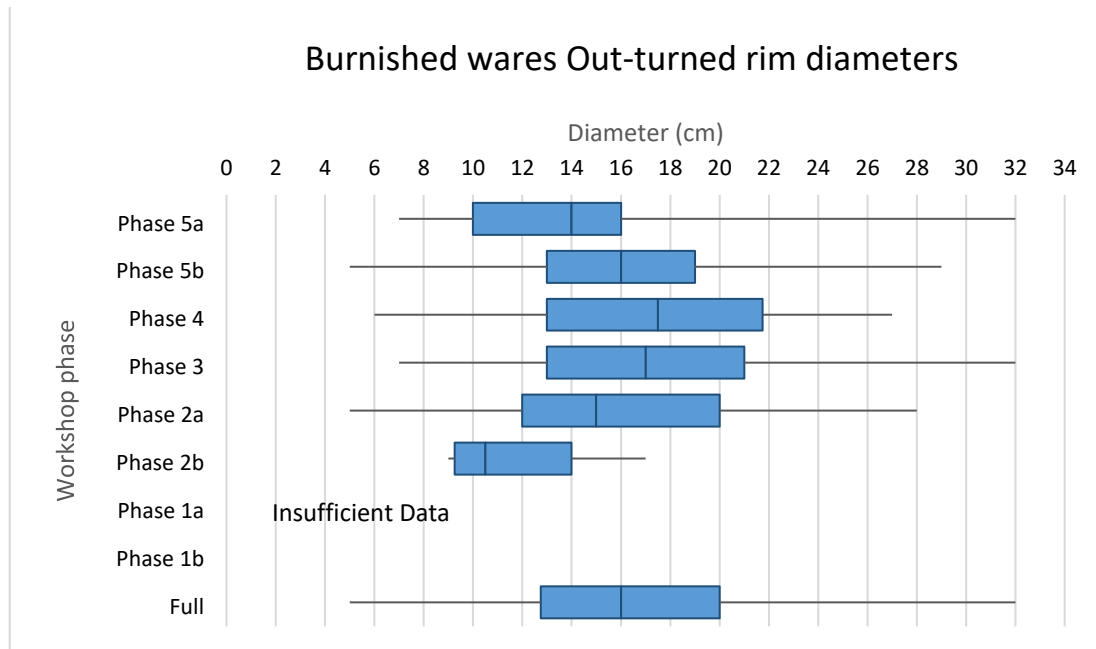


Figure 5.56: Box-plot of burnished wares Out-turned rim diameters from Unit(B) (jewellery workshop)

5.6.4.3.3 Other ware rims

The five measured Black Slipped rims were all from the jewellery workshop. While only a small assemblage, the Black Slipped rims appear to have been on the smaller side and were clustered in two ranges, two smaller rims, one 10 cm and one 12 cm in diameter while the remaining three were in the 20-22 cm range. The three Light Brown Slipped rims were 11, 13 and 19 cm in diameter, with the 19 cm rim being a potential imported rim from the inland Somali Islamic trading towns. Only two of the unidentified rims were measurable, both worn rim sherds from Phase 4. These were an out-turned 23 cm rim and an in-turned 14 cm diameter rim with Type A carination (see App.Fig. III.3).

5.6.4.4 Burnished wares carinated rims

A total of 100 burnished wares rims from the jewellery workshop and four from HAR18(E) had body carination. These were discussed in more detail separately from the complete assemblage of burnished ware rims here as it allowed for potential changes over time in this particular form to be investigated. Interestingly, all the rims with carinated bodies appear to have been from bowls, and there was no evidence among any of the carinated sherds for other forms of carinated vessels, such as jugs or bottles, as is found in the Shay culture wares (e.g. Chapter 2.6). As discussed above, carinated sherds were found across Phase 5a to Phase 2b, although no carinated sherds with rims were recovered from Phase 2b.

5.6.4.4.1 Burnished wares carinated rim forms

Compared to the full assemblage of burnished ware rims the carinated rims had a fewer forms represented. As with the full assemblage, Simple and Flat rims were the most common rim forms at 43.0% and 42.0% of the carinated rims respectively. This was higher than the 37.3% and 32.3% respectively from the full burnished ware assemblage. 11.0% of the carinated rim sherds were Flat, Lipped rims, while the remaining carinated rims consisted of single examples of Tapered, Flat, Inner Lip and Rounded rims (see Fig. 5.57 and App.Fig. III.29). The Flat, Lipped rims were found in all contexts with carinated rims except for Phase 5a. Phase 3 was the only phase which had a significantly higher proportion of Flat rims compared to Simple rims (see Fig. 5.57). Type B carinated sherds were more likely to have Out-turned rims (70.4%) compared to Type A sherds (57.4%) (see App.Fig III.30-31).

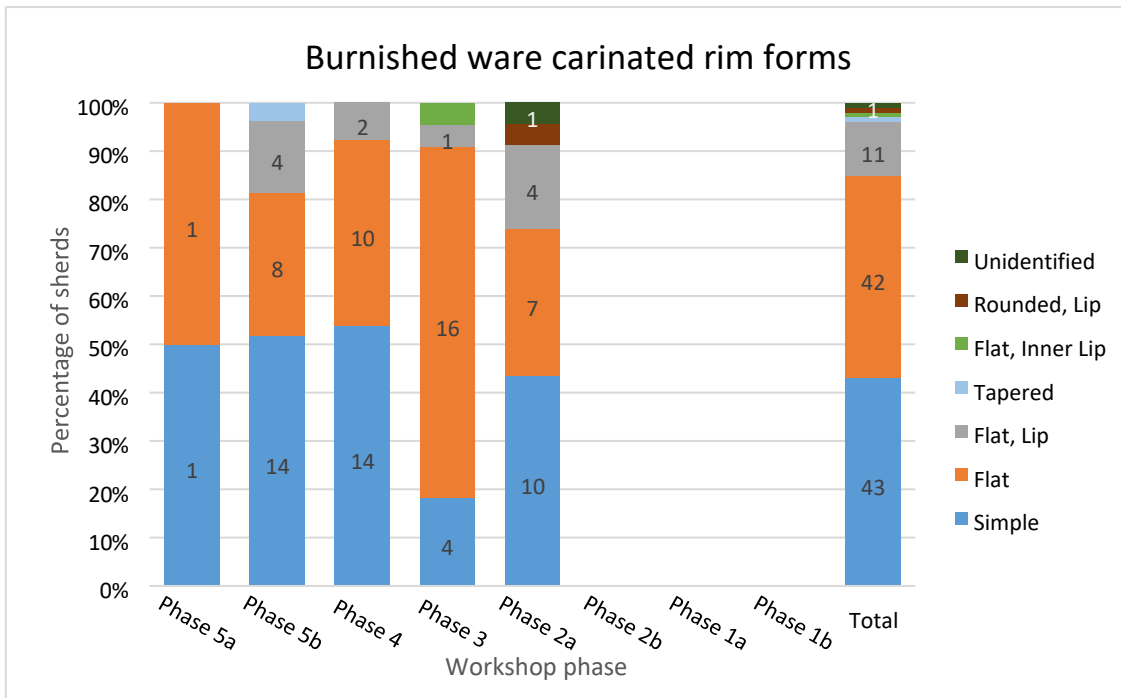


Figure 5.57: Burnished wares carinated rim forms by phase for Unit(B) (jewellery workshop)

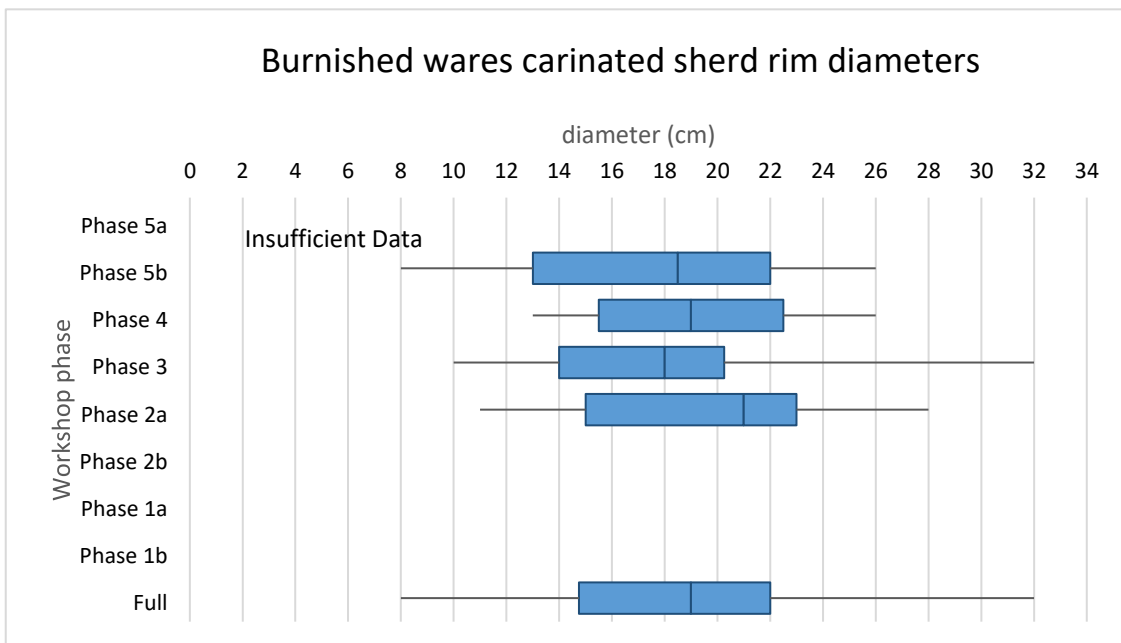


Figure 5.58: Box-plot of burnished wares carinated rim diameters from Unit (B) (jewellery workshop)

5.6.4.4.2 Burnished wares carinated rim diameters

Out of the 104 burnished rims with carination, rim diameters were recorded for 88 sherds from the jewellery workshop (85%) and three from HAR18(E) (75%). Overall, the carinated rims were concentrated in the 15-22 cm diameter, with a mean diameter of 19 cm. In-turned rims were on average slightly smaller (13-21 cm quartiles, mean 17 cm) than out-turned rims (15-23 cm quartiles, mean 19.5 cm). While having less variation in diameter than Type A carinated rims, Type B carinated rims were generally larger than Type A and had a much larger mean diameter compared to Type A carinated rims (21 cm for Type B and 17 cm for Type A). Despite this, Type A carinated rims had the largest diameter among the carinated vessels. Phase 2a had the largest mean rim diameter for both in-turned and out-turned carinated rims. Indeed, for In-turned rims the mean diameter in Phase 2a (21 cm) was larger than the upper quartile range for Phase 3 (19.5 cm). Burnished ware carinated out-turned rims increased in mean diameter through Phases 3, 4 and 5b. No clear pattern was visible for the in-turned burnished ware carinated rims (see Fig. 5.59 and 5.60).

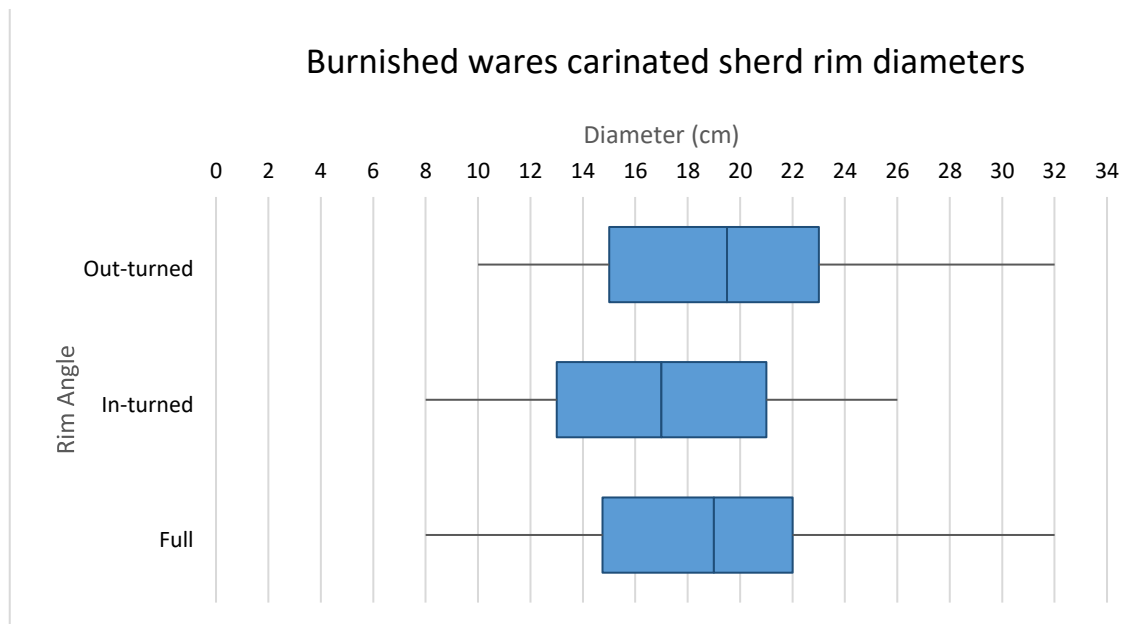


Figure 5.59: Box-plot of burnished wares carinated rim diameters from Unit(B) (jewellery workshop) by rim angle

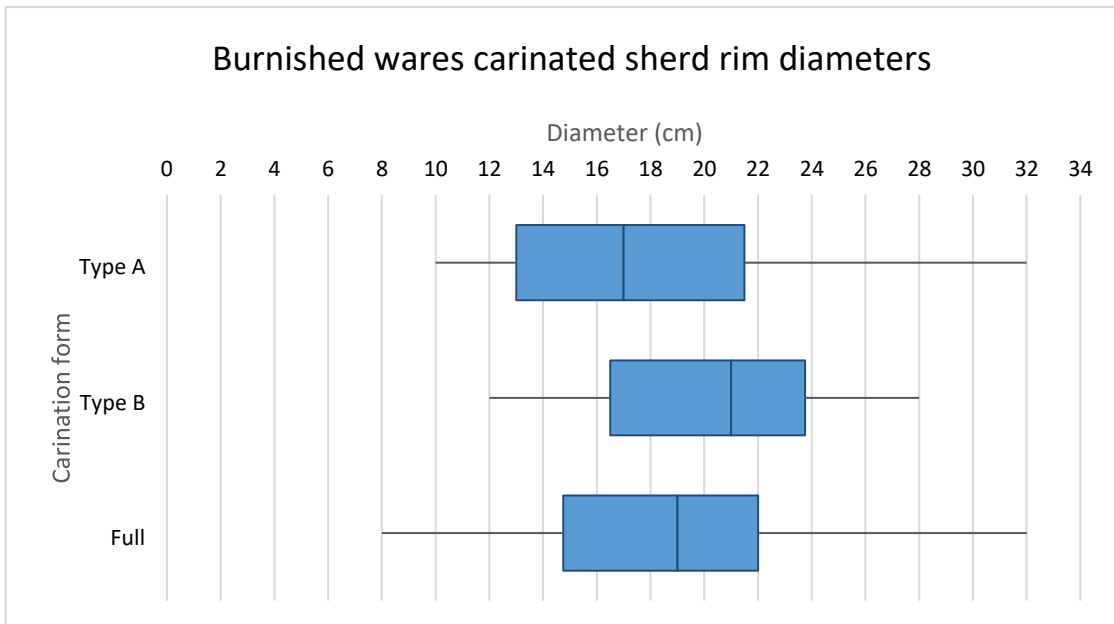


Figure 5.60: Box-plot of carinated burnished wares rim diameters from Unit(B) (jewellery workshop) by carination form

5.6.4.5 Conclusion

Despite the range of rim forms present at Harlaa, they appear to be of limited use as chronological indicators as the majority of rim forms are found throughout the sequence. Flat, Inner Lip rims appear to have been a more recent rim form, concentrated in Phase 5b, Phase 4 and Phase 3. Among the burnished wares, which likely were primarily used for consumption and serving, there did appear to be an increase in rim diameter of the Out-turned burnished ware rims through the phases. Although interestingly this pattern is not as clear with the carinated bowl rims as it is with the whole burnished ware assemblage, with Phase 2a having much larger average rim diameter than other phases for both In-turned and Out-turned burnished ware carinated rims.

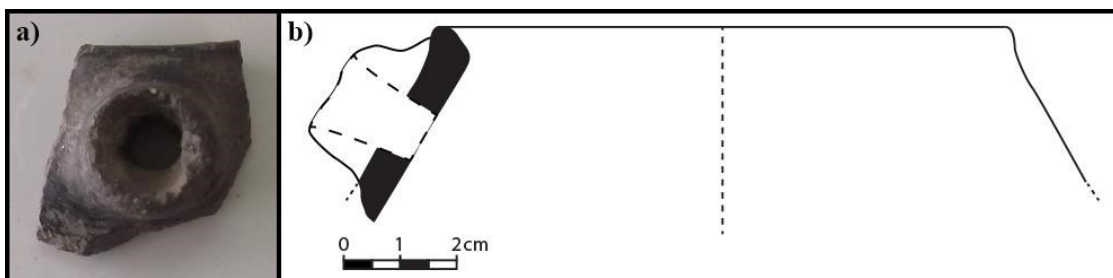


Figure 5.61: Sherd HAR17(B)5-38, Black/Brown Burnished ware Flat, Lip, In-turned rim with spout

5.6.5 Spouts

A small number of spouts were recovered from the excavations at Harlaa, 18 from the jewellery workshop and three from HAR18(E) (21 sherds total). Seventeen of the examples from the jewellery workshop were Earthenware/Plainware, with the final one Black/Brown Burnished ware (See Fig. 5.61). These spouts were concentrated in the more recent contexts, primarily Phase 5b and Phase 4, with two examples from Phase 5a and one from Phase 2a. The single Black/Brown Burnished ware spout was from Phase 5b. It appeared that spouts at Harlaa were a more recent form, focused in Phase 5b and Phase 4. The three examples from HAR18(E) were all Earthenware/ Plainware spouts and were from throughout the sequence, one from each of HAR18(E) 2, HAR18(E)5 and HAR18(E) 7.

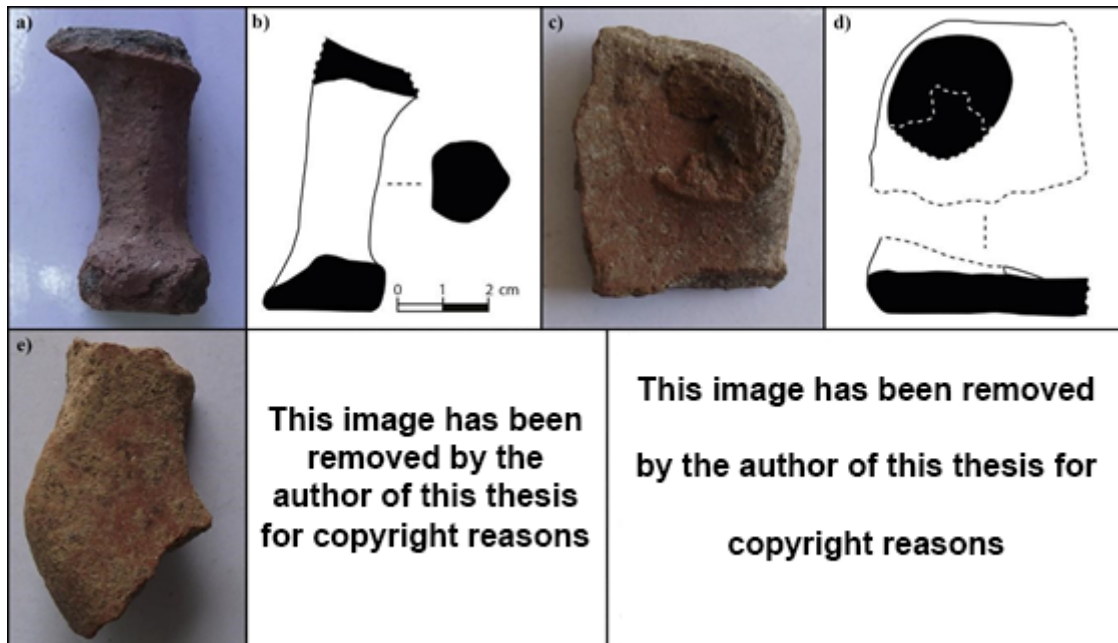


Figure 5.62: Stand base examples, all Harlaa examples are Earthenware/Plainware a),b) Harlaa sherd HAR15(A)2-06; c),d) Harlaa sherd HAR15(A)5-03; e) Harlaa sherd HAR16(A)9-46; f),g) Stand bases from the Chercher mountain sites (Joussaume, 2014)

5.6.6 Stand Bases

A limited number of sherds were recovered which were interpreted as being from stand bases. These were all Earthenware/Plainware sherds. Three of these were from the mosque in HAR15(A), from contexts HAR15(A) 2, 4 and 5 (see Fig. 5.62). Two further sherds from stand bases were recovered from the jewellery workshop in Phase 4 (HAR15[B]6-56) and Phase 3 (HAR16[A]9-46). A final unusual sherd was recovered from Phase 2a (HAR17[B] 23-05), which was potentially from a square stand base. Additionally, two stand base fragments were recovered from HAR18(E), one from each of HAR18(E) 5 and HAR18(E) 6. These stand bases have close parallels to examples from the nearby Chercher mountain cyclopean walled sites (see Fig. 5.62f,g and Joussaume, 1974, 2014; see also Chapter 7.4.1.4). It was interesting that these bases are much more common by proportion of sherds in the mosque unit compared to the jewellery workshop contexts. Additionally, the mosque assemblage did not contain any flat or ring bases, so these stands may have been related to items such as incense burners. The relatively high proportion from HAR18(E), interpreted as a domestic area, compared to the jewellery workshop, however, suggested that this form was not only associated with religious contexts. The low proportion of stand bases in the jewellery workshop therefore may have been due to the particular use of the building. The few examples of stand bases recovered makes using stand bases as chronological indicators challenging. However, based on their predominance in the mosque (Unit [A], dated 1155-1255 AD [see App.Table III.7]) as well as the examples in Phase 3 and 4 of the jewellery workshop suggested that they may be a more recent development.

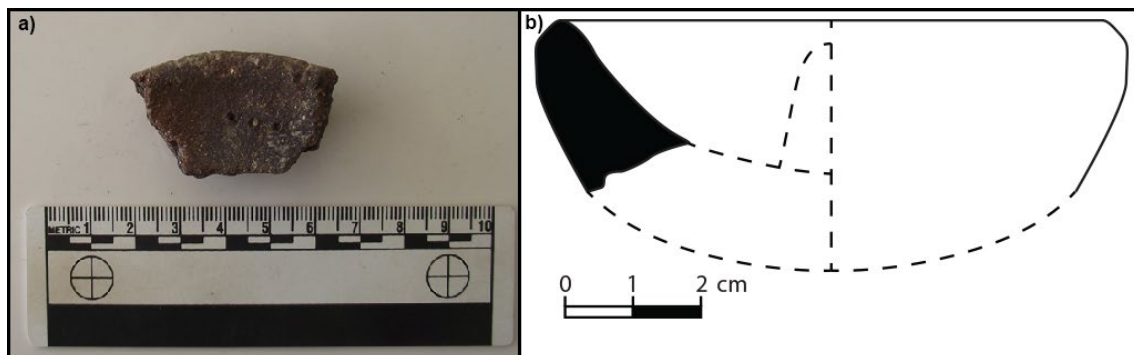


Figure 5.63: a),b) Sherd HAR17(B)20-25, Earthenware/Plainware rim sherd with punctate decorated interior, see App.Fig VI.7 for examples of surface collected lids

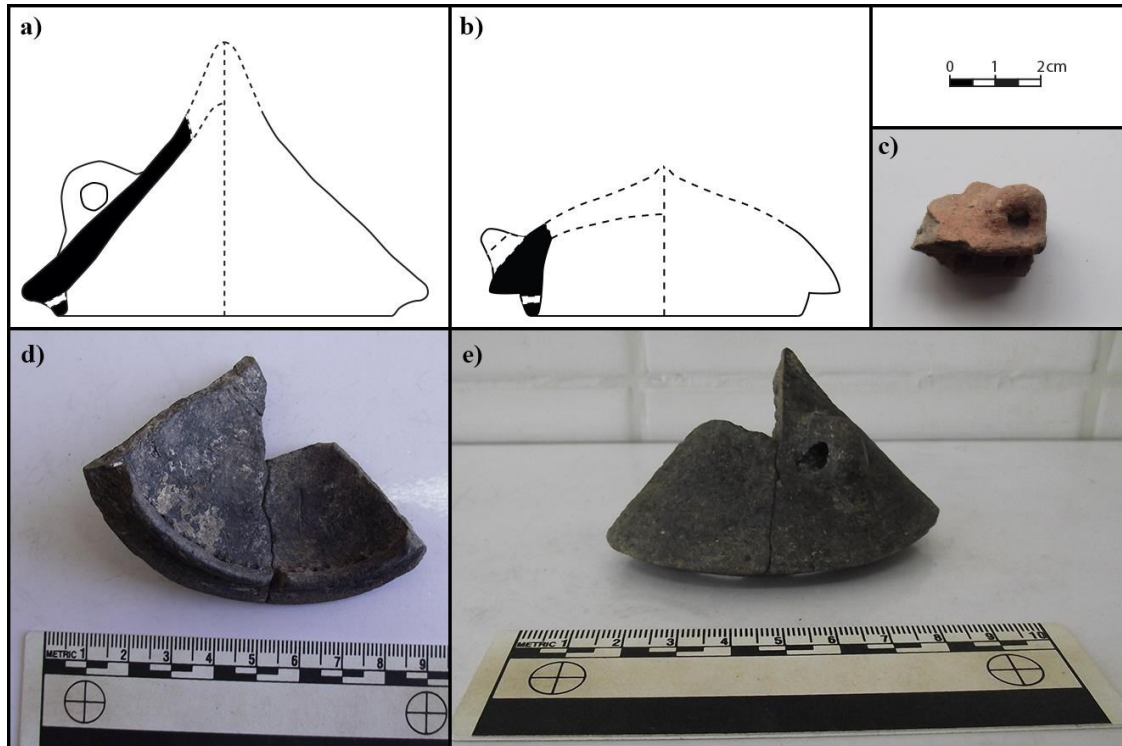


Figure 5.64: Burnished ware Conical lids; a),d),e) Sherd HAR15(B)6-35, Black/Brown Burnished ware; b),c) HAR18(B)8-12 Red Burnished ware

5.6.7 Lids

In addition to the rims with inner ledges discussed above, which were likely related to the use of lids, a few sherds from lids were recovered (e.g. Fig. 5.63 and 5.64). Lids were likely more common at Harlaa than is indicated by this analysis as lids were hard to identify outside of rim sherds. Additionally, many lids may have been made of perishable material such as woven lids or unfired clay which would not have been preserved (see Chapter 4). The lids identified from the jewellery workshop consisted of four Earthenware/Plainware examples, three Black/Brown Burnished ware lids and one Red Burnished ware example. The Plainware lids were recovered from Phase 5a, Phase 3 (two examples) and Phase 2a.

The four burnished ware lids were of an interesting conical form with an inner pierced ledge, usually with a small pierced lug handle on the exterior (See Fig. 5.64). These conical lids were recovered from Phase 5b, Phase 4, Phase 3 and Phase 2a. The examples from Phase 5b, Phase 4 and Phase 3 were Black/Brown Burnished ware. The Phase 4 example was 9 cm in diameter, and while the Phase 5b and Phase 3 examples had damaged rims, the diameter from the internal ledge for all three Black/Brown Burnished ware lid fragments was 8 cm.

This suggests that these conical lids were similar in size. The Phase 2a example was a Red Burnished ware conical lid and was much smaller than the Black/Brown Burnished ware examples, at around 6 cm in diameter. The low number of identifiable lid sherds from the excavation makes them unsuitable as chronological indicators. However, the burnished ware conical lids were very distinctive and had potential parallels (see Chapter 7 for more detail).

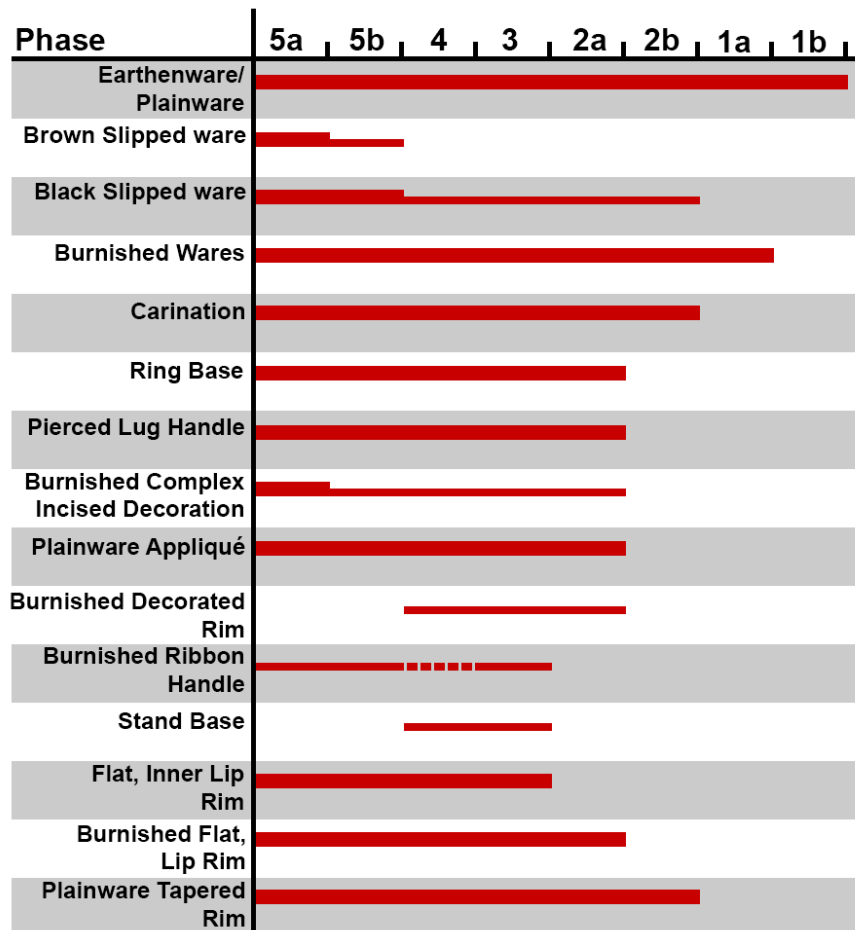


Figure 5.65: Proposed chronological indicators identified as part of the ceramic analysis

5.7 Conclusion

In conclusion, from the excavation assemblage it appears that the local ceramics from Harlaa are only of limited use as chronological indicators. Despite the variety present in the local ceramics, most of the forms and styles had long periods of use, and there are few clear patterns of use across the phases at Harlaa. Despite this, a few chronological changes could be observed in the local ceramics, particularly around Phases 2a-1a. All the main ware types (Earthenware/Plainware, Black/Brown Burnished, Light Brown Burnished and

Red Burnished ware) were found throughout the sequence with no clear changes in fabric or finish visible. The exception was Phase 1a, which only contained Earthenware/Plainware sherds. The rarer Black Slipped and Light Brown Slipped ware variants did appear to be indicative of more recent phases. Light Brown Slipped ware present was in Phase 5a, while Black Slipped ware was concentrated in Phase 5a-5b, with smaller quantities also present in earlier contexts (see Fig, 5.11), potentially representing worn Black/Brown Burnished ware sherds with red fabric.

The decorative styles present on the Harlaa local ceramics were quite varied; however, they also had long periods of use. The un-burnished decorative style found on the burnished wares was distinctive to Harlaa but was found in all phases, so was unfortunately not chronologically significant. There was a notable decline in decorated sherds from Phase 3-2b (2.7% in Phase 3 to 0.8% in Phase 2b) and no decorated sherds from Phase 1a or 1b. It was unclear if the absence of decorated sherds in Phase 1a-1b was significant or was due to the low number of sherds collected from these phases. Burnished ware appliqué body decoration was found in Phase 5b and Phase 4. Pierced sherds were found in all phases with the exception of Phase 1a and 1b.

Carinated sherds had a clear chronological break, with no carinated sherds found earlier than Phase 2b. Additionally, Phase 2b and Phase 5a had much lower proportions (1.1% in Phase 5a and 0.6% in Phase 2b) of carinated sherds than the other phases (2.35-3.9%). Ribbon handles were found throughout the sequence, with the exception of Phase 1a, the earliest phase. In contrast pierced lug handles were concentrated in Phases 5b-2a. Ring bases remained constant at around 2% of the assemblage through Phase 5a-2a, but were completely absent from the earlier contexts.

Rim forms were unfortunately quite poor as chronological indicators. While rim forms were quite diverse at Harlaa, most forms were found scattered throughout the phases with no clear pattern. A few potentially chronologically significant rim forms were identified, so some chronological observations could still be made. The earlier phases, particularly Phase 1a, 1b and 2b had a smaller range of rim forms than the later phases. With the burnished wares Flat, Lipped rims were absent from Phase 2b and earlier, while burnished ware Rounded, Lip rims were more common in the more recent phases, particularly

Phase 5b. An absence of Earthenware/Plainware Tapered rims was potentially representative of Phase 1a or 1b. Flat, Inner Lip rims appear to have been a more recent form, concentrated in Phase 5b-3.

The small number of spouts from Harlaa were concentrated in the more recent phases, particularly Phase 5b and Phase 4, with a small amount in Phase 5a and Phase 2a. Figure 5.64 provides a proposed chronological breakdown of the forms and wares for the local ceramics at Harlaa.

The next chapter will look at the ceramic assemblage collected from fieldwalking surveys during the 2018 field season and investigate how the results presented in this chapter can be used to interpret the field survey ceramics as well as potentially identify different chronological periods in areas of the site.

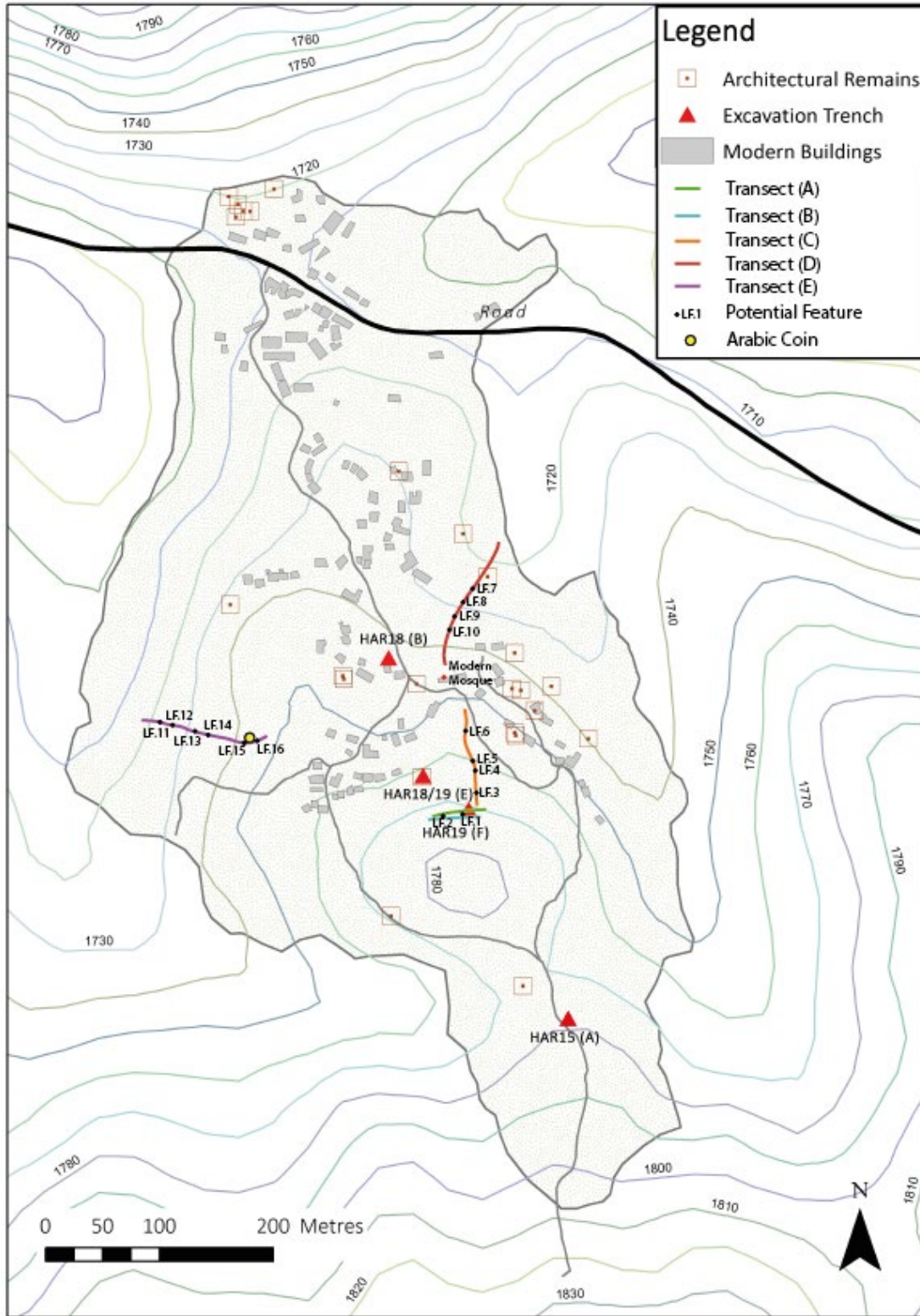


Figure 6.1: Map of Harlaa showing HAR18 survey transects, base map by N. Khalaf

Chapter 6: Field Survey Ceramic Analysis

6.1 Introduction

As part of the 2018 field season at Harlaa a field survey was undertaken. This field survey consisted of 5 transects across parts of the wider site (see Fig. 6.1). Each transect was given a letter code (Transect [A] – Transect [E]), while each transect collection unit was denoted by a sequential number starting from the first collection unit surveyed (e.g. Tran[A].5 = Transect [A], unit 5). Each transect consisted of a series of large square collection units of 3x3 m (Transects [C] and [E]) or 3x5 m (Transects [A], [B] and [D]). See App. Table IV.1 for number of collection units per Transect and length of the Transects. These dimensions for the survey collection units were chosen as the terracing around Harlaa is about 3 m wide, allowing for easier positioning of the transect units. The large size of the transect units also ensured a sufficient density of material was collected for analysis. Both 3 m and 5 m long transect units were used to test the size of unit required to have a sufficient density of sherds for comparison. The locations of the start and end points of each transect and the position of each unit within the transect was recorded using a hand-held GPS (see Table 6.1 for start and end co-ordinates). While the focus of the survey was on collecting ceramics for analysis and comparison with the excavated assemblage, all archaeological material visible on the surface was collected from each transect unit. The local ceramics were divided into the same ware types as the excavated assemblage (see Chapter 5.3), then the non-diagnostic sherds for each ware type in each transect unit were counted and discarded to save storage and transport space. The diagnostic sherds were analysed and recorded using the same methodology as the excavated local ceramics to facilitate comparison between the two assemblages. The methodology and background for this fieldwalking survey was discussed in more detail in Chapter 3.3.

Transects (A) and (B) were two parallel transects along two terraces on the hill on which the mosque (HAR15[A]) is situated (50 m and 45 m long respectively). This covered the area which was excavated as unit HAR19(F) in the 2019 field season (see Fig. 6.1). Transects (A) and (B) were considered

together in the analysis as they were adjacent to each other. Transect (C) (82 m length) ran from Transects (A) and (B) down the hill northwards towards the jewellery workshop (Unit [B]) and through the field which contained HAR18(E). Transect (D) (120 m length) ran from the bottom of the valley westwards up towards Unit(B) and modern mosque. Transect (E) (102 m length) ran from the bottom of the valley on the other side of the settlement eastwards up towards the gap in-between the citadel hill and the mosque hill. The material from Tran(B).7 was lost prior to analysis and Tran(C).8 represented a modern compacted floor covering a 3x4 m unit which made collecting material impossible. See App.Table IV.1 for a breakdown of all archaeological material recovered as well as transect lengths.

| HAR18 Transect | Average sherd density | Start Coordinate | End Coordinate |
|---------------------------|----------------------------------|--------------------------|--------------------------|
| (A) | 2.08 S/m ² | N09.48557, E041.91114 | N09.48551, E041.90740 |
| (B) | 2.68 S/m ² | N09.48549, E041.91070 | N09.48551, E041.91110 |
| (C) | 3.07 S/m ² | N09.48559, E041.91107 | N09.48633, E041.91097 |
| (D) | 2.20 S/m ² | N09.48760, E041.91115 | N09.48666, E041.91074 |
| (E) | 5.12 S/m ² | N09.48624, E041.90840 | N09.48612, E041.90936 |

Table 6.1: Average sherd density and GPS coordinates for each survey transect

| Potential Feature | Transect Units | Downslope Spill | Notes | Start GPS Co-ords. |
|-------------------|---------------------------|-----------------|---|--------------------------|
| LF.1 | Tran(A).5/ Tran(B).6 | Tran(C).1-2? | Associated with known buried feature (HAR19[F]), settlement/storage structure | N09.48556, E041.91095 |
| LF.2 | Tran(A).8/ Tran(B).1-2 | - | Associated with large quantities of shell, settlement/ manufacturing structure | N09.48553, E041.91082 |
| LF.3 | Tran(C).4 | Tran(C).5-6 | Depositional feature | N09.48569, E041.91106 |
| LF.4 | Tran(C).10 | Tran(C).11-13 | Depositional feature | N09.48585, E041.91106 |
| LF.5 | Tran(C).14 | Tran(C).15 | Depositional/storage feature | N09.48593, E041.91103 |
| LF.6 | Tran(C).22 | Tran(C).23-24 | Storage structure/ feature | N09.48616, E041.91100 |
| LF.7 | Tran(D).11 | Tran(D).10-8 | Depositional feature | N09.48724, E041.91095 |
| LF.8 | Tran(D).14 | Tran(D).13-12 | Settlement feature | N09.48714, E041.91088 |
| LF.9 | Tran(D).17 | Tran(D).16-15 | Settlement feature | N09.48703, E041.91081 |
| LF.10 | Tran(D).19 | Tran(D).18 | Settlement feature | N09.48693, E041.91077 |
| LF.11 | Tran(E).6 | Tran(E).5-4 | Settlement feature | N09.48623, E041.90854 |
| LF.12 | Tran(E).9 | Tran(E).8-7 | Depositional feature | N09.48621, E041.90864 |
| LF.13 | Tran(E).14 | Tran(E).13-11 | Storage feature | N09.48616, E041.90881 |
| LF.14 | Tran(E).18 | Tran(E).17 | Storage/settlement structure | N09.48613, E041.90891 |
| LF.15 | Tran(E).28 | Tran(E).27-24 | High sherd density throughout, may be other features in spill, Settlement feature | N09.48607, E041.90919 |
| LF.16 | Tran(E).32 | Tran(E).31-29 | Settlement feature | N09.48609, E041.90928 |

Table 6.2: Potential features identified based on high relative sherd density in the survey transects

6.2 Wares

6.2.1 Ware and Sherd distribution

Sherd distribution was considered by density of sherds per meter squared (S/m^2) for each unit in a transect. This was chosen because some transects used different unit sizes (3x3 m for Tran[A],[B] and [D] and 3x5 m for Tran[C] and [E], see Chapter 3.3) and some transect units were partially obscured meaning that material could not be collected from the full transect unit. This allowed the units of different sizes to be compared. A total of 3689 sherds from local ceramics were recovered during the field survey (see App.Table IV.1; see App.Table IV.2 for proportions of diagnostic sherds). The same ware types found in the excavation were identified as well as a small selection of unidentified or unique wares.



Figure 6.2: Large vessel uncovered in 2017 near LF.1 in Transect (A)/(B). Note, the farmer had removed much of the body of the vessel

Sherd density was quite varied, ranging from $0.07 S/m^2$ to $15.0 S/m^2$. There were particular hotspots of sherd density identified which likely related to buried features (see Table 6.2 and Fig. 6.1 as well as App.Fig. IV.1-4 for maps of these potential features). While it was impossible to say for certain what these potential features were without excavation, some observations could be made based on known nearby features and the density of sherds. There were two hotspots associated with potential features in Transects (A) and (B) at Tran(A).6/(B).5 (LF.1) and Tran(A).8/(B).1-2 (LF.2). LF.1 related to a known buried feature including a large vessel and plaster floor which was discovered

by a farmer in 2017 (see Fig. 6.2). In the 2019 season this feature was excavated as unit HAR19(F). However, the large vessel was not excavated as the farmer had re-dug and likely destroyed it in the intervening period. LF.2 was associated with an extremely high concentration of shell fragments (see App.Fig. IV.4). These two potential features were likely storage or manufacturing settlement structures. This was reinforced by LF.1 and LF.2 being close to Unit HAR19(F), an extensive structure with storage pits. Transect (C) had two main peaks of sherds at Tran(C).14 and Tran(C).22, (LF.5 and LF.6) with smaller concentrations at Tran(C).4 and Tran(C).10 (LF.3 and LF.4). LF.3 and LF.4 were likely depositional features based on the lower proportion of sherds recovered. LF.6 was identified as a storage structure, while LF.5 was a depositional or storage feature. Transect (D) had two potential features, LF.9 and LF.10, at Tran(D).17 and Tran(D).19 respectively, both interpreted as settlement features. Two smaller concentrations of sherds were also visible at Tran(D).11 (LF.7) and Tran(D).14 (LF.8). Trenches from robbed walls were visible near LF.7, so LF.7 was likely related to a settlement feature, while LF.8 was interpreted as a depositional feature. Interestingly sherds almost completely disappeared towards the end of the transect near the modern mosque. This was close to the jewellery workshop, so it would be expected to have still been part of the archaeological settlement, especially as there was evidence for features further down the slope. This absence may have been due to the fact that this area was close to the mosque and modern village and so has been heavily disturbed and picked over by the locals in addition to material travelling down the slope over time.

Transect (E) had a noticeably higher average S/m² density than the other transects (See Table 6.1). This suggested that there was significant occupation in this area of the site. The highest density of sherds among all transects, 15.0 S/m², was from a potential settlement feature LF.15 in Tran(E).28. Tran(E).27-26 also had a significant quantity of sherds, which likely represented a spill of sherds downslope from LF.15 or further settlement structures. There were potential features also identified in Tran(E).6 (LF.11, a settlement feature), Tran(E).13-14 (LF.13, a storage/depositional feature), Tran(E).18 (LF.14, a storage/settlement structure) and Tran(E).32 (LF.16), as well as Tran(E).9 (LF.12) as a less likely, but possible depositional feature. It was interesting that

there was a consistently high density of sherds from Tran(E).1-(E).9, at the bottom of the slope. This likely represented material which has collected at the bottom of the slope over time. LF.14 was interesting as it has almost no downslope spill, this may suggest that the associated feature was deeper than the other features identified. Tran(E).26-32 also had a consistently high density of sherds, and it was possible that there were more buried features present. However, only the two main density spikes at Tran(E).32 and Tran(E).28 were considered as features here as LF.16 and LF.15 (see App.Fig. IV.1-3 for plans of sherd density and potential features for each transect). An Arabic coin was found by the farmer close to Transect (E) a few days before the field survey (see App.Fig. IV.5). The location the farmer found the coin was recorded using the handheld GPS and is shown in Fig. 6.1.



Figure 6.3: Terracing around Harlaa while undertaking fieldwalking survey (Photo by R. MacLean)

6.2.2 Taphonomic Processes

There was evidence that taphonomic processes and the movement of soil have affected the surface assemblages. The site of Harlaa is located on a large hill, with much of the site situated on steep slopes (see Fig. 6.3 and 3.1).

All of the survey transects were in fields on the slope of the hill. With all the transects going up or down slopes (Transects [C], [D] and [E]) there was a noticeable distribution of archaeological material down slope from likely features, showing that material has spread down slope over time through downhill soil creep (see App.Fig. IV.1-4). This is particularly noticeable with Black Slipped and Brown Slipped wares, the ceramics distinctive to Phase 5a and 5b, the most recent phases, as these are the layers likely most subjected to movement. Additionally, the later terracing of the fields may have resulted in the removal of the upper phases of some features (see also Chapter 3.3).

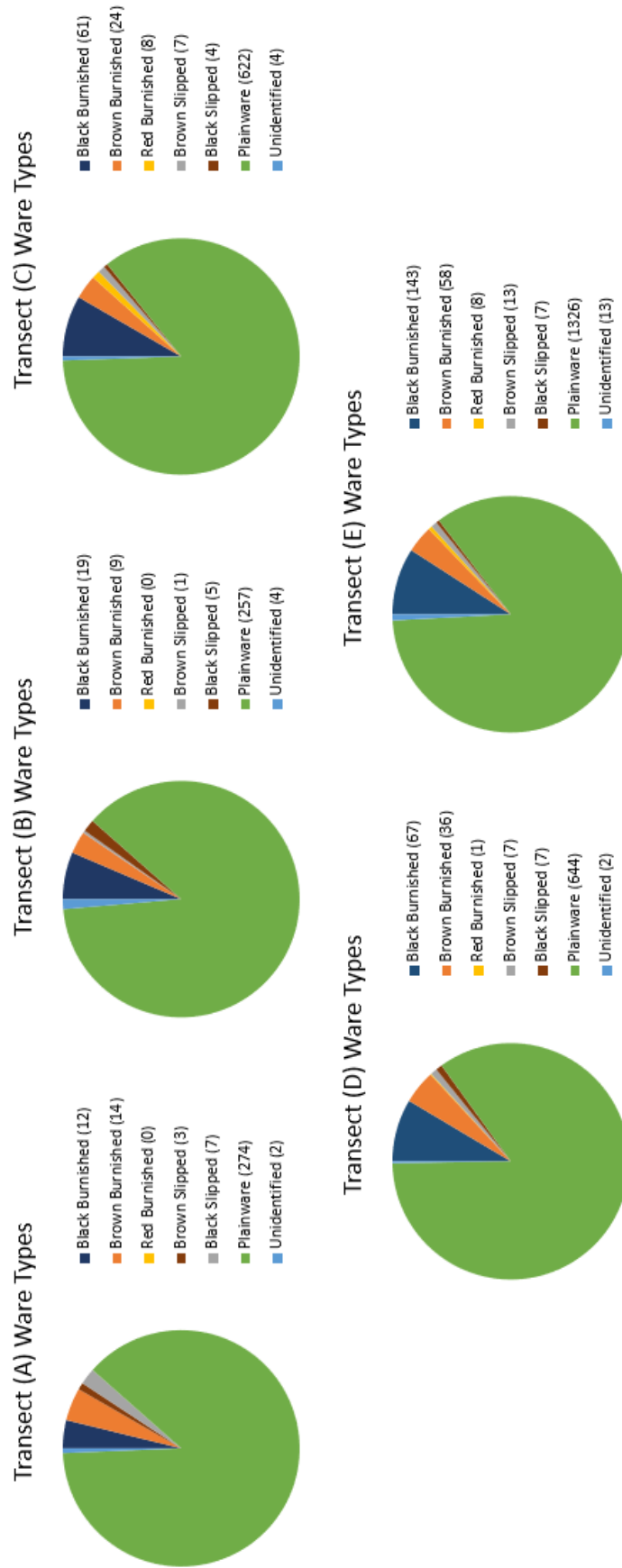


Figure 6.4: Proportion of local wares across Transects (A)-(E), (See App. Table IV.3-7 for breakdown by collection unit)

6.2.3 Survey assemblage wares

Earthenware/Plainware sherds (see Chapter 5.3) were found in every unit across all transects. This was to be expected as this was the dominant ware form found in the excavations at Harlaa. Considering transects as a whole Earthenware/Plainware averaged around 85% of the sherds, with Transect (A) at 87.8%, Transect (B) at 87.1%, Transect (C) at 85.2%, Transect (D) at 84.7% and Transect (E) at 84.6%, (see Fig. 6.4) this is higher than the excavated assemblages, which averaged around 75% of the assemblage being Earthenware/Plainware. See Fig. 5.13 for the proposed chronological distribution of ware types based on the jewellery workshop phases (Insoll, 2018b).

6.2.3.1 Transect (A)/(B) wares

Transects (A) and (B) had the highest proportion of Earthenware/Plainware at around 87% (see section 6.2.3 above). Black Slipped wares were concentrated around Tran(B).3-4 and Tran(A).5-8, which for Transect (A) were associated with the two sherd density spikes representing LF.1 and LF.2, while for Transect (B) they were between the two features. There were also Black Slipped ware sherds found in Tran(A).3 and Tran(B).9. This may suggest that these features dated to the more recent Phase 5a-5b occupation of Harlaa. Light Brown Slipped ware sherds were only found in Tran(A).3, Tran(A).9 and Tran(B).7. These did not directly correlate with any of the potential settlement features, but could suggest that LF.1 was more recent (See App.Fig. IV.1).

Black/Brown or Light Brown Burnished ware sherds were present in all transect units except for Tran(A).4 and Tran(A).5, which both had low quantities of sherds (0.5 and 1.0 S/m² respectively). Tran(A).3 also had a low proportion of sherds (0.9 S/m²), but had a wider range of wares with all wares expect for Red Burnished ware, including an Unidentified ware present. As was expected Black/Brown Burnished ware sherds were generally more common than Light Brown Burnished ware, although there was no clear pattern in the distribution of the burnished wares visible.

6.2.3.2 Transect (C) wares

Transect (C) only had Black Slipped ware sherds present in two contexts Tran(C).3 and Tran(C).4, at the top of the slope near Transects (A) and (B). As Transect C began just downslope from LF.1, this fits with the distribution of Black Slipped ware sherds around Tran(A).5-7 and indicated that the associated settlement/storage feature was likely more recent. Light Brown Slipped ware sherds appeared only in small quantities in isolated transect units; Tran(C).12, Tran(C).15, Tran(C).21, Tran(C).23 and Tran(C).27. These transect units were close to potential features LF.4, LF.5 and LF.6 and were usually downslope from the potential features. As with Transects (A) and (B), Black/Brown Burnished or Light Brown Burnished ware sherds were found in the majority of transect units, with the exception of Tran(C).2, Tran(C).15 and Tran(C).18-19. Apart from Tran(C).2 these were transect units with a low sherd density. Tran(C).14 (LF.5) had a very low proportion of burnished sherds for the density of sherds present, with only 2% Black/Brown Burnished ware and 2% Light Brown Burnished ware. This could fit with the identification of LF.5 as a potential storage feature. Red Burnished ware sherds were present in small quantities in several transect units in Transect C; Tran(C).9-10, Tran(C).12, Tran(C).16, Tran(C).21 and Tran(C).24. The spread around Tran(C).9-12, possibly associated with LF.4, was interesting, although the significance was not clear. (See App.Fig. IV.1 for map of ware distribution).

6.2.3.3 Transect (D) wares

The Black Slipped ware sherds in Transect (D) had a less clear pattern than in Transects (A)-(C). There was a small concentration in Tran(D).4-5, at the bottom of the slope. Additional small quantities of Black Slipped ware sherds were present in Tran(D).13, Tran(D).15, Tran(D).17 and Tran(D).20. Tran(D).17 was associated with LF.9 and also contained Light Brown Slipped ware sherds. However, the small proportions of Black Slipped and Light Brown Slipped wares recovered make dating likely features based on the survey assemblage problematic. In addition to Tran (D).17, Light Brown Slipped sherds were present in Tran(D).3, Tran(D).8-9, Tran(D).12 and Tran(D).21. As with Transect (C) these tended to be downslope of potential features (LF.8 and LF.9). All units

except for Tran(D).24, which only contained a single local sherd, had Black/Brown Burnished or Light Brown Burnished ware sherds. Transect units Tran(D).3 and Tran(D).22 only contained Light Brown Burnished ware sherds while all others contained at least Black/Brown Burnished ware sherds. Interestingly Tran(D).11 and Tran(D).17, associated with LF.7 and LF.9 respectively had a lower proportion of burnished sherds (3.9% Black/Brown Burnished ware and 5.8% Light Brown Burnished ware in Tran[D].11 and 5.6% Black/Brown Burnished ware and 4.2% Light Brown Burnished ware in Tran[D].17) than would be expected. A single Red Burnished ware sherd was recovered from Tran(D).5 (See App.Fig. IV.2 for map of ware distribution).

6.2.3.4 Transect (E) Wares

As discussed above, Transect (E) contained a much higher density of sherds than the other transects. As with Transect (D) Black Slipped ware sherds were generally not directly associated with potential features, with sherds present in Tran(E).5, Tran(E).8 and Tran(E).23-24, all down slope from likely features LF.11, LF.12 and LF.15 respectively. LF.16 in Tran(E).32 did contain Black Slipped ware sherds, however, the proportion was too low to have any strong significance purely from a survey. Light Brown Slipped ware sherds were found in transect units Tran(E).3, Tran(E).26, Tran(E).28, Tran(E).30-31 and Tran(E).34. Tran(E).28 was the highest density unit out of any transect and was associated with LF.15, did potentially contain a proportionally significant quantity of Light Brown Slipped ware sherds. As was seen with the other transects, all other concentrations of Light Brown Slipped ware sherds were down slope of potential features. Tran(E).17 was the only transect unit to not contain any Black/Brown Burnished or Light Brown Burnished ware sherds. However, Tran(E).17 had the lowest sherd density (0.89 S/m²) in Transect (E). Tran(E).22 contained only Light Brown Burnished ware sherds out of the burnished wares. Red Burnished ware sherds were present in small quantities across Transect (E) in transect units; Tran(E).2, Tran(E).6, Tran(E).9, Tran(E).12, Tran(E).27-28 and Tran(E).32. Compared to Light Brown Slipped and Black Slipped wares, Red Burnished ware sherds seem to have had a much closer correlation to the potential features; LF.11, LF.12, LF.15 and LF.16 all had directly associated Red

Burnished ware sherds and LF.13 (Tran[E].13-14, a potential storage feature) had Red Burnished ware sherds just down slope. This could suggest that Red Burnished ware was generally associated with phases earlier than Phase 5b. Out of the potential features LF.16 had a much lower proportion of burnished sherds than was expected (3% Black/Brown Burnished and Light Brown Burnished ware and 1% Red Burnished ware). Tran(E).28 (LF.15) also contained a slightly lower proportion of burnished ware sherds than the other likely features, although it was still within an acceptable range (See App.Fig. IV.3 for map of ware distribution). LF.15 and LF.16 were both still identified as settlement features due to the density of sherds associated with them.

6.2.3.5 Discussion

It was of interest that Transects (C) and (E) showed a higher proportion of Light Brown Slipped ware sherds (7 sherds, 1.0% in Transect [C]; 13 sherds, 0.8% in Transect [E]) compared to Black Slipped ware (4 sherds, (0.6%) in Transect [C]; 7 sherds, 0.5% in Transect [E]), while all other transects and the excavation units had a higher proportion of Black Slipped ware sherds. It would generally be expected for Black Slipped ware to be more common, as based on the excavation data it appeared to have had a longer period of use (see Fig. 5.13). This may suggest that the areas covered by Transects (C) and (E) were more heavily occupied in the latest periods when Light Slipped wares were in use compared to other Transects.

The distribution of Black Slipped wares in Transects (C), (D) and (E) was interesting. The fact that they were generally found down slope of potential features may suggest that they were originally associated with the features but much of the material from the more recent phases of occupation has since spread down the slope. This fits with the taphonomic processes identified above, suggesting that there has been movement of archaeological material down the slopes over time.

6.2.3.6 Imported and Modern Ceramics

A selection of imported ceramics were recovered as part of the survey as seen in Table 6.3. In addition to unidentified imported wares, three broad groups

of imported ceramics were identified (Horton, pers. comm. 17/05/18; Insoll, pers. comm. 13/05/19). These included Yemeni wares, Far Eastern Martaban ware jars and a small selection of Mamluk Egyptian wares, including an Ayyubid-Mamluk “Grenade” Flask, which was likely used for storing Mercury. In addition there was a single buff unglazed ware potentially from Egypt, Yemen or the Arabian Gulf. These imported wares all covered the mid-late 13th – 14th century, which correlated with the more recent phases; Phase 5a-4 (see Table 6.3 and Table 5.1), these phases also represented the period when the site of Harlaa was in its prime. It was also interesting that no fine Chinese wares such as Celadon were recovered. This suggested that these wares were rare at Harlaa, or that these sherds have been collected by the local farmers.

The unidentified unglazed ware from LF.15 had some similarities to modern wheelmade incense burners, so may be a modern sherd. No sherds were recovered which could be clearly identified as Oromo ceramics based on comparisons with the ethnographic examples (see Chapter 4.5 and Appendix I).

| Unit | Potential Feature | Code | Description | Date |
|------------|-------------------|---------------|---|---|
| Tran(A).10 | - | Tran(A).10-08 | Martaban Jar | 14 th cent. |
| Tran(C).24 | LF.6 | Tran(C).24-06 | Martaban Jar | 14 th cent. |
| Tran(D).6 | - | Tran(D).6-07 | Unidentified unglazed ware | - |
| Tran(D).9 | LF.7 | Tran(D).9-09 | Yemeni Black on Yellow ware | 13 th -mid 14 th cent |
| Tran(D).24 | - | Tran(D).24-01 | Unidentified glazed ware | - |
| Tran(E).6 | LF.11 | Tran(E).6-12 | Mamluk Egyptian Fritware | 14 th -15 th cent. |
| Tran(E).9 | LF.12 | Tran(E).9-10 | Martaban Jar | 14 th cent. |
| Tran(E).11 | LF.13 | Tran(E).11-05 | Yemeni/Iranian Polychrome Glazed ware | Late 13 th cent. |
| Tran(E).20 | - | Tran(E).20-12 | Worn Yemeni glazed ware | - |
| Tran(E).25 | LF.15 | Tran(E).25-11 | Unidentified unglazed ware | - |
| Tran(E).26 | LF.15 | Tran(E).26-18 | Ayyubid-Mamluk Egyptian “Grenade” Flask | 13 th -14 th cent. |
| Tran(E).29 | LF.16 | Tran(E).29-14 | Islamic unglazed buff ware | - |

Table 6.3: Imported ceramics recovered during the field survey (see App.Fig. IV.6 for photographs)

6.2.4 Conclusion

It has been shown that it was possible to identify potential buried features based on hotspots of sherd density, and such possible features were identified in all transects. The fact that such hotspots could sometimes be associated with known features supported their identification. While the nature of the wares at Harlaa made identifying early features challenging as the main wares (Earthenware/Plainware, Black/Brown Burnished ware and Light Brown Burnished ware), were present throughout the sequence and there were no wares unique to the early period, Black Slipped and Light Brown Slipped wares do show some potential for the identification of more recent Phase 5a-5b features. This was somewhat hampered by the fact that it appeared that much of the more recent archaeological material has travelled down slope over time through taphonomic processes. In Transect (A)/(B), LF.1 was likely related to Phase 5 based on the distribution of Black Slipped ware sherds in Transects (A) and (B), as well as the top of Transect (C). The distribution in Transect (C) was less clear with Black Slipped ware sherds only present in Tran(C).3-4, likely relating to LF.1 in Transects (A)/(B), while Light Brown Slipped ware sherds are spread throughout the rest of the Transect. Transect (D) was also somewhat unclear with the distribution of Black Slipped and Light Brown Slipped ware sherds compared to possible features. Transect (E) showed the most consistent evidence for the more recent archaeological material having travelled down the slope, and it was likely that at least LF.11 and LF.15 represent features with Phase 5 use. The density of material in Tran(E).28 as well as in Tran(E).27-25 down the slope suggested that it had a deeper stratigraphy than just the more recent periods. Therefore, the local wares present at Harlaa do provide an indication of the date of the landscape and features to a limited extent. As has been discussed previously (see Chapter 5.3), the ware types found (particularly Black Slipped and Light Brown Slipped) were primarily an indication of recent phases, particularly Phase 5a-5b. This was due to the previously mentioned issue of the absence of ware types associated only with the early phases of occupation at Harlaa. The dating of the imported ceramics fits with the more recent Phases at Harlaa, which was to be expected from a surface collected fieldsurvey assemblage.

| Transect (A) | Un-burnished | Punctate | Appliqué | Finger Pressed | Total |
|--------------|--------------|----------|----------|----------------|----------|
| Tran(A).1 | 1 | 0 | 0 | 0 | 1 |
| Tran(A).2 | 0 | 0 | 0 | 0 | 0 |
| Tran(A).3 | 0 | 0 | 0 | 0 | 0 |
| Tran(A).4 | 0 | 0 | 0 | 0 | 0 |
| Tran(A).5 | 0 | 0 | 0 | 0 | 0 |
| Tran(A).6 | 0 | 0 | 0 | 0 | 0 |
| Tran(A).7 | 0 | 0 | 0 | 1 | 1 |
| Tran(A).8 | 0 | 1 | 0 | 0 | 1 |
| Tran(A).9 | 0 | 0 | 1 | 0 | 1 |
| Tran(A).10 | 1 | 0 | 1 | 0 | 2 |
| Total | 2 | 1 | 2 | 1 | 6 |

Table 6.4: Transect (A) Decorated sherd distribution for all ware types

6.3 Decoration

6.3.1 Introduction

A total of 66 sherds from the survey showed evidence of decoration, six from Transect (A), five from Transect (B), 14 from Transect (C), 17 from Transect (D) and 24 from Transect (E). This made up 1.79% of the survey assemblage, which was noticeably lower than with the excavated assemblages, which averaged around 3% of the assemblage. This was likely due to the fact that decorated sherds were more likely to be collected by farmers. A similar range of decorative styles were recovered to the excavated assemblage; light slip patterns, incised, punctate, appliqué and finger pressed decoration were present (see Chapter 5). Additional moulded ridge and a possible painted sherd decoration style not present in the excavated assemblage were also identified.



Figure 6.5: Earthenware/Plainware rim sherd Tran(B).9-04 with complex incised decoration, see Fig. 5.14d for Black/Brown Burnished ware example

6.3.2 Decoration Similar to the Excavation Assemblage

The six decorated sherds from Transect (A) were concentrated around Tran(A).7-10, with a single example from Tran(A).1. This was to be expected as the highest concentration of sherds were in Tran(A).7-10, associated with LF.2. The two Light Brown Burnished ware sherds from Tran(A).1 and Tran(A).10 were both decorated with un-burnished pattern decoration. The remaining decorated sherds were all Earthenware/Plainware (see Table 6.4 for a breakdown of the decoration). Of note, was a ribbon handle fragment from Tran(A).10 decorated with an appliqué dot, as decoration on handles was rare. The absence of incised decoration was also interesting as this was usually one of the most common forms of decoration. The decorated sherds from Transect (B) consisted of two sherds from Tran(B).1 and single examples from Tran(B).4, 5 and 9. Again this concentration fit with LF.2. The Black/Brown Burnished ware decorated sherds consisted of an incised sherd from Tran(B).5 and a sherd with an appliqué ridge from Tran(B).1. This sherd with an appliqué ridge was of interest as in the excavation assemblage appliqué ridges were rare on burnished sherds, primarily being an Earthenware/Plainware. The single Light Brown Burnished ware decorated sherd from Tran(B).1 had un-burnished decoration. The Earthenware/Plainware decorated sherds consisted of two incised sherds from Tran(B).4 and Tran(B).9. The incised sherd from Tran(B).9 was notable as it was a fine, well slipped Earthenware/Plainware rim with complex incised decoration on the interior (see Fig. 6.5). This sherd had close parallels to some of the burnished examples with complex incised decoration in both decorative style and form, such as the example from HAR17(B) 5 (see Fig. 5.14d) and may have been an imitation of this in Earthenware/Plainware.

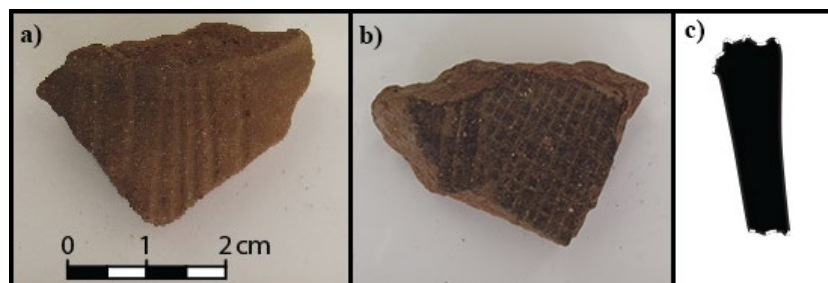


Figure 6.6: Light Brown Burnished ware sherd Tran(C).23-02 with incised decoration on interior and exterior

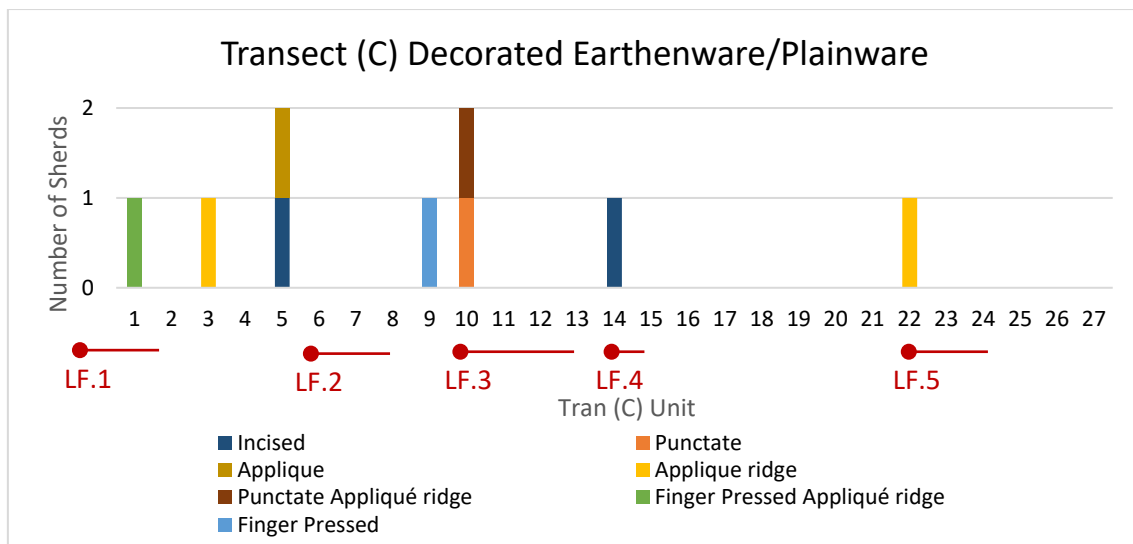


Figure 6.7: Decorated Earthenware/Plainware sherds in Transect (C)

The decorated sherds in Transect (C) had small concentrations around Tran(C).9-11 and Tran(C).21-23. The main concentration in Tran(C).10 fit with LF.4, while the one in Tran(C).21 was interestingly just above the potential storage structure/feature in Tran(C).22 (LF.6). The Black/Brown Burnished ware decorated sherds consisted of three incised sherds one from Tran(C).10 and two from Tran(C).21. The two decorated Light Brown Burnished ware sherds consisted of an un-burnished pattern decorated sherd from Tran(C).21 and an incised sherd from Tran(C).23. The incised example appeared to be a neck join or base and had straight incised lines on the exterior and a cross-hatched panel on the interior (See Fig. 6.6). Based on the interior decoration it was more likely to be a base sherd for an open vessel. See Fig. 6.7 for a breakdown of the Earthenware/Plainware decorated sherds. It was interesting that the concentration around Tran(C).9-11 consisted of four decorated Earthenware/Plainware sherds and a single burnished sherd, while Tran(C).21-23 (associated with LF.6) consisted of four burnished decorated sherds and a single Earthenware/Plainware sherd. This may suggest particular uses for the associated features.

Transect (D) had concentrations of decorated sherds around Tran(D).6-7, Tran(D).11 and Tran(D).14-16. Tran(D).11 and Tran(D).14-16 both related to LF.7 and LF.8 respectively, while Tran(D).6-7 had no association. The seven Black/Brown Burnished ware sherds consisted of an incised sherd (Tran[D].14), two un-burnished pattern (Tran[D].7 and 16) and one with an appliqué ridge

(Tran[D].20). The distribution of Earthenware/Plainware decorated sherds can be seen in Fig. 6.8, of note was the high proportion of finger-pressed decoration in Transect (D), as this was usually a rarer form of decoration and was generally associated with more recent contexts (Phase 5a-2a). All the concentrations of decorated sherds had a higher proportion of Earthenware/Plainware decorated sherds. A single punctate decorated Black Slipped ware sherd was recovered from Tran(D).20.

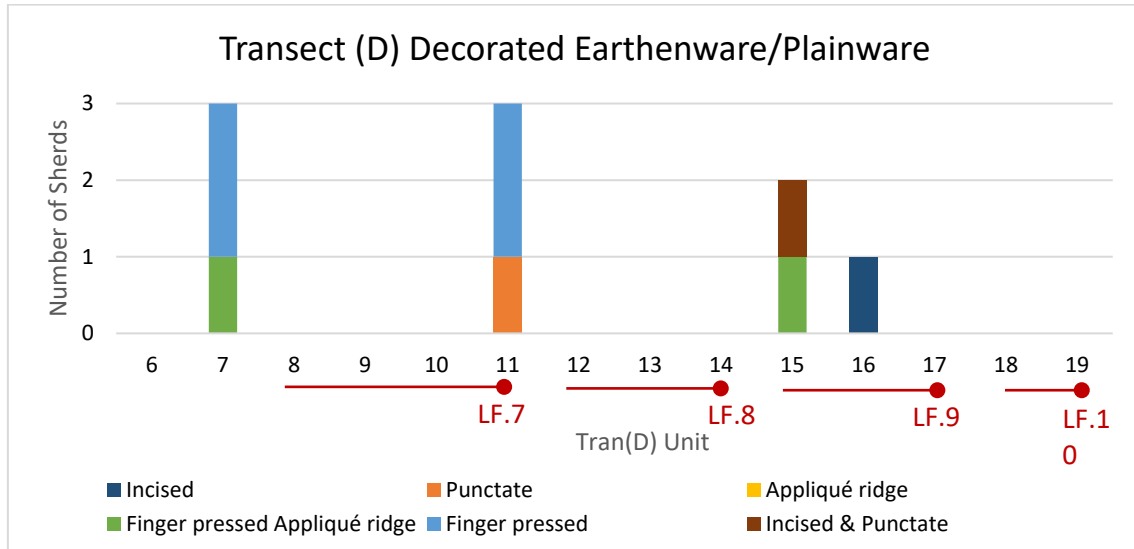


Figure 6.8: Decorated Earthenware/Plainware sherds in Transect (D). No Earthenware/Plainware decorated sherds were recorded in Tran(D).1-6 or Tran(D).17-24

Transect (E) had small concentrations of decorated sherds at Tran(E).11-13 and Tran(E).25-26 with a larger concentration from Tran(E).28-33 spiking in Tran(E).28-29 and Tran(E).32. Tran(E).11-13 was in the downslope spill of LF.13, while Tran(E).25-26 were in the extensive spill from LF.15. Tran(E).28 and Tran(E).32 were both potential features (LF.15 and LF.16 respectively) in the area with the highest recorded density of sherds across the survey. The Black/Brown Burnished ware decorated sherds were concentrated in the upper transect units and consisted of three incised sherds (Tran[E].13, 25 and 31), one un-burnished pattern (Tran[E].29) and one with incised and un-burnished pattern (Tran[E].26). Three Light Brown Burnished ware un-burnished pattern sherds were recovered from Tran(E).6, 29 and 32. The distribution of Earthenware/Plainware decorated sherds can be seen in Fig. 6.9.

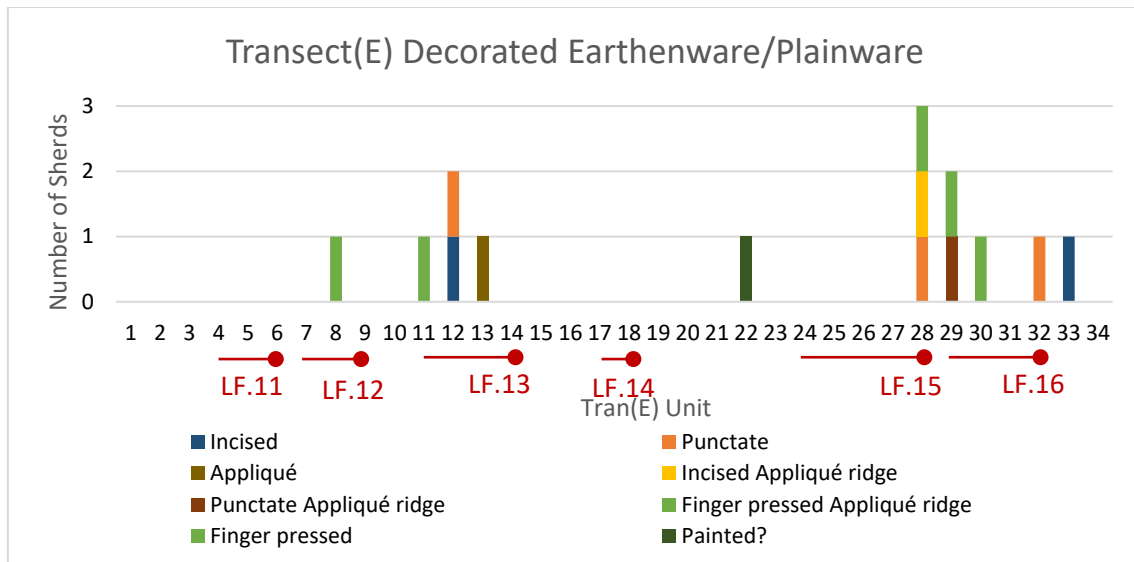


Figure 6.9: Decorated Earthenware/Plainware sherds in Transect (D) by Transect Unit. No Earthenware/Plainware decorated sherds were recorded in Tran(E).1-7

| Context | Fabric Type | Rim Form | Rim Angle | Diam. (cm) | Rim Decoration |
|------------|-------------|----------|--------------|------------|----------------|
| Tran(C).5 | Plainware | Flat | Out-turned | 21 | Appliqué |
| Tran(E).8 | Plainware | Simple | Unidentified | - | Finger Pressed |
| Tran(E).12 | Plainware | Simple | Out-turned | 13 | Incised |
| Tran(E).33 | Plainware | Flat | Out-turned | 14 | Incised |

Table 6.5: Decorated rims from the 2018 fieldwalking survey

6.3.2.1 Decorated Rims

Only four sherds with decoration on the rim were recovered as part of the survey (see Table 6.5). As was discussed in Chapter 5.4.8, rim decoration was rare at Harlaa (6.6% of decorated sherds from the HAR16-HAR18 excavation assemblage), and certain styles, particularly incised and punctate decoration on flat rims may have links with the Somali trading towns (see Chapter 5.4.8 and 7.5.2.1). All the decorated rims from the survey were Earthenware/Plainware. The single example from Transect (C) was recovered from Tran(C).5 and was decorated with an appliqué dot on a flat rim (See Fig.6.10a). The only other sherds from Harlaa with a similar decoration were burnished wares, including a Light Brown Burnished ware Thickened, Flat rim from HAR17(B) 10 (see App.Fig. III.11). The example from Tran(E).8 was not associated with any likely features and had finger pressed decoration (see Fig.6.10e,f). The closest parallel from the excavation was a pinched rim from Phase 5a (HAR17(B)16-08 [Phase 5a]). The final two decorated rims were both incised with diagonal lines on the rim, with the example from Tran(E).12, just down-slope from LF.13.

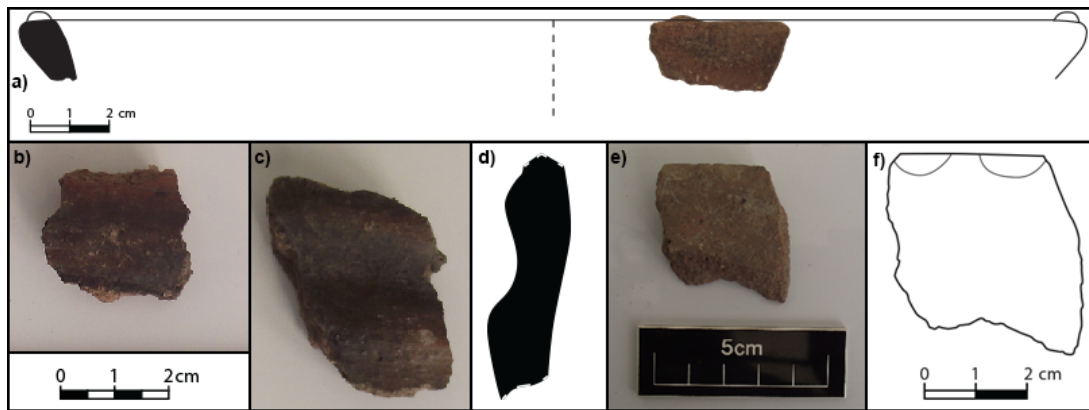


Figure 6.10: a) Flat, Out-turned Earthenware/Plainware rim with appliqué dot Tran(C).5-04; b) Black/Brown Burnished ware body sherd Tran(D).6-01 with moulded ridges; c),d) Black/Brown Burnished ware body sherd Tran(D).18-02 with moulded ridges; e),f) Finger pressed Earthenware/Plainware Simple rim Tran(E).8-03, unclear diameter and rim angle

6.3.4 New Decorative Styles from Survey

Among the Black/Brown Burnished Sherds in Transect (D), there were three sherds decorated with moulded ridges from Tran(D).1, 6 and 18. Unlike the case of appliqué ridges, which usually consisted of a single applied ridge often close to the rim or on a neck join, the examples of moulded ridges consisted of multiple parallel ridges formed directly out of the body with no evidence for additional material (See Fig.6.10b-d). It was interesting that this decoration was not found in any other survey transect or among the excavation assemblage. It was possible that these post-date Medieval Harlaa and are related to the Oromo people; however no similar decoration was observed on the Oromo ethnographic ceramics (see Chapter 4.5). A single sherd from Tran(E).22 had possible painted decoration (see Fig.6.11), a style which has not been found previously at Harlaa. The sherd was quite small and it was possible that this represents a splash of a slip rather than deliberate decoration.



Figure 6.11: Possible Earthenware/Plainware painted sherd Tran(E).22-03

| Transect | Ware | Decorated | Total Sherds | Proportion |
|----------|-----------|-----------|--------------|------------|
| Tran(A) | Burnished | 2 | 26 | 7.69% |
| Tran(A) | Plainware | 4 | 274 | 1.46% |
| Tran(B) | Burnished | 3 | 28 | 10.71% |
| Tran(B) | Plainware | 2 | 257 | 0.78% |
| Tran(C) | Burnished | 5 | 93 | 5.38% |
| Tran(C) | Plainware | 9 | 622 | 1.45% |
| Tran(D) | Burnished | 7 | 104 | 6.73% |
| Tran(D) | Plainware | 9 | 664 | 1.36% |
| Tran(E) | Burnished | 8 | 209 | 3.83% |
| Tran(E) | Plainware | 14 | 1326 | 1.06% |
| Full | Burnished | 25 | 460 | 5.43% |
| Full | Plainware | 38 | 3143 | 1.21% |

Table 6.6: Number and proportion of decorated sherds for burnished wares and Earthenware/Plainware by Transect

6.3.5 General Discussion

As with the excavated material, while the majority of the assemblage consisted of Earthenware/Plainware across all transects, a much higher relative proportion of burnished sherds were decorated, with between 1.1%-1.5% of Earthenware/ Plainware sherds and 3.8%-10.7% of the burnished sherds having decoration (See Table 6.6). This was roughly similar proportions to the excavated assemblage, with HAR16(A) having 1.3% of Earthenware/Plainware sherds decorated and 7.8% of burnished ware sherds decorated and HAR17(B) had 1.6% of Earthenware/Plainware and 8.9% of burnished ware sherds decorated. The low density of decorated sherds made drawing strong parallels between transect units and the excavated assemblage challenging. However, some comparisons were possible between the material associated with and spread downhill from likely features and the excavation material. As likely features were identified by a high density of sherds it was to be expected that there would also be concentrations of decorated sherds, so an absence of decorated sherds was also notable.

6.3.6 Decoration as Chronological Indicators

In Transect(A)/(B) LF.2 contained appliqué ridges and finger pressed decoration, which were most common in Phase 5a, but found together throughout Phase 5-3. LF.1 only had a single incised burnished sherd associated with it. Interestingly in Transect(C) LF.5 only had a single incised

Earthenware/Plainware sherd, this possible feature also had a much higher proportion of Earthenware/Plainware sherds. These together may suggest a very early phase (Phase 2 or 1a) or a particular use of the feature, potentially storage. While LF.6 had a higher sherd density, the majority of the associated decorated sherds were from Tran(C).21, above the feature, potentially suggesting that the feature may continue further up slope. As was discussed above, the majority of decorated sherds in LF.6 and its spread downslope were incised or light slipped burnished ware sherds (four out of five sherds) typical decorative styles across all phases, while the single Earthenware/Plainware sherd had an appliqué ridge, which was found throughout Phase 5a – Phase 2a. LF.4 and its spread consisted of one Black/Brown Burnished ware incised sherd and two decorated Earthenware/Plainware sherds. These decorated sherds again included finger pressed and appliqué ridge decoration which could indicate a more recent phase, although a wide range from Phase 5a to Phase 2a.

While the transect unit associated with LF.9 (Tran[D].17) did not contain any decorated sherds, the spill downslope in Tran(D).16-14 did contain decorated sherds, with Tran(D).14 also being a possible feature (LF.8). LF.10 only had a single associated decorated sherd, a Black/Brown Burnished ware sherd with moulded ridges, which as discussed above, may post date the period of study. LF.7 only contained Earthenware/Plainware decorated sherds including two finger pressed, again suggesting the range of Phase 5a to Phase 3. The concentration around Tran(D).6-7 which had no associated feature included a Black/Brown Burnished sherd with moulded ridges and three with finger pressed decoration which suggested that this deposit may be related to the very end (Phase 5) of, or after the Harlaa period of the site (late 13th – 14th century or later). The spread of decorated sherds covering the likely features at Tran(E).28 and Tran(E).32 (LF.15 and LF.16) included a high proportion of Earthenware/Plainware sherds decorated with appliqué ridges (four out of nine decorated Earthenware/Plainware sherds). There were no decorated sherds associated with Tran(E).18 and LF.14.

6.3.7 Conclusion

The low number of decorated sherds and limited chronological variability among the decoration within the excavated phases limited the use of decorated sherds for dating. However, they may still have potential when considered alongside other aspects of the ceramic assemblage.

| Unit | Potential Feature | Ware |
|------------|-------------------|-----------|
| Tran(A).8 | LF.2 | Plainware |
| Tran(B).1 | LF.2 | Plainware |
| Tran(C).10 | LF.4 | Plainware |
| Tran(C).11 | LF.4 | Plainware |
| Tran(D).11 | LF.7 | Plainware |
| Tran(E).25 | LF.15 | Plainware |
| Tran(E).32 | LF.16 | Plainware |

Table 6.7: Pierced body sherds from fieldwalking survey

6.4 Body Piercings

As was discussed with the excavated assemblage (Chapter 5.5), piercings primarily had practical use, either for storing the vessel, securing lids or cooking, although some decorative use could not be ruled out. Seven sherds with piercings were recovered from the survey (see Table 6.7), all Earthenware/Plainware, one from each of Tran(A), Tran(B) and Tran(D) and two from Tran(C) and Tran(E). The examples from Transects (A) and (B) were from Tran(A).8 and Tran(B).1, both associated with LF.2 and the high concentration of shell fragments (see App.Fig. IV.4). The two from Transect (C) were from adjacent transect units; Tran(C).10 and 11 associated with possible feature LF.4. The pierced sherd from Tran(D).11 was also associated with a potential feature, LF.7. The pierced sherd from Tran(E).32 was associated with LF.16, and the final pierced body was recovered in Tran(E).25, in the large extended spill downslope from LF.15. In the excavation assemblage body piercings were found throughout most of the phases, with Earthenware/Plainware body piercings from Phase 5a to Phase 2a.

6.5 Forms

| Transect | Burnished | | Plainware | | Total Sherds |
|----------|-----------|------------|-----------|------------|--------------|
| | Sherds | Percentage | Sherds | Percentage | |
| Tran(A) | 4 | 100.00% | 0 | 0.00% | 4 |
| Tran(B) | 8 | 88.89% | 1 | 11.11% | 9 |
| Tran(C) | 12 | 92.31% | 1 | 7.69% | 13 |
| Tran(D) | 11 | 91.67% | 1 | 8.33% | 12 |
| Tran(E) | 27 | 100.00% | 0 | 0.00% | 27 |
| Total | 62 | 95.38% | 3 | 4.62% | 65 |

Table 6.8: Number and proportion of burnished ware and Earthenware/Plainware carinated sherds by Transect

6.5.1 Carination

A total of 65 carinated sherds were recorded as part of the survey. As with the excavated assemblage, the majority of the carinated sherds were burnished across all transects (95%, 62 of 65 carinated sherds were burnished, see Table 6.8 for breakdown by transect). The carinated sherds in Transect (A) consisted of two Black/Brown Burnished ware and two Light Brown Burnished ware, concentrated in Tran(A).6-7, which possibly related to LF.1. With nine carinated sherds Transect (B) had a higher proportion of carinated sherds than Transect (A). Six of them, including the Earthenware/Plainware were from Tran(B).5, which fit with the Transect (A) carinated sherds and LF.1. LF.2 only had two associated carinated sherds in Tran(B).1-2. The Transect (C) carinated sherds were spread out across the transect. There was a slight concentration of carinated sherds around Tran(C).20-22 including a Red Burnished ware sherd, which was largely up-slope from LF.6. This along with the concentration of decorated sherds discussed above may suggest that the feature was actually partially located in Tran(C).21 as opposed to just Tran(C).22. Carinated sherds in Transect (D) were also spread across the transect with no clear concentrations. The two Earthenware/Plainware carinated sherds were from Tran(D).2 and Tran(D).20. There was a small spread of four carinated sherds across Tran(D).20-22, which were not associated with any potential features. LF.8, had a single carinated sherd with two more down slope in Tran(D).13. The LF.9 potential feature also had two carinated sherds. There was a spread of carinated sherds from Tran(E).31-24, which covered the area with the highest sherd density and LF.15, although interestingly did not directly include LF.16.

6.5.1.1 Carination as a chronological indicator

As was discussed in Chapter 5, carinated sherds were found from Phase 5a to Phase 2b, and carination was most common across Phase 5b to Phase 2a. Plainware carinated sherds were also present in all these phases, although in much lower proportions. This gave a broad range of phases for the potential features associated with carinated sherds.

6.5.2 Handles

| Transect | (A) | (B) | (C) | (D) | (E) | Total |
|------------------|------------|------------|------------|------------|------------|--------------|
| Ribbon Handle | 9 | 8 | 9 | 27 | 41 | 94 |
| Pierced Lug | 2 | 1 | 4 | 2 | 8 | 17 |
| Twin Pierced Lug | 0 | 0 | 1 | 1 | 1 | 3 |
| Lug | 0 | 0 | 0 | 0 | 2 | 2 |
| Unidentified | 1 | 0 | 1 | 0 | 1 | 3 |
| Total | 12 | 9 | 15 | 30 | 53 | 119 |

Table 6.9: Handle forms by Transect for 2018 fieldwalking survey

As with the excavated assemblage, ribbon handles remained the most dominant handle form in the assemblage (79%), followed by pierced lug handles, including a limited number of twin pierced lug handles (17% combined). There was also a single un-pierced lug handle, likely from a lid and an unusual un-pierced circular lug handle. See Table 6.9 for distribution of handle types by Transect.

6.5.2.1 Transect (A)/(B) Handles

In Transects (A) and (B) all the ribbon handles were Earthenware/ Plainware except for a single Black Slipped ware ribbon handle in Tran(A).3. There were concentrations of ribbon handles in Tran(A).8, Tran(B).1 and Tran(B).3. These were associated with LF.2, possibly suggesting it had a storage purpose. This would fit with the large concentration of shells also associated with the feature. The pierced lug handles were all Black/Brown Burnished ware and consist of two in Tran(A).6, and one in Tran(B).2, each associated with either LF.1 or LF.2.

6.5.2.2 Transect (C) Handles

The ribbon handles in Transect (C) were all Earthenware/Plainware and were concentrated in Tran(C).14, with single examples present in Tran(C).5-6 and in Tran(C).23-24 and Tran(C).27. Tran(C).14 was the primary transect unit for LF.5. Tran(C).14 was also a transect unit with a very low proportion of burnished wares sherds, which may suggest that LF.8 was related to storage and/or production, or potentially an earlier phase of occupation. One Black/Brown Burnished ware pierced lug handle was recovered from Tran(C).1, one Light Brown Burnished ware pierced lug handle from Tran(C).7 and two Earthenware/Plainware pierced lug handles from Tran(C).9 and Tran(C).12. Additionally a single Light Brown Burnished ware twin pierced handle was recovered from Tran(C).14 (see Fig. 6.12). This meant that only LF.4 and LF.5 had associated pierced lug handles.



Figure 6.12: Light Brown Burnished ware twin pierced lug handle, sherd Tran(C).14-02

6.5.2.3 Transect (D) Handles

Transect (D) had a single Black/Brown Burnished ware ribbon handle in Tran(D).19 (LF.10), with the remainder Earthenware/Plainware. Fig. 6.13 shows the distribution of Earthenware/Plainware ribbon handles, and interestingly none of the highest spikes of handles at Tran(D).5, Tran(D).9 and Tran(D).13 were directly associated with possible features. Tran(D).9 and Tran(D).13 were likely part of spills down from potential features in LF.7 and LF.8, although it was interesting that neither LF.7 nor LF.8 contained ribbon handles themselves. Likely features around LF.9 and LF.10 were covered by a spread of ribbon handles from Tran(D).20 through to Tran(D).15. A Light Brown Burnished ware pierced lug handle was recovered from Tran(D).16 and an Earthenware/Plainware pierced lug handle and Black/Brown Burnished ware twin pierced lug handle were recovered from Tran(D).20.

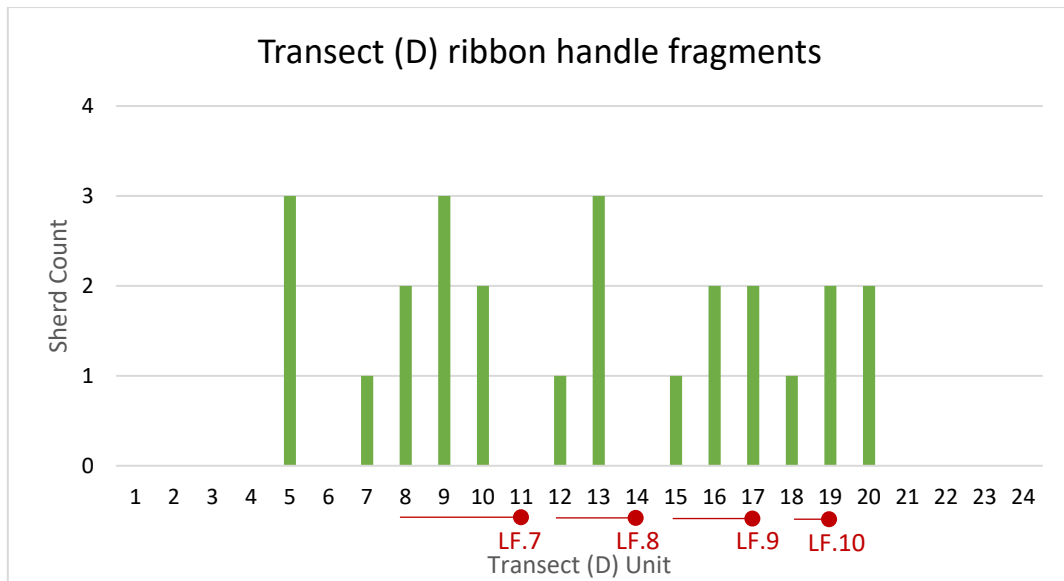


Figure 6.13: Distribution of Earthenware/Plainware ribbon handles in Transect (D)

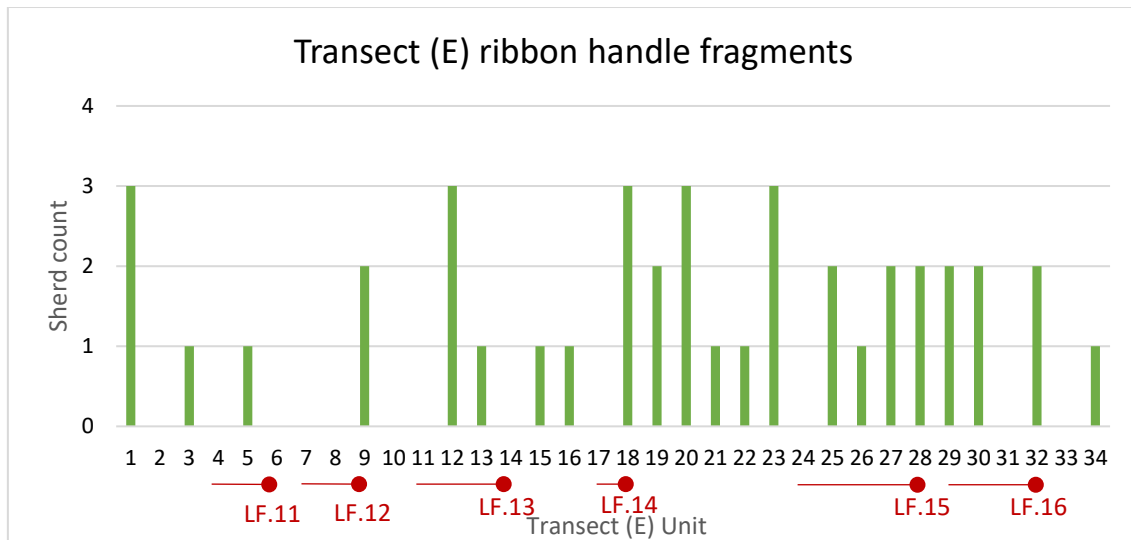


Figure 6.14: Distribution of Earthenware/Plainware ribbon handles in Transect (E)

6.5.2.4 Transect (E) Handles

Transect (E) also had two Black/Brown Burnished ware ribbon handles, a rim with a ribbon handle join from Tran(E).14, LF.14, (see Fig.24b below), and a ribbon handle fragment from Tran(E).28 (LF.15). Fig. 6.14 shows the distribution of Earthenware/Plainware ribbon handles. These two burnished ribbon handles were directly associated with LF.13 and LF.16. As can be seen, ribbon handles were found across most of the transect units (22 of 34, 65%), and except for LF.11, one of the lower density likely features, ribbon handles were present at all potential features. No Earthenware/Plainware pierced lug handles were

recovered from Transect (E). Fig.6.15 shows the distribution of burnished pierced lug handles and their ware type, with the Black/Brown Burnished ware example from Tran(E).28 being a twin pierced lug handle. No pierced lug handles were associated with LF.13 or LF.14, while the single Red Burnished ware pierced lug handle was associated with LF.11. LF.15 and LF.16 had associated pierced lug handles or pierced lug handles close down slope. The pierced lug handles around Tran(E).21-22 were interesting as there were no clear associated features. The Earthenware/Plainware lug handle, likely from a lid, was from Tran(E).20 (see Fig. 6.16c-e) and the Black Slipped ware circular lug handle was from Tran(E).24 (see Fig. 6.16f,g).

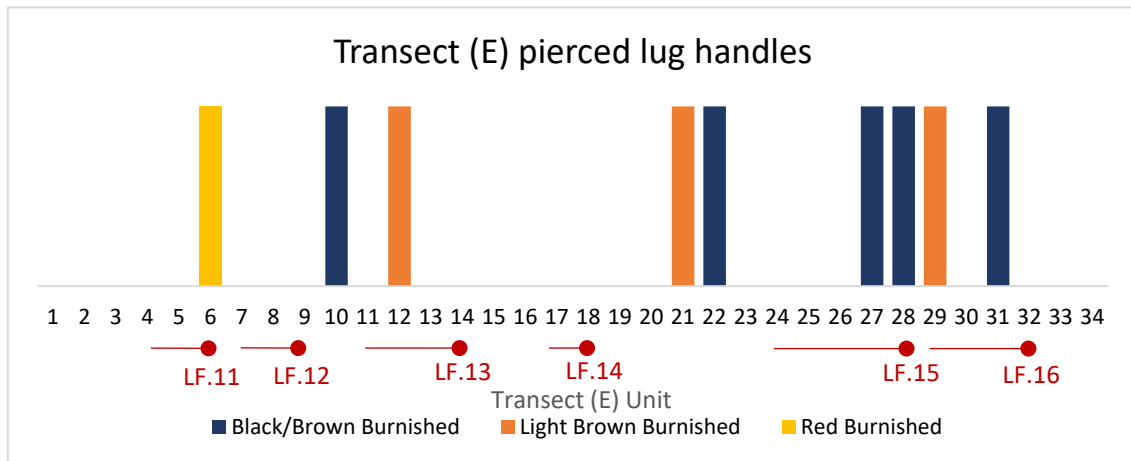


Figure 6.15: Distribution of pierced lug handles and their ware type for Transect (E) (only single examples recovered from each transect unit)

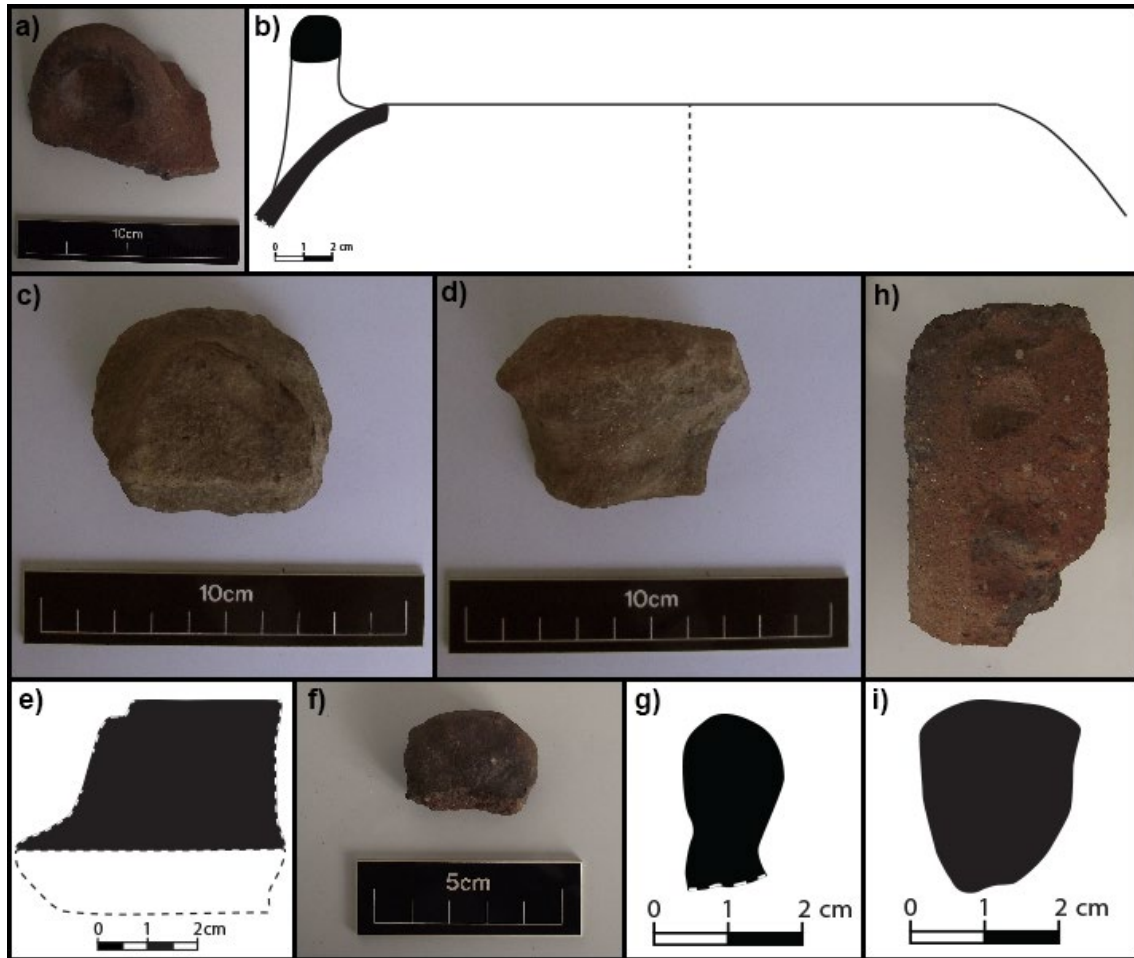


Figure 6.16: a),b) Earthenware/Plainware complete ribbon handle with Flat, Angled, Closed rim (21cm diameter) sherd Tran(E).34-06; c-e) Earthenware/Plainware lug handle from lid sherd Tran(E).20-11; f),g) Black Slipped circular lug handle sherd Tran(E).24-06; h),i) Earthenware/ Plainware ribbon handle fragment with punctate/finger pressed decoration sherd Tran(E).12-03

6.5.2.5 Discussion

It is worth acknowledging that the low number of pierced lug handles across the transects, alongside the fact that no more than one pierced lug handle was recovered from any single transect unit made any conclusions drawn based on them limited. The twin pierced lug handles were of interest as across the excavated units only four twin pierced lug handles were recovered (see Chapter 5.6.2.1). Therefore having three recovered from the survey was interesting as they were proportionally much more common in the survey than the excavated assemblage. It was possible therefore that the twin pierced lug handles were a more recent development, however, the small quantity recovered made it impossible to draw any conclusions. One of the ribbon

handle fragments from Tran(E).12 showed evidence for punctate decoration on the exterior, and decoration on handles is rare at Harlaa. The handle was also not circular or oval in profile as was normal, rather it had been flattened on the sides to form a trapezoid section (see Fig. 6.16h). The complete ribbon handle from Tran(E).34 was also of interest as it included the rim, which was of a Flat, Angled, Closed form and showed that this handle extended up above the rim (See Fig. 6.16a-b). In general ribbon handle joins with rims suggested that the handle usually ran parallel to or at a tangent to the rim, not rising above the rim to the extent that the Tran(E).34 example does. Ribbon handles were found across all phases, and so were not particularly useful for dating. Additionally, no clear pattern in the proportion of ribbon handles could be identified in the excavation assemblage.

6.5.2.6 Handles as Chronological indicators

As discussed above, Earthenware/Plainware ribbon handles were found in every phase except for Phase 1a so were not particularly useful as chronological indicators. Burnished ware ribbon handles are more concentrated, found in Phase 5a, 5b and Phase 3, meaning that LF.10, LF.13 and LF.16 may be more recent features. Pierced lug handles were slightly more concentrated in particular phases than ribbon handles as they were found from Phase 5b to Phase 2a, and were most common in Phase 5b and Phase 4.

6.5.3 Bases

| Transect | Black Burnished | Brown Burnished | Black Slipped | Plainware | Other | Total |
|----------|-----------------|-----------------|---------------|-----------|-------|-------|
| Tran(A) | 0 | 0 | 0 | 1 | 0 | 1 |
| Tran(B) | 1 | 2 | 2 | 3 | 0 | 8 |
| Tran(C) | 2 | 3 | 0 | 6 | 1 | 12 |
| Tran(D) | 3 | 4 | 1 | 6 | 0 | 14 |
| Tran(E) | 8 | 8 | 1 | 8 | 0 | 25 |
| Total | 14 | 17 | 4 | 24 | 1 | 60 |

Table 6.10: Breakdown of ring bases by ware type for each transect

6.5.3.1 Ring base wares

As with the carinated sherds, Transect (B) had a higher proportion of ring bases (eight sherds) compared to Transect (A) with only a single ring base

sherd (see Table 6.10). This single base was an Earthenware/Plainware ring base from Tran(A).8, (LF.2) which was likely a storage feature with a high density of shell fragments. Transect (B) had three Earthenware/Plainware ring bases found in Tran(B).2-3, again associated with LF.2. The other ring bases in Transect (B) consisted of two Black Slipped bases from Tran(B).3 and Tran(B).9, two Light Brown Burnished ware bases from Tran(B).1 and 4 and a Black/Brown Burnished ware base from Tran(B).2. Except for the Tran(B).9 Black Slipped ware base, these were all associated or close to LF.2. None were clearly associated with LF.1.

Out of the eleven ring base fragments from Transect (C), six were Earthenware/Plainware, three Light Brown Burnished ware and one Black/Brown Burnished ware (see Table 6.10). LF.6, contained four ring bases; two Light Brown Burnished ware and two Earthenware/Plainware. LF.5 contained a single Earthenware/Plainware ring base, while none of the other possible features had associated ring bases. Transect (D) contained twelve ring bases, broken down by ware type as seen in Table 6.10. LF.9 contained the Black Slipped ware ring base as well as an Earthenware/Plainware and a Black/Brown Burnished ware example. An Earthenware/Plainware ring base was recovered in Tran(D).18, up slope from LF.9. LF.7 contained a Black/Brown Burnished ware and Earthenware/Plainware ring base. LF.10 contained no ring base fragments, however part of the assemblage in Tran(D).18-17 may be from the spread of this possible feature.

Transect (E) contained 25 ring bases, eight of each of Earthenware/Plainware, Black/Brown Burnished ware and Light Brown Burnished ware and a single Black Slipped ware ring base (see Table 6.10). Six sherds were concentrated around LF.13; three Earthenware/Plainware, two Black/Brown Burnished ware and one Light Brown Burnished ware. LF.15 contained three burnished ring bases, two Light Brown Burnished ware and a Black/Brown Burnished ware, with two Earthenware/Plainware in the spread down Tran(E).27-26. LF.16 contained two Light Brown Burnished ware ring bases. Transects (B) and (D) contained a higher proportion of Earthenware/Plainware ring base sherds than the excavated assemblages. As was discussed in Chapter 5, there was no chronological variation of ring bases among the different wares in the excavation assemblage, however, the absence of ring

bases was indicative of Phase 2b or earlier in the excavation assemblage. Only LF.3 and LF.11 had no associated ring bases. As seen in Fig. 6.17, the proportions of ring bases relative to their associated ware type did not align with the proportions seen in the workshop phases (see Fig. 5.41). The survey assemblages had a higher proportion of ring bases, particularly burnished ware ring bases, compared to the excavation assemblage. All the jewellery workshop phases with ring bases had both burnished ware and Earthenware/Plainware ring bases, while half of the survey potential features only contained either burnished ware or Earthenware/Plainware ring bases. This highlighted the issue of the low sample size associated with the survey potential features coupled with the limited chronological changes visible in the local ceramics.

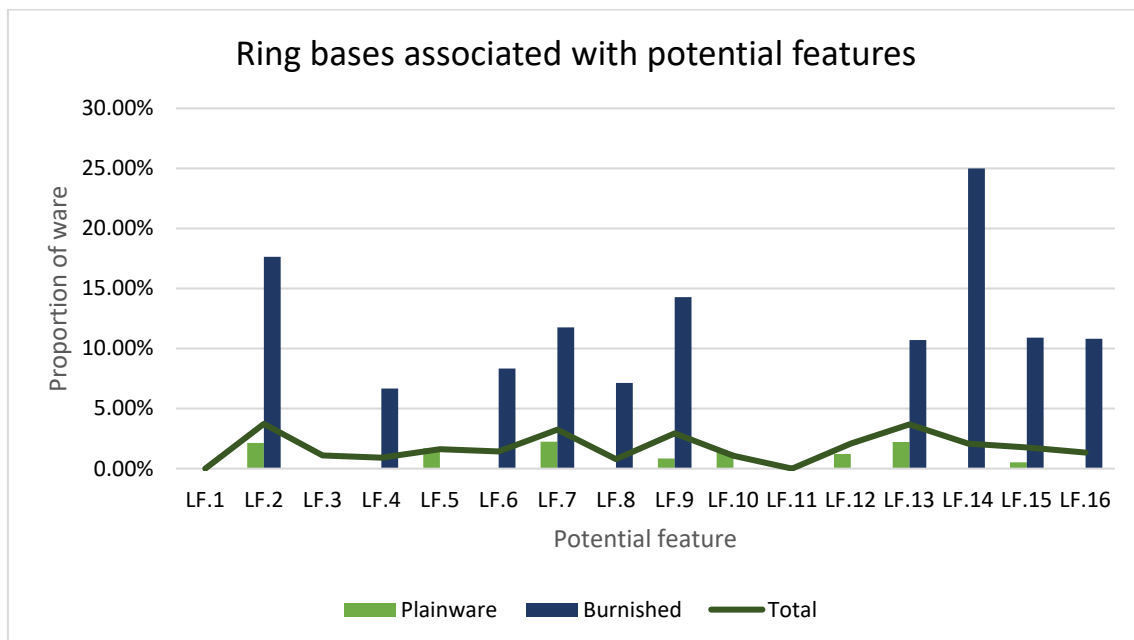


Figure 6.17: Ring bases as a proportion of their associated ware group by potential feature

6.5.3.2 Ring base forms

Four categories of ring base forms were identified in the excavation; extended, short-flat, simple and angled and unidentifiable ring bases (see Chapter 5.6.3 and Fig. 5.40). As was discussed in Chapter 5 there did not appear to be any chronological distribution of the ring base forms to use as chronological indicators. However, they were still important to consider, especially with regards to the possibility of evidence for Islamisation at Harlaa, as well as vessel form and use at Harlaa (see Chapter 7).

| Diam (cm) | Tran(A) | | Tran(B) | | Tran(C) | | Tran(D) | | Tran(E) | | Total | |
|--------------|---------|------|---------|-------|---------|-------|---------|-------|---------|-------|-------|-------|
| | No. | Per. | No. | Per. | No. | Per. | No. | Per. | No. | Per. | No. | Per. |
| < 4 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 5-6 | 0 | 0.0% | 2 | 25.0% | 0 | 0.0% | 1 | 7.1% | 1 | 0.0% | 4 | 10.8% |
| 7-8 | 1 | 100% | 3 | 37.5% | 3 | 21.4% | 3 | 21.4% | 9 | 40.0% | 19 | 51.4% |
| 9-10 | 0 | 0.0% | 0 | 0.0% | 1 | 7.1% | 5 | 35.7% | 6 | 24.0% | 12 | 32.4% |
| 11-12 | 0 | 0.0% | 1 | 12.5% | 0 | 0.0% | 0 | 0.0% | 1 | 4.0% | 2 | 3.2% |
| 13-14 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Unident. | 0 | 0.0% | 2 | 25.0% | 10 | 71.4% | 5 | 35.7% | 8 | 32.0% | - | - |
| Total | 1 | 100% | 8 | 100% | 14 | 100% | 14 | 100% | 25 | 100% | - | - |
| Measured | 1 | 100% | 6 | 75.0% | 4 | 28.6% | 9 | 64.3% | 17 | 68.0% | 37 | 100% |

Table 6.11: proportion of ring base diameters by transect

6.5.3.3 Ring Base Diameters

Diameters were recorded for a total of 37 (60%) base sherds (one from Transect [A], six from Transect [B], four from Transect [C], nine from Transect [D], and 17 from Transect [E]). This was a much lower proportion of measurable sherds compared to the excavated assemblage (74% of ring bases). However, this was to be expected as surface collected material would likely more worn due to being knocked about. As with the excavated sherds, the majority (54% of measured sherds) fit into the 7-8 cm diameter range (see Table 6.11). This was the same proportion of bases within the 7-8 cm range that was seen in the excavated assemblage. This shows that when considered as a whole, the survey assemblage does follow the broad trends of the excavation assemblage. The survey assemblage had a much higher proportion of 9-10 cm diameter ring bases (32.4% compared to 22.5% from the excavation) and lower proportion of the other diameter ranges. Unfortunately, there was not a sufficient density of ring bases from the survey assemblage to produce the box plot graphs used in the analysis of the excavation assemblage.

The four measured Black Slipped ware ring bases consisted of two in the 5-6 cm range (Tran[B].3 and Tran[B].9) and two in the 7-8 cm range (Tran[D].17 and Tran[E].8) were also all in the 6-10 cm range with the two from Tran(B) being 6 cm diameter. The measured Earthenware/Plainware base from Tran(B).2 was the one of the two bases in the 11-12 cm range (The other in Tran(E).26, the spill from LF.15), which fit with LF.2 having larger storage vessels. Only four of the 14 ring bases from Transect (C) were able to have their diameter recorded, two of which were Light Brown burnished ware ring

bases in the 7-8 cm range (two associated with LF.6) and one Black/Brown Burnished ware 9-10 cm (associated with LF.4). Interestingly the final Earthenware/Plainware ring base from Tran(C).16 was the smallest recovered during the field survey at 6.5 cm diameter. The three Earthenware/Plainware sherds in Transect (D) (from Tran[D].11, Tran[D].17 and Tran[D].18) were all 9-10 cm diameter, as were the two Light Brown Burnished ware bases from Tran(D).9 (LF.7) and Tran(D) 17 (LF.9). However, no Black/Brown Burnished ware ring bases were above 8 cm in diameter. The single ring base above 10 cm in diameter in Transect (E) was an Earthenware/Plainware base from Tran(E).26 (LF.15), all other ring bases were in the 7-8 or 9-10 cm in diameter.

6.5.3.4 Other Bases and Modification

Only two non-ring base fragments from bases were recorded during the survey, a 10 cm diameter Earthenware/Plainware moulded base from Tran(D).13 and a probable Black/Brown Burnished ware flat base from Tran(E).21. A small selection of the ring bases had further modification. A Light Brown Burnished ware ring base from Tran(D).9 in LF.7 (9 cm diameter) appeared to have been pierced (see Fig. 6.18a), A damaged Black/Brown Burnished ware base from Tran(E).18 (LF.14, no diameter) was also pierced (see Fig. 6.18b). These piercings were likely used to hang the vessel for storage. A small fragment from an Earthenware/Plainware ring base from Tran(E).13 (LF.13, no diameter) appeared to have been decorated with deep incisions through the ring (see Fig. 6.18c).

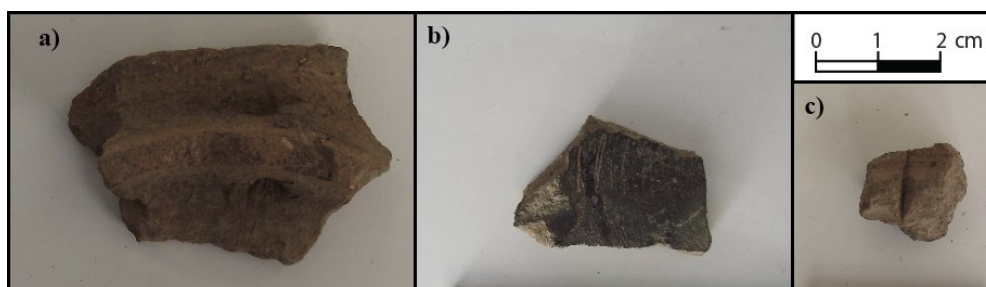


Figure 6.18: Ring bases with further modification; a) Pierced Light Brown Burnished ware ring base, Tran(D).9-03; b) Pierced Black/Brown Burnished ware ring base, Tran(E).18-02; c) Incised Earthenware/Plainware ware ring base, Tran(E).13-07

6.5.3.3 Bases as chronological indicators

Bases did not appear to be particularly useful as chronological indicators in the survey assemblage. The primary use of ring bases as chronological indicators was through their presence or absence in the assemblage. However, the low proportion of ring bases recovered as part of the survey alongside the fact that ring base sherds have potentially moved around a lot due to various taphonomic process made it challenging to tell if the presence or absence of ring bases alongside a potential feature was due to their actual presence or absence, or due to the fact they were simply not recovered as part of the survey.

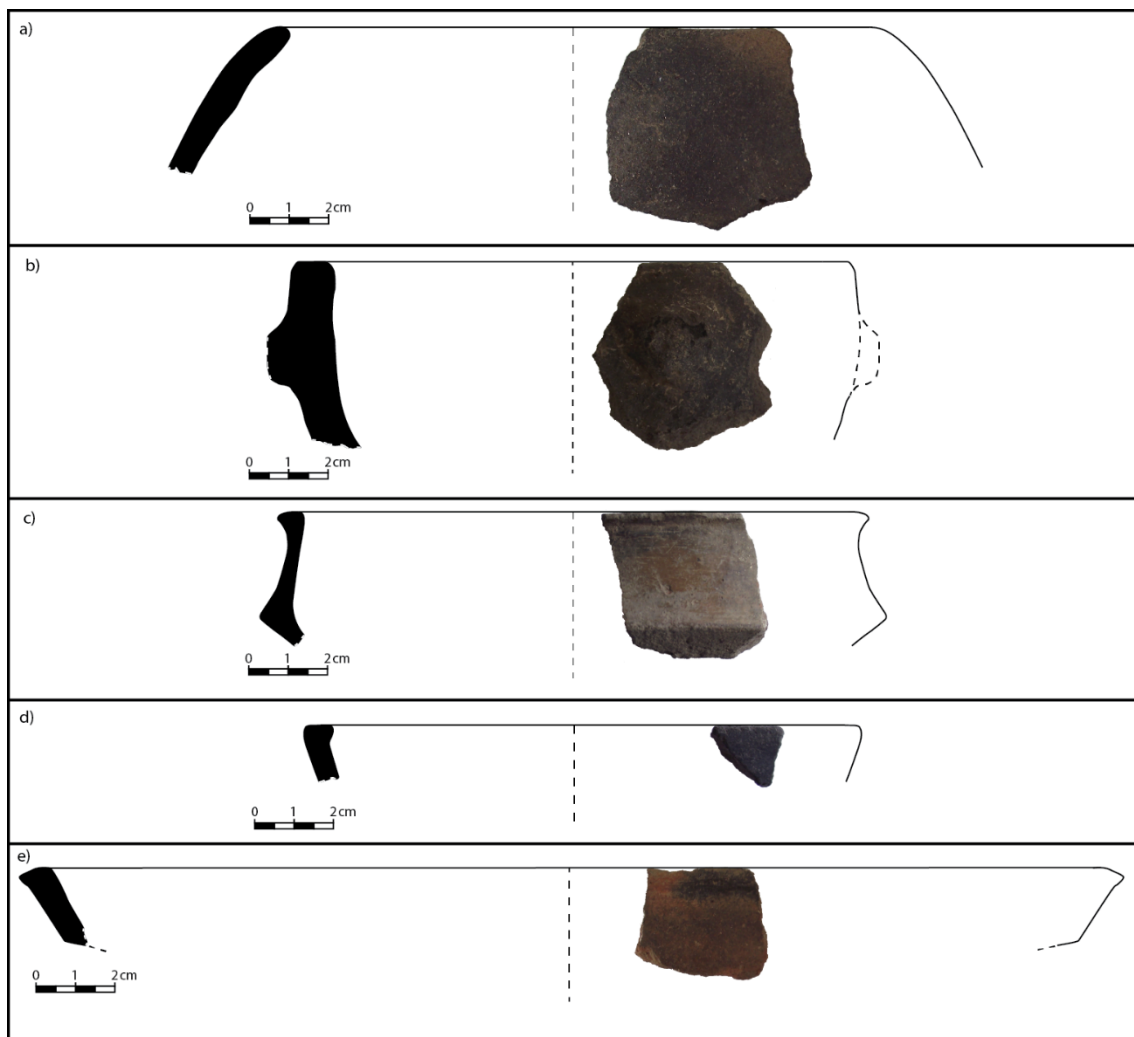


Figure 6.19: a) Earthenware/Plainware Simple, In-turned rim Tran(B).4-03; b) Black/Brown Burnished ware Flat, Out-turned rim with ribbon handle join Tran(E).14-02; c) Light Brown Burnished ware Flat, Lip, In-turned rim with Type B carination HAR16(A)4-08; d) Black/Brown Burnished ware Flat, Inner Lip, Out-turned rim HAR16(A)6-13d; e) Light Brown Burnished ware Flat, Angled, Out-turned rim with carination Tran(A).6-04

6.5.4 Rims

| Transect | Black Burn. | Brown Burn. | Red Burn. | Black Slip | Brown Slip | Plainware | Unique | Total |
|----------|-------------|-------------|-----------|------------|------------|-----------|--------|-------|
| Tran(A) | 2 | 5 | 0 | 0 | 1 | 18 | 0 | 26 |
| Tran(B) | 2 | 2 | 0 | 0 | 0 | 26 | 0 | 30 |
| Tran(C) | 8 | 3 | 1 | 1 | 1 | 44 | 1 | 59 |
| Tran(D) | 13 | 7 | 0 | 0 | 0 | 50 | 1 | 71 |
| Tran(E) | 35 | 19 | 1 | 1 | 2 | 149 | 2 | 209 |
| Total | 60 | 36 | 2 | 2 | 4 | 287 | 4 | 395 |

Table 6.12: Rim sherds by ware type for each transect

6.5.4.1 Introduction

A total of 395 rims (10.7% of sherds) were collected during the survey (see Table 6.12 for breakdown by transect). These were divided into the same forms as the excavated assemblage (see Chapter 5), with the rim angles also following the Out-turned, Straight, In-turned, Closed and Unidentified categories from the excavated assemblage. Rim diameters were also recorded for all measurable rims (309 rims, 78% of rims). Unlike with the ring bases, this was a similar proportion of rims which were measurable as in the excavation assemblage.

6.5.4.2 Rim Forms

While a wide variety of rim forms were found at Harlaa, few forms manifested any clear chronological distribution visible in the excavation assemblage; Black/Brown Burnished ware and Light Brown Burnished ware rim forms appeared quite homogeneous across their use, with Simple, Flat and Tapered rims being common throughout and Flat, Lipped rims found from Phase 5a to Phase 2a (see Fig. 6.19 for examples of rim forms). A somewhat rarer Flat, Inner Lip form was found among the burnished wares and was possibly a more recent form (Phase 5b to Phase 3) (see Fig.6.19d). Earthenware/Plainware rims were much more varied than the burnished wares, although again most forms were found throughout the chronological sequence (see Chapter 5.6.4). As with the excavated assemblage, Simple rims were the dominant form of rim across the survey assemblage and all ware types (see App.Table IV.8), making up 43% of the rims followed by Flat rims (28%). This was close to the 41% Simple rims and 29% Flat rims found in the excavation assemblage.

6.5.4.1.1 Transect (A)/(B) Rim Forms

The two Black/Brown Burnished ware rims in Transect (A) were both from Tran(A).6 and consisted of a single Simple rim and a single Flat, Angled rim. The Light Brown Burnished ware rims were concentrated around Tran(A).8-10 (close to LF.2). These consisted of two Simple rims, one Flat rim and one Tapered rim with a single Flat, Angled rim in Tran(A).6. This Flat, Angled rim (see Fig. 6.19e) was of particular note as it was the only example of a Flat, Angled, Out-turned rim with evidence for body carination across both the excavated and survey assemblages. There was a single Light Brown Slipped ware Simple rim from Tran(A).9. Transect (B) had a large concentration of ten rims in Tran(B).1 (associated with LF.2), nine Earthenware/Plainware and one Light Brown Burnished ware. The Light Brown Burnished ware rim was a Flat, Lipped rim, while the Plainware rims included five Flat rims, but only two Simple rims. This potentially fit with LF.2 being used for storage. The other main concentration of rims was six rims in Tran(B).5. The single Black/Brown Burnished ware rim was a simple rim, while the remaining Earthenware/Plainware rims consisted of three simple and two flat rims. Tran(B).3, 4, 8 and 9 all contained three rim sherds. Tran (B).4 and Tran(B).8 contained only Earthenware/Plainware rims; three Simple rims in Tran(B).4 and a Simple rim, Flat rim and Tapered rim in Tran(B).8. Tran(B).5 contained a single Black/Brown Burnished ware Simple rim and two Earthenware/Plainware Flat rims, while Tran(B).9 had a single Light Brown Burnished ware Flat, Lipped rim and an Earthenware/Plainware Simple and Flat rim. It was interesting that Tran(B).8-9 had more variable rim forms than Tran(B).3-4.

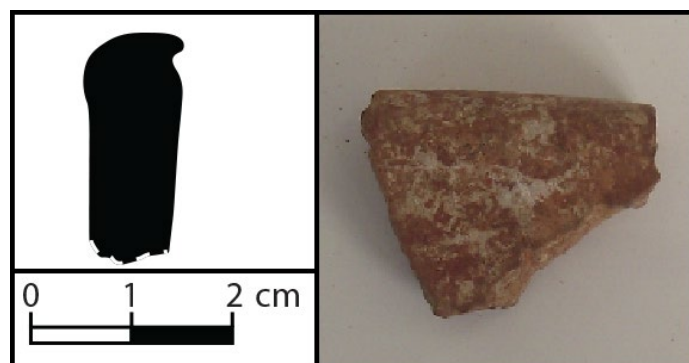


Figure 6.20: Unique Red Burnished ware rim Tran(C).10-09, unknown rim angle and diameter

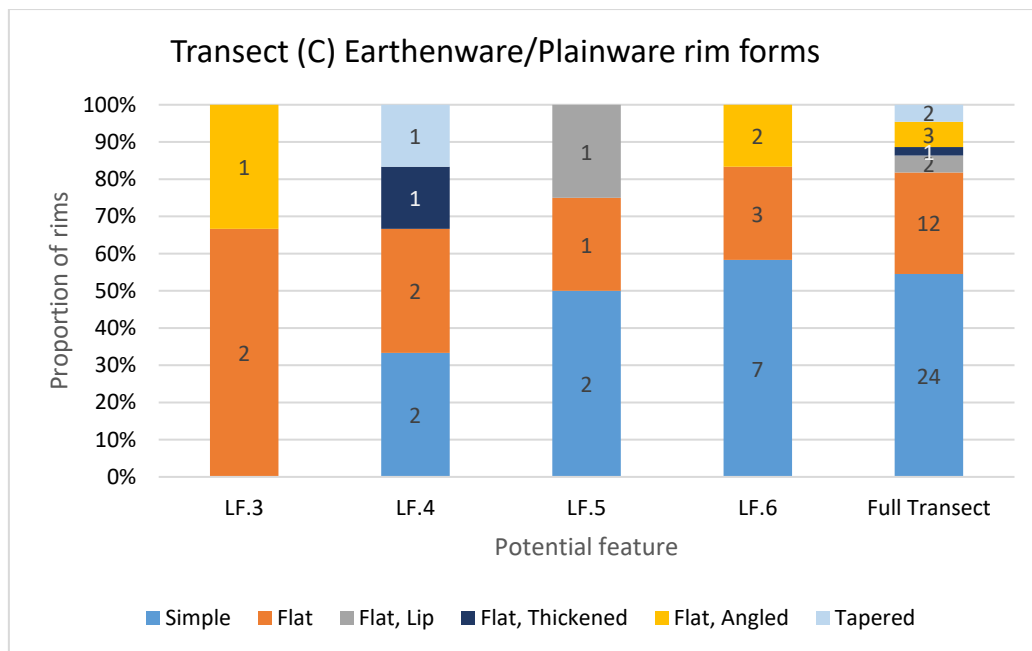


Figure 6.21: Earthenware/Plainware rim forms associated with the potential features in Transect (C)

6.5.4.1.2 Transect (C) Rim forms

There were no major concentrations of Black/Brown Burnished ware rim sherds in Transect (C). Tran(C).9 had two rim sherds and all other units with Black/Brown Burnished ware rims had only single sherds. A single Black/Brown Burnished ware Flat rim was recovered from Tran(C).23 and Tran(C).24, downslope from LF.6. None of the other six Black/Burnished ware rims appeared to be associated with potential features, The Flat, Lip rim was from Tran(C).9. The three Light Brown Burnished ware rims were all from the end of the transect in Tran(C).21, 23 and 24, possibly also associated with LF.6. They consisted of a Simple, Flat and Unidentified rim. LF.3 and LF.5 had no associated burnished ware rims. A single Red Burnished ware Unique rim sherd was recovered from Tran(C).10 (LF.4) (see Fig. 6.20), potentially from a small flat plate. A Black Slipped Flat rim sherd was recovered from Tran(C).4 and a Light Brown Slipped ware Flat rim from Tran(C).27.

The main concentration of Earthenware/Plainware rims in Transect (C) consisted of eight rim sherds in Tran(C).22, potential feature LF.6. These consisted of four Simple rims, three Flat rims and a Flat, Angled rim. Downslope in the spread from LF.6, Tran(C).23 contained a single Flat, Angled rim and Tran(C).24 contained three Simple rims. LF.5 and its spill contained four Earthenware/Plainware rims; one of each of Flat and Flat, Lipped and two

Simple rims. Tran(C).1 contained four Earthenware/Plainware Simple rims, possibly representing a spill downslope from features in Transects (A) and (B), primarily LF.1. In addition to the Black Slipped ware rim discussed above, LF.3 contained an Earthenware/Plainware Flat, Angled rim, while the spill in Tran(C).5 contained two Earthenware/Plainware Flat rims. In addition to the Unique Red Burnished ware rim, LF.4 contained two Earthenware/Plainware Simple rims, while the spill contained an Earthenware/Plainware Flat and Flat, Thickened rim in Tran(C).11 and an Earthenware/Plainware Tapered rim in Tran(C).12.

The low number of rim sherds associated with any potential feature made comparisons with the excavation phases limited (see Fig. 6.21). The small range of distinct forms was closest to the earlier phases (Phase 2a-1b), however, this may simply have been due to the low number of sherds.

6.5.4.1.3 Transect (D) Rim forms

The first potential feature in Transect (D) did not appear until Tran(D).11 (LF.7), although there was still a spread of material down the slope, including concentrations of rim sherds in Tran(D).4 and Tran(D).7. The Tran(D).4 concentration consisted of a single Light Brown Burnished ware Simple rim and four Earthenware/Plainware rims; two Simple, one Flat and one Flat, Angled. The Tran(D).7 concentration consisted of a Flat, and Unidentified Light Brown Burnished ware rim and two Flat Earthenware/Plainware rims. LF.7 itself only contained Earthenware/Plainware rims; five Simple and one Flat rim. Downslope in the associated spill, Tran(D).10 contained a Simple and Unidentified Earthenware/Plainware rim and a Black/Brown Burnished ware Flat rim, while Tran(D).9 contained a single Black/Brown Burnished ware Flat rim. Interestingly, LF.8 itself did not contain any rim fragments. However, Tran(D).13 and Tran(D).12 (downslope from LF.8) did contain rim sherds, a single Black/Brown Burnished ware Flat rim and five Earthenware/Plainware rims; a Simple rim, two Flat rims, and one Flat, Lipped rim. LF.9 contained eight rims sherds; four Black/Brown Burnished; (one Simple, two Flat and one Flat, Lipped rim) and four Earthenware/Plainware rims (one of each of Simple, Flat, Unique and Unidentified rim forms). In the associated spill, (Tran[D].16-15) contained

three rim sherds, which consisted of three Simple rims (two Earthenware/Plainware and one Black/Brown Burnished ware rim). LF.10 had nine rim sherds, seven Earthenware/Plainware (three Simple; one Flat, Lipped; one Rounded, Lipped; one Flat, Angled; one Tapered) and two Black/Brown Burnished ware (one Simple and one Flat), while the associated spill contained two further Flat rims, one Earthenware/Plainware and one Black/Brown Burnished ware.

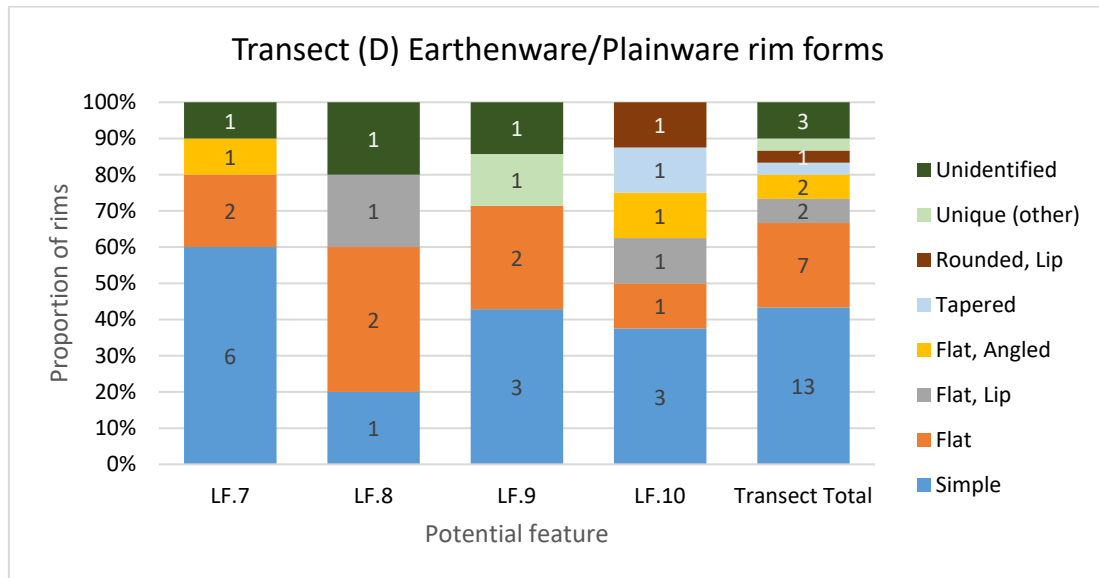


Figure 6.22: Earthenware/Plainware rim forms associated with the potential features in Transect (D)

With ten Earthenware/Plainware rims the greatest number of rims associated with any potential feature (see Fig. 6.22), comparisons with the excavation assemblage were again limited, with all features potentially fitting with any phase from Phase 5a to Phase 1a. The higher proportion of Earthenware/Plainware Simple rims in LF.7 alongside Flat and Flat, Angled rims had similarities to Phase 2b, while the Earthenware/Plainware rim form proportions in LF.10 were closest to Phase 2a. However, these were not exact matches and again the low number of rim sherds made comparisons challenging. The proportions for the whole transect were close to Phase 5b, which fit with Phase 5b representing the disturbed surface assemblage.

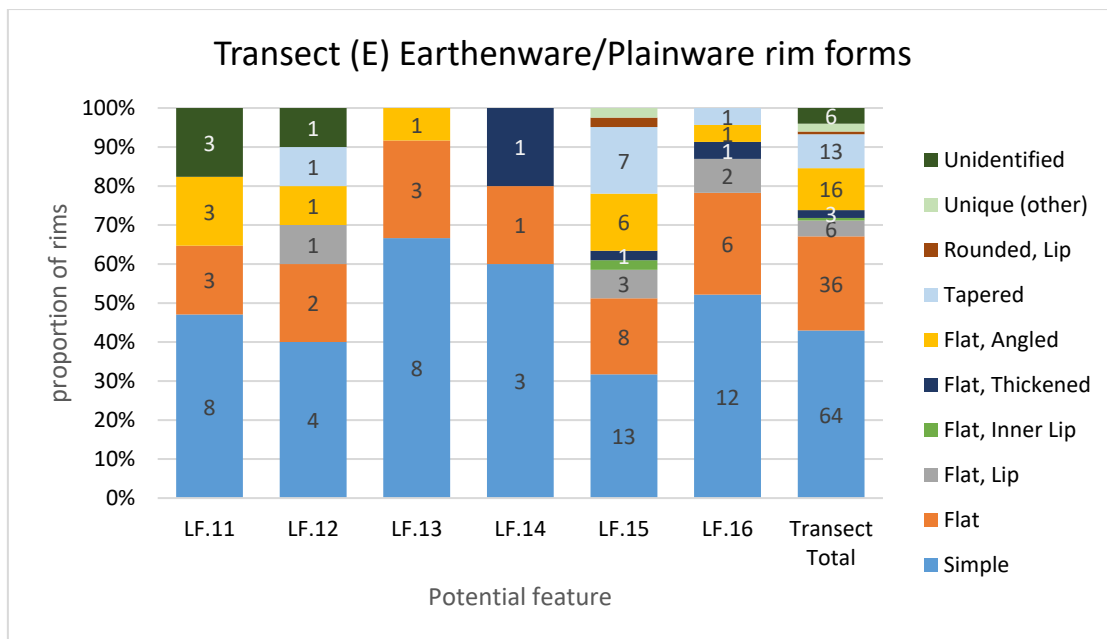


Figure 6.23: Earthenware/Plainware rim forms associated with the potential features in Transect (E)

6.5.4.1.4 Transect (E) Rim forms

As has been discussed previously Transect (E) had the highest density of sherds out of any of the transects, so had the potential to provide the clearest indication of the potential of local rim forms as chronological indicators. The first likely feature, LF.11, in Tran(E).6, contained 13 rim sherds, six Simple rims (four Earthenware/Plainware, one Black/Brown Burnished ware and one Light Brown Burnished ware), two Earthenware/Plainware Flat rims, an Earthenware/Plainware Flat, Angled rim, a Black Burnished Flat, Inner Lip rim and three Unidentified Earthenware/Plainware rims. The assemblage downslope in Tran(E).4-5 included seven more Earthenware/Plainware rims as well as a Simple and Flat, Lipped Light Brown Burnished ware rim. Tran(E).1 had a concentration of ten rims, likely representing material that has collected at the bottom of the slope. LF.13 had eleven rim sherds across the two associated transect units including eight Earthenware/Plainware rims (four Simple rims, three Flat rims and a Flat, Angled rim), as well as a Simple and Flat Black/Brown Burnished ware rim and a Flat Light Brown Burnished ware rim. LF.14 only contained six rim sherds, and Tran(E).17, the associated spill, contained no rim sherds. These consisted of three Simple, one Flat and one Flat, Thickened Earthenware/Plainware rim and one Simple Light Brown Burnished rim. LF.15 itself contained 16 rim sherds including four Simple, three

Flat, two Flat, Lipped, a Flat, Angled and a Tapered Earthenware/Plainware rim as well as a Flat, Inner Lip Earthenware/Plainware rim, which was more commonly a burnished ware form. The remaining rims were three Simple and one Tapered Black/Brown Burnished ware rim. The dense spread downslope from LF.15 contained another 15 Earthenware/Plainware rims, eight burnished ware rims, a Light Brown slipped simple rim and a unique ware simple rim. Finally LF.16, also within the area with the highest density of material only contains six Earthenware/Plainware rims (three Simple, one Flat and two Flat, Lipped) a Flat Black Slipped ware rim and a Flat Red Burnished ware rim. The spread downslope contains a further 17 Earthenware/Plainware rims, six Black/Brown Burnished ware and two Light Brown Burnished ware rims, neither of which were present in LF.16 itself, and a further unique ware rim.

Both LF.15 and LF.16 potentially had a sufficient density of Earthenware/Plainware rim sherds for comparisons to be made with the excavation phases (see Fig. 6.23). LF.15 did not closely match any of the excavation phase proportions. The proportion of Simple and Flat rims was closest to Phase 1a, however, it had a much greater range of rims than was found in Phase 1a as well as a Flat, Inner Lip rim which was a more recent form (Phase 5b-3). LF.16 also did not have any direct parallels to the workshop phases, but was most likely around phase 5a-2a.

As a complete transect it was interesting to note that Transect (E) contained five Black/Brown Burnished ware and two Light Brown Burnished ware Flat, Angled rims. This was interesting as this rim form, while known, was usually rare among the burnished wares in the excavated assemblage (2.7% of the Black/Brown Burnished ware rims and 4.1% of the Light Brown Burnished ware rims). However, in the survey assemblage it made up 14% and 10% of the recorded rims respectively for Black/Brown Burnished ware and Light Brown Burnished ware, which was close to the 11% Flat, Angled Earthenware/Plainware rims in Transect (E). When considered as full assemblages, rather than breaking down by phases or potential features, the Transect (E) assemblage had close parallels with the workshop assemblage, which again suggested that the survey was collecting material from multiple phases of occupation on the same part of the site.

6.5.4.1.5 Discussion

As has been shown, rim forms were of very limited use as chronological indicators as part of the fieldwalking survey. The low number of rim sherds collected during the survey coupled with the lack of any rim forms clearly diagnostic to a particular phase made identification of phases challenging. Even potential features with a sufficient density of rim sherds, such as LF.15 and LF.16, did not have any clear parallels with the proportion of forms seen in the workshop phases. This, coupled with the fact that the proportions of sherds from the combined transect assemblage resembled the complete workshop assemblage or Phase 5a (the disturbed contexts), suggested that material from multiple phases was being collected around the potential features. This made identifying particular phases without clear identifying rim forms (which were largely absent at Harlaa) almost impossible.

6.5.4.3 Rim Diameters

Rim diameters were recorded for 309 measurable rims (78% of rims). 23 (88% of rims) from Transect (A); 25 (83% of rims) from Transect (B); 44 (75% of rims) from Transect (C); 45 (63% of rims) from Transect (D) and 172 (82% of rims) from Transect (E). As was discussed in Chapter 5, while some chronological variation could be seen in rim diameters, they were only of limited use as chronological indicators.

6.5.4.4.1 Transect (A)/(B) Rim diameters

None of the potential features in Transect (A)/(B) had a sufficient quantity of rim sherds to produce the box-plot graphs used in Chapter 5. The only rim larger than 30 cm in Transect (A) or (B) was a single 31-35 cm Earthenware/Plainware rim from Tran(A).8, which fit with LF.2 possibly being used for storage. The majority of Earthenware/Plainware rim sherds fell into the 16-25 cm range (five 16-20 cm and five 21-25 cm). Transect (B) appeared to generally have had smaller rims than Transect (A). The largest rims in Transect (B) were 26-30 cm Earthenware/Plainware rims from Tran(B).1 and Tran(B).5. The majority of the Earthenware/Plainware measured rims were in the 11-15 cm and 16-20 cm range (seven of each). Tran(B).1 contained the highest proportion of

Earthenware/Plainware rims, three 11-15 cm, four 16-20 cm and one 6-10 cm. The three 6-10 cm Earthenware/Plainware rims are spread out across the transect with one in each of Tran(B).1, 4 and 8.

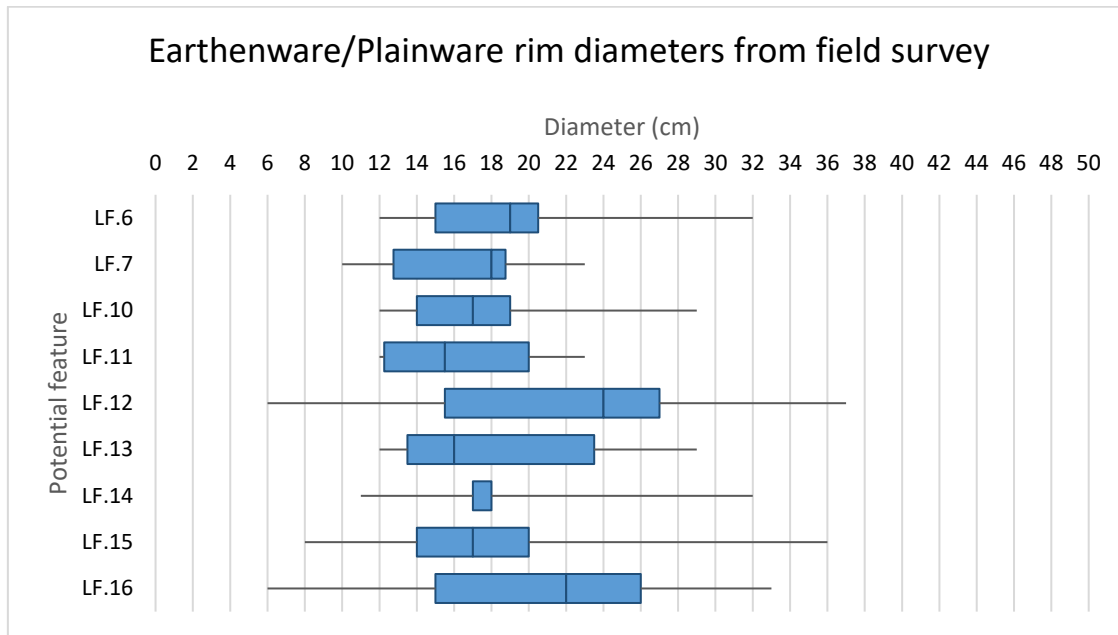


Figure 6.24: Box-plots of rim diameters for potential features with sufficient measured Earthenware/Plainware rim sherds (Note: LF.14's median was at 17 cm)

6.5.4.4.2 Transect (C) Rim diameters

LF.6 was the only feature in Transect (C) with a sufficient quantity of measured rim sherds (see Fig. 6.24). However, no comparisons could be made to any of the workshop phases for Earthenware/Plainware rim sherds. The largest rim from Transect (C) was an Earthenware/Plainware in the 36-40 cm range from Tran(C).3, not associated with any potential feature. LF.4, LF.5 and LF.6 all contained 11-15 cm, 16-20 cm and 21-25 cm diameter Earthenware/Plainware rims, LF.6 also contained a single larger 31-35 cm diameter rim. This fit with previous evidence that suggested that LF.6 may have been related to a storage feature. Only LF.4 and LF.6 contained any measurable burnished ware rim sherds, a single Black/Brown Burnished ware 11-15 cm sherd from LF.4 and two Black/Brown Burnished ware rims (one 11-15 cm and one 16-20 cm) and a 16-20 cm Light Brown Burnished ware rim from LF.6. All the burnished ware rims from Transect (C) were in the 6-25 cm range.

Transect (D) Rim diameters

Box-plots were produced for Earthenware/Plainware rims in LF.7 and LF.10 (see Fig. 6.24). Again there were no close parallels with the workshop excavation phase box-plots. The largest rims in Transect (D) (26-30 cm) were from LF.9 and LF.10. LF.7 and LF.8 both only contained single examples of Black/Brown Burnished ware measured rims, both 16-20 cm, while LF.7 also contains a 16-20 cm Light Brown Burnished ware rim. LF.9 contained three 16-20 cm Black/Brown Burnished ware and one 11-15 cm. As with Transect (C), all the Burnished ware rims were in the 6-25 cm range.

6.5.4.4.3 Transect (E) Rim diameters

Box plots were produced for all the Earthenware/Plainware rim diameters for all potential features in Transect (E) (see Fig. 6.24). As with the Transect (C) and (D) there were no clear parallels with the rim diameters from excavation workshop phases. The largest Earthenware/Plainware rims were found in LF.12 and LF.15 at 31-35 cm diameter, with slightly smaller 26-30 cm rims present in LF.14 and LF.16. The smallest Earthenware/Plainware rims (6-10 cm) were associated with LF.12, LF.15 and LF.16. The burnished wares rims generally fell into the same 6-25 cm range as the other transects, although there were rarer examples of larger and smaller rims. The largest burnished ware rim was a 31-25 cm Light Brown Burnished ware unique Rounded, Inner Lipped rim, likely from a shallow open bowl (see Fig. 6.25) from LF.15. Additionally, a 26-30 cm Black/Brown burnished ware rim was recovered from LF.15 and a 26-30 cm Light Brown Burnished ware rim from Tran(E).15, not associated with any potential feature. A single 5 cm Light Brown Burnished ware rim was recovered from LF.14.

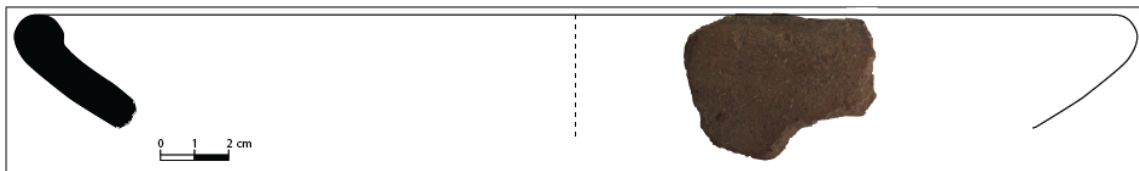


Figure 6.25: Light Brown Burnished ware unique Rounded, Inner Lip rim Tran(E).25-05 (LF.15)

6.5.4.4.4 Discussion

As could be seen both here and in Chapter 5, rim diameters did not provide much evidence towards the dating of features, with most diameter ranges present throughout the sequence. Large (31-35 cm and 36-40 cm) Earthenware/Plainware rims did appear to be more strongly associated with the later phases of the site (Phase 5-4). However, these larger rims could also have been present due to specific uses of the unit during those phases, such as storage or types of manufacture. Larger rims were also rare in the excavation assemblage (3.9% of rims were larger than 30 cm across all ware types), which may explain why the largest rims in the field survey were primarily associated with Transect (E), which had the highest density of sherds. As seen in Fig. 6.24, the rim diameters for the Earthenware/Plainware rims were skewed towards the larger diameters compared to the excavation Earthenware/Plainware rims. This may have been due to the smaller rims being affected and damaged more by taphonomic processes.

6.5.4.4 Conclusion

Despite the range of rims present at Harlaa, they were of limited use as chronological indicators, and even less so in the context of material recovered from fieldwalking surveys. The long use of different types of rims at Harlaa meant that the primary use of rims as chronological indicators in the excavation assemblage involved looking at the proportions of rim forms and diameters in different phases. The fact that there were almost no similarities between the proportions of either rim forms or rim diameters in the excavation phases and the potential features identified in the field survey suggested that many of the potential features were multi-phase and material from several phases was collected in the field survey, or that the rim forms or diameters were more associated with function as opposed to chronology. This coupled with the low number of rim sherds associated with identified features in the survey meant that it was challenging to identify phases in assemblages with mixed phases.

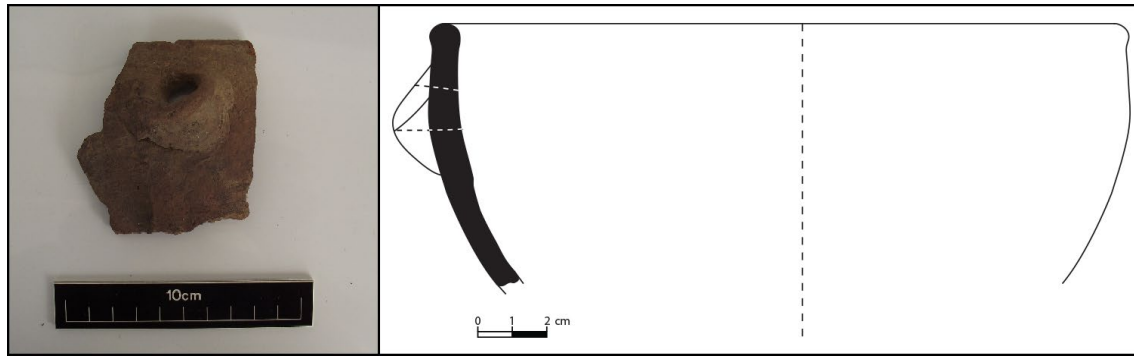


Figure 6.26: Earthenware/Plainware half spout with Simple, Out-turned rim and burnished interior Tran(C).12-01

| Unit | | Ware | | Unit | | Ware |
|------------|------|-----------|--|------------|-------|-----------|
| Tran(A).3 | - | Plainware | | Tran(D).7 | - | Plainware |
| Tran(B).1 | LF.2 | Plainware | | Tran(D).17 | LF.9 | Plainware |
| Tran(B).3 | - | Plainware | | Tran(E).7 | LF.12 | Plainware |
| Tran(C).4 | LF.3 | Plainware | | Tran(E).28 | LF.15 | Plainware |
| Tran(C).11 | LF.4 | Plainware | | Tran(E).30 | LF.16 | Plainware |
| Tran(C).12 | LF.4 | Plainware | | | | |
| Tran(C).20 | - | Plainware | | | | |
| Tran(C).21 | - | Plainware | | | | |

Table 6.13: Spouts from the fieldwalking survey

6.5.5 Spouts

Thirteen spouts were recovered as part of the survey. In the excavation assemblage spouts were generally found in more recent contexts (primarily Phase 5b-4, with smaller quantities in Phase 5a and Phase 2a). Transects (A) and (B) contained three spouts, all Earthenware/Plainware, one in each of Tran(A).3, Tran(B).1 and Tran(B).3. Tran(B).1 was the only spout directly associated with a potential feature (LF.2) in Transect (A)/(B). Transect (C) contained five spouts as seen in Table 6.13. The spout from Tran(C).11 was a semi-circular spout which had no known parallels from the excavation assemblage at Harlaa (see Fig.6.37a-c), while the example from Tran(C).12 was Earthenware/Plainware with a burnished interior and roughened exterior with a rim and a half-spout (see Fig. 6.26). LF.3 had an associated spout, while the spouts in Tran(C).11 and Tran(C).12 were just downslope from LF.4. Only two spouts were recovered from Transect (D), in units Tran(D).7 and

Tran(D).17. The spout from Tran(D).7, not associated with any potential feature, was large compared to most spouts and was decorated with a finger pressed appliqué ridge around the spout join (see Fig. 6.37c,d). This had parallels with the decorated appliqué ridges around some Earthenware/Plainware neck joins. The spouts in Transect (E) were also all Earthenware/Plainware with two associated with the large concentration around Tran(E).26-32 (LF.15 and LF.16) and one downslope in Tran(E).7, potentially associated with LF.12.



Figure 6.27: a), b), c) *Earthenware/Plainware semi-circular spout Tran(C).11-02*; d), e) *Large Earthenware/Plainware spout with finger pressed appliqué ridge round spout Tran(D).7-08*

| Unit | | Ware | Notes |
|------------|-------|-----------|--------------------|
| Tran(B).3 | - | Plainware | Possible stand leg |
| Tran(D).2 | - | Plainware | Stand base |
| Tran(E).26 | LF.15 | Plainware | Stand leg |
| Tran(E).28 | LF.15 | Plainware | Stand base |

Table 6.14: *Stand base sherds from fieldwalking survey*

6.5.6 Stand Bases

Four stand bases, which have potential links with the Chercher Mountain ceramics (see Fig. 7.27 and Chapters 2.5, 5.6.6 and 7.5.1), were recovered during the survey (see Table 6.14 and Fig. 6.28). While only a small number were recovered from excavation units, these appeared to have been a more recent feature. Most of the stand bases were recovered from the mosque unit

(HAR15[A]), which could additionally suggest that they had particular functions, potentially as incense burners. The two examples from Transect (E) were both associated with the area of highest sherd density (LF.15), while the examples from Transects (B) and (D) were not directly associated with potential features.



Figure 6.28: a), b) Possible Stand leg Tran(B).3-06; c) Stand leg and base fragment Tran(E).26-10; d),e) Stand base fragment Tran(D).2-07 with profile; f) Stand base Tran(E).28-15

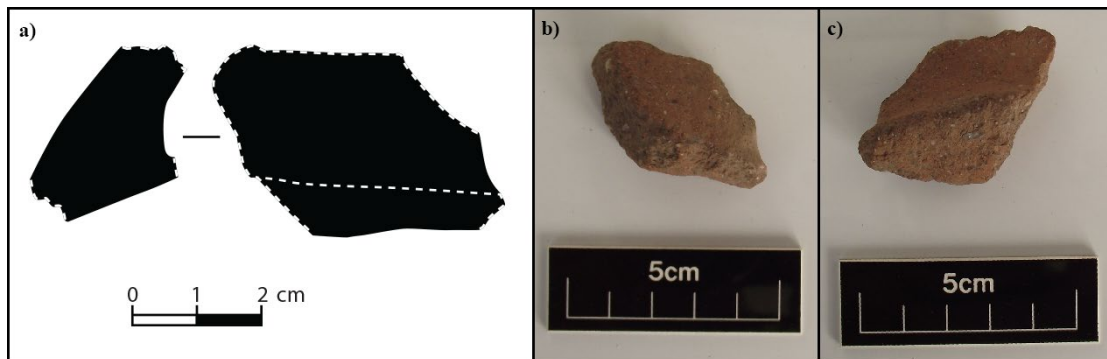


Figure 6.29: Unusual Earthenware/Plainware sherd Tran(C).10-07 a) profile and “back” of sherd b),c) “back” and “front” of sherd

6.5.7 Other Forms

Also present in the survey assemblage were examples of unique or unidentified forms. In Tran(D).21 a unique Earthenware/Plainware sherd from a vessel with a sub-square form and a rounded base was recovered (see Fig. 6.30). The sherd was from a corner of the sub-square vessel and included almost the full profile, which was about 3.5 cm tall, although as it was not a circular vessel the size of the vessel could not be estimated. There were no parallels to this from the excavation assemblage or from the ethnographic

literature. It may have been used in the manufacturing processes which were taking place nearby in the jewellery workshop. Another unusual Earthenware/ Plainware sherd was recovered from Tran(C).10, and it was unclear what this sherd represented (see Fig. 6.29).

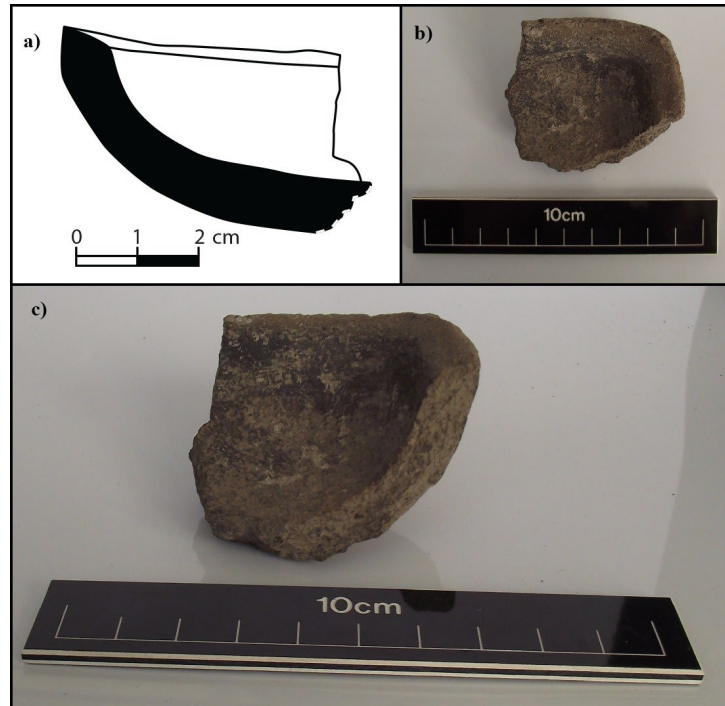


Figure 6.30: Unique sub-square Earthenware/Plainware rim sherd Tran(D).21-04 a) Profile drawing; b) top-down view; c) profile photograph

6.6 Conclusion

At Harlaa the local ceramics appear to be of limited use as chronological indicators for identifying features recorded during the fieldsurvey. This was in large part due to the longevity of use of many of the wares and forms as well as the absence of any wares or forms distinctive to only the early phases of the site. Ware types provided some of the best indicators for later phases. Light Brown Slipped ware and Black Slipped ware are both associated with the most recent phases, primarily Phase 5a-5b, with Light Brown Slipped wares potentially continuing in to the post-Harlaa period (see Fig. 5.65 for potential chronological indicators identified). These more recent ware types were often found downslope from potential features, as material spread downslope over time due to downhill creep. The wares indicated that there may have been more recent features in the vicinity of Transects (A)/(B) as well as potential features LF.4, LF.5, LF.9, LF.11, LF.12 and potentially LF.15.

When considering decorative styles, appliqué ridges on Earthenware/Plainware were associated with the main phases of the jewellery workshop (Phases 2a-5a), however this decoration only appeared in small quantities in the survey assemblage with the main concentration in Tran(E).28-32 (LF.15-16) and LF.1 in Transect (A)/(B). Carination had a long use at Harlaa, only absent in the deep stratigraphy (Phase 1a-1b). Carination was present in small quantities across most of the transects and potential features, which suggested that most of the site was in use from Phase 2b onwards. Of note was the absence of carinated sherds associated with LF.2, which was identified as a potential storage feature. This would fit with carinated and burnished vessels largely having a role in serving and consumption.

Pierced lug handles were found from Phase 5a-Phase 2a in the excavation assemblage, while only found as single examples in units, most potential features had pierced lug handles associated with them. The potential features without pierced lug handles were LF.6, LF.7, LF.8, LF.10, LF.12 and LF.14, however, the low number of pierced lug handles collected during the field survey means that these identifications are not conclusive. The presence of three twin pierced lug handles in the survey assemblage was interesting as this form was rare in the excavation assemblage. These handles may have been a style of handle which largely post-dated the excavation assemblage. Earthenware/Plainware ribbon handles were found throughout the chronology of the excavated assemblage and this fits with the spread of ribbon handles across the survey transects. Burnished wares ribbon handles were rare in the excavation assemblage where they were found in Phase 5a-5b and Phase 3. In the field survey burnished ware ribbon handles were found in LF.10 and LF.15, which suggested that these potential features were more recent.

The analysis of the ring bases, rims and to an extent the decoration highlighted a particular issues with the nature of the chronological variation present in the Harlaa local ceramics. Due to the longevity of many of the local ceramic forms the primary method of identifying chronological changes in the workshop phases outside of the introduction of particular forms around Phase 2a-2b was changes in the relative proportions of different forms in the phases. This meant in potential features with multiple phases of use (which appeared to be most of the potential features), the proportions for the phases became mixed

together in the field survey assemblage which made identifying the phases present challenging. All of the dateable imported ceramics were dated to the 13th – 15th century, which could potentially cover from Phase 2b to Phase 5a (see Table 5.1), although most were 14th century or later and so would suggest Phase 4-5. Interestingly these sherds were not usually associated with potential features with late identifiers such as Black Slipped ware except in Transect (E), where they were both associated with LF.12, LF.15 and LF.16.

As previously discussed when considering the taphonomic processes at Harlaa, the fact that the site of Harlaa is situated on a large hill and much of the site is on terraced slopes (see Fig. 6.3) has impacted the survey. The sherd distribution suggested that material has spread down the slopes over time from the original features. It was also likely that material from more recent phases has been affected more by soil creep as could be seen with the Black Slipped and Light Brown Slipped wares. Additionally, the fact that the landscape has been terraced has meant that material has been removed from features or moved around, distorting the chronology.

The next chapter will bring together the result of this chapter and the analysis of the excavation assemblage (Chapter 5) alongside the literature on contemporary sites in the region (Chapter 2) and ethnographic literature (Chapter 4) to further discuss the viability of local ceramics as chronological indicators as well as considering potential influences and links with the wider region, including potential links with the wider Islamic world. Key vessels forms present in the local ceramics will be highlighted and the evidence for foodways at Harlaa will be discussed. These will all be brought together to consider the impact of Islamisation in the region and its visibility and impact on the local ceramics.

Chapter 7: Discussion

7.1 Introduction

The ceramic analysis undertaken in Chapters 5 and 6 on the local ceramics from Harlaa from both the excavation and survey has characterised the local ceramics and provided a basis for a typology. This will be further expanded now, also considering material recovered by the local farmers including complete vessels as well as general unstratified surface collected material. The analysis undertaken so far has investigated the question of chronology from two different angles, looking at how the local ceramics changed across the excavated phases (Chapter 5), and how these phases might be applied to ceramics recovered during field surveys (Chapter 6). These will now be brought together alongside discussion on the key styles and forms as well as vessel use and foodways to come to a clearer conclusion on the viability of local ceramics as chronological indicators at Harlaa.

7.2 Key Vessel forms, styles and manufacture

Several key forms and styles present at Harlaa have been identified in Chapters 5 and 6. The fragmentary nature of the sherds collected both from the excavation and survey has made reconstructing complete vessel forms challenging. While no complete vessels were recovered during the excavations, 16 complete vessels were recovered by local farmers (see Appendix V), and some parallels can be drawn between these vessels and the sherds from both the excavation and survey assemblages to attempt to link the archaeological sherds with complete vessel forms.



Figure 7.1: Close up photographs of selection of complete vessels recovered by farmers showing distinctive features, a) Vessel 06 with finger pressed decoration on neck join, b) Vessel 06, circular hole cut into body; c) Vessel 05, slashed piercings; d) Vessel 12 with punctate decoration (see Appendix V)

7.2.1 Complete vessels

The complete, or nearly complete vessels collected by local farmers were recorded during the 2017-2019 field seasons at Harlaa (see Appendix V) consisted of a variety of forms. This collection contained three Black/Brown Burnished ware vessels (vessels 01, 04 and 05) and thirteen Earthenware/ Plainware vessels. The owners of the vessels tended to want to keep the soil in the vessel, which meant the interior and full profile could not usually be ascertained.

The Black/Brown Burnished ware vessels consisted of a small globular bottle with a broken neck (Vessel 01), a small globular jug (Vessel 04) and a closed bowl (Vessel 05). The bowl had a pierced lug handle above the shoulder, while the jug had what was likely a broken twin pierced lug handle on the shoulder. The bowl was interesting as it had four panels of rough slashed

~1 cm long piercings above the shoulder. This style of piercing has not been found in the excavation assemblage (see Fig. 7.1c and App.Fig. VI.1). Both the jug and the bowl had ring bases. The bottle and jug were likely used for storing and serving some kind of liquid, and their smaller size fits with the interpretation of burnished wares being used for serving and consumption. It was unclear what the function of the bowl was, as the piercings did not have a clear use, and meant that the bowl could never be more than half-full with a liquid. There were no clear ethnographic parallels for this form from Ethiopia which would aid in interpreting the use of the vessel.



Figure 7.2: Earthenware/Plainware sherd HAR19(F)6-51 with rim and handle join, a) joined sherds; b) in-situ fragments on bedrock; c) profile drawing

Vessel 02 was an Earthenware/Plainware spherical bowl with a ring base, two vertical ribbon handles on each side, and two rows of large ~1 cm diameter piercings just below the shoulder. This vessel was potentially a brazier or steamer, as the large piercings made it unsuitable for containing liquids. This was also the only complete vessel with decoration on the rim, which consisted of incisions on the simple form rim, as well as the only Earthenware/Plainware complete vessel with a ring base. Vessel 06 was a large Earthenware/Plainware jar with a long neck and single vertical ribbon handle. The surface was well smoothed and almost burnished in places. It was decorated with large punctate or finger pressed dots along the join between the neck and body (Fig. 7.1a). It was interesting to note that this decoration did not completely encircle the vessel. The decoration covered a little over half the diameter roughly centred on the handle join (see Fig. 7.1a). This vessel was likely used for the storage of liquids. A collection of conjoining sherds from HAR19(F) 6 during the 2019 season, including a group found in situ on the bedrock, were likely from the rim,

neck and handle of a similar vessel (see Fig. 7.2, and Vessel 06 in Appendix V). Vessel 06 also had a ~3 cm almost circular hole chipped into the body just under the shoulder. It was unclear why this hole was made, but it did not appear to be a fresh break, therefore it was likely formed while, or shortly after, the vessel was in use (see Fig. 7.1b). Vessel 04 was a medium sized somewhat closed bowl with a single horizontal ribbon handle on the shoulder. This vessel had a rough exterior and was potentially used for consumption and/or cooking. Even today *shiro wot*, the staple stew in Ethiopia (see Chapter 4.1.1), is often served in the same vessel that it is cooked in, so a vessel need not be used solely for cooking or serving. Vessel 09 was a closed pot with two horizontal ribbon handles (one broken) and a spout. This vessel was likely a cooking pot, probably for a liquid-based dish based on the spout.

Two small Earthenware/Plainware vessels, which were termed “tea pots” (Vessels 10 and 15) were recorded. These had similar forms; small pots with a single horizontal handle and a spout opposite. These small vessels were likely used for serving liquids, and while unlikely to have actually been used for tea, were named such due to their similar appearance to such vessels. Two smaller pots had globular bodies and short straight necks (Vessels 11 and 16). Vessel 14 was a globular pot with a very short straight neck and an almost carinated body. Two jars (Vessels 12 and 13) had a similar form to vessels 11 and 16, but were larger and had longer necks and pairs of handles. The handles on Vessel 12 were vertical from the shoulder to just under the rim (both broken), while those on Vessel 13 were horizontal on the neck join (one broken). Additionally, Vessel 12 had punctate decoration on the shoulder under the neck join and two appliqué blobs on the perpendicular sides to the handles. The style of the punctate decoration was very similar to some Earthenware/ Plainware sherds such as HAR18(B)8-17 (Phase 2a) from the excavation assemblage (see Fig. 7.1d and 7.3). Vessel 07 was a tall bowl with a flared, flat rim. Vessel 08 was a spherical bowl missing the majority of the rim, what remained of the rim appeared to be In-turned, Tapered and flared.



Figure 7.3: Earthenware/Plainware sherd HAR18(B)8-17 with punctate decoration

As has been discussed previously, the fragmentary nature of much of the excavation ceramic assemblage made reconstructing the full form of vessels difficult. Even with the complete vessels discussed here it was challenging to find clear comparisons with the excavation assemblage sherds. This was further complicated by the hand-made nature of the local ceramics, which meant a lack of standardisation and large degree of variability in the form of vessels, even those for similar use. For example, Vessels 11-14 and 16 were all medium sized Earthenware/Plainware pots with globular bodies and straight necks. However, the proportions between the body and neck varied and some had horizontal ribbon handles (Vessel 13), others vertical ribbon handles (Vessel 12), and most had no handles. Therefore, while forms were identified, there was a large degree of variability within the forms. In addition to the fact that the local ceramics were handmade, the variability in forms seen in both the complete vessels and excavation assemblage suggested that there were multiple people manufacturing pottery at the same time, as well as a degree of experimentation and innovation taking place. This would potentially fit with Harlaa being a trade centre where a range of ideas and people were mixing. Despite these challenges some potential comparisons could still be made.

7.2.2 Other forms and styles

In addition to the forms seen in the complete vessels, it was possible to identify some key forms and styles. One of the most distinctive decorative styles present at Harlaa was the un-burnished pattern decoration found on burnished wares (see Chapter 5.4.2) from Phase 5a to Phase 2b. This style had few

parallels outside of Harlaa. Despite predating Harlaa, the clearest parallels were from the site of Mifsas Bahri, a Late Aksumite (550 – 700 CE) frontier community in southern Tigray (Yule & Gaudiello, 2017). Un-burnished patterns were found on the burnished wares, which are primarily black, including patterns similar to those found at Harlaa (Fig. 7.10c). There were also potential examples of un-burnished pattern decoration from the Chercher mountains (Joussaume, 1974; 2014) and the Shay culture sites (Fauvelle-Aymar & Poissonier, 2012; 2016). However, the Shay culture examples were primarily the opposite of the un-burnished pattern, with burnished lines on an unburnished surface. The potential links with these sites will be discussed more below (section 7.5.2.2).



Figure 7.4: a) Large fragment of a Black/Brown Burnished ware carinated bowl with foot ring recovered by a farmer (recorded in 2019); b) Sherd HAR19(F)6-29, Light Brown Burnished ware carinated bowl fragment with rim, twin pierced lug handle and detached ring base; c) close up of detached ring base on HAR19(F)6-29; d) profile of HAR19(F)6-29

Carinated bowls appeared to have been one of the main forms of bowl at Harlaa. Evidence for carinated bowls was found from Phase 5a to Phase 2a. Carinated sherds were recovered from Phase 2b, but none of the sherds included rims, so it could not be confirmed that they were from bowls. However, no other carinated forms other than bowls has been identified at Harlaa in the local ceramic assemblage. Until the 2018 season it had been theorised that at least some of these carinated bowls had ring bases. However, no sherds with

both carination and ring bases had been found. During the 2019 season a large fragment of a carinated bowl with a ring base was shown to the author by a farmer (Fig. 7.4a). Additionally, conjoining sherds including the rim, carination and base with detached ring base (Fig. 7.4b-d) were recovered from the excavations in unit HAR19(F). While both these examples are currently undated, they do confirm that at least some proportion of the carinated bowls had ring bases. However, not all carinated bowls appear to have had ring bases. For example, HAR17(B)18-08, a Light Brown Burnished ware carinated bowl (Fig. 7.5) was unlikely to have had a ring base. Unfortunately, this meant that it was not possible to tell if the use of ring bases on carinated bowls was chronologically significant.

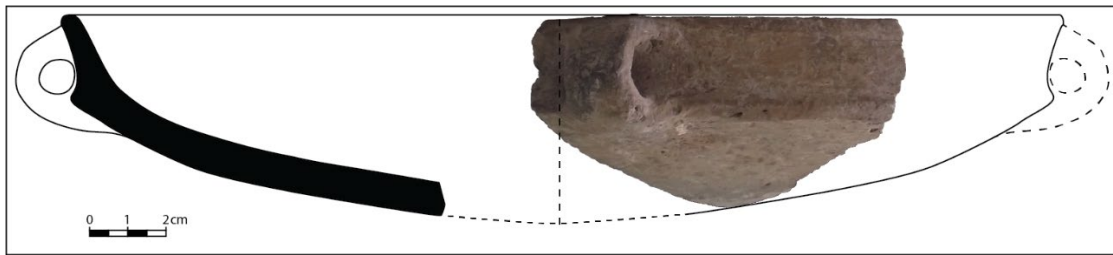


Figure 7.5: Light Brown Burnished ware Type B carinated vessel with pierced lug handle HAR17(B)18-08

Another potential form of bowl, primarily found in the Earthenware/Plainware, was also present in the excavation assemblage. This form was identified by Flat, Angled, out-turned rims. There were likely bowls with other rim forms, particularly Simple, Flat and Flat, Lipped, however this particular form of rim appeared indicative of a bowl form. Additionally, most Flat, Angled, out-turned rims had a particular finish: the interior, rim and just under the rim on the exterior was usually smoothed while the rest of the exterior was rough, likely to aid grip (Fig. 7.6). This style of finish was common on many Earthenware/Plainware vessels across the chronological sequence, including some of the complete vessels (e.g. Vessel 03 in Appendix V). Unfortunately, there were no large fragments of these rims or complete examples to confirm the form of these bowls, but they appeared to have been medium-shallow open bowls. Both the burnished ware carinated bowls and the Earthenware/Plainware open bowls with Flat, Angled rims had similar ranges of diameters, 8-32 cm for the carinated bowls and 8-34 cm for the Earthenware/Plainware open bowls. Both forms also had similar quartile ranges, 14.75-22 cm diameter with a median of

19 cm for the carinated bowls, and the Earthenware/Plainware bowls actually slightly larger with a 16-22 cm diameter quartile range, but a slightly lower median at 18.5 cm. Both forms were concentrated in Phase 2a-5a, although two examples of Flat, Angled rims were recovered from Phase 1a, both close to the median diameter at 18 and 19 cm.



Figure 7.6: Earthenware/Plainware Flat, Angled, Out-turned rim, HAR17(B)3-40, likely from an open bowl

Large storage vessels were primarily identified by large thick rims (30 cm or larger diameter) and potentially thicker body sherds (~1.5-2 cm thick). These rims were usually Simple, Flat, or Flat, Lipped and were in-turned or closed, which suggested that these vessels did not have the necks seen in Vessel 06. All the examples of these large in-turned rims were Earthenware/Plainware. The size of these vessels meant that there were no complete examples recovered from Harlaa. The closest to a complete large storage vessel from Harlaa was an apparently articulated vessel discovered near what would be HAR19(F) and shown to the team by the farmer in 2017 which was discussed in Chapter 6. Unfortunately, much of the body and rim of this vessel had already been removed by the farmer, leaving just the fill of the vessel (see Fig. 6.2). As mentioned in Chapter 6, the sherds which had already been removed were collected in 2017 and the rest of the vessel was intended to be excavated in the 2019 season. However, the farmer had dug up the remainder of the vessel in the intervening period so the vessel was not able to be reconstructed.

Ring bases were relatively common at Harlaa across all ware types from Phase 5a to Phase 2a. These ring bases came in a variety of forms, which although did not appear to have any chronological significance, may be useful when considering links with the wider region and the function of vessels.

The stand bases consisted of legs, which appeared to be formed in a similar manner to the ribbon handles (see below and Chapter 5.6.6) attached to the underside of the vessel and to a plate or ring which formed the base of the vessel. Only nine examples of this form were recovered between the excavations and field survey (four from the field survey and five from the excavations), with a further three collected as general unstratified surface collected sherds. The closest parallels to these bases were from the nearby sites in the Chercher mountains (Joussaume, 1974, 2014), where there were many examples of bowls with legs attached to flat plates recorded (see Chapter 2.5, 7.4 and 7.5). The form of the stand bases attached to a ring was similar to a 'clay table' recovered from the Jesuit Missionary site of Gännätä Iyasus in the Lake Tana region of northern Ethiopia (see Fig. 2.44). However, where the diameter could be recorded, they were much too small to have been part of a table such as from Gännätä Iyasus (Fernández et. al., 2017: 178-179; de Torrez Rodríguez, 2017: 240-242; see also Chapter 2.12).



Figure 7.7: a),b) Earthenware/Plainware rounded base HAR17(B)15-04 with potential joins from multiple 'slabs' of clay (Phase 1a); c),d),e),f) Earthenware/Plainware potential rounded base HAR18(B)25-02 thickened with multiple layers (Phase 1b)

7.2.3 Manufacture

There is only limited evidence currently for the manufacturing techniques employed at Harlaa in both the excavation and survey assemblages and the complete vessels discussed above. As has been briefly discussed in Chapters 5

and 6, there was no evidence for the use of the wheel at Harlaa for pottery manufacture, and all the local ceramics appeared to be handmade. This could be seen in the inconsistent forms on individual vessels, including the shape of the body, rim forms and rim diameters. This was corroborated by the ethnographic evidence in Chapter 4, which suggested that the use of the wheel was rare in Ethiopia until recently. A couple of Earthenware/Plainware sherds from Phase 1a/1b showed evidence in the profile for potential thick coils or multiple slabs of clay used in building up the walls of the vessels (Fig. 7.7a-b and 7.8d). However, this did not mean that this technique was used throughout all the periods at Harlaa. Other Earthenware/Plainware sherds showed evidence for the vessel being thickened with multiple layers of clay, particularly around the base of vessels (Fig. 7.7c-f). The burnishing on the burnished wares has tended to destroy much of the evidence for manufacture methods on those wares. Particularly on the interior of sherds, finger marks from smoothing and manufacture were occasionally visible (Fig. 7.7). These marks further suggested that the vessels were handmade as opposed to wheelmade as they were not the fine parallel marks as you find on wheelmade vessels. Scraping also appeared to have occasionally been used on the interior of the vessels (e.g. Fig. 7.7b, see Rice 1987:137 for comparison). As can be seen by the numerous examples of detached ring bases, they generally appeared to have been formed from a ring of clay added to the base, rather than being extruded from the vessel body (see Fig. 5.40).

The ribbon handles appeared to have had a standard style of manufacture throughout the sequence. The core of the handle was formed from a sausage of clay which was attached to the body. The rest of the handle was then built up around this core and smoothed into the body. The handle core could be attached to the body in a variety of ways, it could be pierced through the body then smoothed out on the interior, pushed partly into the body, or merely abutting onto the body, relying on the additional clay and smoothing to maintain integrity (see Fig. 5.34 and 5.37).

The rare examples of detached pierced lug handles suggested that they were usually formed from an appliqué blob which was pierced with, or formed around, a ~1 cm diameter stick and smoothed into the body. While ribbon handles were very common on the Ethiopian ethnographic ceramics and

handles similar to pierced lug handles are also well attested, the manufacturing processes for these handles was rarely discussed in the ethnographic literature, which meant it was not clear how widespread these techniques of manufacture, particularly for ribbon handles, are in modern Ethiopia. Anjum (2013) did describe the process of making a traditional coffee pot by a potter in Mekelle (Tigray region). When making the handle the potter ‘...pulls a handle with a coil, making sure that the joints are fused’ (Anjum, 2013: 98). This along with the photographs of the process suggested that the handle was formed from a single “coil” of clay which was attached and smoothed directly onto the body. Unlike the process at Harlaa, the handle was not built up further around this core.

Some potential tools for the burnishing of the burnished wares have been recovered. There was a collection of smooth pebbles which may have potentially been used for burnishing (Insoll, in prep.). The use of pebbles, in particular “crystal pebbles” including quartzite, was attested in the ethnographic data (e.g. Arthur, 2014; Kaneko, 2014; Barley 1994). Additionally, astragali (ankle bones) from sheep and goats were recovered at Harlaa which showed wear suggesting that they were used to smooth something (see Fig. 7.9a-b). The use of astragali as smoothing tools was not found in the ethnographic literature for Ethiopia or Africa in general. However, similar wear on these bones has been observed elsewhere, such as on deer astragali at Bronze Age Ras Shamra in the Levant (e.g. Vila, 2008: 175-176; Chahoud & Vila, 2017: 206), and prehistoric sites in Romania and Hungary (e.g. Meier, 2013; Măgărit, 2017), where they were also interpreted as potentially tools for pottery burnishing. Rib scrapers were discussed in the ethnographic literature as tools used for forming pottery (e.g. Lyons & Freeman, 2009; Barley, 1994), and examples of ox rib scrapers were found at Harlaa (see Fig. 7.9c).

The burnishing on the Harlaa pots appears to have been produced prior to firing. This interpretation was due to a combination of the un-burnished pattern decoration, which appeared to have been produced by roughening the burnished surface prior to firing, as well as the variable firing colour of the fabric. Burnishing pre-firing while the clay was in a leather hard or dry state was a known technique both in Africa and more generally (e.g. Rice, 1987: 138; Wayessa, 2011; Arthur, 2013: 17; Orton & Hughes, 2013: 90, 133-134; Quinn, 2013: 82, 88).



Figure 7.8: a) Earthenware/Plainware ring base HAR17(B)7-22 with finger marks on the interior (Phase 2a); b) Earthenware/Plainware body sherd HAR18(E)4-09 with scraping marks on interior; c) Earthenware/Plainware Simple, In-turned rim HAR18(E)3-11 with finger marks on interior; d) Earthenware/Plainware Simple, In-turned rim HAR18(B)17-18 with finger marks on interior and potential join in fabric (Phase 2a); e),f) Light Brown Burnished ware neck sherd HAR18(B)8-07 with finger marks on interior; g),h) Light Brown Burnished ware carinated sherd HAR18(B)11-07 with punctate decoration and finger marks on interior; i) Interior of Earthenware/Plainware Flat, In-turned rim HAR18(B)17-15 with finger marks on interior (Phase 2a); j),k) Earthenware/Plainware potential rounded base HAR18(B)22-02 with finger marks on interior (Phase 2b)



Figure 7.9: a) unworked astragalus from HAR17(B) 23; b) astragalus worn down by use for smoothing/burnishing from HAR18(B) 16; c) Ox rib used as scraper from HAR17(B) 21



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Figure 7.10: a) Light Brown Burnished ware rim with carination and un-burnished zig-zag and line decoration from Harlaa (Sherd HAR18[B]12-01); b) Potential un-burnished pattern decoration from the Shay culture site of Meshalä Maryam (Fauvelle-Aymar & Poissonnier, 2012: 61); c) Un-burnished line decoration from Mifsas Baḥri (Gaudiello & Yule 2017: 116); d) Potential un-burnished line decoration from Dobba/Raré in the Chercher Mountains (Joussaume, 2014: 106)

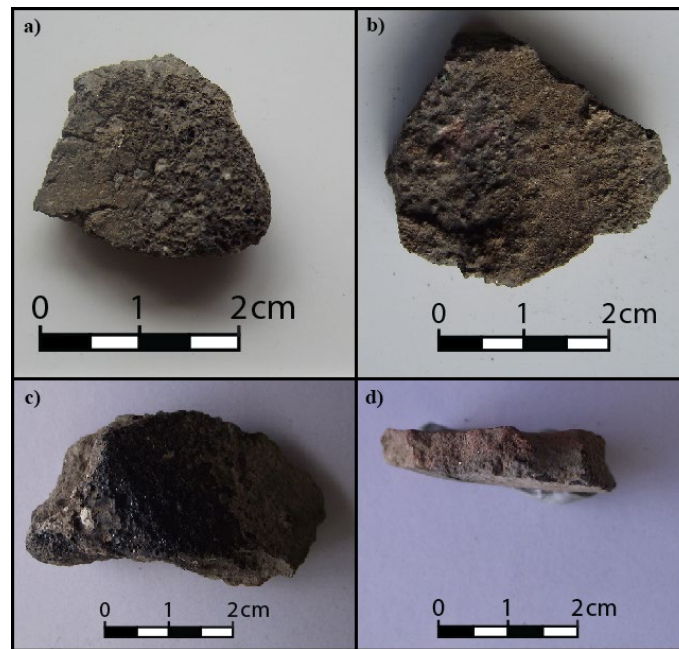


Figure 7.11: close up examples of vitrification, a) Sherd HAR18(B)7-10 (Phase 2a); b) Sherd HAR18(B)8-14 (Phase 2a); c) Sherd HAR16(A)4-13 (Phase 5b); d) Sherd HAR16(A)6-21 profile showing heat damage around piercing

| Phase | Context | Ware | Code | Notes |
|----------|------------|-----------|---------------|---------------------|
| Phase 5b | HAR16(A) 4 | Plainware | HAR16(A)4-13 | Very damaged |
| Phase 5b | HAR16(A) 4 | Plainware | HAR16(A)4-28 | Decorated rim |
| Phase 5b | HAR16(A) 6 | Plainware | HAR16(A)6-21 | Pierced |
| Phase 5b | HAR17(B) 4 | Burnished | HAR17(B)4-49A | |
| Phase 5b | HAR17(B) 4 | Burnished | HAR17(B)4-49B | |
| Phase 5b | HAR17(B) 4 | Burnished | HAR17(B)4-49C | Ring base |
| Phase 4 | HAR18(B) 5 | Plainware | HAR18(B)5-21 | Pierced |
| Phase 4 | HAR18(B) 5 | Plainware | HAR18(B)5-34 | Potential Rim sherd |
| Phase 2a | HAR18(B) 7 | Plainware | HAR18(B)7-10 | |
| Phase 2a | HAR18(B) 8 | Plainware | HAR18(B)8-14 | |
| Phase 2a | HAR18(B) 9 | Plainware | HAR18(B)9-15A | Potential residue |
| Phase 2a | HAR18(B) 9 | Plainware | HAR18(B)9-15B | Potential residue |
| Phase 2a | HAR18(B) 9 | Plainware | HAR18(B)9-16A | Piercing |
| Phase 2a | HAR18(B) 9 | Plainware | HAR18(B)9-16B | |
| Phase 2a | HAR18(B) 9 | Plainware | HAR18(B)9-16C | |

Table 7.1: Vitrified sherds recovered during the Harlaa excavations, see App.Fig. VI.2 for photographs

7.3 Archaeological ceramics, their use and foodways

The local ceramics at Harlaa appear to have had a variety of uses. They were primarily for the storage, preparation, cooking, consumption and serving of food. In addition, residue and vitrification on sherds from the jewellery workshop suggested that some of the ceramics were used for the manufacturing processes undertaken there, as there were no examples from any of the other excavation units. There was also evidence for the further modification of ceramics, both to allow vessels to continue to be used and to repurpose broken sherds.

7.3.1 Residue and vitrification

A small collection of sherds, mostly from the jewellery workshop are vitrified or have residue preserved on them. This residue has not been analysed as it is outside the scope of this thesis, but likely relates to various manufacturing processes undertaken in the jewellery workshop.

7.3.1.1 Vitrification

In addition to distinct crucible fragments, a collection of vitrified local sherds were recovered from the excavation, all from Unit (B), the jewellery workshop. The crucibles were often extremely vitrified and had a distinctive form and a finer, denser fabric, likely due to their specialised function. The crucible fragments were analysed separately from the analysis of the local ceramics in this thesis and so are not discussed here (cf. Insoll et. al., in prep). The vitrified local ceramic sherds are listed in Table 7.1 and were found from Phase 5b to Phase 2a. The only vitrified burnished ware sherds were a collection of three sherds from HAR17(B) 4 in Phase 5b (see App.Fig. VI.2d). The exact type of burnished ware could not be determined due to the vitrification and heat damage. They all appear to have been from the same vessel and included a 7 cm ring base. The rim sherd HAR16(A)4-28 (Phase 5b) was also interesting as was a sherd with some parallels to the ceramics from the Somali trading towns (cf. González-Ruibal et. al., 2017; also Chapter 5.4.8 and 7.5.2.1). It was a Flat, Angled, In-turned rim with decoration on the rim, which was not what would be expected for a vessel intended for manufacturing

(Fig. 7.12). Despite this, the sherd showed a degree of vitrification on the interior of the rim. The limited nature of the vitrification on this sherd suggested that it was not used intensively. Two sherds had piercings, HAR16(A)6-21 (Phase 4) and HAR18(B)9-16A (Phase 2a), potentially for pouring whatever was being contained (see Fig. 7.11d and App.Fig. VI.2c,k). The vitrification and heat damage on these sherds was also concentrated around the piercing. With a couple of exceptions, the vitrification tended to be concentrated on the interior of the sherds. This suggested that the vessels were being used to store something which was hot enough to vitrify the fabric, rather than being used to heat something to high temperatures. The only clear exception to this was HAR16(A)6-21 (Phase 5b), one of the pierced sherds, which had the vitrification and heat damage concentrated on the exterior (see Fig. 7.11d and App.Fig. VI.2c).



Figure 7.12: Earthenware/Plainware rim sherd HAR16(A)4-28 showing, a) profile; c) rim decoration; and b),d) close up of vitrification on rim

| Phase | Context | Ware | Code | Residue | Notes |
|----------|-------------|--------------------|---------------|--------------------------|---------------|
| Phase 5a | HAR18(B) 1 | Black Burnished | HAR18(B)1-01 | "Powdery" White | |
| Phase 5b | HAR15(B) 5 | Plainware | HAR15(B)5-24 | "Liquid" White | |
| Phase 5b | HAR15(B) 5 | Plainware | HAR15(B)5-26 | "Liquid" White | Piercing |
| Phase 5b | HAR16(A) 4 | Plainware | HAR16(A)4-12A | "Liquid" White | |
| Phase 5b | HAR16(A) 4 | Plainware | HAR16(A)4-12B | "Powdery" White | |
| Phase 5b | HAR16(A) 6 | Plainware | HAR16(A)6-18A | "Powdery" White | |
| Phase 5b | HAR16(A) 6 | Plainware | HAR16(A)6-18B | "Liquid" White | |
| Phase 5b | HAR17(B) 3 | Plainware | HAR17(B)3-21 | "Powdery" White | |
| Phase 5b | HAR18(B) 2 | Plainware | HAR18(B)2-16 | Iron | |
| Phase 4 | HAR15(B) 6 | Plainware | HAR15(B)6-37 | "Liquid" White & Iron | |
| Phase 4 | HAR15(B) 6 | Plainware | HAR15(B)6-46 | "Powdery" White | |
| Phase 4 | HAR17(B) 21 | Black Burnished | HAR17(B)21-01 | "Waxy" White | |
| Phase 3 | HAR16(A) 8 | Plainware | HAR16(A)8-18 | Bubbly Black | |
| Phase 3 | HAR16(A) 9 | Plainware | HAR16(A)9-35A | "Powdery" White | |
| Phase 3 | HAR16(A) 9 | Plainware | HAR16(A)9-35B | "Powdery" White | |
| Phase 3 | HAR17(B) 20 | Black Burnished | HAR17(B)20-01 | "Waxy" White | |
| Phase 2a | HAR17(B) 7 | Plainware | HAR17(B)17-07 | "Powdery" White | |
| Phase 2a | HAR18(B) 9 | Plainware | HAR18(B)9-15A | "Liquid" White | Vitrification |
| Phase 2a | HAR18(B) 9 | Plainware | HAR18(B)9-15B | "Liquid" White | Vitrification |
| Phase 2a | HAR18(B) 7 | Unidentified | HAR18(B)7-19 | Light Brown | |
| Phase 2a | HAR18(B) 12 | Plainware | HAR18(B)12-02 | Grey | Exterior |

Table 7.2: Sherds with residue from the Harlaa excavations, see App.Fig VI.5 for photographs

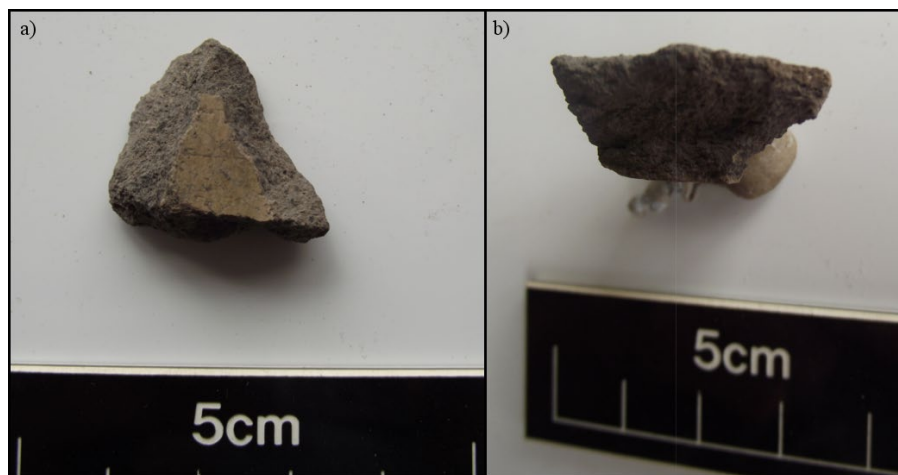


Figure 7.13: a) Sherd HAR18(B)7-20 with unusual potential residue; b) Close up of profile showing thickness of deposit on interior of HAR18(B)7-20

7.3.1.2 Residue

The 21 sherds with residue were found from Phase 5a to Phase 2a within Unit (B), the jewellery workshop (although examples with similar residues were recovered from Unit [E] in the 2019 season). The analysis and identification of this residue was not part of this research and is in progress (Insoll, in prep.). Therefore, the composition of the residues was unclear, but most of the residues did not appear to be related to cooking and foods, which fit with the identification of Unit (B) as a jewellery workshop. Most of the sherds had a white residue, however, there appeared to be several sub-types of white residue (see Table 7.2). One of the most common types of residue was a solid, but powdery white deposit, which could be up to 1 mm thick and was found on eight of these sherds. There were examples which had multiple layers of deposition such as HAR17(B)17-07 (Fig. 7.14a), which suggested that vessels were used for the same process multiple times before being discarded.

The other common type of white residue, also found on eight sherds, appeared to have been deposited by a more liquid process (see Fig. 7.14d). The deposits were usually smoother and thinner than the “powdery” deposits, and often contained small bubbles. The residue on HAR15(B)6-37 (Phase 4) showed evidence for a “liquid” white deposit as well as a potential rusty iron deposit on top of the white deposit (see App.Fig. VI.5l). Additionally, the only pierced sherd with residue has a “liquid” residue, including in the piercing itself (Fig. 7.14d). There were two sherds which had a white deposit which was

termed “waxy” (Fig. 7.14b). This was a thick (~1 mm), almost waxy deposit. Both examples of this deposit were found on Black/Brown Burnished ware sherds. The final Black/Brown Burnished ware sherd with a residue had a “powdery” residue. This suggested that whatever process produced the “waxy” deposits used burnished wares as all the remaining residue was found on Earthenware/Plainware sherds.

The remaining deposits on sherds consisted of a thin rusty iron deposit on the interior of an Earthenware/Plainware sherd from Phase 5b (HAR18[B]2-16) (App.Fig. VI.5k), a bubbly black deposit from Phase 3 (HAR16[A]8-18) (Fig. 7.14c and App.Fig. VI.5p), a grey deposit on the exterior of a sherd from Phase 2a (HAR18[B]12-02) (App.Fig. VI.5w) and an interesting potential light brown residue, also from Phase 2a (HAR18[B]7-19). The potential light brown residue was a very smooth and shiny deposit on the interior of a small Earthenware/Plainware sherd (see Fig. 7.13). This deposit may alternatively represent a unique method of slipping and burnishing the interior or an attempt at producing a crude glaze effect (see Chapter 5.3.9.4 for discussion of this sherd as an unidentified ware). The black residue was one of the only residues which was potentially related to cooking. The grey deposit on the exterior of HAR18(B)12-02 may have been a liquid which spilt from the vessel onto the exterior and burnt on. This may also have been evidence for cooking residue. The “liquid” residue was primarily found in Phase 5b and 2a with a single example in Phase 4, while the “powdery” deposit had a much wider range, present from Phase 5a to Phase 2a. The two examples of “waxy” residue were only found in the contiguous Phases 4 and 3. The main production that formed these residues therefore appeared to be primarily focused in Phases 5b-2a, with a smaller presence in Phase 5a, and some additional unusual residues in Phase 2a. The analysis of these residues is in progress as a separate part of the project (Insoll, in prep.) and the results were not available at the time of completing this thesis.

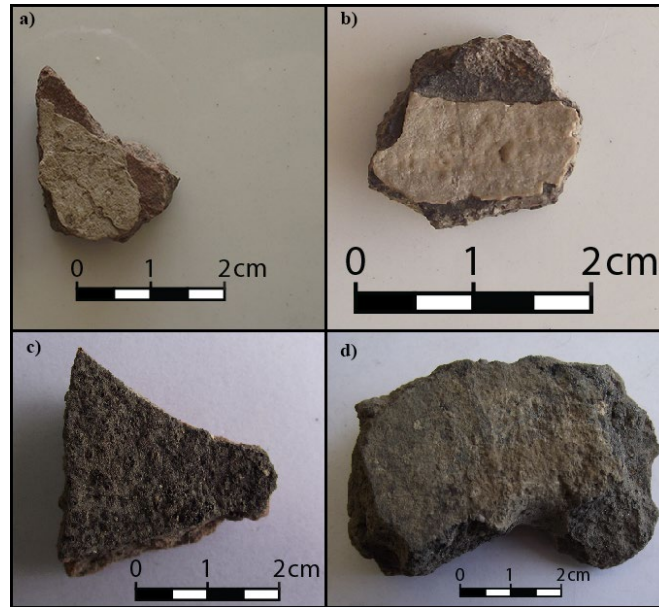


Figure 7.14: Close up examples of residue on sherds, a) Earthenware/ Plainware sherd HAR17(B)17-07 (Phase 2a) with layers of "powdery" white residue; b) Black/Brown Burnished ware sherd HAR17(B)20-01 (Phase 3) with white "waxy" deposit; c) Earthenware/Plainware sherd HAR16(A)8-18 with bubbly black burnt deposit, d) Earthenware/Plainware sherd HAR15(B)5-26 with white "liquid" deposit and piercing



Figure 7.15: Collection of Earthenware/Plainware worked discs from HAR17(B)5 (Phase 5b)

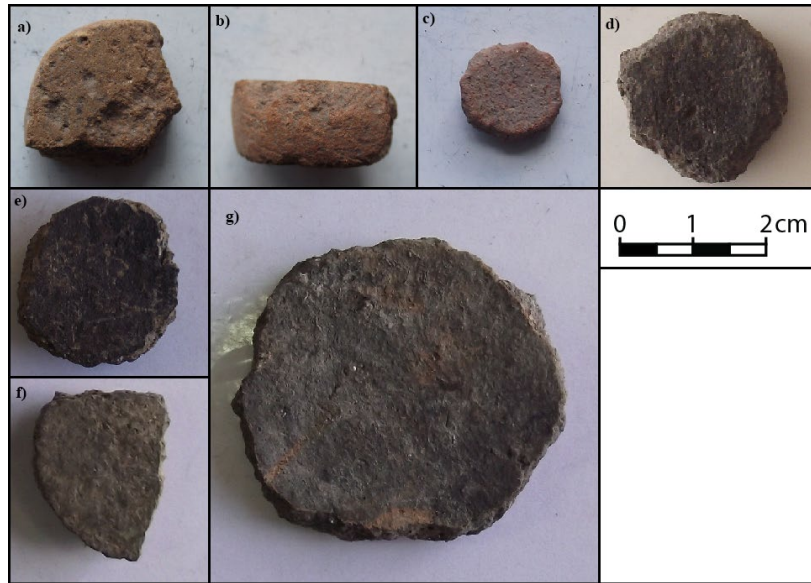


Figure 7.16: a),b) Earthenware/Plainware ground disc fragment HAR18(B)1-33; c) small Earthenware/ Plainware chipped disc HAR18(B)5-52; d) Earthenware/Plainware chipped disc HAR17(B)2-18; e) Earthenware/ Plainware chipped disc HAR15(B)5-42; f) Earthenware/Plainware chipped disc fragment HAR16(A)9-67j; g) Earthenware/Plainware chipped disc HAR15(B)4-30

7.3.2 Modification

Some of the local ceramics appeared to have been modified after they were fired, either sherds from broken vessels reworked for new purposes or occasionally to repair or modify a vessel so it could continue to be used after being damaged.

7.3.2.1 Worked Discs

The most common modification at Harlaa consisted of worked discs. While some examples were worked into fine discs, many of the discs were only roughly worked (see Fig. 7.15 for a range of worked discs). A total of 192 worked discs were recorded (184 Earthenware/Plainware, seven Black/Brown Burnished ware and one Red Burnished ware, see App. Table VI.1). During the analysis of the 2016 and 2017 seasons all potential worked discs were recorded. As the 2015 ceramic assemblage was culled prior to analysis it appeared that only the examples of fine worked discs were kept for further

analysis. Because of time restraints, during the 2018 season only the finer examples of worked discs were recorded.

These discs were generally 2-6 cm in diameter and potential examples were found throughout all phases, and almost all contexts in the 2016 and 2017 assemblages. The discs were usually chipped, and occasionally ground (see Fig. 7.16a-b and App.Fig. VI.4,6 for examples of ground discs). These discs were potentially used as gourd stoppers, although some of the smaller examples may have been gaming pieces. Examples of ground discs formed from pottery sherds from Koma Land, Ghana, dating to the 8th – 14th century AD, were identified as horn or gourd stoppers, likely used with a grass or fibre ring to hold them in place, based on ethnographic parallels (Insoll, Kankpeyeng & Nkumbaan, 2012: 36-37).

Most of the worked discs recorded fell into the Earthenware/Plainware category, with only a small number of burnished ware worked discs (primarily Black/Brown Burnished ware). This suggested that the discs were not being used for decorative purposes, as none had any decoration, and it would be expected for the burnished wares to be more appealing than Earthenware/Plainware. A small possible worked disc from HAR18(B) 5 (Phase 5b) was too small to have had any practical use (~1 cm in diameter), and as it was Earthenware/Plainware was unlikely to be used for decoration (see Fig. 7.16c). As it was recovered from the jewellery workshop it may have been a blank or practice piece for producing small worked discs of celadon which were also found in the jewellery workshop (Parsons, in prep.; Insoll et. al., in prep). HAR17(B)2-17 was an Earthenware/Plainware base from Phase 5a which had the walls and ring base chipped off (See Fig. 7.17). This may have also been used as a stopper, although the technique used to knap it was similar to that which was used to remove material from celadon bases for use in the jewellery workshop (Parsons, in prep.). Another ring base, recovered by a local farmer, had the walls removed and ground down to produce a disk (see App.Fig. VI.6). A thick (½ inch) glazed disc ¾ of an inch (1.9 cm) diameter was recovered from the site of Amud in modern Somaliland (see Chapter 2.8 and 7.5.2.1), interpreted as a playing piece. Steatite discs of similar or slightly larger size were also found at other Somaliland inland Islamic towns, although a use was not suggested. (Curle, 1937: 323). Worked ceramic discs, both pierced and

unpierced were also recovered from the early periods of the Aksumite site of Adulis, for which a variety of uses were suggested such as lids, fishing weights and spindle whorls (cf. Zazzaro et. al., 2014b: 69-70; see Chapter 2.2.2).



Figure 7.17: a) Earthenware/Plainware ring base HAR17(B)2-17; b),c) close up of percussion marks

7.3.2.2 Other modifications and secondary uses

There were a few examples where a vessel appeared to have been broken, then modified to allow their continued use. The most common example of this was where handles had broken on a vessel, then been ground down so they could still be used. The clearest example of this was a large body sherd with the rim and ribbon handle joins from HAR19(F) 6 where there was clear evidence visible for the handle join being chipped off and ground down (see Fig. 7.19).

A Black/Brown Burnished ware worked disc included in the small finds assemblage from Phase 5b was half of a ground disc which had two small holes drilled through it (see App.Fig. VI.4a). Another Earthenware/Plainware sherd recovered by a local farmer was also chipped and ground into an oval shape, with two holes drilled (see Fig. 7.18). These were potentially used either as a toggle for securing ties or as a weight. A collection of large Earthenware/Plainware body sherds found while excavating the deep deposits in HAR17(B) appeared to have been used as the base of a hearth (Insoll, 2017a).

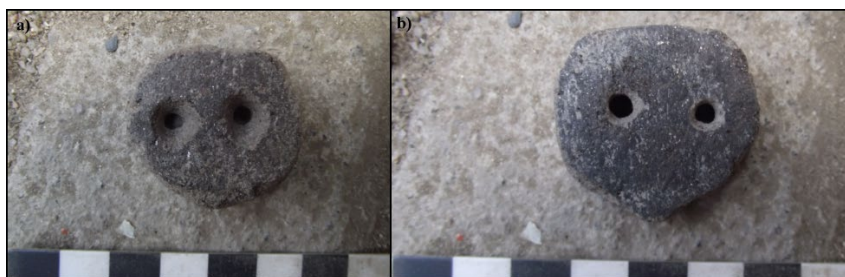


Figure 7.18: Earthenware/Plainware ground worked disc with drilled holes, recovered by a farmer and recorded in 2019 season

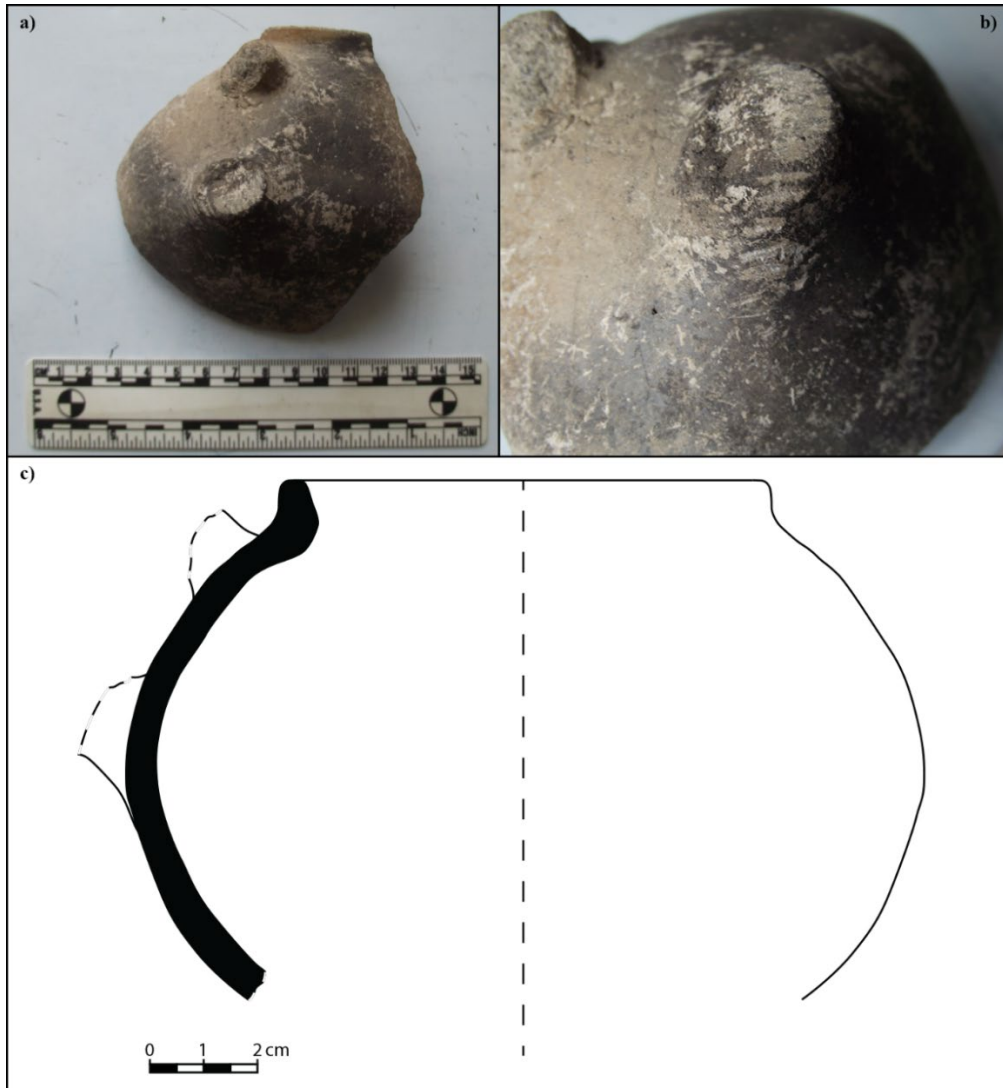


Figure 7.19: a) Sherd HAR19(F)6-15, large fragment of a *Black/Brown Burnished ware* (fading to *Light Brown Burnished ware*) pot with ribbon handle b) close up of ribbon handle join showing marks from chipping and grinding the handle down, c) profile of HAR19(F)6-15

7.3.3 Local ceramics, function and foodways

Foodways are defined as ‘the cultural, social, and economic practices related to the production and consumption of food, from food procurement and preparation to presentation, consumption and disposal’ (Metheny, 2015). While the concept of foodways had its origins in folklore studies it is now widely used by both archaeologists and anthropologists (Metheny, 2015). Early archaeological literature on food was dominated by discussions on subsistence and diet, with little consideration for the social aspects of food. However, over the last 30 years interest in and study of foodways by archaeologists has grown dramatically (Twiss, 2012: 357-360). As foodways considered the entire cycle of

food use from collection to discard, it was often useful to break down the stages of food of interaction. Common phases included production, processing, consumption and discard (Twiss, 2012: 361-365), although some authors broke down the stages even further if required (e.g. see Samuel, 1996). Ceramics can form an important part of all phases of foodways, and so had the potential to inform on the foodways that they were used in (Villing & Spataro, 2015).

As has been discussed above, the fragmentary nature of the local ceramic excavation assemblage from Harlaa has made identifying vessel forms within the excavation assemblage challenging. Therefore, most of the forms discussed, particularly cooking vessels, were based on the complete vessels recovered by farmers as discussed, alongside the few forms identified in the archaeological assemblage, such as the burnished carinated bowls.

As the archaeobotanical and archaeozoological analysis of the material from Harlaa is in progress (Insoll, in prep.), this discussion will rely on vessel forms to consider foodways at Harlaa. While this approach has obvious limitations, the broad types of food consumed and methods of production can potentially be inferred from the ceramics. Ceramic vessels can be considered tools whose function is as containers for storage, cooking and presentation. The form and morphology of vessels can provide indications of their function for storage, production and serving, and can provide broad indications of the types of cuisine which were consumed (Braun, 1983: 108; Hally, 1983: 267-268; Rice, 1987: 224-226; Knight & Rojas, 2015; Villing & Spataro, 2015). There is no exact correlation between vessel forms and use, and the fact that vessels may have had multiple uses further complicates the issue. However, certain forms are more suited to particular functions, or for the storage and/or preparation of particular types of food or goods, and so limited inferences can still be made while relying primarily on vessel forms (Hally, 1986; Rice, 1987: 224-225; Orton & Hughes, 2013: 247; González-Ruibal & Falquina, 2017). Potential links with Islamic foodways will be discussed in more detail below (section 7.6.2).

In his study of vessel function at two Barnett phase sites in northwest Georgia, USA, Hally identified a variety of characteristics of vessels which could indicate the 'mechanical performance' of ceramic vessels for different roles (Hally, 1986: 278-281). Hally's case study had more large fragments and complete vessels than is found at Harlaa, allowing more detailed analysis of

characteristics such as vessel volume and the ratio of vessel height to other vessel features. Additionally, Hally's interpretation relied heavily on ethnographic foodway parallels which were not available for Harlaa. Some of the vessel characteristics suggested by Hally (cf. 1986: 278-281), in particular vessel suspension and orifice closure alongside the related characteristics of spillage, evaporation and heat loss of the vessel contents, were still possible to observe and relevant to consider the analysis of the Harlaa assemblage. While accurate vessel height was not available for some forms, manipulation and removal of vessel contents could still be considered to an extent.

As part of the Qwara region survey González-Ruibal and Falquina (2017, see also Chapter 2.4) were able to identify changes in the foodways between the 'traditions'. The Gelegu Tradition (600 – 1300 AD) was identified as primarily consuming baked foods based on the overwhelming presence of open bowls and plates. In contrast, the Jebel Mahadid Tradition saw the introduction of hemispherical pots with protruding rims which were potentially for boiling and stewing foods as well as brewing. The introduction of *kisra*, a Sudanese flatbread (Ahmed et. al., 1990: 158; Maundu & Imburmi, 2003: 28-29) was also identified through plates and bowls with burnished or polished interiors which had close parallels with medieval Sudanese *doka*, used for baking *kisra*.

7.3.3.1 Storage vessels

The main forms identified as storage vessels at Harlaa were large neckless vessels with in-turned rims (see Fig. 7.20) and large jars with tall, slightly in-turned necks (see Fig. 7.2, Appendix V: Vessel 06). The storage jars with necks were likely used for the storage and transportation of liquids as the narrow opening and long neck would be impractical for the storing and accessing of solids and the neck and ribbon handle connecting the neck and body would be suitable for pouring liquids. The large neckless storage vessels with in-turned rims were more likely for the storage of solids, potentially grain. Barley and wheat were two crops identified in the archaeobotanical remains from Harlaa based on the preliminary results of the archaeobotanical analysis (Beldados, in prep.).

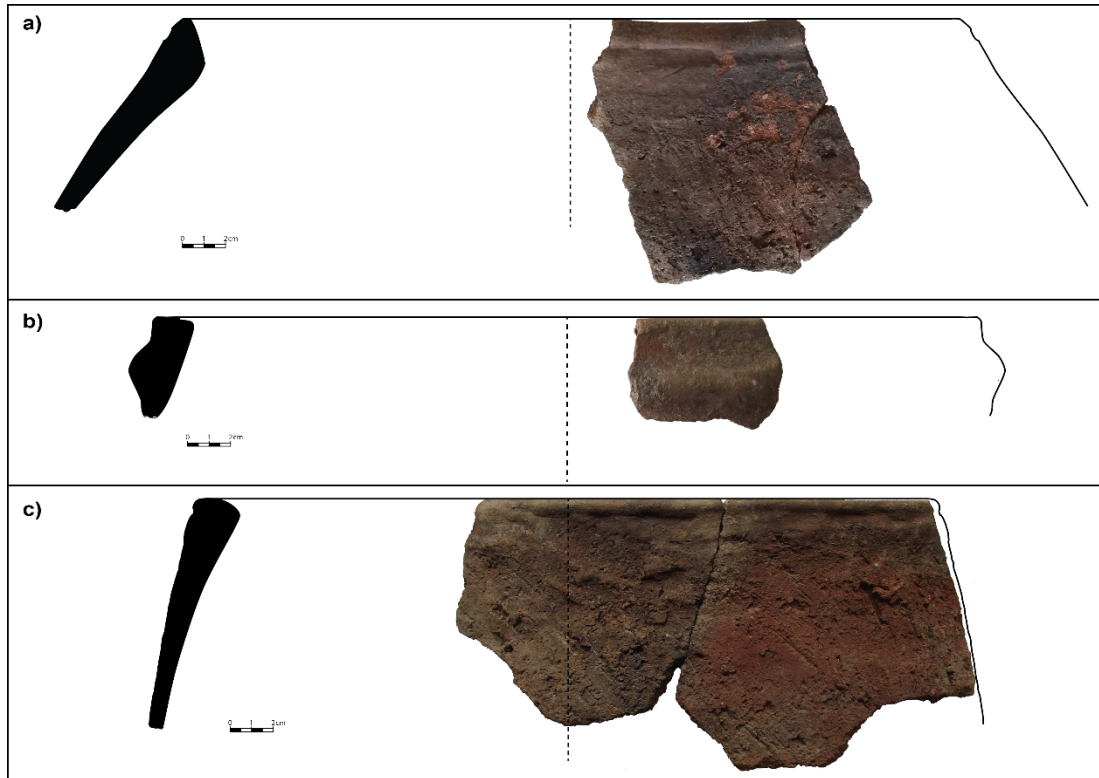


Figure 7.20: Examples of Earthenware/Plainware rims from large storage: a) HAR17(B)6-27 (Phase 5b); b) HAR17(B)4-35 (Phase 5b); c) HAR18(B)15/17-15/22 (Phase 2a)

7.3.3.2 Cooking Vessels

Several vessel forms have been identified as potential cooking vessels at Harlaa. Of note is the fact that there is currently no evidence for the use of ovens for cooking at Harlaa, so it was likely that cooking was done over open fires. The utility of rounded bases has been noted both in African ceramics (Barley, 1994) and in wider ethnoarchaeological literature (e.g. Hally, 1983: 280; Villing & Spataro, 2015: 6). For cooking rounded bases are stronger and better at transmitting heat on an open fire compared to flat or ring bases and are better suited to the traditional African “three stone” hearth (Barley, 1994: 33). Additionally, when not required to stand on a hard surface such as a table, a rounded base allowed the vessel to be set at any angle required by the user (Barley, 1994: 33). During his travels through Adal, Johnston also noted the use of three-stone hearths (1844a: 291; see also Chapter 4.6).

Vessels with ring bases were therefore unlikely to have been used for cooking, while those with rounded bases may have been used for cooking, storage or serving depending on the form of the rest of the vessel. All the vessels identified as cooking vessels had rounded bases. The complete vessels

with globular bodies and straight or slightly out-turned necks were identified as potential cooking vessels (Vessels, 11, 12, 13, 14 and 16, see Appendix V). Their form with a globular body and rounded base was more suited to boiling or stewing as opposed to baking or frying. The necks would help retain the liquid while leaving the form still open enough to allow the contents to be easily manipulated, such as by stirring. Additionally, the slightly restricted form which was 'at least as deep as it is wide' (Villing & Spataro, 2015: 6) of these cooking vessels meant that liquids evaporate slower. Again this suggested food with a high liquid content which was not thickened including stews and broths (Villing & Spataro, 2015: 6; Bartłomiej, 2015: 104-105). Vessel 09 was also likely a cooking vessel, although it had a more of a globular, in-turned bowl form, which alongside the spout clearly suggested that liquids formed an important part of the meals that were being cooked in the vessel.

While it was removed as part of the cleaning process, Earthenware/ Plainware sherds occasionally showed evidence for blackening and sooting on the exterior from use over an open fire. These sherds included body sherds as well as ribbon handle fragments with sooting on the underside of the handle. This supports the theory that cooking vessels were primarily Earthenware/ Plainware as there was little evidence for sooting on burnished wares. Vessel 7 was a deeper bowl than the supposed form of the bowls discussed below. This vessel may have been used both for cooking and serving, as the deeper form allowed better retention of liquids while cooking compared to the other bowls and the lack of a neck allowed full access to the contents for consumption compared to the cooking vessels discussed above.

7.3.3.3 Bowls

The carinated bowls, which were usually burnished, were generally wide, of a medium-shallow depth and open, even when the rims were in-turned. These bowls (found in Phase 5a-2a) fit with stews potentially being one of the main types of food consumed at Harlaa as they were deep enough to hold a stew, and the generally open form allowed easy access to the contents of the bowl. The carination created a slight restriction which may have aided with preventing liquids from spilling from the bowls (Knight & Rojas, 2015: 274). The

rim diameters for these carinated bowls ranged from 8-32 cm, with the majority in the 15-22 cm range, and the mean at 18 cm diameter (see Chapter 5.6.4.4). Two main concentrations of burnished carinated rims diameters could be seen, 13-16 cm (30.7% of measured rims) and 18-23 cm (45.5% of measured rims) diameter bowls, with 13 cm being the single most common diameter of carinated bowl at 12.5% of the bowls (see Fig. 7.21b). The fact that this was outside of the 15-22 cm quartile range highlighted the wide range of rim diameters of the carinated bowls and that larger bowls were more common. While full profiles of the vessels were not possible, meaning volume could not be calculated, the bowls in the 13-16 cm diameter range were likely suitable for a single person's serving or for serving smaller dishes. Those in the 18-23 cm diameter range were at the limit of what would be suitable for a single individual and were more likely to be for serving or for communal meals. The fact that the carinated bowls were often decorated supports these vessels having a role in the serving and consumption of food.

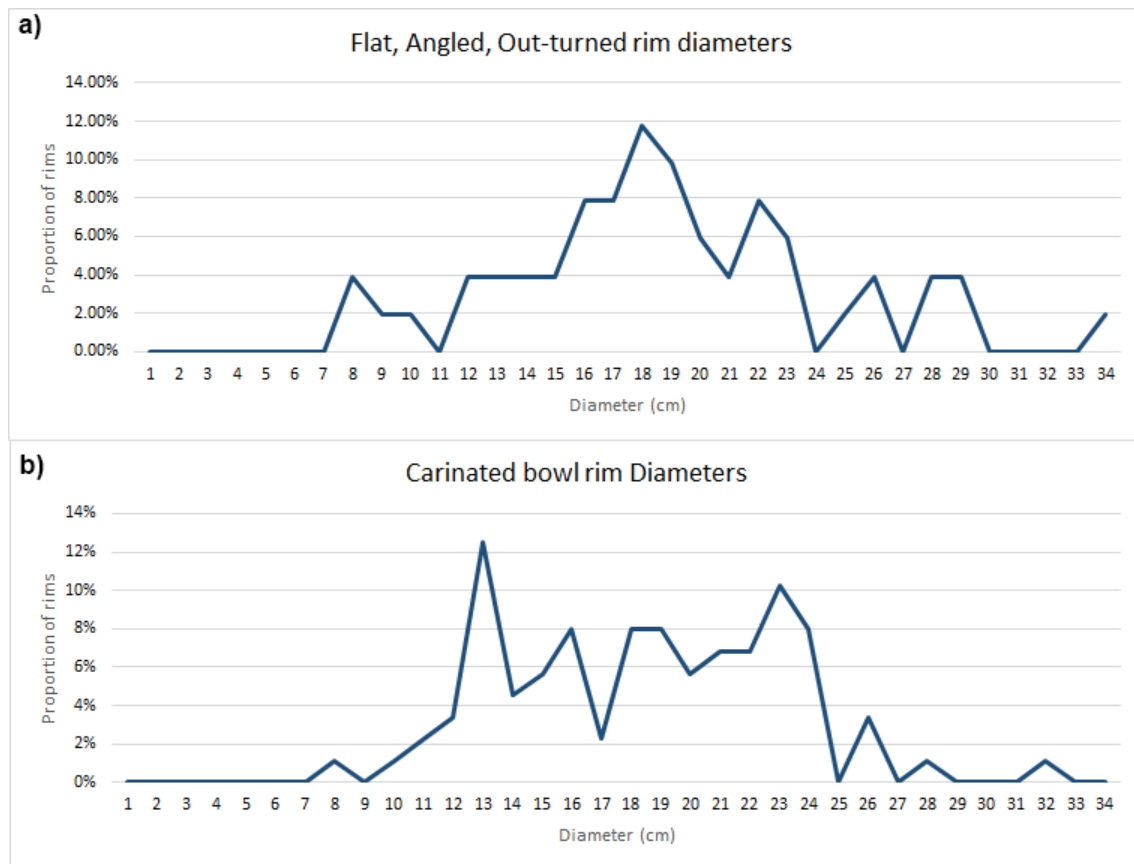


Figure 7.21: a) Rim diameters for Earthenware/Plainware bowls with Flat, Angled, Out-turned rims; b) Rim diameters for burnished wares carinated bowls

The Earthenware/Plainware bowls also fit with the hypothesis that stews formed an important part of the diet at Harlaa as they were also open, easily accessible forms. However, unlike with the carinated bowls there was no restriction to the orifice, which meant that while access is easier, spillage was more likely (Knight & Rojas, 2015: 274). While burnished ware carinated bowls and Earthenware/Plainware open bowls had a similar range of diameters, some differences could be seen in which diameters were most common among the different bowls. The Earthenware/Plainware open bowls peaked at 18 cm diameter, at 11.8% of the rims which was a similar proportion to the most common carinated bowl diameter. This was larger than the most common carinated bowl diameter and the Earthenware/Plainware open bowls did not have a clear divide between two groups of diameters. As is discussed below, the Earthenware/Plainware bowls may have also had a role in the cooking and preparation of food in addition to serving.

The largest bowls (above 25 cm diameter) would clearly have been too big for a single individual or even two people, and so were likely for serving communal dishes. Within wider African contexts, in Mali at the site of Gao, the capital of the Islamic Songhai Empire in the 15th – 16th centuries, 'large-mouthed vessels' were noted as cooking vessels both in the archaeological assemblage and modern ethnographic examples. These vessels had rims in the 25-30 cm diameter range and contemporary examples were used for cooking dishes with high liquid content (MacLean & Insoll, 1999: 84-89). While not from either Africa or Islamic contexts, Hally also noted the use of large bowls for both cooking and the boiling of water at the Barnett phase sites in the USA. Hally argued that ingredients were cooked in cooking jars before being transferred to the large bowls for mixing and reheating, then served and consumed directly from the bowls (Hally, 1986: 288). This was another potential interpretation for the function of these vessels, particularly the Earthenware/Plainware examples. Although, as these bowls were mainly identified through rims, there was no clear evidence for their use over a fire. At the other end of the spectrum, the rare examples of the smallest bowls (8-10 cm diameter) may have been used for storing and serving condiments or represent small cups.

7.3.3.4 Plates

There was little evidence for wide, shallow plates or, either for frying while cooking or for serving dishes, potentially *injera*, in the 2015-2018 archaeological assemblage. However, examples of rims from shallow plates were recovered during the 2019 season in Unit HAR19(E). This could suggest that this absence was due to the use of Unit(B), (a jewellery workshop), where most of the analysed assemblage is from, rather than plates being rare at Harlaa. Although, even in Unit E (a potential domestic structure), initial analysis of the 2019 assemblage suggested that only a few examples of “plate rims” occurred, which implied that plates were still rare at Harlaa. Similar rims from plates identified as for producing and serving *injera* have been recovered from archaeological excavations at several sites in Ethiopia including Harar (Insoll, 2017b: 204) and the Lake Tana Jesuit missionary sites (Fernández et. al., 2017: 169).

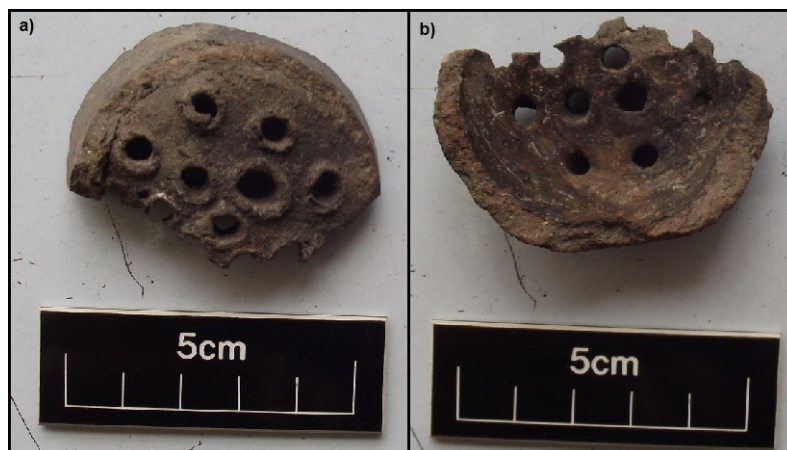


Figure 7.22: Surface collected Black/Brown Burnished ware spout with filter, HAR19S/C-12

7.3.3.5 Drink serving and consumption

There was little evidence for locally produced drinking vessels at Harlaa. The large storage jars identified as for storing liquids could have been used to store either drink or ingredients for cooking or manufacture. Necks from potential bottles and sherds from small-medium jars were found in the excavation assemblage, likely for serving and/or storing a smaller quantity of liquid. Unfortunately, due to the fragment nature of the assemblage, no full forms could be reconstructed. However, no cups or similar vessels used for drinking have been identified from complete examples or sherds. During the

2019 season a Black/Brown Burnished ware spout with a filter was recovered as an unstratified surface sherd, which was potentially used for pouring drinks (add Fig. 7.22). Jugs with strainers have been attested in Islamic contexts, used for serving water and drinks flavoured with juices and spices (e.g. Magness, 2010: 139; see also section 7.6.2). Examples of vessels probably for serving or storing liquid were found in the imported ceramic assemblage from Harlaa with sherds from unglazed jars of Egyptian, Gulf and Yemeni origin present, one of which had a filter inside (Insoll, pers. comm. 2019; in prep.). It was unclear what the two complete 'small tea pots' were used for (Appendix V: Vessels 10 and 15), but their forms suggested that they were for serving a liquid. This may have been a drink, drink flavouring, or for serving sauces to accompany meals.

There was no evidence for the production of beers and similar alcoholic beverages on the local ceramics at Harlaa as the distinctive pitting on earthenwares caused by the fermentation process of beer production (cf. Arthur, 2003: 522-524; Skibo, 1992: 106) was not observed on any of the ceramics from Harlaa. This potentially fits with Harlaa being at least partially Islamic, as Muslims are prohibited from consuming alcohol, although this was not always observed (see 7.6.2 below).

7.3.3.6 Conclusion

In conclusion, while limited, some broad inferences could be made on the nature of the foodways at Harlaa. The depth and form of the cooking vessels as well as the open bowls suggested that foods based around liquids, such as stews or boiled food were likely an important part of the cuisine at Harlaa. The rim diameters of both the burnished carinated bowls and Earthenware/Plainware open bowls suggested that there was likely some degree of communal eating. Unfortunately, as the cooking vessels were all vessels recovered by the local farmers it was not clear if there was any chronological change in the foodways at Harlaa. Links between these foodways identified and Islamic foodways will be considered in 7.6.2 below.

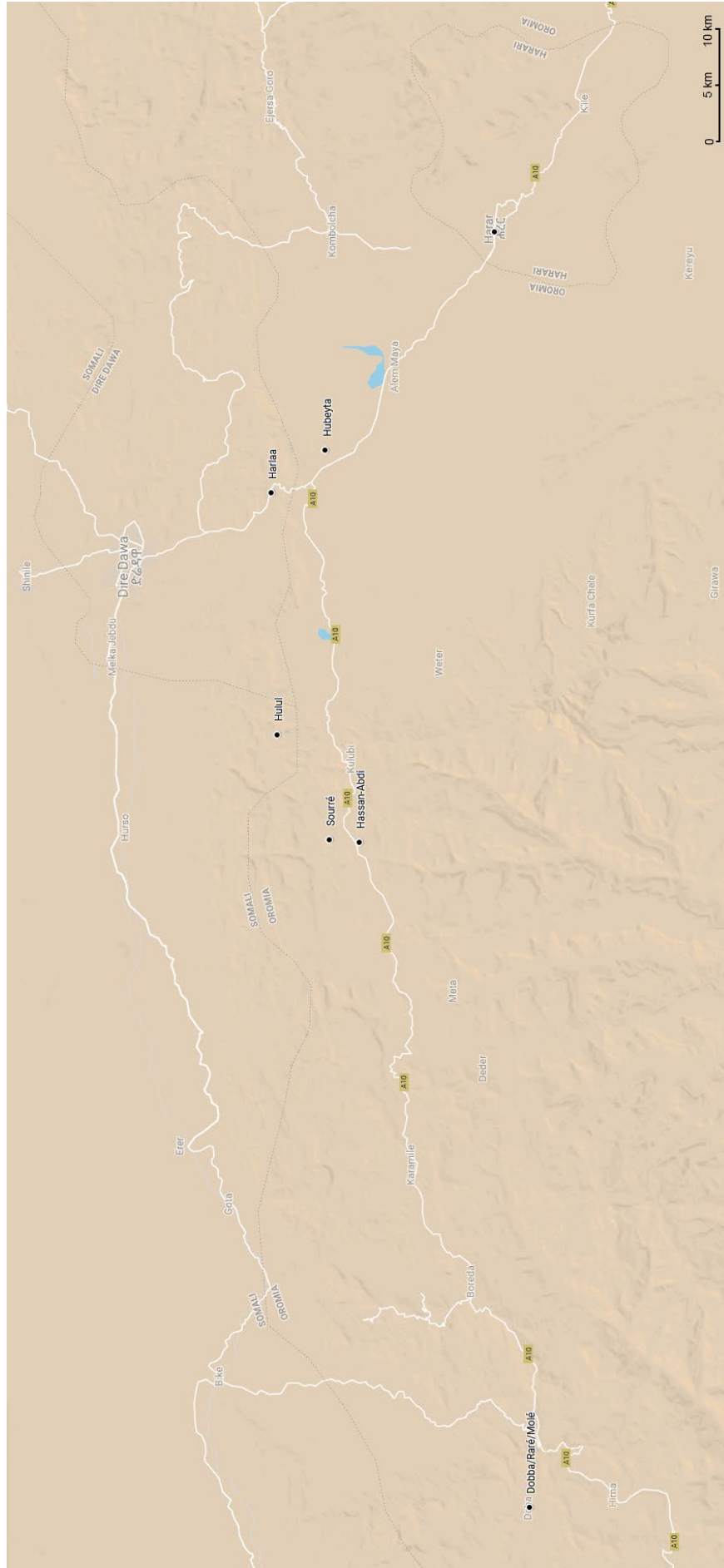


Figure 7.23: Map of sites in the vicinity of Harlaa (base map from maps.google.com)

7.4 Archaeological ceramics as chronological indicators

The ceramic analysis undertaken in Chapters 5 (Ceramic Analysis) and 6 (Survey Analysis) has provided the basic typology for considering the viability of the local ceramics from Harlaa as chronological indicators at the site of Harlaa itself. Next the viability of the ceramics as chronological indicators in the wider region will be considered through comparisons with the ceramic assemblages from nearby sites. These will primarily be the sites of Hulul and Hubeyta which were briefly visited during the 2019 field season, Harar (Insoll, 2017b) and the Chercher Mountain sites (Joussaume, 1974; 2014).

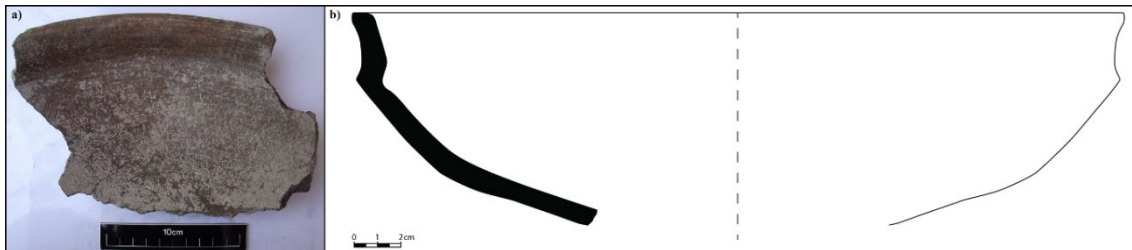


Figure 7.24: Sherd HUL19S/C-01 from Hulul surface collection, large fragment of a Light Brown Burnished ware bowl with Type A carination

7.4.1 Ceramics as chronological indicators in the wider region

7.4.1.1 Hulul

The site of Hulul and the associated Abyzeyid mosque ruins were visited in the 2019 field season. Hulul is situated 21 km west of Harlaa (see Fig. 7.23). The construction of the mosque and the other standing walls visited were similar to the distinctive stone walls at Harlaa. A survey was made of the mosque and a small number of surface ceramics were collected from around the village (see App. Table VI.2). These included a large fragment of a burnished ware carinated bowl (Fig. 7.24), and 14 Earthenware/Plainware sherds including body sherds, rims, a ring base and handles. The fabrics and finishes found at Hulul were generally similar to the local ceramics from Harlaa. This could suggest that similar sources of clay were used at both Hulul and Harlaa. The burnished ware carinated bowls, while having a long period of use, were a chronologically distinct form at Harlaa for Phases 5a-2b, and the example from Hulul appeared very similar to examples from Harlaa (see Fig. 5.27, 7.4 and 7.5 for examples from Harlaa). The rim forms recovered from Hulul were all common forms at Harlaa (Simple, Flat, and Flat, Lipped) and so were not chronologically significant. Rim sherd HUL19 S/C-03 was similar to the

rims from large Earthenware/Plainware storage vessels at Harlaa (App.Fig. VI.9a-b). Body sherd HUL19 S/C-04 was also likely from a large storage vessel due to the thickness of the sherd and the somewhat rough exterior. No decorated sherds were collected from Hulul. The small sample size from Hulul, alongside the issues with using the Harlaa ceramics to date survey assemblages discussed above, limited the comparisons that could be made between the Harlaa and Hulul assemblages and their use as chronological indicators. However, the assemblages did appear broadly similar with similar types of burnished and Plainwares, similar rim forms, handles and open carinated burnished bowls, so any chronological indicators identified at Harlaa may potentially be applicable at Hulul.

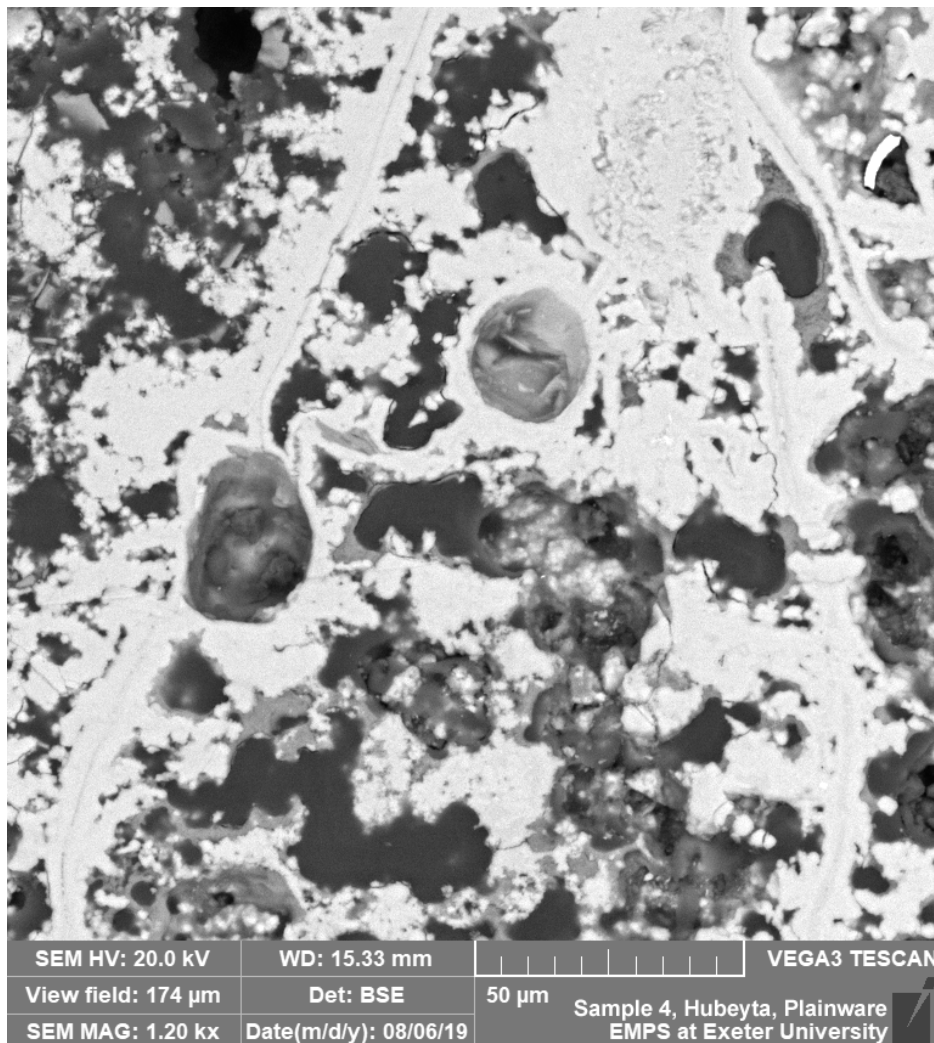


Figure 7.25: Close up SEM backscatter photograph of unusual feature in fabric of Hubeyta sample, see App.Fig II.31-32 for spectra

7.4.1.2 Hubeyta

The site of Hubeyta was also visited by Insoll during the 2019 field season and archaeological material was collected from the surface. Hubeyta is 6 km south-east of Harlaa, just off the modern road between Dire Dawa and Harar (see Fig. 7.23). The material collected from Hubeyta consisted of eleven sherds; three ribbon handle fragments, seven rim sherds and a sherd from a large flat plate (see App. Table VI.3). All the sherds collected were Earthenware/Plainware with no burnished wares recorded.

The fabric of the Hubeyta sherds was noticeably different from the Harlaa wares. Mica was still common in the Hubeyta fabric, however, there was a much higher proportion of gravel/sand inclusions, likely due to a different source of clay and different processing of the clay. A single Earthenware/Plainware sherd from Hubeyta was taken for SEM (Scanning Electron Microscope) and EDS (Energy Dispersive Spectrometry) analysis to allow comparison with the Local ceramics from Harlaa. This sample had many of the same basic inclusions as the Harlaa wares, with small zircon grains, anorthoclase feldspar, larger quartz inclusions and biotite mica all present. The larger inclusions in the SEM backscatter photograph (>1 mm) analysed were all quartz and feldspar, with smaller examples of both also present. The biotite mica inclusions were generally around 0.5 mm long and the zircon grain sub 0.1 mm. In addition to these, an unusual inclusion (0.3-0.6 mm diameter examples observed) was present (see Fig. 7.25). The principal component of this inclusion appeared to be an Fe-Ti oxide similar to the ilmenite occasionally found in the Harlaa fabrics. However, this inclusion had a distinctive spectrum compared to the Harlaa, with a lower proportion of iron present as well as further impurities, likely meaning it was closer to rutile (see App. Fig. II.31-32). This Fe-Ti oxide has also not formed the crystals expected of either ilmenite or rutile, rather it had formed a “bubbly” deposit which has grown around other small (5-10 µm) inclusions, including round potential rutile grains and a thin rectangular, high-iron inclusion. High-carbon deposits appeared to fill in voids in the inclusion. It was unclear what this inclusion represents, however it was not observed in the fabrics from Harlaa.

While this was only a single sample, it suggested that the clay used at Hubeyta was formed in comparable conditions to Harlaa, with a similar fabric and common inclusions. However, there were differences, such as the unusual

Fe-Ti oxide inclusions which were distinct compared to the ilmenite grains found in the Harlaa fabrics. This suggested that the clay was from a different source to Harlaa. As with the Harlaa fabrics, while some of the inclusions may have been additional temper added, none of the inclusions in the Hubeyta could be clearly identified as such.

While burnishing was not noted, the sherds were usually well smoothed. The absence of burnished sherds collected did not necessarily mean that burnished wares were not present at the site, as the low number of collected sherds meant that burnished sherds may have simply been missed. The ribbon handles appeared similar in form to Harlaa. However, ribbon handles were a common form of handle and were found throughout almost the entire sequence at Harlaa, except for Phase 1a and so are not useful chronological indicators by themselves. Additionally, ribbon handles were a common style of handle across Ethiopia (see Chapter 2 and 4).

As was discussed above, the variability of rim forms within and across the phases at Harlaa limited their use as chronological indicators. Additionally, most of the rims collected from Hubeyta were Simple (five examples) with single examples of Flat and Flat, Angled rim forms. These are common forms found at Harlaa and were present throughout the sequence. Two decorated sherds were collected from Hubeyta. The first was a Plainware rim sherd with a vertical curving appliqué ridge on the body (see App.Fig. VI.9c). This was different to the normal appliqué decoration on Earthenware/Plainware at Harlaa, which primarily consisted of straight appliqué horizontal ridges on the neck join or just under the rim of the vessel. The second decorated sherd was a Simple rim with incised decoration on the rim (see App.Fig. VI.9d). While rim decoration was rare, this type of decoration was one of the more common forms of rim decoration at Harlaa. Also of note was the rim from a large 40 cm diameter plate (HUB19 S/C-11). No examples of this type of vessel were recorded during the 2015-2018 seasons at Harlaa, however examples of plate rims were recovered from HAR19(E) during the 2019 season, which supported the hypothesis that the structure in Unit (E) had a domestic function (see section 7.3.3.4). The plate sherd was also the only sherd from Hubeyta which had the roughened exterior which was present on many Earthenware/Plainware sherds from Harlaa (App.Fig. VI.9e-f).

7.4.1.3 Harar

Harar was the focus of fieldwork by Insoll in 2014 (Insoll et. al., 2014; Insoll, 2017b) and 2018, with the author also present during the 2018 season. Both the 2014 and 2018 seasons consisted of multiple test excavations throughout the old city of Harar, primarily focused on the many mosques and shrines the city is famous for (see Chapter 2.9). A total of 362 local ceramic sherds were recovered during the 2014 season excavations (See App.Fig. VI.3) within Harar at the sites of Amir Nur (AMNUR 14 [A]), Shagnila Toya (SHA 14 [A]) and the Amir's Palace (PAL 14 [A]). The material from the final site of Hamburti (HAM 14 [A]) was discarded due to modern contamination (Insoll, 2017b). Sixteen ware types were identified based on fabric colour and surface finish, including slipped and burnished, slipped, burnished or plain. The two most common ware types were Black Slipped and Red Slipped wares at 89 and 48 sherds respectively. As with the Harlaa ceramics there was a large degree of variability in the finish, fabric and surface colour on the un-burnished wares at Harar as seen in the variety of ware classifications. Additionally, some of the red slipped and black slipped ware sherds from PAL 14 (A) were fired one colour on the exterior and a different colour on the interior.

The majority of the decorated sherds were recovered from AMNUR 14 (A) (12 examples), with a single example from SHA 14 (A) and four from PAL 14 (A). The decoration consisted primarily of incised lines, with rarer examples of "raised" decoration (appliqué or moulded) and a single example of impressed decoration on a brown fabric handle. Interestingly, most of the appliqué 'raised' decoration was on black burnished or black slipped and burnished (three examples) with two examples on black slipped wares (Insoll, 2017b: 202-204). At Harlaa appliqué decoration was primarily found on the Earthenware/ Plainware sherds, not the burnished wares. Eight rim forms were identified at Harar, considering both rim form (simple, flat, carinated, out-turned and rounded) and rim angle (closed, open or straight). The most common rim form was flat (20 examples) followed by simple open, (ten examples) with a further four simple, closed rims. At Harlaa simple rims were the most common, followed by Flat rims. The only site in Harar which featured more simple rims than flat rims was SHA 14 (A) (three simple open rims, one simple closed and two flat rims).

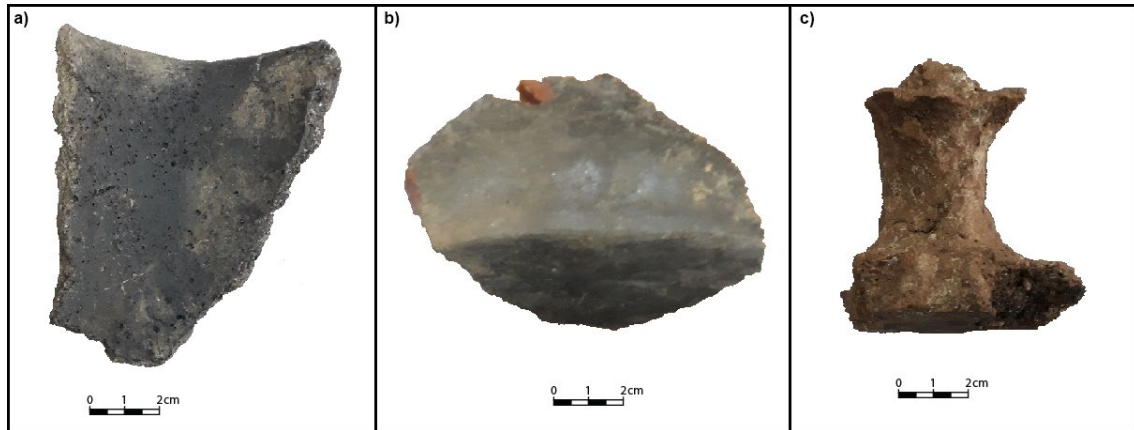


Figure 7.26: Sherds from Harar: a) burnished sherd with bubbling on interior from PAL 14 (A) 4, Harar; b) Black slipped and burnished carinated sherd from AMNUR 14 (A) 5, Harar; c) Sherd similar to stand bases from TUM 14 (A) 2, Ganda Harla, near Harar

Handles were briefly mentioned and appeared to primarily be the ribbon handle form which is attested throughout Ethiopia ethnographically and archaeologically (see Chapter 2 and 4). Four ring bases were also recorded from Harar, three from AMNUR 14 (A) and one from PAL 14 (A) (Insoll, 2017: 204). Only a single carinated sherd was recorded (AMNUR 14 [A] 5.2), a black slipped and burnished ware (Insoll, 2017b: 204-205; see also Fig. 2.38). Another carinated sherd from AMNUR 14 (A) 5, also black slipped and burnished ware, but without a rim, was discovered during brief further analysis during the 2018 field season (Fig. 7.26b). While not as common, as at Harlaa, carination appeared to primarily be a burnished ware form at Harar. As would be expected due to the distance, the fabric of the Harar local ceramics appeared different to the Harlaa ceramics. The fabric was generally more friable and less dense, which potentially suggested a lower firing temperature (Insoll et al., 2014: 106). Additionally, some sherds, most evident on black burnished sherds from PAL 14 (A) 7, showed evidence for the fabric bubbling on the interior of the vessel (e.g. Fig. 7.26a), a feature that was absent at Harlaa. The single white fabric ware from PAL 14 (A) 8, was of a finer well sorted fabric which has no parallels with the rest of the Harar assemblage or at Harlaa (Insoll, 2017b: 202-203).

The foundation of Harar was late, potentially during the 16th century (Insoll, 2017b: 210; Insoll & Zekaria, 2019), this was later than the main occupation of Harlaa and the introduction of the primary chronologically

diagnostic forms identified at Harlaa, such as carination, ring bases and pierced lug handles, which further limited the chronological viability of the local Harlaa ceramics in comparison to Harar. Therefore, the different dates of the founding and occupation of Harlaa and Harar alongside the differences visible in the local ceramic assemblages made the local ceramics from Harlaa unsuitable as chronological indicators at Harar.

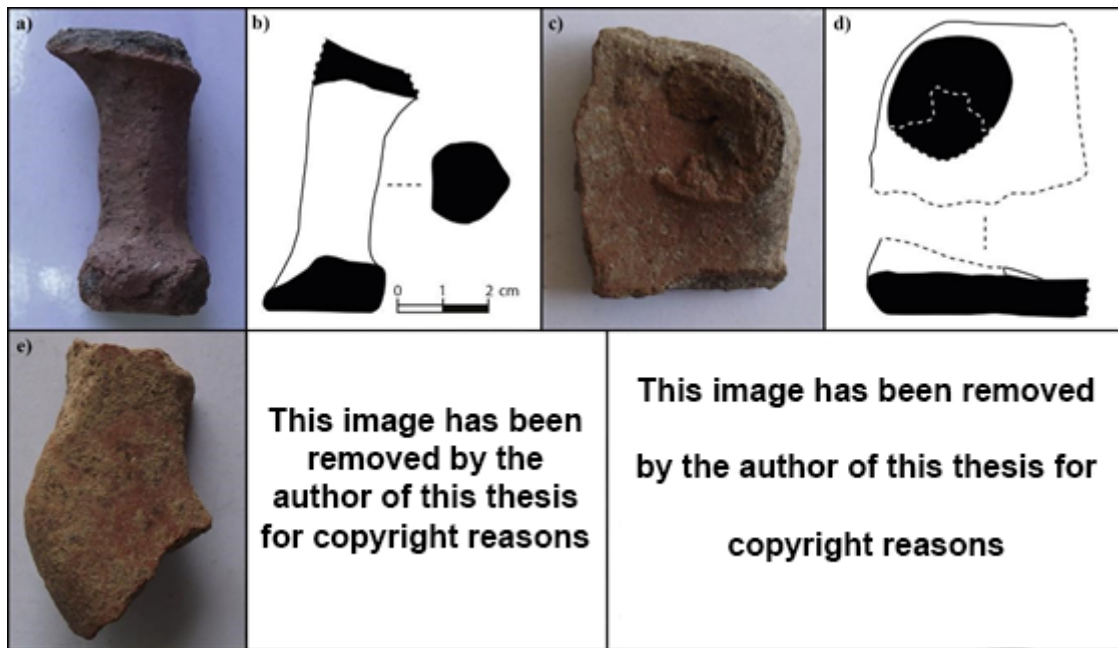


Figure 7.27: a),b) Earthenware/Plainware stand base HAR15(A)2-06 from Harlaa ; c),d) Earthenware/Plainware stand base HAR15(A)5-03 from Harlaa; e) Earthenware/Plainware stand base fragment HAR16(A)9-46 from Harlaa; f),g) Stand bases from the Chercher mountain sites (Joussaume, 2014)

7.4.1.4 Chercher mountains

The Chercher mountains run along the southern edge of the Rift Valley south-west to north-east (see Chapter 2.5). The sites under discussion here, which were first investigated archaeologically in the 1970s by Roger Joussaume (1974, 2014) are located on the heights (above 2000 m) in between the towns of Asbe Teferi and Harar (See Fig. 7.23). Little was known about the beliefs of the inhabitants of the Chercher mountains in the period the sites were occupied (10th – 13th century). What little that is known was largely inferred through the burials which suggested non-Islamic, non-Christian beliefs. Despite the close proximity of the Chercher mountains sites to Harlaa and similar date ranges for some of the sites compared to Harlaa, clear differences could be seen in the ceramic assemblages.

Key chronological forms identified at Harlaa were not found at the Chercher mountains sites. Carinated bowls were present, however their fabric and finish was not discussed in the text (Joussaume, 1974) and they were rare enough that they are not included in the main ceramic typology. Although not discussed in the text, occasional potential examples of un-burnished pattern decoration (in the form of straight lines) were visible in photographs (see Fig. 7.10d). Pierced lug handles were present, but are rare, and no examples were discussed of either twin pierced lug handles or pierced lug handles associated with carinated bowls. Traditional form ring bases were rare in the Chercher mountain ceramics, with most of the vessels having rounded bases, stand bases or bases termed 'annular' similar to the extended ring bases found at Harlaa (see Fig. 2.24d-e and Fig. 5.40f,d). While ring bases were chronologically indicative at Harlaa, this sub-type of ring base was not chronologically significant within the ring bases. The apparent dominance of this form of ring base in the Chercher mountains compared to Harlaa (where it made up only 22% of the identifiable ring bases) suggested a different tradition of bases in the Chercher mountains compared to Harlaa. This further limited the viability of using the Harlaa ceramics as chronological indicators in the wider region. While stand bases were found at the Chercher mountain sites, they appeared to be different in form to most of the examples from Harlaa. The examples from the Chercher mountains sites were attached to flat circle or square bases (see Fig. 7.27f-g), while the examples from Harlaa were primarily rings with an open centre (see Fig. 7.27a-b,e), although there were also examples similar to the Chercher mountain examples (see Fig. 7.27c-d). An example from a tumulus near the site of Ganda Harlaa, 12.5 km from Harar, excavated by Insoll in the 2014 season, appeared similar to the Harlaa examples with a ring (Insoll et. al., 2014: 104-106), although of a different fabric (See Fig. 7.26c).

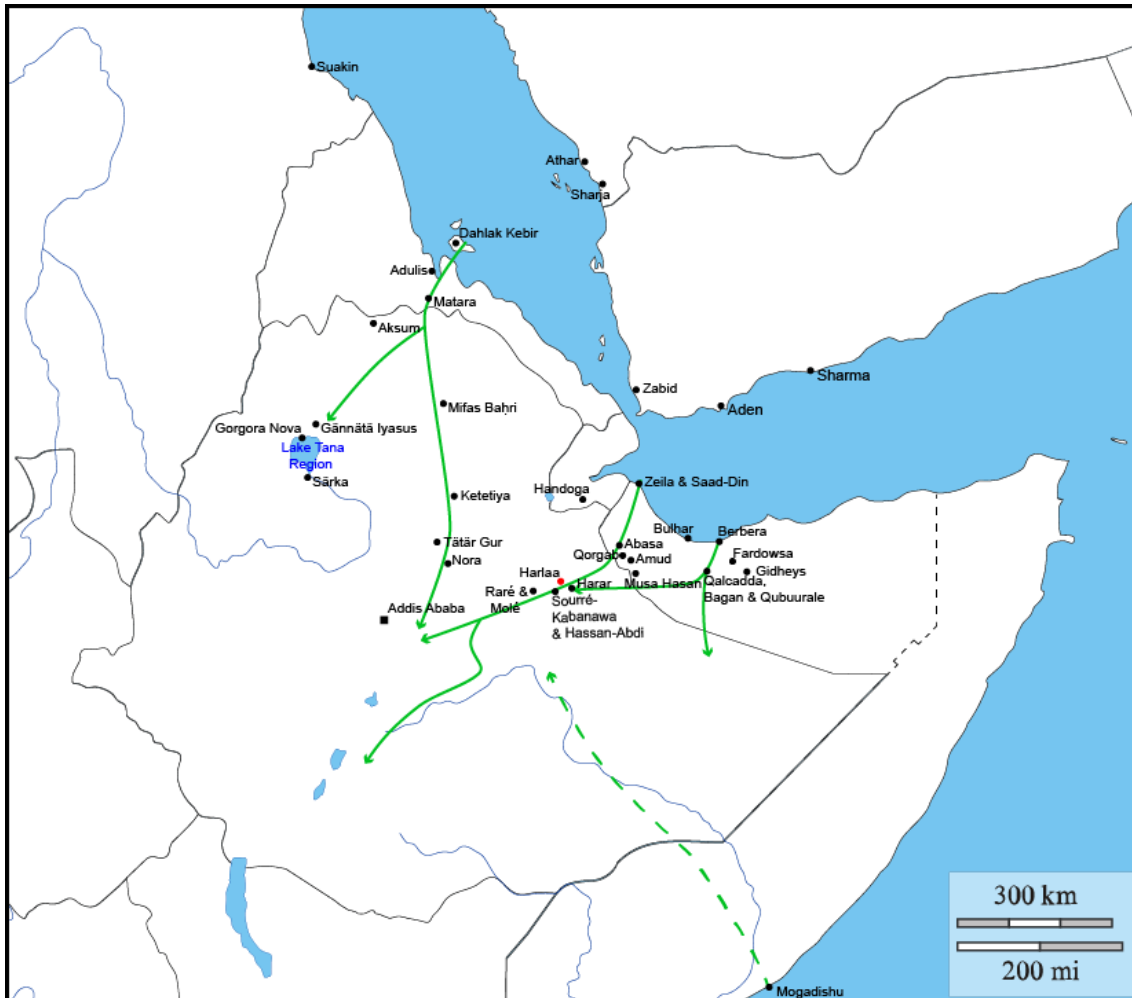


Figure 7.28: Map of inland trade routes in the Horn of Africa (base map from d-maps.com [Website 7]; map after Beaujard, 2007; Fauvelle-Aymar & Hirsch, 2001; 2011; Insoll, in prep.)

7.5 Connections through archaeological ceramics

It was also important to consider potential connections and links visible between the local ceramics from Harlaa and the wider region. Links with the sites in the immediate vicinity of Harlaa discussed above will be briefly highlighted again with respect to potential connection in forms and styles. Sites in wider Ethiopia and the Horn of Africa which showed evidence for being part of the same trade networks of which Harlaa was a part, including the Shay culture sites (Fauvelle-Aymar & Poissonnier, 2012; 2016) and the Somali trading towns (Fauvelle-Aymar & Hirsh, 2011; González-Ruibal et. al, 2017) will also be considered. Finally links with the wider Red Sea and Indian Ocean trade network, focusing primarily on Islamic port sites on the Red Sea and Arabian coast including Suakin (Phillips & Smith, 2014; Smith et. al., 2012), Zabid (Ciuk

& Keall, 1996), Sharma (Rougeulle et. al., 2015), and Athar and Sharja (Zarins & Zahrini, 1985; Zarins & Al-Badr, 1986) will be discussed. The ceramics from these port sites will be considered again below when investigating evidence for Islamisation in the local ceramics from Harlaa.

7.5.1 Local Links

As was seen above (section 7.4.1), clear differences could be seen in the ceramic assemblages beyond the immediate vicinity of Harlaa. While further work will be required, it was likely that the same or a related ceramic tradition was present at Hulul. This was seen through the similar fabrics, finishes on the burnished wares and Earthenware/Plainwares and comparable forms such as the burnished carinated bowls and rim forms on the large Earthenware/Plainware storage vessels. The presence of the ruins of the Abyzeyid mosque suggested that like Harlaa, Hulul was an Islamic settlement of a similar date to Harlaa. Similar architectural features in the construction of walls to Harlaa also suggested links between the two sites. The site of Hubeyta on the other hand showed clearer differences compared to Harlaa. No burnished wares were collected or noted during the visit to the site and the fabric of the local ceramics, while having some similarities to Harlaa, was distinct. While both the rim forms and ribbon handle forms were similar, they were common forms, and not necessarily significant. The decorated rim from Hubeyta (HUB19 S/C-07, see App.Fig. VI.9d) was similar to rare examples from Harlaa, as well as Handoga (see 7.5.2.3 below).

These similarities seemed to be related to the exchange of ideas rather than physical vessels as similar forms were present, but the specifics were different. This could be seen for example in the stand bases which were present at both Harlaa and the Chercher mountains sites; however the primary forms were different in each assemblage. As was mentioned above, although not discussed in the excavation reports, the distinctive un-burnished pattern decoration found at Harlaa did appear to be present in the Chercher mountains at least in small quantities. A clearer decorative style with links between the two sites was the appliqué ridges with finger pressed or punctate decoration (see Fig. 5.14g). At Harlaa these were found on Earthenware/Plainware on neck

joins and under the rim on medium to large vessels. On the Chercher mountains ceramics this decoration appeared to be on the body and neck join of un-burnished vessels. Punctate and finger pressed decoration was also common around the neck joins of vessels from the Chercher mountains, a style which was also found at Harlaa. However, this style of decoration around the neck joins of larger vessels was common across Ethiopia both in the archaeological and ethnographic ceramics, so was not necessarily significant (see Chapters 2 and 4). While not chronologically significant at Harlaa, there were also similarities between the extended ring bases found at Harlaa and the 'annular' bases on hemispherical bowls from the Chercher mountains. Both of these bases seem to have been formed using similar techniques, with the ring formed separately and smoothed into the base of the vessel (see Fig. 5.40d,f and Fig. 2.24d,e). Unfortunately, the form of the vessels at Harlaa which had these extended ring bases was not identified, so comparisons cannot be made with the Chercher mountains hemispherical bowls. This form of ring base did not have any parallels with Islamic or Chinese base forms, and likely represented a local regional development.

In a cist at the site of Sourré-Kabanawa, a hoard of 67 silver Arabic coins was found in a small black pot with a slightly carinated body and a broken handle and neck (Joussaume, 2014: 72-74). These dolmen cists were dated to the first half of the 2nd Millennium BC (Joussaume, 2014: 94). The coins were identified as Ottoman issues dating from between 1520 and 1566 AD. This unfortunately post-dated the heyday of medieval Harlaa under study, but still provided clear evidence for the region's contact with the wider Islamic world. It was argued that these either relate to the establishment of Ottoman control in Ethiopia around the ports of Massawa and Arkiko and the city of Deberoa around 1557 AD, the Ottoman conquest of key ports in Yemen in 1539 and 1547 AD or military support provided to the emir of Harar by the Ottomans in the early 1500s (Joussaume, 2014: 73). While the fabric was described as black, the finish of the small pot which contained the coins was unfortunately not discussed. There were no direct parallels for the form of the vessel (see Fig. 7.29) at Harlaa or discussed in the rest of the Chercher mountains assemblage, although potential links with Shay culture bottles has been suggested (Fauvelle-Aymar & Poissonnier, 2012: 213). It was also potentially a Harari vessel used

for coffee (Insoll, pers. comm, 06/01/20). The lack of clear parallels fit with the vessel being a later form re-used to store the coins.

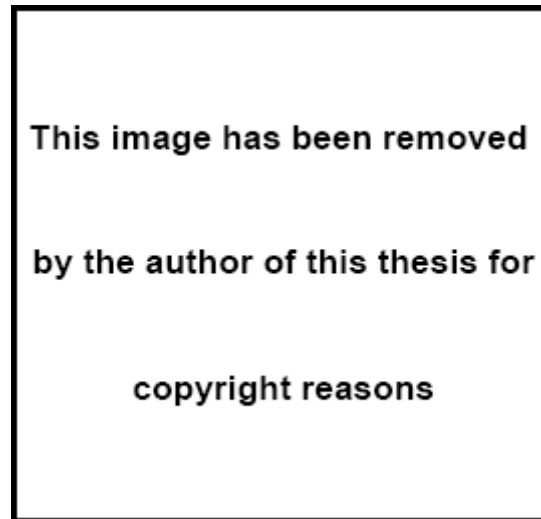


Figure 7.29: Pot containing Ottoman coins from Sourré-Kabanawa cist C2 (Joussaume, 2014: 72)

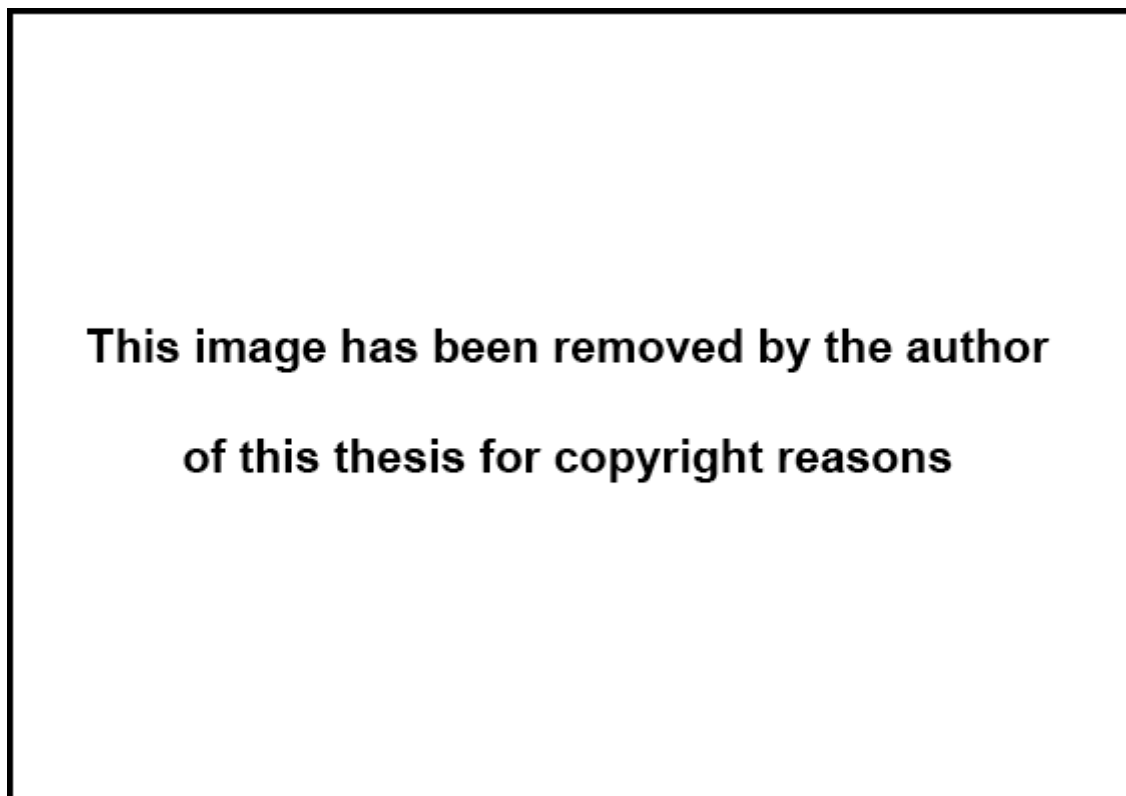


Figure 7.30: Incense burners from the Somaliland Islamic towns; 1),2) from Bulhar; 3),4) from tomb at the nomadic site of Iskudar (González-Ruibal et. al., 2017: 147, 165)

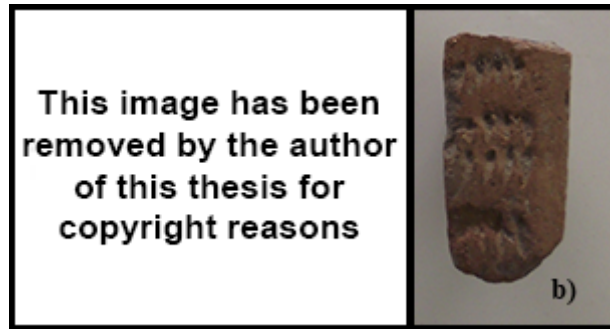


Figure 7.31: a) *Decorated rims from Somaliland Islamic inland towns (González-Ruibal et. al., 2017: 159); b) Earthenware/Plainware decorated rim HAR17(B)3-13 from Harlaa*

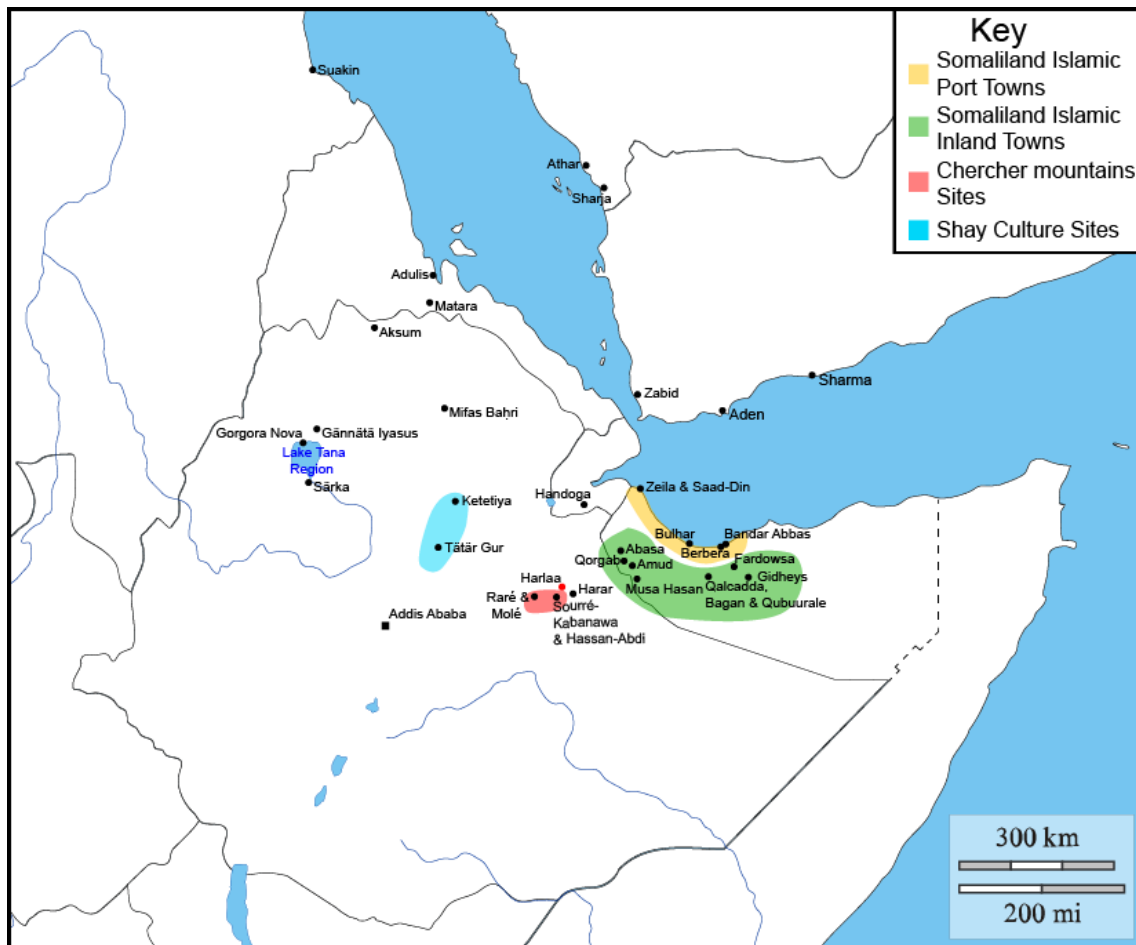


Figure 7.32: *Map of key sites discussed (base map from d-maps.com [Website 7])*

7.5.2 Links within the wider Horn of Africa

The sites discussed here will focus on sites within the Horn of Africa which evidence links with the same Red Sea and Indian Ocean trade networks of which Harlaa was a part, including the Somaliland Islamic trade settlements, the Shay culture sites and the site of Handoga.

7.5.2.1 Somaliland Islamic towns

The Somaliland Islamic trade settlements were a collection of inland towns, ports and caravansaries in modern Somaliland along part of the trade route from the Red Sea coast inland (see Fig. 7.28, 7.32; see also Chapter 2.8). These included the port sites of Zeila and Berbera, inland towns such as Amud, Fardowsa, and Abasa and caravansaries such as Qalcadda. This route was likely part of one of the main trade routes linking Harlaa with the Red Sea trade (Fig. 7.28) and imported material from the Red Sea and Indian Ocean was found at many of these sites (González-Ruibal et. al., 2017; Curle, 1936; 1937; Chittick; Fauvelle-Aymar et. al., 2011; Hirsch & Fauvelle-Aymar, 2004; Huntingford, 1978).

The local ceramics seemed similar across the region and the various site types. The local ceramics recovered from the Somaliland inland Islamic towns have benefitted from the most detailed analysis and will be considered first. These towns have been visited by archaeologists since the early 20th century (e.g. Curle, 1937; Chittick, 1976; Fauvelle-Aymar et. al., 2011; González-Ruibal et. al., 2017; Huntingford, 1978) and surface material has been collected and surveys and excavation undertaken. The local ceramics from the towns of Gidheys, Bagan, Amud and Fardowsa were the best published from the Somaliland inland Islamic towns (see Fig. 7.28 and 7.32 for locations). The local ceramics from these towns were fired ochre-brown, with a poorly sorted sand temper. The surface was usually smoothed, but not burnished, and there was limited variation visible in the forms of the vessels. Two main rim forms were present across these sites, simple inverted rims and flat thickened rims. The flat thickened rims often had decoration. The decoration on the rims consisted of incisions, impressed dots or roulette decoration (Fig. 7.31a and 2.37). Apart from decoration on the rim and decorated incense burners, decoration was rare, with only occasional examples of 'friezes combining incised triangles and impressed dots' (González-Ruibal et. al., 2017: 153) on body sherds. Horizontal lug handles were also common across the inland town sites. Incense burners were almost entirely covered in incised and punctate or roulette decoration and had no parallels within the Harlaa ceramics (Fig. 7.30).

As has been discussed in previous chapters (Chapter 2, 4 and 5), local wheelmade ceramics were rare in Ethiopia, so potential wheelmade local

ceramics recovered from the site of Fardowsa were of interest, although little information was available on them (González-Ruibal et. al., 2017: 153). Potential local wheelmade ceramics were also identified at Abasa and Saad-Din island, near Zeila, by Curle (1937: 320). The absence of burnished wares among the local ceramics from Somaliland has been noted by Fauvelle-Aymar et. al. (2011: 40). However, Curle (1937: 321) did record that fragments of black and brown burnished sherds were found at most of the inland sites visited, but also highlighted the fact that burnished pottery is not used in Somaliland in modern times, despite being common in Ethiopia. During their visits to the Somali Islamic towns Curle (1936; 1937), Chittick (1975) and Huntingford (1978) made little mention of the local ceramics present other than acknowledging the existence of 'coarse hand-made pottery' (Curle, 1936: 1937). Sherds collected by Curle are held in the British Museum (Website 1). These largely appeared similar to those described by González-Ruibal et. al., with a similar fabric, although there were no examples of the typical decorated rims. Five potential burnished sherds were identified among the British Museum Curle collection (Af1935,0709.81, Af1935,0709.82, Af1974,Q.787, Af1974,Q.784 and Af1945,0709.51), which will be discussed below (Fig. 7.33).

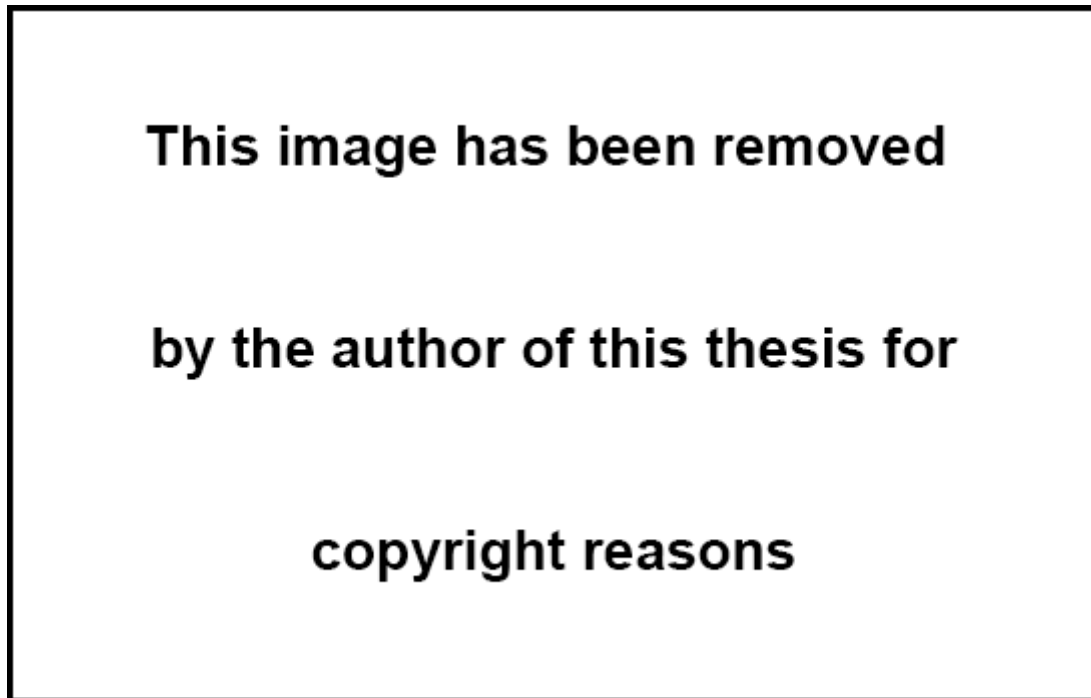


Figure 7.33: Burnished sherds in the Curle collection at the British Museum from Somaliland Islamic towns (no scale), a) sherd Af1974,Q.787; b) sherd Af1935,0709.82; c) sherd Af1935,0709.51; d) sherd Af1974,Q.784; e) sherd Af1935,0709.81 (Photographs from British Museum Online Catalogue [Website 1])

The only medieval period caravanserai site which has been investigated in the Somaliland region is the site of Qalcadda (see Fig. 7.28 or 7.32 for location). The site included a fort, caravan station, tombs and a roughly 0.8 hectare artefact scatter, interpreted as a possible trading zone. Excavations were undertaken in the fort, caravan station and artefact scatter area. The main period of use at the site was dated to the height of the Adal Sultanate, 1415 – 1559, the very end of the main occupation of medieval Harlaa. The local wares from Qalcadda appeared similar to those from the inland towns, although a much higher proportion of jars and containers were present and the horizontal lug handles common elsewhere in the region were much rarer. These variations were likely due to the specific use of the site for trade and exchange (González-Ruibal et. al., 2017: 149-150).

The coastal ports of Zeila and Berbera (see Fig. 7.28 or 7.32 for locations) were two of the main Red Sea ports on the Somaliland coast in the medieval period (González-Ruibal et. al., 2017: 138). Zeila was briefly visited by

Ibn Battuta in the 14th century, however he did not stay long in the town as he found it to be ‘...the dirtiest, most disagreeable and most stinking town in the world’ (Gibb, 1962: 373). The work undertaken in Somaliland by a team led by González-Ruibal included a survey of Zeila, and it was noted that little of medieval Zeila remains. Interestingly, the only ceramics recovered during this were imported ceramics, with no handmade wares which are found at other sites (González-Ruibal et. al., 2017: 139-141). The only site where material was collected was dump sites near the governor’s palace which had previously been visited by Curle (1937) and Fauvelle-Aymar et. al. (2011), who also did not observe any hand-made ceramics. The imported material dated to the 9th – 19th century, which suggested that the dump was in use for an extended period (Fauvelle-Aymar et. al., 2011: 32; González-Ruibal et. al., 2017). Excavations by Fauvelle-Aymar et. al. in 2004 and 2007 near the “two mihrab” mosque in the west of Zeila did recover some potential local ceramics from throughout the stratigraphic sequence and local ceramics were the only type of ceramic found in the deepest contexts. Unfortunately, there was little description of these ceramics beyond the fabric, which was described as thick, having a red paste and coarse inclusions (Fauvelle-Aymar et. al., 2011: 48-49). The local ceramics from the inland Islamic towns were described as having an ochre-brown fabric, which may suggest that a different clay or firing process was employed for local ceramics at Zeila. The lack of detailed description of the local wares from Zeila unfortunately meant that comparisons could not be made between Zeila and the local ceramics from Harlaa.

As with Zeila, little of medieval Berbera remained and no local ceramics were recorded, although medieval and post-medieval imports have been recovered (González-Ruibal et. al., 2017: 141-143). While no local ceramics were recovered from Berbera, local ceramics recovered from two other port sites were investigated. The site of Bandar Abbas was interpreted as a primarily Yemeni trade port based on both the remaining architecture and large quantities of wheelmade domestic pottery with close parallels to Yemen. In addition to the Yemeni wares and a range of other imported wares, a small quantity of handmade vessels were recovered. These were interpreted as evidence for trade with local people from the Somaliland region, as they had close parallels with the local ceramics from the inland towns. Overall the pottery assemblage

was almost identical to that of Sharma in Yemen which will be discussed below. (González-Ruibal et. al., 2017: 143-144). The final port site considered was Bulhar. While primarily known as a port site during more recent periods (mainly the 19th century), it did have some evidence for medieval occupation. The imported ceramics suggest a 10th – 14th century date and the only forms mentioned with regards the local ceramics were a pair of incense burners similar to those discussed above (Fig. 7.30) (González-Ruibal et. al., 2017: 145-148).

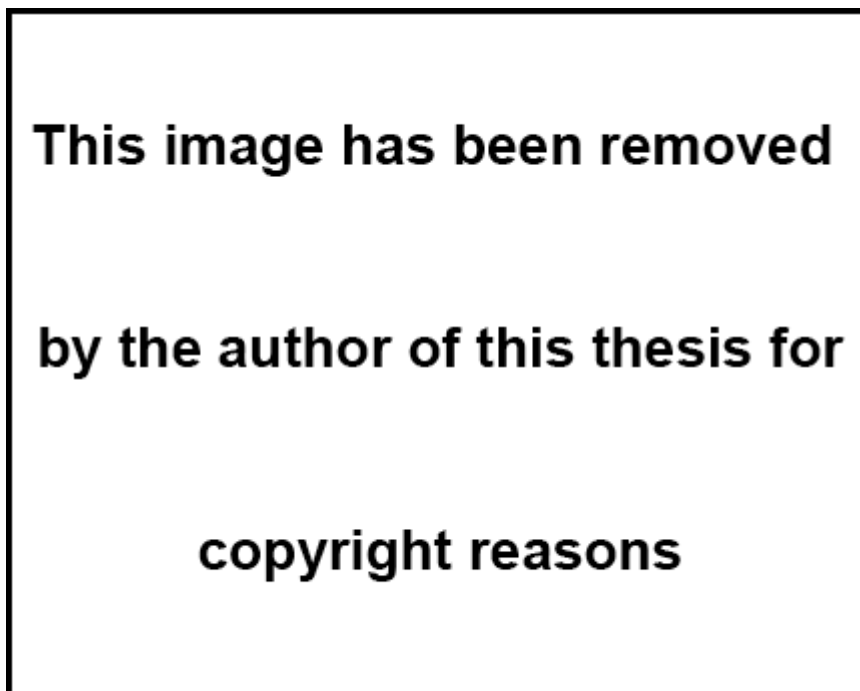


Figure 7.34: Local ceramics collected by Curle from Somaliland Islamic towns held in British Museum (no scale), a) complete lid Af1935,0709.118; b) Sherd with complete handle Af1935,0709.122; c) sherd with twin pierced lug handle Af1935,0709.129; d) Sherd with pierced lug handle and rim Af1935,0709.147 (Photographs from British Museum Online Catalogue [Website 1])

The local ceramics from the Somaliland trade sites appeared distinct compared to the Harlaa ceramics. Burnished wares and carinated vessels found at Harlaa were not present (or at least rare), decoration was mainly found on rims, which was rare at Harlaa, the roughened exterior often found on Earthenware/Plainware vessels at Harlaa was absent from the Somaliland Islamic towns, and the variety of forms appeared much more limited in comparison with Harlaa. However, the rarity of decorated rims at Harlaa and their abundance at these sites could suggest that this style of decoration was

introduced to Harlaa via the trade network from this region of Somaliland. Indeed, some of the decorated rims from Harlaa had close parallels with examples from the Somaliland Islamic towns and may have been imported from there (e.g. Fig. 7.31 and Fig. 7.12). Judging by the Curle collection in the British Museum, the fabric of the local wares from the Somaliland towns was finer and denser than those from Harlaa (Insoll, pers. comm. 15/04/2019). The forms of both the single pierced lug handle (Af1935,0709.147, Fig. 7.33d) and double pierced lug handle (Af1935,0709.129, Fig. 7.34c) appeared similar to the form of these handles at Harlaa, although at Harlaa they were predominantly on burnished ware vessels. The form of lid Af19335,0709.118 (Fig. 7.34a) was also reminiscent of examples recovered by farmers at Harlaa (see App.Fig VI.7). A decorated spout from Zeila (Fauvelle-Aymar et. al., 2011: 49) was comparable to a spout collected by a farmer from Harlaa (see Fig. 7.35). The ware of the spout from Zeila was not specified, so it was unclear if it was a local or imported ware. However, it had some similarities to the trackware from Zabid in Yemen (see 7.5.3.1). It did, however, show evidence for potential links between Zeila and Harlaa. This made sense as Zeila was likely the principal port for Harlaa.



Figure 7.35: a) Spout recovered by farmer at Harlaa; b) Spout from Zeila (Fauvelle-Aymar et. al., 2011: 49)

A black burnished sherd collected from Amud was identified by Curle as similar to jars used for storing honey in Harar (Curle, 1937: 321). Sherd Af1935,0709.81 from the British Museum collection was likely this sherd (Fig. 7.33e). This sherd had a distinctive pale buff fabric under the black burnish which was not present at Harlaa. The multiple moulded ridges on the sherd was a rare decorative style at Harlaa, only found on three sherds from Transect D in

the field survey assemblage. Sherds Af1974,Q.787, from Qorgab, and Af1974,Q.784 from Amud were potential black burnished sherds with ribbon handles. The joins of these ribbon handles had a distinctive form which was not found at Harlaa (see Fig. 7.33a,d). In contrast, the ribbon handle on the unburnished sherd Af1935,0709.122 was very similar to the form at Harlaa (Fig. 7.34b). However, as has been mentioned previously, this form of ribbon handle was common across Ethiopia both archaeologically and ethnographically (see Chapter 2 and 4). While worn, the exterior finish of Af1935,0709.51 (Fig. 7.33) (from Saad-Din island, near Zeila), did appear similar to Black/Brown Burnished ware sherds from Harlaa, although the fabric was significantly finer, denser and better sorted than the Harlaa ceramics. These four suggested that while burnished wares were likely not local to the Somaliland towns, those recovered did not have direct links with the Harlaa burnished wares. The final burnished sherd, Af.1935,0709.82 (from an unidentified site in Somaliland visited by Curle) had much closer parallels with the local Harlaa ceramics. In addition to being potentially carinated, the finish and fabric of this sherd appeared very similar to Light Brown Burnished ware sherds from Harlaa (Fig. 7.33b).

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Figure 7.36: a) Potential stand base from Shay culture site of Qopros (Poissonier, 2012a: 43); b),c),d) Shay culture decorated unburnished pots with distinctive pierced lug handle (Poissonier & Hirsch, 2012: 58)

7.5.2.2 Shay culture sites

The Shay culture sites are situated along the eastern edge of the central plateau of Ethiopia and were dated to the 10th – 14th century AD, contemporary with Harlaa (Fig. 7.32, see also Chapter 2.6). Despite being a “pagan” culture, these sites showed evidence for potential links with the same trade networks that Harlaa was a part of. This was seen through the presence of many glass beads of Indo-Pacific and Middle Eastern origin. Additionally, parallels have been drawn between the metal artefacts from the Shay culture sites and those

from the Chercher mountains (Fauvelle-Aymar & Poissonnier, 2012: 214-218; 2016: 67-70). Due to the close proximity between Harlaa and the Chercher mountain sites, it was possible that these metal artefacts may have actually been manufactured at Harlaa, where there was strong evidence for significant metal production (Insoll et al., 2016; Insoll, 2017a; in prep.). It was interesting to note the absence of any mention of Chinese or Islamic ceramics at the Shay culture sites despite their presence at other sites closer to the coast with links to the trade network such as the Somaliland towns and Harlaa. This absence may have been due to the fact that only Shay culture funerary monuments have been excavated so far (Fauvelle-Aymar & Poissonnier, 2016: 63-64). Alternatively, they may not have been valued, or it may simply be that Chinese and Islamic ceramics were not imported as far inland as the Shay culture sites may explain their absence.

The Shay culture ceramics had two main ware types; the first were fired black and burnished, and the second were unburnished but with well smoothed surfaces in a dark grey fabric (see Fig. 2.32). Among the Shay ceramics there were distinct forms particular to the burnished and un-burnished wares. Carinated forms were even more common among the burnished wares than at Harlaa, although none of the forms had any clear parallels with Harlaa. The distinctive “flying saucer” vessels and carinated bottles had no parallels at Harlaa with their sharp, acute-angled carination. The carinated bowls were also distinct compared to the Harlaa forms, with the sharper carination closer to the rim (Fig. 2.27d, 2.28b and 2.32d). The Shay unburnished globular bottles and jugs had closer parallels to forms at Harlaa, although those identified at Harlaa were mainly burnished ware forms at Harlaa (e.g. see Appendix V: Vessel 04). Ring bases were only found on the open bowls and globular bottles. A single base from the Shay culture site of Qopros appeared similar to the stand bases from Harlaa and particularly the Chercher mountains. The surface was noted to be rough and the fabric ‘*apparaissent grisâtres (sans nettoyage)*’; ‘appears greyish, (but was not cleaned)’. Fauvelle-Aymar and Poissonnier described the base as being formed by making three conical perforations into a solid base. This was not how the stand bases from Harlaa were formed, but the profile of the Qopros example appeared similar to examples from the Chercher mountains and Handoga (see Fig. 7.36a, 7.27 and 7.38) (Fauvelle-Aymar &

Poissonnier, 2012: 43-44). There were also rare examples of decorated extended foot rings with circular holes (see Fig. 7.10b).

The pierced lug handles from the Shay sites were of a distinctive form to those from Harlaa (see Fig.7.36b-d), although ribbon handles were also present. Decoration was common and was primarily incised, impressed and appliqué, alongside potential painted decoration. The decorative patterns on the Shay vessels appeared much more detailed and extensive than decoration was normally at Harlaa. As was mentioned above, there were some potential examples of the un-burnished pattern decoration on Shay culture ceramics. However, where described, most of this decoration on the Shay culture ceramics was burnished lines on an un-burnished fabric, the opposite of Harlaa. Again, it is important to acknowledge that the Shay culture ceramic assemblage consisted of the vessels that were selected for use and deposition within funerary contexts, and so likely did not represent the full scope of the Shay culture ceramics. This was compounded by the issues with the concept and dating of the 'Shay culture' discussed in Chapter 2.6.

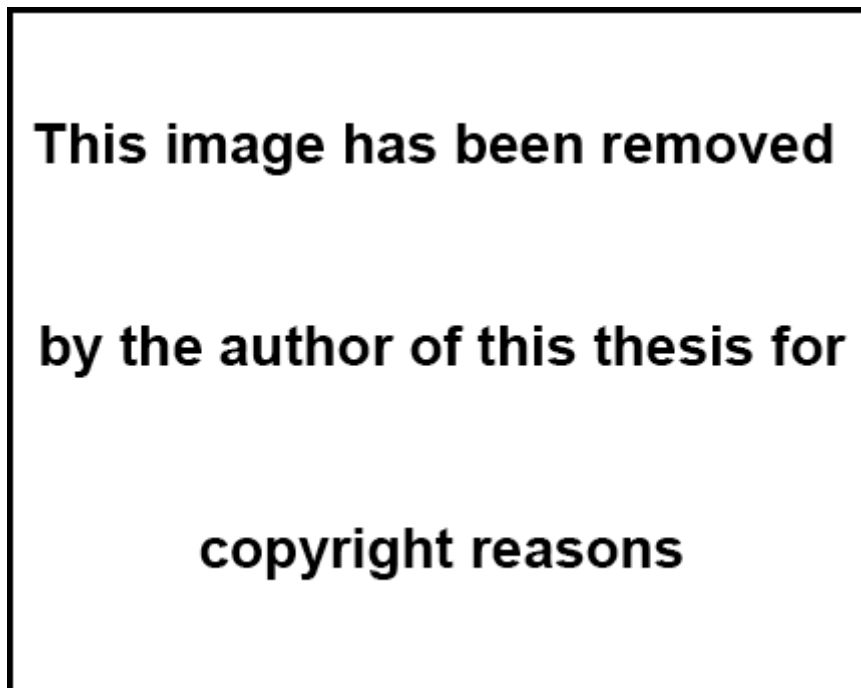


Figure 7.37: a),b) Decorated flat rims from Handoga; c) decorated simple rim with small pierced lug handle (Grau, 1976)

7.5.2.3 Handoga

The site of Handoga is located in Djibouti near the contemporary Djibouti-Ethiopia border (see Fig. 7.32; also Chapter 2.14). Handoga had less evidence for links with the Red Sea and Indian Ocean trade networks, with only a few pieces of imported glass from an unidentified source recovered (Grau, 1976: 8). The ceramics recovered from the site were largely unburnished and had some interesting parallels with both Harlaa and the Chercher Mountains. A variety of unusual base forms were found at Handoga, including extended rings with sections removed and multi-legged bases (App.Fig. VI.10), which were not attested at Harlaa or elsewhere. There was also a *'fond de vase à quatre pieds reliés par un couronne'* (Grau, 1976: 8), which had clear parallels to the stand bases from Harlaa and the Chercher mountains. As with the sherds from Harlaa, the base of this example was a ring as opposed to a flat plate (see Fig. 7.38). Incised decoration on the rim was also present at Handoga. The decoration on flat rims appeared similar in style, but cruder, to the examples from the Somaliland trade towns (see Fig. 7.37a-b). An example of incised parallel lines on a simple rim had closer parallels to Harlaa and Hubeyta (see Fig. 7.37c).



Figure 7.38: 'Crown' stand base from Handoga (Grau 1989: 8)

7.5.2.4 Conclusion

While similar forms were found in the local ceramic assemblages across sites in the Horn of Africa which were part of the Indian Ocean and Red Sea trade networks, they tended to manifest differently at each site. This implied that the local ceramics largely did not travel along the trade routes themselves; rather ideas and concepts spread along the trade routes. There were potential examples of decorated rims at Harlaa which may have been imported from the Somaliland Islamic towns. While the Aksumite site of Matara was dated to the 6th – 7th century, much earlier than the supposed date of the Shay culture, a few vessels very similar to the heavily carinated ‘flying saucer’ pots were recovered. Anfray, Fauvelle-Aymar and Poissonnier have argued that these represent Shay culture contact with the region several centuries after Aksumite Matara fell into ruin (Anfray, 1963: 103-104; 2012: 27; Fauvelle-Aymar & Poissonnier, 2012: 208-213; 2016: 71). This may show evidence for Shay culture links with the northern trade route (see Fig. 7.28). While ideas and concepts may have travelled along the trade routes, which ideas were picked up, and how they manifest at different sites, varied. Un-burnished pattern decoration was primarily found at Harlaa, with rare potential examples from the Chercher mountains and Shay culture sites. Burnished wares appeared rarer closer towards the Gulf of Aden, as seen with both the Somaliland Islamic towns and Handoga. Carination was common at both Harlaa and the Shay culture sites, but had distinctive forms at each site, and was rare elsewhere. Stand bases were found at Harlaa, the Chercher mountains and Handoga, but had different forms at each location. Decorated rims were common at the Somaliland Islamic trade towns but are rare elsewhere.

7.5.3 Links beyond the Horn

As a site with clear links with the Red Sea and Indian Ocean trade networks it is also important to consider potential links between the local ceramics from Harlaa and regions in the wider network with which it was connected to. This will also provide a background for the evidence (or lack thereof) of Islamisation visible through the local ceramics at Harlaa. First, the imported ceramics recovered from Harlaa will be briefly considered to highlight

the regions which Harlaa has evidence for contact with as well as the imported ceramics that they had access to, before investigating the ceramics from key site within the trade networks, primarily in the Red Sea and Arabia.

The imported wares recovered during the field survey were listed in Table 6.3. The identified imported wares from the excavation units included Chinese ceramics, mostly celadon (primarily Lonquan kiln), Martaban ware from south east Asia, various glazed Yemeni wares including Yemeni Black and Yellow ware, Blue Tihama ware, Iranian Fritware, buff unglazed wares from Egypt, Yemen and the Arabian Gulf, and Indian Red Polished Ware (Insoll, 2018b; pers. comm., 2019; Parsons, in prep.).

7.5.3.1 Zabid

The town of Zabid is located in northern Yemen in the southern Tihama plains (see Fig. 7.32). Zabid and its hinterland have shown evidence for occupation from around 1500 BC through the medieval Islamic period up to the modern day. Zabid rose to prominence in the 9th century as the seat of the Ziyadid dynasty. In the early 11th century the Ziyadid dynasty was overthrown and Najah, a former Abyssinian slave assumed control. This is significant as it showed links between Ethiopia and Zabid in this period, at least through the slave trade. After this Zabid fell under control of a variety of dynasties including the Egyptian Mamluks and the Ottomans. The significance of Zabid declined during this period as other ports rose in significance and European influence increased in Yemen (Keall, 1983a: 379-382; Ciuk & Keall, 1996: 4-5). The periods of Islam 3 (AD 950–1150), Islam 4 (1150–1350) and Islam 5 (1350–1550) at Zabid (Ciuk & Keall, 1996: 4-6), covered the periods under study at Harlaa. Some Islam 2 (AD 750-950) period local wares will also be briefly considered as they had links with the sites in the northern Tihamah plains (see section 7.5.3.2) and were suggested to have been in use from 8th – 11th century, so extended into early Islam 3 (Keall, 1983a: 385; 1983b: 55)

Most of the ceramics recovered were unglazed and a mixture of wheel and hand-made unglazed local wares were recorded. The *trackware* pottery from Islam 3-4 was an example of local handmade pottery from Zabid. The main forms of this ware were medium to large gourd shaped pitchers and jugs

(see App.Fig. VI.11). The fabric was cream to red and usually quite fine. In Islam 4 a white slip was commonly applied to the exterior prior to firing. The vessels were heavily decorated with panels of comb grooved and incised decoration which gave the ware its name. None of these vessels showed evidence for ring bases, although some had flat bases (Ciuk & Keall, 1996: 46-54). The fabric finish and decoration was distinct compared to Harlaa. The globular gourd shaped form was found at Harlaa (see Black/Brown Burnished ware Vessel 01 in Appendix V), however, this would not have been a complex form to produce and so was not indicative of any links. The decoration on a *trackware* neck (See Fig. 7.39d) had parallels with a spout from Zeila and a spout that was recovered by a farmer from Harlaa, and based on the descriptions of the fabric from Zabid, they may have been examples of *trackware* (see also 7.5.2.1). In Islam 5 the fabric became much coarser and the decoration was less precise and more 'chaotic'. Additionally, they were occasionally decorated with a primitive underglaze, painted slip lines or have a crude translucent glaze (Ciuk & Keall, 1996: 48-52).

The main local unglazed wheelmade ware was present in Islam 2 – early Islam 3. This ware consisted of vessels fired red throughout decorated with incised wavy lines. The clay was well levigated and fired, and wasters recovered attested to the local production of this ware. These vessels generally had flat or slightly concave bases. On jugs and pitchers, the vertical ribbon handles were decorated with a small appliqué blob on the top of the handle. (Keall, 1983a: 385; 1983b: 55; Ciuk & Keall, 1996: 40).

Glazed wares were present in Islam 4 and 5. The locally produced glazed wares identified were Blue Tihamah ware and Green-Yellow Tihamah ware. The Blue Tihamah ware was identified as an imitation of 'underglaze painted black and turquoise' wares from Syria, Mesopotamia and Persia dating to the 12th – 13th century. Early forms of this ware were being produced in Islam 4, but the main production was in Islam 5. The Blue Tihamah ware had a red fabric which was fired then white slip patterns were applied followed by a turquoise glaze which turns translucent once fired (Keall, 1983a: 383; 1983b: 56; Ciuk & Keall, 1996: 5-6). Little description was given of the forms of these vessels. Despite being present on almost all the glazed vessels, ring bases were rare on the unglazed ceramics. Carination similar to Harlaa did not appear

at Zabid. A medium jar from Islam 5 had a short, extended ring base (Fig. 7.39a), while a mixing bowl from Islam 4 (Fig. 7.39b) and a medium sized bowl from Islam 5 (Fig. 7.39c) also had standard ring bases. This final vessel had carination leading into the base and was slipped and burnished an undescribed colour over a red-buff fine fabric. The form and manufacture of this base was almost identical to examples from burnished wares at Harlaa (see Fig. 5.40h for comparison), although the form of the carination was distinct. Apart from this vessel, burnishing was rare on the ceramics from Zabid during the Islamic period. Crude burnishing was found on cooking pots from Islam 5. These cooking pots, called *burmah* in contemporary Yemen, had no parallel form among the burnished ware ceramics at Harlaa. Additionally, burnished wares were likely not the primary cooking ware at Harlaa.

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Figure 7.39: a) Medium jar with ring base from Zabid; b) Mixing bowl with ring base from Zabid; c) Burnished medium bowl with carination and ring base from Zabid; d) Trackware neck with incised decoration similar to spouts from Zeila and Harlaa (Ciuk & Keall, 1996)

7.5.3.2 Tihama Plains sites

Several sites in the northern Tihama Plains region in south-eastern Saudi Arabia were surveyed and excavated by Zarins in the mid-1980s (Zarins & Zahrini, 1985; Zarins & Al-Badr, 1986). The primary sites of interest here were Athar and Sharja (see Fig. 7.32). The site of Athar rose to prominence along with the Ziyadid Dynasty from Zabid around 800 AD (see 7.5.3.1 above), but likely has earlier pre-Islamic origins. Athar reached its peak in the 9th – 10th centuries and appeared to have declined and the port was largely abandoned by the 11th century (Zarins & Zahrini, 1985: 69-70, 75-76).

The main unglazed, presumed local, wares from Athar were wheelmade vessels with red fabric and a black core, usually unslipped. These were broken

down into ware groups based on the temper, the most common had grit temper, followed by chaff-temper and crushed steatite temper. Those with grit temper were usually large bowls with flat bases and out-turned folded triangular rims or overhanging rims. Decoration usually consisted of incised wavy lines, and the folded rims were sometimes also decorated. In contrast, incised decoration at Harlaa usually consisted of straight lines and was rare on rims. The folded rim form was not found on the Harlaa ceramics, nor was it present on the decorated rims from the Somaliland Islamic towns. The chaff tempered wares were broadly similar to the grit tempered wares, but also included large storage vessels. These storage vessels had flat bases, short necks and occasionally large "turban handles". When decorated it usually consisted of appliqué decoration around the mid-section. These storage vessels were noted to be similar to large Abbasid barbotine blue or turquoise glazed ware examples also found at the site. The steatite tempered vessels were again similar in form to the grit and chaff tempered examples. They were occasionally decorated with pinched appliqué bands, and there were examples which were fired grey imitate steatite vessel forms (Fig. 7.40b-d). Other ware types included "egg-shell" ware, which was a well sorted and levigated buff fabric without a slip and thin walls. When decorated the decoration consisted of a combination of incised straight lines and combed wavy lines. This ware type was attested at a number of sites, including on Bahrain, and at Siraf and Susa (Zarins & Zahrini, 1985: 81). Vessels made of a brown fabric with sand or mica temper were identified as the primary cooking vessel based on sooting on the exterior. These vessels had flat bases and often had ledge handles. Decoration consisted of exterior ridging (Zarins & Zahrini, 1985: 80-81).



Figure 7.40: a) Burnished carinated bowl recovered from Athar, identified as 'African'; b),c),d) Local unglazed wheelmade ware from Athar (Zarins & Zahrini, 1985: Plate. 95)

A selection of wares from Athar were identified as “African”. Of particular interest was a highly burnished black vessel with sharp carination. It was noted that carination is not a form normally found at Athar. This vessel was more in-turned, with sharper carination, than was standard for the Harlaa carinated bowls and the form of the rim was rare at Harlaa, particularly on burnished wares (see Fig. 7.40a), so it was unlikely to have originated from Harlaa. It may however have originated from elsewhere within Ethiopia as burnished carinated forms have been shown to be common in Ethiopia. Another black burnished rim sherd with drilled holes for repairing was also noted, but not illustrated or described in detail. A red fabric “bullet base” with chaff temper was noted as unusual and a potential African ware as it had a ‘reverse slip’ finish. The other wares identified as African did not have any notable parallels to the Harlaa local ceramics; these included two sherds of black, grit tempered ‘paddle stamped ware’ and two fragments of black ware with complex incised geometric patterns filled with white (Zarins & Zahrini, 1985: 81).

Sharja, situated to the south of Athar, was likely founded at a similar time to Athar. However, it appeared to have outlasted Athar, as it was mentioned in later sources, including by Ibn Battuta who visited in the 14th century, and

described it as a small town inhabited by merchants from Sana in Yemen (Gibb, 1962: 365-366; Zarins & Al-Badr, 1986: 54). The geography and structure of the site was noted to be very similar to Athar. The local wares discussed above at Athar were also present at Sharja, although only in particular areas of the site. Wasters from both Sharja and Athar attested to the local production of at least unglazed ceramics. It was noted that identical wares to the wheelmade red wares from Athar and Sharja were found at Zabid (Zarins & Al-Badr, 1986: 55). While similar finishes and decorative styles were present, the examples from Zabid do not appear to have the same variety of tempers as found at Sharja and Athar (see 7.5.3.1 above).

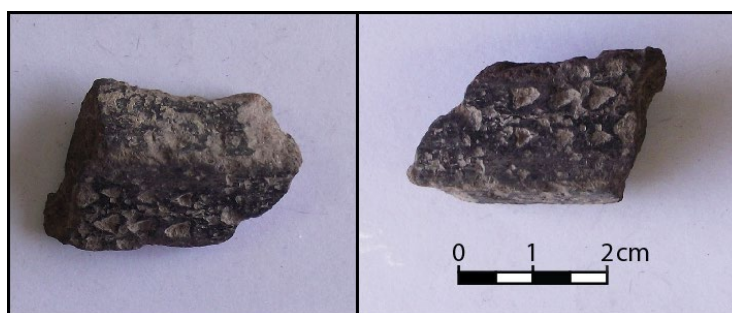


Figure 7.41: Black/Brown burnished ware sherd HAR15(B)3-02 from Harlaa with Type A carination and crude triangular punctate decoration

7.5.3.4 Sharma

Medieval Sharma was founded around the 10th century and was an important port in the western Indian Ocean until the mid-12th century. The site was briefly reoccupied during the late 13th – early 14th century before being abandoned again until the 18th century (Rougeulle, 2005:4-5). A wide variety of ceramics have been recovered from the site including locally produced wares, ceramics from wider Yemen and imported wares from across the Red Sea and Indian Ocean trade networks, including Africa.

Unglazed ceramics made up over 90% of the assemblage from Sharma, and 34% of these were identified as locally produced at the nearby site of Yaḍghaṭ, 12 km inland from Sharma. These ceramics were handmade, usually with rough interiors and were often poorly fired. The core of the fabric was black with a light brown or orange surface, often slipped and the temper consisted of abundant white limestone. Decoration consisted of wavy comb grooved patterns and patterns painted on in a red slip, neither of which were found on local ceramics at Harlaa (see Fig. 7.42a,b). The most common vessel form at

Sharma was jars, mainly with an ovoid body, slightly pointed base and a cylindrical neck. Most of these jars were about 40 cm in height with a maximum diameter of 26-28 cm, although there were rare examples (about 5% of the jar sherds) which were from much larger examples. Two main rim forms were present on the jars, thickened everted rims and rarer straight rims with a triangular appliqué band under the rim. The bowls came in a wide range of forms and sizes but were generally open. Bases were flat, slightly concave, or had small rings. Larger basins had more regular forms and usually had flat or thickened rims, often with punctate or comb grooved decoration similar to the decorated rims from the Somaliland trade towns (see Fig. 7.31 and 2.37). Similar basins were noted to have been produced at Zabid (see section 7.5.3.1 above). Other unglazed Yemeni wares were primarily identified as from western Yemen in the region around Zabid (Rougeulle et. al., 2015:157-163). Rare examples of unglazed wares from the Gulf were present, primarily “eggshell” finewares. These wheelmade vessels with thin walls had a very fine, pale fabric with mica as the only visible inclusion. These wares were common across the Gulf from the pre-Islamic period and may have links with the buff Gulf wares recovered at Harlaa.

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Figure 7.42: a),b) Bowls with decorated rims produced at Yaḍghaṭ; c),d) Burnished carinated bowls with necks from Sindh, recovered at Sharma; e),f),g),h) Decorated burnished carinated sherd from Sindh, recovered at Sharma (Rougeulle et. al, 2015: 186,202,208)

The ceramics from the Indian sub-continent were of particular interest as they were often burnished and were among the only wares to have carinated forms in any significant proportion at Sharma. These made up 5% of the ceramic assemblage and two main sources were identified, southern India and the Sindh region of modern Pakistan. Those from Sindh had closer parallels to the Harlaa local ceramics. These ceramics included vessels for transport and storage, but also vessels for cooking, serving and preparation. Many vessels showed evidence for repeated use for cooking over fires. As these ceramics were found throughout the Gulf and Indian Ocean from the start of the Islamic period until the 16th century, this suggested that the people who were using these ceramics for preparing and consuming food were also travelling and potentially settling along the trade networks. The two main Indian fabrics present at Sharma were red and grey-black. The red wares were identified as being from southern India. The finer red wares were pink to buff in colour, while

the coarser wares were orange to red. Inclusions were medium to coarse and consisted of quartz, white and grey mica, siliceous inclusions, and unidentified red and white dots. More significant were the wares with grey fabric and black surface, identified as from Sindh dating to the 10th – 12th century. The primary inclusions were sand, white mica, and unidentified black and white dots. Common decoration consisted of triangular punctate dots and horizontal incised lines. Some of the examples of the carinated sherds decorated with triangular punctate dots had close parallels with examples from Harlaa (See Fig. 7.42e-g and Fig. 7.41). Despite this, the form of the vessels from India and Sindh appeared distinct compared to the local Harlaa ceramics. While carination was present, the two examples with complete profiles had sharper in-turned carination with short straight necks (Rougeulle et. al., 2015: 165-168, 202-214). Additionally, the common styles of rim among the vessels from India and Sindh, found both on the smaller pots and larger jars, included large lips and outwards folded rims, which were rarely found at Harlaa (Fig.42c,d). A single unique black burnished rim from Harlaa (HAR15[B]5-15), was similar to both these rims and those from Gujarat, and may represent either an import from this region or a local imitation (Fig. 7.43).



Figure 7.43: Black/Brown Burnished ware Unique rim HAR15(B)5-15 from Harlaa (Phase 5b)

A variety of unglazed ceramics from Sharma were identified as African in origin, which made up 16% of the unglazed ceramics. These were primarily from the Swahili coast in east Africa, and key forms will be briefly considered. The most common vessel form was a globular pot with a rounded base and short neck, most of which at Sharma appeared to have been used as cooking pots, although the larger vessels were likely for storage and transport. Interestingly, while different kinds of decoration were present on these vessels at Sharma in different periods, the proportion of these imported African pots remained largely constant at about 50% of the diagnostic African sherds across

the occupation of Sharma. Decoration was common (80% of diagnostic sherds) and was usually on the neck or just below the neck join and the main decorative style consisted of incised lines, with rare examples of red paint, impressed arcs, and panels of hatched triangles. The rare examples with impressed arcs (four sherds) were identified as from the Comoros islands, dated to around the 9th – 11th century, and three examples with incised hatched triangles, were simply identified as being from the east coast of Africa, again had an early date of around the 8th – 10th century AD (Rougeulle et. al., 2015: 168-172, 216-221). While globular pots with straight necks were found at Harlaa, decoration on the necks was not present and the necks tended to be more pronounced at Harlaa than the east African wares found at Sharma. The large storage jars and vessels at Harlaa were distinct compared to the east African imports from Sharma.

In addition to these vessels, a collection of 50 African carinated bowls was reported from Sharma. These were divided into two broad categories, simple carination (12 examples) and *carène marquée* (36 examples). The style of the carination on some of the simple carinated vessels did appear similar to the Type A or B carination from Harlaa, although there were no out-turned examples, and apart from punctate dots close to the carination, the decoration was distinct, and usually consisted of hatched incised patterns (Fig. 7.44a-c). The *carène marquée* type had ledges coming out from the carination which was not present at Harlaa (Fig. 7.44d-f). Unlike at Harlaa these vessels were not burnished, although many had a red slip over the medium to coarse brown fabric. Additionally, blackening on the exterior suggested that they were used for cooking, for which there was little evidence on the carinated vessels from Harlaa. These carinated pots were found at a variety of sites across the east African coast where they date to the 10th – 13th century (Rougeulle et. al., 2015: 172-173, 224-227).

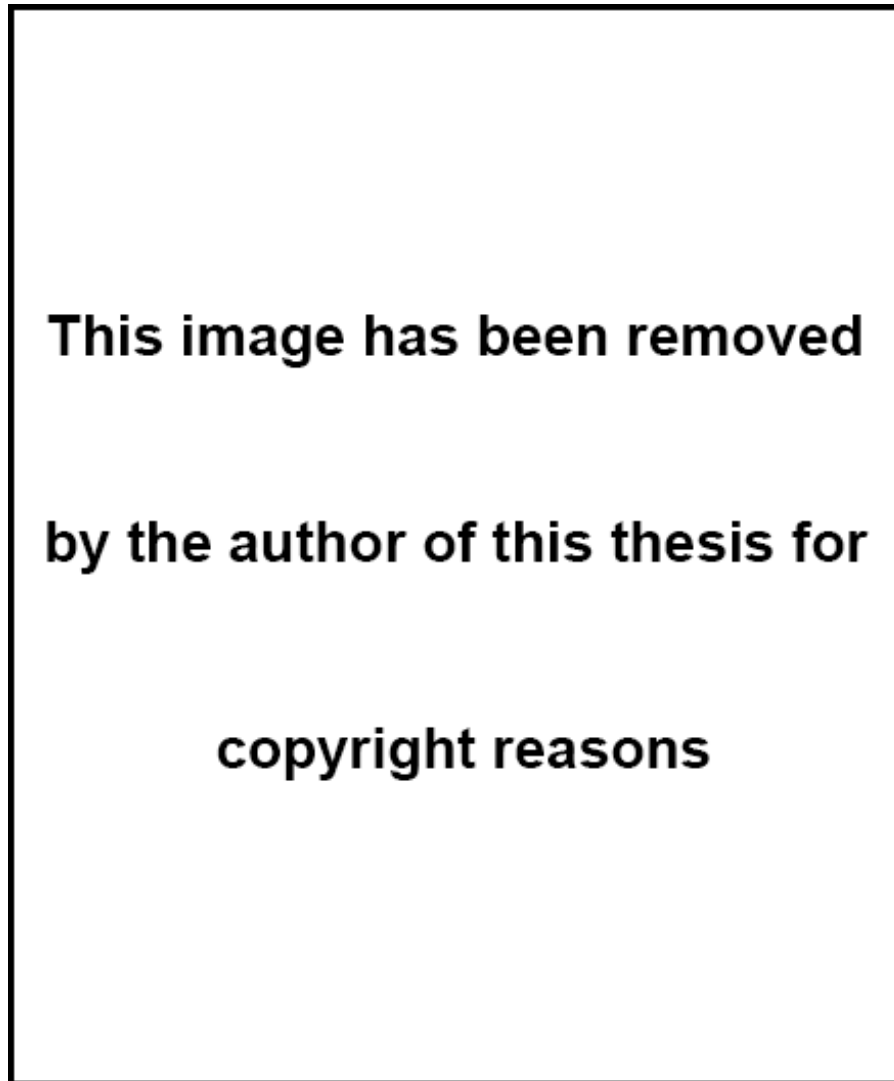


Figure 7.44: a),b),c),d),e),f) Carinated bowls from the Swahili coast recovered at Sharma; g),h) Jars with finger marks recovered at Sharma (Rougeulle et. al., 2015: 224,230)

Finally, there were a selection of unglazed ceramics whose origin could not be unidentified. None of these examples appeared to be from Harlaa, however some interesting comparisons could still be made with a few of these unidentified forms. The *jarres á traces de doigts* (jars with finger marks) had some similarities with some Earthenware/Plainware sherds from Harlaa. The fabric appeared similar (although denser at Sharma) with a thick black core and a red-black exterior as well as the distinctive finger marks which identified the vessels (Fig. 7.44g,h), although at Harlaa they were only found on the interior of the vessels (Fig. 7.8j,k). Like at Sharma the sherds from Harlaa had thick walls (~ 1cm thick) and a thickened base, although the Harlaa examples were more rounded than the pointed examples from Sharma (Rougeulle et. al., 2015: 177-

178, 230-231). A couple of the unidentified lids from Sharma had similarities in form to the rare burnished ware conical lids from Harlaa (Fig. 7.46a-c). The examples from Sharma did not have the pierced ledge like the Harlaa examples and the finish on the Sharma lids was unclear, although the fabric on the sherds most similar in form to Harlaa was black with sand and likely limestone inclusions (Rougeulle et. al., 2015: 179, 236). This did not fit with the fabric from Harlaa.

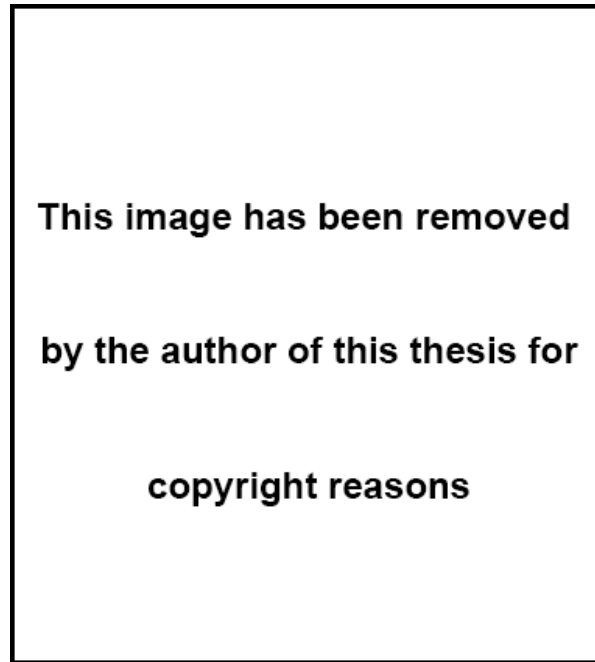


Figure 7.45: a),b),c) bases with degraded glaze, likely from Yemen, recovered at Sharma; d),e) Brown glazed bases, potentially from Yemen, recovered at Sharma (Rougeulle, 2015b: 272,274)

Glazed ceramics made up 6.8% of the ceramic assemblage at Sharma. A few key forms and decorative patterns among the glazed wares will again be considered in relation to the Harlaa local ceramics. Likely due to being turned on a wheel, most of the glazed ware ring bases were distinct to the local ring bases from Harlaa. Ring bases on the ceramics with degraded glaze were closest in form to the simple style of ring base (Fig. 7.45a-c). The exact origin for these poorly glazed ceramics was unclear, however the closest parallels suggested were from Zabid, where they were linked with the Yemeni mustard wares. These were believed to have been produced in the regions around Aden and Zabid. A small number (18 sherds) of speckled brown glazed ceramics were also recovered from Sharma. The provenance of these ceramics was again unclear, as only a single potential sherd, from the site of al-Tariyya on the

Yemeni coast, had been found outside of Sharma. While similar glazes were found elsewhere in the Indian Ocean in the 16th – 20th century, these sherds were found in contexts dating from 1050–1150 AD, had a red fabric, with sand and large amounts of mica inclusions. The primary form present was fine open bowls with ring bases and glazed on the interior (Fig. 7.45d,e). These bases were noted as being similar in form to the potential Yemeni mustard wares discussed above. A glazed sgraffiato lid had a similar form to the unidentified unglazed lids discussed above (Fig. 7.46d), although with a more pronounced, again unpierced, lip. This suggested that, at least at Sharma, these lids may have been imitating Islamic glazed wares (Rougeulle et. al., 2015: 237-275).

It was interesting to note that the identifiable ceramics from Sharma with the closest similarities to the local ceramics from Harlaa were the forms of both glazed and unglazed wares from eastern Yemen as well as burnished wares from Sindh, which borders Gujarat, for which there was evidence for trade material from at Harlaa (see Chapter 1.4.2.1).

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Figure 7.46: a),b),c) Unidentified lids recovered at Sharma; d) Sgraffiato glazed lid recovered at Sharma (Rougeulle et. al., 2015: 236; Rougeulle 2015b: 268)

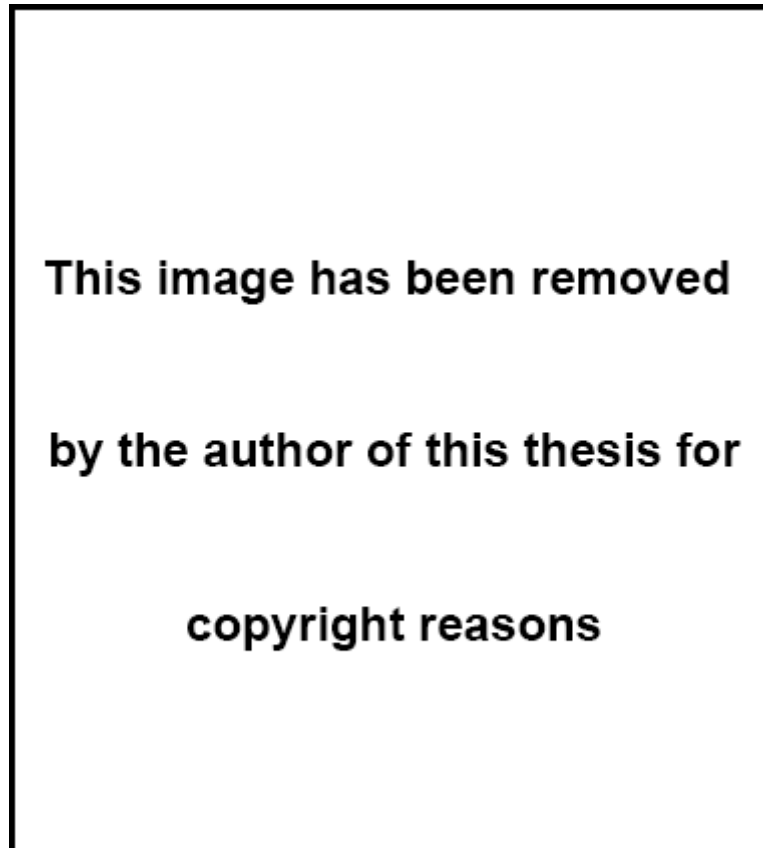
7.5.3.5 Suakin

The Islamic port site of Suakin in modern Sudan (see Fig. 7.32) was a key Red Sea port on the African coast in the second millennium AD, with a settlement recorded by at least the 9th century AD and the port well established by the 12th century, although the potential founding could date much earlier. The settlement itself was located on an oval island about one mile in diameter in a small bay on the coast and linked by a causeway to the mainland. (Breen et. al., 2011: 208-210; Rahim Salim, 1997: 65-66; Mallison, 2012: 159-166; Peacock, 2012; Phillips & Smith, 2014: 4-5). Suakin was visited by Ibn Battuta during his

travels, who incorrectly located it on an island six miles off the coast. Ibn Battuta made no note of any ceramics during his stay (Gibb, 1962: 363-364). It has also been claimed that the original Islamic refugees from Mecca may have stopped off as Suakin on their way to Ethiopia (Rahim Salim, 1997: 65), however, this has not been verified elsewhere. This could potentially show early links between Islam, Suakin and Ethiopia. Multiple seasons of excavations have been undertaken on the old island from 2004-2013. These were undertaken at four houses, the *Muhafeza*, or governor's house, and the Shafa'i Mosque (Phillips & Smith, 2014: 3; Smith et. al., 2012: 174-179).

Limited analysis of the local unglazed ceramics from Suakin has been published. The local ceramics were described as 'unglazed buff to red-firing earthenwares' (Smith et. al., 2012: 179). A photograph of a selection of ceramics from the 15th – early 16th century included some local ceramics (see App.Fig. VI.8). While there were no rims and forms of the vessels could not be identified, the decoration primarily consisted of impressed or roulette chevrons which were not found at Harlaa. Additionally punctate and incised decoration was observed, which had some similarities to Harlaa, but was not chronologically significant or distinctive to Harlaa specifically. The imported ceramics, however, have been published in some detail. A collection of black burnished sherds were recovered from contexts dating to 13th – mid 16th century from the Beit el Basha house and the 'market street trench' outside the Beit 'Osman Digna' house. These have been identified as Indian in origin, likely from the Gujarat region of northwest India, where they dated from the 4th to 13th centuries (Fig. 7.47b). Similar ceramics have been identified at sites around the Strait of Hormuz including Sohar in Oman and Ras el-Khaimah in the U.A.E. These sherds were characterised by everted rims, bands of fine ribbing and occasional shallow carination. Neither the everted rims nor the fine ribbing decoration were found on the burnished wares from Harlaa. Additionally, the fabric appeared much finer and denser than at Harlaa and was usually fired medium-grey with charcoal, calcite and ironstone/hematite inclusions (Phillips & Smith, 2014: 11-12; Smith et. al., 2012: 182-183). 'Yemeni Yellow ware', found in contexts dating from the 15th to 18th centuries, but primarily dated to the mid-13th – 15th century, had strong similarities to Yemeni wares recovered from Harlaa. In particular, the base of a cup photographed (see Fig.7.47a) was

almost identical to imported examples from Harlaa (Insoll, in prep.). However, the form of this base was not found among the local bases at Harlaa. Finally, a base similar in form to the stand bases from Harlaa was recovered during recent work at Suakin, but has yet to be published (Phillips, J., pers. comm. 24/11/2018).



*Figure 7.47: Yemeni 'Yellow ware' from Suakin (Phillips & Smith, 2014: 8);
b) Indian Black burnished ware sherds from Suakin, likely imported from
the Gujarat region (Phillips & Smith, 2014: 11)*

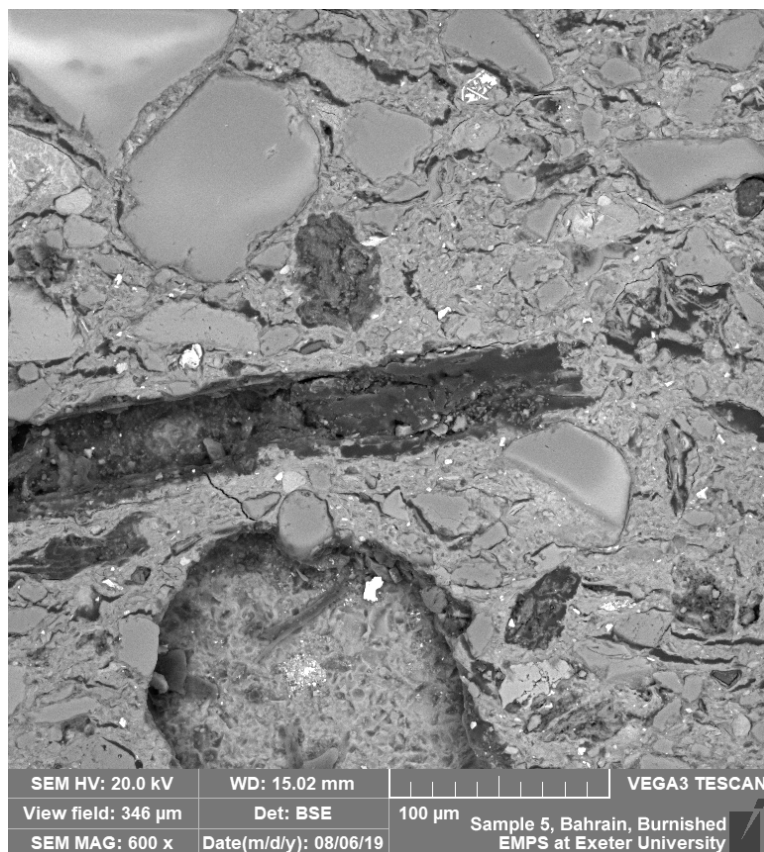


Figure 7.48: Close up SEM backscatter photograph of burnished sherd MUH4-18(16) (Sample 5) from Muharraq 4, Bahrain showing charcoal inclusion and potential unusual void

7.5.3.6 Bahrain

A single sherd from the 2018 season excavations in Bahrain headed by Insoll was included in the petrographic analysis (see Chapter 5.2.3). This sherd, MUH4-18 (16), was a black burnished sherd with black-grey fabric from the site of Muharraq (c.f. Insoll, 2018c). The sherd was chosen to compare with the local Black/Brown Burnished wares from Harlaa and investigate if there were any potential similarities. The principal inclusions included carbon deposits, which based on the SEM backscatter photographs were likely wood charcoal fragments (see Fig. 7.48). Small crystals of ilmenite were also present, as well some form of calcitic mineral, for which the closest parallel identified was apatite (Website 3). The fabric also included small-medium sized fragments of rock made up of multiple minerals (see App.Fig. II.34). The main components of this rock were a calcitic mineral, likely augite; some form of iron oxide, likely impure magnetite or hematite; and a plagioclase feldspar, with medium-sized inclusions of an albite feldspar also present in the fabric (Website 3). Alongside the

ilmenite, the impure iron oxide (which included titanium in the impurities) suggested that a variety of minerals in the Fe-Ti oxide range were present in the rocks that made up the inclusion (Dobrovine, 2004). The identity of a final inclusion was unclear and may not have actually been an inclusion. The closest comparable spectrum was pectolite, however, the form of the inclusions did not match the thin strands that pectolite crystals form (Frost et. al, 2015: Fig. 1 and Fig. 2). Additionally, in the close-up SEM backscatter photograph these features appeared to be largely voids filled with a thin deposit, rather than actual inclusions (see Fig. 7.48). This could have meant that the spectra was being distorted by picking up the slide below a thin, mixed deposit.

The fabric appeared denser and better compacted than the Harlaa wares, with very few of the elongated voids from forming the vessel which were common in the Harlaa fabric (see Chapter 5.3.2). Inclusions were still poorly sorted and variable in size. If the features discussed above were indeed voids, their form suggested that they originally contained something which either burnt out or degraded during the firing of the vessel. There were some similarities to the inclusions found in the local Harlaa ceramics, such as ilmenite and feldspars, although the most common feldspar at Harlaa was anorthoclase, an alkali K-feldspar. However, ilmenite and feldspars are both very common minerals in rocks, and so were not particularly significant. Micaceous minerals such as the biotite which was common at Harlaa were not identified in the sample from Bahrain, and calcites were not present in the Harlaa fabrics. While there were carbon deposits in the Harlaa fabrics, the inclusions in the Bahrain sample were much more clearly wood charcoal. It was likely that this sherd represented an import from the Gujarat region of north-west India, similar to the black burnished examples found at Suakin, which were described as containing charcoal fragments and the most prominent inclusions were calcitic and ironstone/hematite (Smith et. al., 2012: 182-183; Phillips & Smith, 2014: 10-11), all of which were present in the sample from Bahrain.

7.5.3.7 General discussion

As has been shown, most of the Islamic sites in the Red Sea and Indian Ocean which participated in the trade network discussed here produced their own local unglazed ceramics (usually wheelmade) in addition to the various imported ceramics which were traded throughout the region. These imported ceramics included Chinese porcelain, glazed wares from throughout the Islamic world, including Egypt, Persia, Iraq, the Levant, as well as wares produced within the area studied, particularly in Yemen. In addition, unglazed wares were traded around the Indian Ocean and Red Sea primarily as storage vessels for goods, but also serving and cooking vessels have been identified from as far away as the Swahili coast, Sindh and Gujarat, and southern India. These showed that people were likely travelling the trade network from across the region. This meant that a wide range of forms and styles were present across the trade network that Harlaa would potentially have come into contact with and influenced the local ceramics at Harlaa. Despite this range of wares only a limited number of potential links with the local Harlaa ceramics have been identified here which will be discussed in more detail below.

7.6. Archaeological Ceramics and Islamisation

While the local Harlaa ceramics generally appeared distinct compared to the various wares present at the Islamic sites around the Red Sea and Indian Ocean, a few potential links were identified, primarily from Yemen as well as imports from Sindh and Gujarat. The extent to which the local ceramics from Harlaa were influenced by the introduction of Islam into the region will be considered.

7.6.1 Vessel Forms

As has been shown, burnishing was a rare finish on wares produced in traditional Islamic contexts such as Arabia and the Gulf. However, it was common at Harlaa and was the finish on what were identified as the primary serving wares at Harlaa.

While ring bases were known elsewhere in Ethiopia (e.g. see Aksumite [Chapter 2.2; Bard, 2014; Gaudeillo & Yule, 2017; Benoist et. al., 2016] and early Chercher mountains examples [Chapter 2.5; Joussaume, 2014]), at

Harlaa they were absent in the earlier phases (Phase 2a-1b). This could potentially mean that ring bases were introduced into the assemblage due to contact with Islamic ceramics. A range of ring base forms were present at Harlaa throughout the sequence. Some of these had similarities within the Horn of Africa, such as the extended ring bases and the annular bases from the Chercher mountains. Others however did have potential links with Islamic forms. The closest parallels to Harlaa ring bases were from Yemen, particularly the 'degraded glaze' wares (potentially a variant of Yemeni Mustard ware) from Sharma (See Fig. 7.45d,e). However, potentially due to the fact that the Yemeni glazed wares were wheelmade and the local Harlaa ceramics were handmade, the parallels were not exact. The appearance of ring bases in Phase 2a and the relatively consistent proportion of ring bases up to Phase 5b did suggest that there was some influence which led to their introduction around Phase 2a. The dating for Phase 2 (11th – Mid 13th century AD) did fit with the proposed introduction of Islam to Harlaa (Insoll, 2018b; in prep.). Therefore, the Harlaa ring bases could have represented a local adaption of Islamic ring bases, explaining the variation of ring base forms and the lack of exact parallels.

Carination was generally rare on Islamic ceramics. Despite this, carination was common at Harlaa from Phase 2b-5b and burnished carinated bowls were one of the most distinctive vessel forms identified at Harlaa. A few carinated forms were identified at Red Sea and Indian Ocean trade sites, although none were exact parallels for the Harlaa forms. Some of the examples from the Swahili coast had a similar style of carination, however these examples were not burnished and the style of decoration was different. Closer parallels could be seen with the black 'polished' wares imported from Gujarat and Sindh which were attested at sites including Sharma (Rougeulle, 2015: 165-168, 202-215), Shanga (cf. Horton, 1996) and potentially Bahrain (see section 7.5.3.6 above). These appeared to be the primary 'polished' wares which were travelling along the trade network and included carinated bowls. As was discussed previously, the rim forms on both the jars and many of the carinated bowls of these wares were distinct compared to the Harlaa rims. The carinated bowls also usually had a distinctive neck which was absent at Harlaa. However, these were the only wares which are both burnished and have carination which were found with any degree of regularity around the Red Sea and Indian Ocean

trade network. The style of carination was usually similar to the Type A carination at Harlaa and the punctate and incised decoration was occasionally found on Black/Brown Burnished ware carinated sherds from Harlaa. A single burnished rim similar to the rims from these vessels was recovered from Harlaa (see 7.5.3.5 and Fig. 7.43). Additionally, there was evidence for links between Harlaa and the Gujarat and Sindh regions, such as the techniques used in manufacturing carnelian beads at Harlaa (see Chapter 1.4.2.1; and Insoll 2017a; et. al, in prep), as well as evidence for earlier links between the Aksumite kingdom and the Gujarat region (cf. Tomber, 2003).

Therefore, despite a lack of evidence for any clear direct influence of Islamic ceramic styles on the local wares at Harlaa there was still evidence for potential influences through the Islamic trade network that Harlaa became part of. Most of the changes identified in the local ceramics occurred in Phase 2a-2b (11th – Mid 13th century), which was the period that Islam was likely introduced to Harlaa (Insoll et. al., in prep). Thus, the changes in the ceramics could have come about due to the various influences which arrived along with access to the Islamic trade network.

7.6.2 Islamic Foodways

7.6.2.1 Outline of Islamic foodways

Archaeological and historical study of foodways has tended to focus on certain areas; North America, Mesoamerica, the Andes, mainland Europe, and south-east Asia, while comparatively little has been undertaken in the Middle East and Africa (Insoll, 1999: 5; Vroom, 2000: 201; Haaland, 2007; 2012; Twiss, 2012: 361). This meant that despite the importance of foodways in Islamic tradition, there has been little academic work on foodways and religion with regards to Islam in the medieval period (Norman, 2012: 416).

Food laws are built into Islamic beliefs and teachings, prohibiting the consumption of certain animals, notably pork, which was the only meat specifically forbidden in the Qur'an, and mandating that *halal* (lawful) animals be killed in a particular way for consumption. Mind-altering substances, particularly alcohol, were prohibited, although which substances were prohibited varied depending on sect and region. These food laws were derived first from the

Qur'an and secondly from the *hadith*, the sayings and deeds of Muhammad, which were further elaborated by the various Islamic schools. Unfortunately, it was unlikely that any of these prohibitions and practices would be visible purely through the ceramic record, and so further discussion on these will have to include the archaeobotanical and archaeozoological assemblages to investigate which animals and plants were being consumed at Harlaa. Also, the presence of prohibited animals in food assemblages did not necessarily indicate that Muslims were not present, as was seen with butchered pig, dog, cat and pony or horse at Bahrain (MacLean & Insoll, 2003: 563, 567-568; see also Insoll, 1999: 94-102). Moderation, hospitality and charity were encouraged by Muhammad 'as a means of creating common bonds and sharing in common blessings' (Fieldhouse, 2003: 293). Fasting is an important part of Islamic practice and is one of the Five Pillars of Islam (Insoll, 1999: 18-19; 2003: 13; Fieldhouse, 2003: 293-296; Norman, 2012: 416-417). These together meant that communal eating and the sharing of food was common, which may potentially be visible in the ceramic record.

Magness (2010: 136) noted that 'Early Islamic cuisine is characterized by variety, encompassing the preparation of a wide variety of different dishes or the same dish prepared in different ways, and offering a variety of dishes at a single meal... Table etiquette was predicated on sharing out of common dishes, so that for example good manners dictated one should take small bits of food and leave the best pieces for others... water and non-alcoholic drinks flavoured with fruit juice, spices, honey, and rose water were offered.' Additionally, as there was no recommendation in Muslim tradition to use utensils like plates or spoons, diners would often take food from the communal dishes using their hands (Levanoni, 2005: 219). It was important to note that most of our understanding of medieval Islamic foodways and cuisine is based on the upper classes, and those of lower classes would have likely had a simpler fare. Additionally, while there may be Islamic culinary traditions, the exact nature of those traditions varied depending on region and Islamic school (Vroom, 2000; Fieldhouse, 2003; Magness, 2010; Norman, 2012). A tradition of communal eating from shared dishes is also common in Ethiopia today, both in Christian and Muslim communities. This meant that an absence of smaller vessels for

individual consumption could have been indicative of a similar tradition of communal eating.

During his travels through the Adal Sultanate in the early 1840s (see Chapter 1.4.1.2 and Chapter 4.6) Johnston (1844a; 1844b) made some brief observations on the food. The bread was described as 'flat cakes of about one pound each in weight... very heavy and of a disagreeable acid taste' (Johnston, 1844a: 52), and appeared distinct to the *injera* common now in Ethiopia. Another bread made of *jowaree* flour was described as '...a crumbly dust, of a bright red colour, very sour to the taste' (Johnston, 1844a: 189; see also 1844a: 8). The staple meal largely consisted of rice and milk, occasionally with meat, usually served in bowls, and was sometimes eaten communally (e.g. Johnston, 1844a: 36,87,212,271). Johnston also noted the slaughtering and cooking of an antelope (1844a: 159-161) and a bullock (1844a: 291-292). Both times the meat was stewed or boiled in pots and eaten together by the travelling group.

7.6.2.2 Islamic Foodways and Harlaa

A wide range of vessels of different forms and sizes were used for serving the variety of dishes that made up the Islamic cuisine (Magness, 2010:137-138). As was discussed above, both burnished carinated and open Earthenware/Plainware bowls at Harlaa came in a wide range of sizes, some of which were clearly too large for a single individual. This suggested that some degree of communal eating was taking place at Harlaa. While different in form to the carinated bowls from Harlaa, smaller bowls in the 10-20 cm range were common among the Islamic glazed ceramics (e.g. Rougeulle, 2015: 254-267; Watson, 2004). This showed that these bowls suitable for a single individual's serving still played an important role in Islamic foodways despite the tradition of communal eating. These smaller bowls may have been used for serving smaller quantities of certain dishes or for individual helpings taken from the larger communal serving dishes (Magness, 2010: 137). The rim diameters of the local ceramics tend to increase from Phase 2b (see Chapter 5.6.4.3), which could suggest that larger meals were being prepared after the introduction of Islam, potentially related to communal meals. Therefore the range of bowls and

potential serving dishes identified at Harlaa could have been suitable for communal eating.

Bread was an important part of the traditional Islamic cuisine (Izdebski et al., 2018; Magness, 2010: 136; Levanoni, 2005), and is considered sacred in Islam (Fieldhouse, 2003: 297). Unfortunately, while wheat and barley were identified at Harlaa (Insoll, in prep.; Beldados, in prep.), as there is currently no evidence for ovens it is unclear what kinds of bread were produced, or even if bread was produced at all. The open form of the bowls would have been suitable for consuming their contents using bread, so a form of bread could have been consumed at Harlaa. There was evidence, both in African contexts (MacLean & Insoll, 1999: 88; Lyons & D'Andrea, 2003; Lyons, 2007), and elsewhere (see Bartłomiej, 2015: 111; Kyriakopoulos, 2015: 256 for examples from Iron Age and recent Mediterranean) for the production of bread without the use of ovens. Instead, large lids, bowls and or plates have been used for the baking of bread, likely flatbreads, without the use of ovens. Apart from some potential large bowls, little in the way of vessels which could have been used in this manner for baking bread have been identified at Harlaa.

Unfortunately, without the completion of archaeobotanical and archaeozoological analysis at Harlaa it was challenging to identify Islamic cuisine and foodways at Harlaa. However, there were no clear indications from the local ceramics of traditions which would not be suitable for Islamic foodways. As was discussed above, there were few exact parallels between the local ceramics from Harlaa and the typical Islamic forms. This suggested that if the people of medieval Harlaa did adopt aspects of Islamic foodways they did not directly copy the associated Islamic ceramics locally. However, the forms identified at Harlaa were all still suitable for serving and cooking aspects of the Islamic foodways. The imported Islamic and Chinese ceramics at Harlaa may also have had a role in the consumption of Islamic cuisine, which would limit the impact on the local ceramics. Additionally, the introduction of these forms around Phase 2a, a similar period to the proposed introduction of Islam to Harlaa, did suggest that Islamic foodways may have impacted the local ceramics at Harlaa. Unfortunately, no clear forms for serving or cooking have been identified in earlier phases, so the pre-Islamic foodways cannot currently be compared.

7.7 Conclusion

In conclusion, while the fragmentary nature of the local ceramic assemblage from the excavations has made identifying full vessel forms challenging, alongside the complete vessels recovered by local farmers a selection of forms were identified and potential uses of the vessels and wares were proposed. The chronological significance of these will be summarised alongside the results of the analysis in Chapter 5 and 6 in the next chapter. The extent to which the local ceramics could inform upon foodways at Harlaa, both generally and in respect to Islamic foodways and Islamisation at Harlaa was considered, highlighting the issues with relying primarily on ceramics and issues with the fragmentary nature of the Harlaa assemblage. The viability and limitations of the local ceramics from Harlaa as chronological indicators at various scales was discussed, which highlighted issues with the nature of the chronological changes in the local ceramics and the variability of local ceramics beyond the immediate vicinity of the site of Harlaa. Despite the variation in local ceramics from sites across the Horn of Africa, similarities and potential links between the local ceramics from Harlaa and contemporary sites both within the Horn of Africa and wider sites in the Red Sea and Indian Ocean trade networks. Islamisation at Harlaa did not appear to correlate to the adoption of clear Islamic ceramic forms into the local ceramics. However, the local ceramics appeared to still be broadly suitable for Islamic foodways. This suggested that there was no direct adoption of Islamic ceramic styles, rather access to the Red Sea and Indian Ocean trade networks opened up access to a wide range of ideas, processes and styles which were adapted and incorporated into the ceramics in different ways along the trade network. The next chapter will conclude the thesis by summarising the results and answering the research questions and goals which were outlined in Chapter 1.

Chapter 8: Conclusion

8.1 Introduction

In addition to providing a detailed analysis of a range of aspects of the local ceramics from Harlaa, this thesis has considered local ceramics from contemporary sites in the Horn of Africa and those from trade ports in the Indian Ocean trade network to situate the development of Harlaa and its ceramics within their wider context and in relation to the adoption of Islam. The results of this discussion and analysis will be summarised with regards to the four research goals outlined in Chapter 1.

8.2 A typology of the local Harlaa ceramics

The first research goal was to gain an understanding of the local ceramics from Harlaa and their development through the creation of a typology. This was done through the ceramics analysis undertaken (Chapter 5) on the assemblages from the 2015-2018 seasons at Harlaa supplemented by the results of the fieldwalking survey (Chapter 6), comparisons with ethnographic (Chapter 4) and archaeological (Chapter 2) and surface collected material, including complete vessels recovered by local farmers (Chapter 7.2; Appendix V).

Two main broad ware categories were identified, burnished wares and plainwares, which were divided into more detailed ware categories (Chapter 5.3). The burnished wares consisted of Black/Brown Burnished ware, Light Brown Burnished ware and Red Burnished ware, while the plainwares consisted of Earthenware/Plainware, Black Slipped ware and Light Brown Slipped ware. Earthenware/Plainware (79.3%) and Black/Brown Burnished ware (16.4%) were the most common ware types followed by Light Brown Burnished ware (2.9%), with Red Burnished ware, Black Slipped ware and Light Brown slipped ware being rare ware types. All the wares were handmade, and based on the variable colours, fabric hardness and widespread ethnographic parallels within Ethiopia (Chapter 4), they were likely fired in open bonfires. The clay used was likely locally sourced and no clear temper could be identified except for occasional organic temper in Earthenware/Plainware sherds (see Chapter 5.2 and 7.2.3).

A range of decorative styles were identified (Chapter 5.4), the most common of which, despite only being found on burnished wares, was unburnished patterns. This style of decoration appeared distinctive to Harlaa as few clear comparisons could be found within the archaeological literature for the Horn of Africa or wider Indian Ocean. The only other archaeological site with clear descriptions of this decoration was the temporally and spatially separate Late Aksumite site of Mifsas Bahri (Gaudiello & Yule, 2017). Incised and punctate decoration was also common across all ware types, usually consisting of simple linear patterns. Also significant were horizontal appliqué ridges, sometimes with further punctate, incised or finger pressed decoration, which were found under the rim or on the neck of Earthenware/Plainware sherds. A small number of decorated rims were significant with regards to potential chronological indicators and links with the wider Horn of Africa.

A range of nine broad rim forms were identified (Chapter 5.6.4), with Simple (41%) and Flat (27%) the most common, with Flat, Lipped rims also common on burnished wares (15%). None of the forms were clearly distinctive to Harlaa. Based on the rim forms and diameters large Earthenware/Plainware storage vessels were identified (Chapter 5.6.4.3, 7.2.2 and 7.3.3.1). Carination was fairly common at Harlaa (2.5% of sherds; Chapter 5.6.1 and 5.6.4.4), particularly among the burnished wares (92% of carinated sherds) and found from Phase 5a to Phase 2b. The burnished ware examples all appeared to be from open carinated bowls, likely used for consumption. Flat, Angled, Out-turned Earthenware/Plainware rims with roughened exteriors likely represented another form of open bowl. Two main handle forms were identified, larger circular ribbon handles, mainly associated with Earthenware/Plainware and smaller pierced lug handles, mainly associated with burnished wares. Ring bases in a variety of forms (likely due to being handmade) were common across all ware types (1.5% of sherds). Rare (four examples) sherds of burnished ware conical lids (Chapter 5.6.7) were distinctive. Finally, rare examples of Earthenware/Plainware 'stand bases' (Chapter 5.6.6 and 6.5.6), six from the excavation and four from the fieldwalking survey were potentially from braziers or incense burners based on their concentration within the mosque, or from open bowls based on parallels with other sites. Earthenware/Plainware cooking pots were identified based on complete examples recovered by local farmers

(see Chapter 7.2.1 and 7.3.3.2). Also identified among the complete vessels were small Earthenware/Plainware “tea pots” which were likely used for serving sauces.

Based on this typology it was argued that Earthenware/Plainware was primarily used for storage and production, while the other wares, particularly the burnished wares, were primarily for serving and consumption. However, this was unlikely to have been a hard divide between the wares.

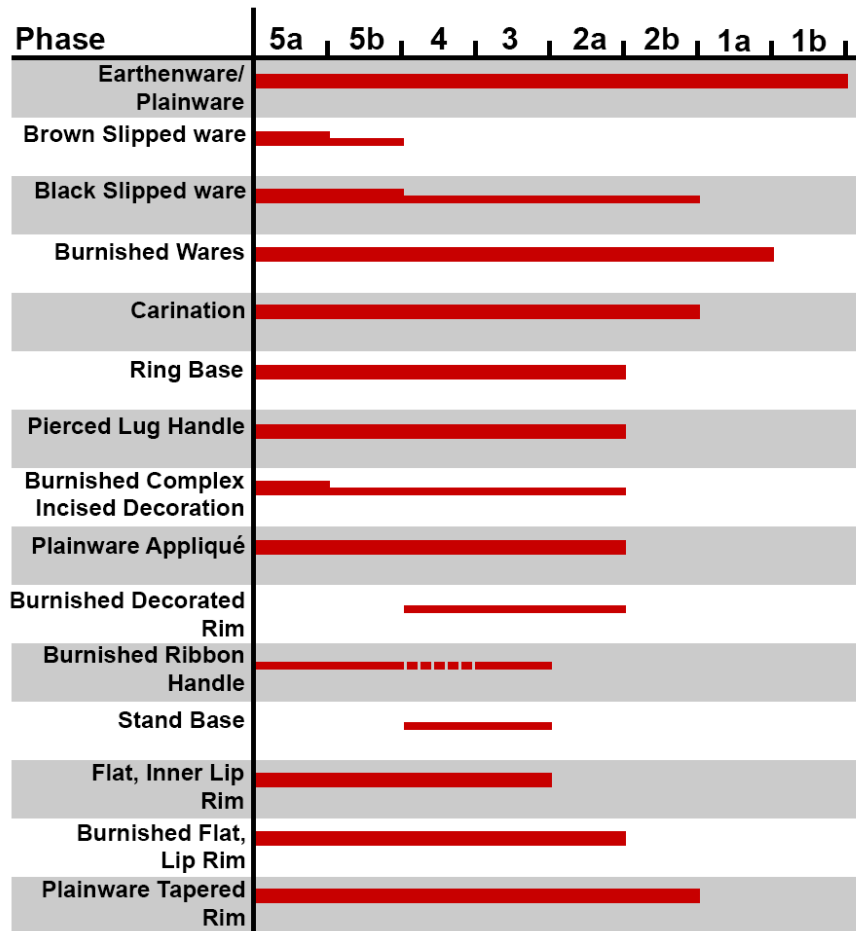


Figure 8.1: Proposed chronological indicators identified as part of the ceramic analysis

8.3 Chronological variation

Using the typology created, the second research goal was to identify any chronological variation visible in ceramic styles, forms and manufacture in the local ceramics from Harlaa. A chronology of five phases was established based on the results of Unit (B), the jewellery workshop by Insoll (see Insoll, 2018b; also Chapter 5.1.1, Table 5.1 and App.Table III.7). Three phases were further broken down into two sub-phases each based on changes in the local ceramics

and stratigraphy (Phases 5a/b, 2a/b and 1a/b). Overall, most of the ceramic wares, styles and forms at Harlaa appeared to have had a long period of use, although some chronological variation was observed (see Fig. 8.1).

Among the wares, Black Slipped wares were most common in Phase 5a-4, although were found in small quantities up to Phase 2b. Light Brown Slipped ware was concentrated in Phase 5a-b, and was likely a very late ware, potentially largely post-dating the archaeological site. The identification of Light Brown Slipped as a late ware was supported by its presence in the fieldwalking survey assemblage. Only Earthenware/Plainware was recovered from Phase 1a, the earliest phase.

Decoration was absent from Phase 1a/b across all wares, although the significance of this was not clear. Most decorative styles were present from Phase 2b-5a, including the distinctive un-burnished decoration and incised and punctate decoration. Appliqué ridges on Earthenware/Plainware sherds were absent from Phase 2b, as was finger pressed decoration. The rare unusual decorative styles, such as pinched and mat impressed, were generally from Phase 5a-b. Rare examples of Black/Brown Burnished ware sherds with rows of moulded ridges from Transect (D) of the fieldwalking survey (see Chapter 6.3.4) may have represented a late decorative style, potentially post-Medieval Harlaa. The rare burnished ware decorated rims were recovered from Phase 2b-4.

Carination was present from Phase 5a-2b, with a very low proportion in Phase 2b (see Chapter 5.6.1). Ring bases were present in similar proportions from Phase 2a-5b (around 2% of the assemblage) and completely absent from Phase 1b-2a (see Chapter 5.6.3) Pierced lug handles were recovered from Phase 2a-5b, with similar overall proportions in Phase 4-5b and 2a-3. Burnished ware ribbon handles are potentially indicative of Phase 5a-5b and Phase 3 (see Chapter 5.6.3). Despite the range of rim forms, limited chronological variation could be observed (Chapter 5.6.4). Flat, Inner Lip rims, primarily a burnished ware form, were concentrated in Phase 5b-3. There was a general decrease in the variety of forms in the earlier phases, although little which would be useful as chronological indicators. In particular Earthenware/Plainware Tapered rims were absent from Phase 1a/b, Flat, Lipped burnished ware rims were absent from Phase 1a-2a and Rounded, Lipped burnished ware rims were more common in the more recent phases, particularly Phase 5a. While rare, the stand

bases were primarily recovered from contexts associated with Phase 3-4 (including Unit [A], the mosque), with the exception of a single potential sherd from Phase 2a (see Chapter 5.6.6).

8.4 Local ceramics as chronological indicators

Building on these chronological changes identified, the next research goal was to assess the viability of the local ceramics at Harlaa as chronological indicators, considering both the site of Harlaa itself as well as the wider context within the Horn of Africa. As part of this a fieldwalking survey was undertaken (see Chapter 6) to collect surface ceramics to assess their viability as chronological indicators when compared to the excavation assemblage. While chronological variation and potential chronological indicators were identified, there were no forms or wares which were clearly distinctive of the early phases. This meant that earlier phases were largely identified by the absence of particular forms, and especially with the amount of material collected from surface surveys, it can be hard to tell if an absence is significant or simply due to the sample size. Particularly when on land which was heavily worked and farmed as well as sloping, such as at Harlaa, surface material will often be mixed and may contain material from multiple phases. Therefore without forms distinctive to particular phases, it would be impossible to separate and identify the different phases present. With regards to excavation assemblages, with sufficient density and stratigraphy, there did appear to be some utility in some of the local ceramics as chronological indicators.

There was a noticeable change in the local ceramics around Phase 2a-b, with the introduction of Carination and burnished ware Flat, Lip rims in Phase 2b and ring bases, pierced lug handles, complex incised decoration on burnished wares, Earthenware/Plainware appliqué ridges and potentially burnished ware decorated rims. These changes were potentially related to Harlaa gaining access to wider trade networks alongside the introduction of Islam. Brown Slipped ware did appear to be a good indicator of Phase 5a-b. While Black Slipped ware was most common in Phase 5a-b, the small quantities present until Phase 2b limited its viability as a chronological indicator. The complete absence of burnished wares from Phase 1a was striking, and potentially represented early occupation of the site.

Beyond Harlaa the use of the local ceramics as chronological indicators was extremely limited. Some potential sites in the vicinity of Harlaa, such as Hulul (see Chapter 7.4.1.1) showed potential similarities with the Harlaa local ceramics, and so comparisons may be possible. However, most, including Hubeyta (see Chapter 7.4.1.4), the Chercher mountains sites (see Chapter 2.5, 7.4.1.4 and 7.5.1) and Harar (see Chapter 2.9 and 7.4.1.3) had their own distinct local ceramic traditions, limiting the use of the local ceramics from Harlaa as chronological indicators beyond Harlaa.

8.5 Local ceramics, Islamisation and contact

The final research goal was to consider both the typology and chronology of the local ceramics with regards to the introduction of Islam and Islamisation at Harlaa as well as potential evidence for contact with the wider trade network through the local ceramics.

8.5.1 Local ceramics and contact

While there was no clear evidence for the movement of local ceramics from Harlaa along the trade routes or to other sites in the Horn of Africa, potential stylistic parallels, influences and exchanges were observed (see Chapter 7.5). In the vicinity of Harlaa parallels were observed between the stand bases and bowls with legs attached to plates from the Chercher mountains sites, although the exact form of the bases was different. Bases similar to the stand bases were also observed at Handoga as well as rare examples from the Shay culture site of Qopros and the Red Sea port of Suakin, all of which showed evidence for being part of the same trade network as Harlaa. The Earthenware/Plainware appliqué ridges also had parallels with examples from the Chercher mountains. The rare decorated rims from Harlaa had parallels with the Islamic towns in Somaliland, where they were much more common. The rims with the closest parallels to the Somaliland Islamic towns from Harlaa were all from Phase 5b-4, which fit with the later date proposed for these sites. Decorated rims were also observed at Handoga and the Chercher mountains sites as well as on locally produced ceramics from Yemen (e.g. Zabid and Sharma). The only potential local ceramic from Harlaa that was exported was a Light Brown Burnished ware sherd from an unidentified

Medieval Islamic town visited by Curle in the 1930s (see Chapter 7.5.2.1). Rare potential examples of the un-burnished pattern decoration were also observed at the Chercher mountains and Shay culture sites. Carination was common on the Shay culture ceramics, although of a distinctive local form, such as the 'flying saucer' bottles. The primary burnished or polished wares which were travelling along the Indian Ocean and Red Sea trade networks appeared to be from Gujarat and Sindh, in north-western India and Pakistan. Mainly cooking vessels, these were often carinated, although the rims and forms were distinct compared to the Harlaa burnished ware carinated open bowls. A single unique Black/Brown Burnished ware rim from Harlaa was of a similar form to these vessels. The punctate decoration found above the carination on these Indian vessels also had some parallels to examples from Harlaa. These were significant as potential links with Gujarat and Sindh have been identified in other aspects of the Harlaa assemblage (see Chapter 1.4.2.1, 7.5.3 and 7.6).

Therefore, while there appears to have been very limited movement of local ceramics between sites which were part of the Red Sea and Indian Ocean trade networks within the Horn of Africa, certain styles and forms were present at different sites, although they manifested in different ways at each site. This suggested that instead of vessels and manufacturers travelling along the trade routes, instead ideas, styles and methods were transmitted, which were then adopted and adapted into the local repertoire.

8.5.2 Local ceramics and Islamisation

The forms identified as part of the typology of the local ceramics were considered alongside Islamic forms from Islamic trade ports along the Red Sea and southern Arabian coast as well as potential relationships between the local ceramics and Islamic foodways. No direct parallels were observed between the local ceramics from Harlaa and typical Islamic forms or decoration. As discussed above (section 8.4), many of the changes identified in the local ceramics (see Fig. 8.1) occurred around Phase 2a-b (11th – mid 13th cent.), which correlate with the period proposed for the introduction of Islam to Harlaa (Insoll et. al, in prep.). Therefore, while apart from ring bases, none of the introduced forms had clear parallels with Islamic forms, these changes were

potentially due to access to a wide range of styles and ideas through the Red Sea and Indian Ocean trade networks.

Islamic foodways were varied across the Islamic world, however religious food laws meant that there were some broad trends (see Chapter 7.3.3 and 7.6.2). Communal eating was encouraged, and large bowls were likely for serving communal meals, with smaller bowls for individual servings, and vessels such as the two complete 'tea pots' for serving sauces accompanying the meals. As alcohol was usually prohibited by Islamic food laws, it was noteworthy that there was no clear evidence for the brewing of beer on the local ceramics. The complete cooking vessels suggested the cooking of high liquid content meals such as stews, which were a common Islamic style of food (Fieldhouse, 2003; Magness, 2010). Additionally, the imported Islamic ceramics at Harlaa, which included both glazed and unglazed wares, may have played a role in the serving and consumption of food, which would have limited the impact of Islamic foodways on the local ceramics. Further consideration of the foodways at Harlaa requires the completion of the faunal and botanical analysis at Harlaa.

8.6 Conclusion

8.6.1 Further research


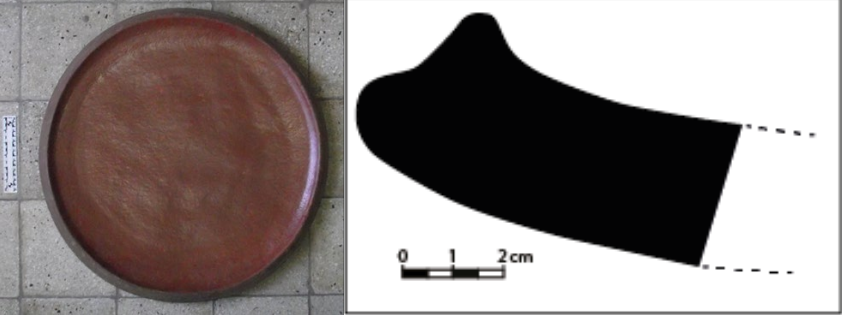
While this thesis has provided valuable analysis and discussion of the local ceramics from Harlaa, their chronology, and situated them within the Horn of Africa and the wider Red Sea and Indian Ocean trade networks, it has also highlighted areas where further research is required. More work could be undertaken with regards to the local ceramics from Harlaa, particularly with respect to further refining the Earthenware/Plainware classification, which was kept broad here due to time constraints. This thesis has shown that more archaeological research is clearly required at Islamic sites in the Horn of Africa, in particular the Dahlak Islands and sites associated with the Shoa, Ifat and Adal sultanates. The research undertaken by the *Becoming Muslim* project at sites such as Harar (Insoll, 2017; Insoll & Zekaria, 2019), and González-Ruibal et. al. (2017) in Somaliland are a promising start, however only preliminary information is currently available on the local ceramics from these projects. Further research at other Islamic sites in the Horn of Africa would allow the local

ceramics from Harlaa to be better situated within their wider Islamic context in the Horn of Africa, and to compare and contrast the nature and development of local Islamic ceramics within the region. Further research into the potential connections between Harlaa and India would allow the agency and active participation of East Africans in the Indian Ocean trade network to be explored. This is now a focus of ongoing research (e.g. Insoll, in prep; Teklehimanot, in prep.).


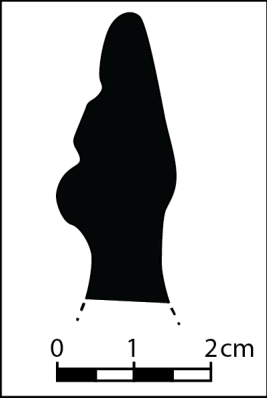

8.6.2 Summary of results



In conclusion, a typology of the local ceramics from Harlaa was created which highlighted the key wares, forms and styles present at Harlaa and their role as potential chronological indicators. While chronological changes were identified among the local ceramics, their nature, with the long use of many forms and the lack of forms purely distinctive to early phases, limited their viability as chronological indicators outside of certain contexts. A concentration of changes in the local ceramics around Phase 2a-b correlated with the proposed introduction of Islam at Harlaa. However, these changes were not directly associated with the adoption of Islamic forms. This alongside comparisons with the local ceramics from other sites with links with the Red Sea and Indian Ocean trade networks suggested that largely ideas and styles were travelling along the trade networks as opposed to physical vessels or potters from sites within the Horn of Africa.



Appendix I – Oromo Ethnographic ceramics from Dire Dawa region in the ARCCH, Addis Ababa



| | | | |
|--|--|--------------------------|-------------------------------------|
| Accession Code: | 99 | Description: | Large handled jug |
|  | | | |
| Base: | Rounded | Fabric Colour: | Red |
| Fabric Finish: | Smoothed | Rim Form: | Flat, Lip Out-turned |
| Rim Diam: | 15.5 cm | Rim Thickness: | 17.6 mm |
| Vessel Height: | 55.5 cm | Max Width (Body): | 35 cm |
| Wall Thickness: | 10 mm | Fabric: | Small-medium inclusions, black core |
| Notes: | Decorated with appliqué ridges, has 3 vertical ribbon handles, handle diam: 2.5 cm | | |
| Accession Code: | 2013-4a | Description: | Flat plate for cooking Injera |
|  | | | |
| Base: | Shallow Rounded | Fabric Colour: | Red |
| Fabric Finish: | Smoothed & painted interior, rough exterior | Rim Form: | "Tapered" |
| Rim Diam: | 60 cm | Rim Thickness: | |
| Vessel Height: | 5 cm | Max Width (Body): | 60 cm |
| Wall Thickness: | 25 mm | Fabric: | Some coarse inclusions |
| Notes: | Exterior rough finish very similar to some Harlaa sherds throughout sequence | | |



| | | | |
|--|--|--------------------------|---------------------------------|
| Accession Code: | 2013-4b | Description: | Unfired lid for Injera plate |
|  | | | |
| Base: | N/A | Fabric Colour: | Brown/Grey |
| Fabric Finish: | Roughly smoothed | Rim Form: | Simple |
| Rim Diam: | 64 cm | Rim Thickness: | |
| Vessel Height: | 15 cm (20 cm with handle) | Max Width (Body): | 64 cm |
| Wall Thickness: | | Fabric: | Sun dried mud with straw temper |
| Notes: | Sun dried mud lid with ribbon handle, likely over a woven basket frame (Abate pers. comm.) | | |
| Accession Code: | 2013-1 | Description: | 3 stands for 2014-4 |
|  | | | |
| Base: | Open stand, Flat rim | Fabric Colour: | Red/Black |
| Fabric Finish: | Roughly smoothed | Rim Form: | Simple |
| Rim Diam: | 11-12x14-15 cm | Rim Thickness: | 9 mm |
| Vessel Height: | Slope from 14.5-16 cm | Max Width (Body): | |
| Wall Thickness: | 7 mm for base | Fabric: | |
| Notes: | | | |



| | | | |
|--|--|--|--------------------|
| Accession Code: 1089a | | Description: Doro Wot pot | |
|  | |  | |
| Base: | Rounded | Fabric Colour: | Red/Brown/Black |
| Fabric Finish: | Burnished interior and exterior except for exterior of base | Rim Form: | Triangular Tapered |
| Rim Diam: | 41.5 cm | Rim Thickness: | 19 mm |
| Vessel Height: | 20.5 cm | Max Width (Body): | 46 cm |
| Wall Thickness: | 10 mm | Fabric: | |
| Notes: | 2 sets of 2 unpierced lug handles, 1 set on rim, 1 set on body, Type B carination towards base | | |
| Accession Code: 1089b | | Description: Lid for Doro Wot pot | |
|  | | | |
| Base: | N/A | Fabric Colour: | Red/Brown/Black |
| Fabric Finish: | Burnished exterior, smoothed interior | Rim Form: | Flat |
| Rim Diam: | 40.5 cm | Rim Thickness: | 11 mm |
| Vessel Height: | 7 cm (12.5 cm to handle) | Max Width (Body): | 40.5 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | 4 piercings surrounding ribbon handle, handle diam: 23x20 mm | | |

| | | | |
|--|---|--------------------------|--------------------|
| Accession Code: | 2013-15a | Description: | Shiro Wot pot |
|  | | | |
| Base: | Rounded | Fabric Colour: | Red/Black |
| Fabric Finish: | Smoothed & painted, except on base which is roughly smoothed | Rim Form: | Triangular Tapered |
| Rim Diam: | 23.5 cm | Rim Thickness: | 20 mm |
| Vessel Height: | 16 cm | Max Width (Body): | 32 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | 2 lug handles on rim, Type B carination with incised carination | | |
| Accession Code: | 2013-15b | Description: | Shiro Wot pot lid |
|  | | | |
| Base: | N/A | Fabric Colour: | Red/Black |
| Fabric Finish: | Smoothed & Painted | Rim Form: | Simple |
| Rim Diam: | 22 cm | Rim Thickness: | 7 mm |
| Vessel Height: | 5.5 cm (8 cm to handle) | Max Width (Body): | 22 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | Ribbon handle diameter: 18x16 mm | | |

| | | | |
|--|---|--------------------------|-------------------------|
| Accession Code: | N/A | Description: | Large Tej jar |
|  | | | |
| Base: | Rounded | Fabric Colour: | Red |
| Fabric Finish: | Smoothed & painted up to shoulder, roughly smoothed below | Rim Form: | Flat, Lip |
| Rim Diam: | 28 cm | Rim Thickness: | 18 mm |
| Vessel Height: | 80 cm | Max Width (Body): | 65 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | Multiple appliqué ridges on neck, 3 decorated ribbon handles, handle diameter: 33x28 mm | | |
| Accession Code: | 2013-21 | Description: | Injera bread plate |
|  | | | |
| Base: | Shallow Rounded | Fabric Colour: | Red/Black |
| Fabric Finish: | Rough exterior, smoothed & painted interior | Rim Form: | "Tapered" (see 2013-4a) |
| Rim Diam: | 51 cm | Rim Thickness: | 24 mm |
| Vessel Height: | 4 cm | Max Width (Body): | 51 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | | | |

| | | | |
|--|--|--|-----------------|
| Accession Code: 2014-4 | | Description: 3 Stands for injera plates | |
|  | | | |
| Base: | Open Stand, Flat (10 cm diam) | Fabric Colour: | Red/Black |
| Fabric Finish: | Roughly smoothed | Rim Form: | Simple |
| Rim Diam: | 9-9.5 cm | Rim Thickness: | |
| Vessel Height: | 12.5 cm | Max Width (Body): | 11.5 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | Flat ribbon handle on each stand and large punctate/finger pressed decoration on top | | |
| Accession Code: 1532 | | Description: Small Injera bread plate | |
|  | | | |
| Base: | Shallow rounded | Fabric Colour: | Red-Brown/Black |
| Fabric Finish: | Roughly smoothed | Rim Form: | Simple/Rounded |
| Rim Diam: | 36 cm | Rim Thickness: | 18 mm |
| Vessel Height: | 7 cm | Max Width (Body): | 36 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | Used as lid for 73-03-2743 | | |

| | | | |
|--|--|--------------------------|--------------------------|
| Accession Code: | 73-03-3743 | Description: | Large open pot |
|  | | | |
| Base: | Rounded | Fabric Colour: | Red/Black |
| Fabric Finish: | Rough exterior, Burnished interior | Rim Form: | Flat, Out-turned |
| Rim Diam: | 38 cm | Rim Thickness: | 13 mm |
| Vessel Height: | 15 cm | Max Width (Body): | 40 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | Decorated with incised appliqué ridge | | |
| Accession Code: | 47 | Description: | "Frying pan" with handle |
|  | | | |
| Base: | Shallow Rounded | Fabric Colour: | Red |
| Fabric Finish: | Roughly smoothed & painted | Rim Form: | Flat, Angled |
| Rim Diam: | 23.5 cm | Rim Thickness: | 10 mm |
| Vessel Height: | 5.5 cm | Max Width (Body): | 23.5 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | Handle broken; width to handle break: 27.5 cm, handle width: 3.5 cm, Handle thickness: 18 mm | | |

| | | | |
|--|---|--------------------------|--------------------------|
| Accession Code: | 2013-16 | Description: | "Frying pan" with handle |
|  | | | |
| Base: | Shallow Rounded | Fabric Colour: | Red? |
| Fabric Finish: | Smoothed & painted | Rim Form: | Flat |
| Rim Diam: | 30.5 cm | Rim Thickness: | 14 mm |
| Vessel Height: | 5 cm | Max Width (Body): | 30.5 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | Width with handle: 42 cm, handle width: 3.9 cm, handle thickness: 22 mm | | |
| Accession Code: | No. 3 "Maoue" | Description: | Injera Plate |
|  | | | |
| Base: | Shallow Rounded | Fabric Colour: | Red/Black |
| Fabric Finish: | Rough exterior, smoothed & painted interior | Rim Form: | "Tapered" (see 2013-4a) |
| Rim Diam: | 53 cm | Rim Thickness: | 28 mm |
| Vessel Height: | 6 cm | Max Width (Body): | 53 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | | | |

| | | | |
|--|---|------------------------------|-------------------------|
| Accession Code: | No. 1 | Description: | Injera Plate |
|  | | | |
| Base: | Shallow Rounded | Fabric Colour: | Red/Black |
| Fabric Finish: | Rough exterior, smoothed & painted interior | Rim Form: | "Tapered" (see 2013-4a) |
| Rim Diam: | 55 cm | Rim Thickness: | 26 mm |
| Vessel Height: | 6.5 mm | Max Width (Body): | 55 cm |
| Wall Thickness: | | Fabric: | |
| Notes: | | | |

Appendix II – SEM and EDS analysis data

| Sample No. | Phase | Unit | Code | Ware | Notes |
|-------------------|--------------|-------------|-------------------|-------------|----------------------|
| 7 | 5b | HAR18(B) | HAR18(B)3-BBB-01 | Burnished | |
| 8 | 5b | HAR18(B) | HAR18(B)3-PW-01 | Plainware | |
| 9 | 5b | HAR18(B) | HAR18(B)3-PW-02 | Plainware | |
| 6 | 3 | HAR17(B) | HAR17(B)20-BBB-01 | Burnished | |
| 10 | 2a | HAR18(B) | HAR18(B)11-BBB-01 | Burnished | |
| 11 | 2a | HAR18(B) | HAR18(B)11-PW-01 | Plainware | |
| 12 | 2a | HAR18(B) | HAR18(B)11-PW-02 | Plainware | |
| 3 | 2b | HAR18(B) | HAR18(B)21-BBB-01 | Burnished | |
| 2 | 2b | HAR18(B) | HAR18(B)21-PW-01 | Plainware | |
| 1 | 1b | HAR18(B) | HAR18(B)27-PW-01 | Plainware | |
| 5 | - | MUH4 | MUH4-18(16) | Burnished | Muharraq, Bahrain |
| 4 | - | HUB19 | HUB19S/C-10 | Plainware | Hubeyta |

Table II.1: Ceramic samples selected for SEM and EDS analysis

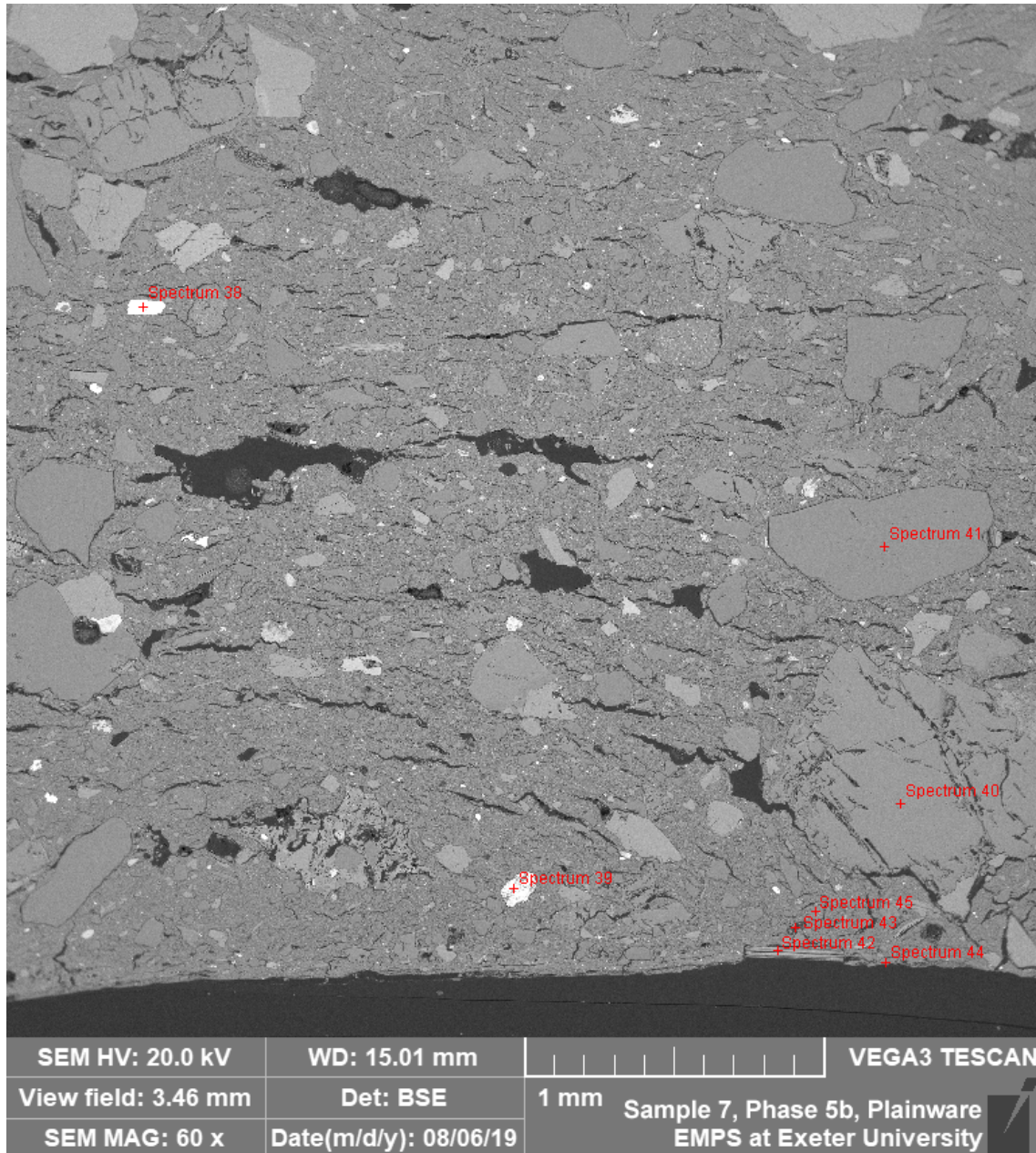


Figure II.1: SEM backscatter image of Sample 7 (Black/Brown Burnished ware sherd from Phase 5b) showing locations of EDS spectra

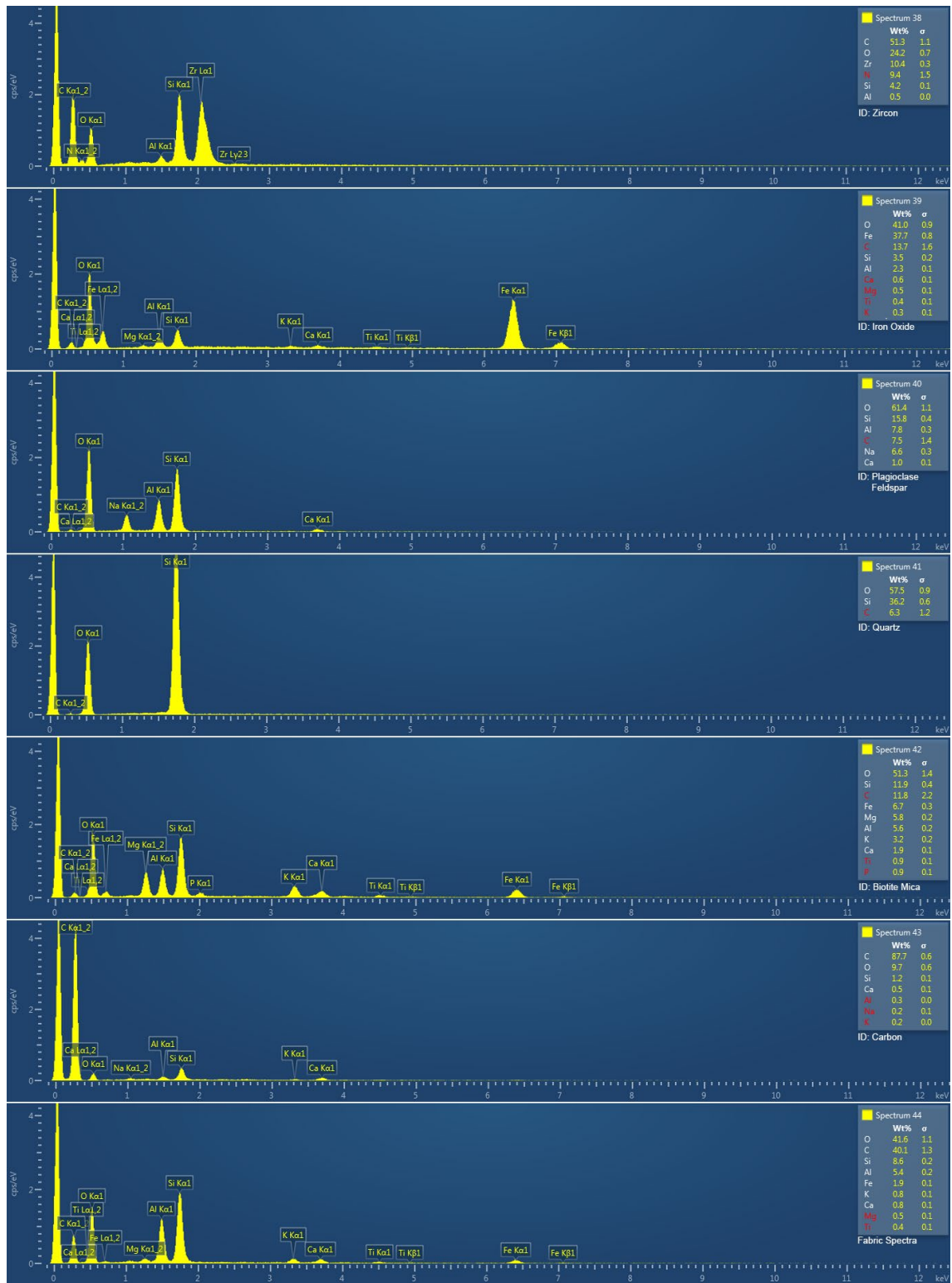


Figure II.2: EDS Spectra from Sample 7 (Black/Brown Burnished ware sherd from Phase 5b)

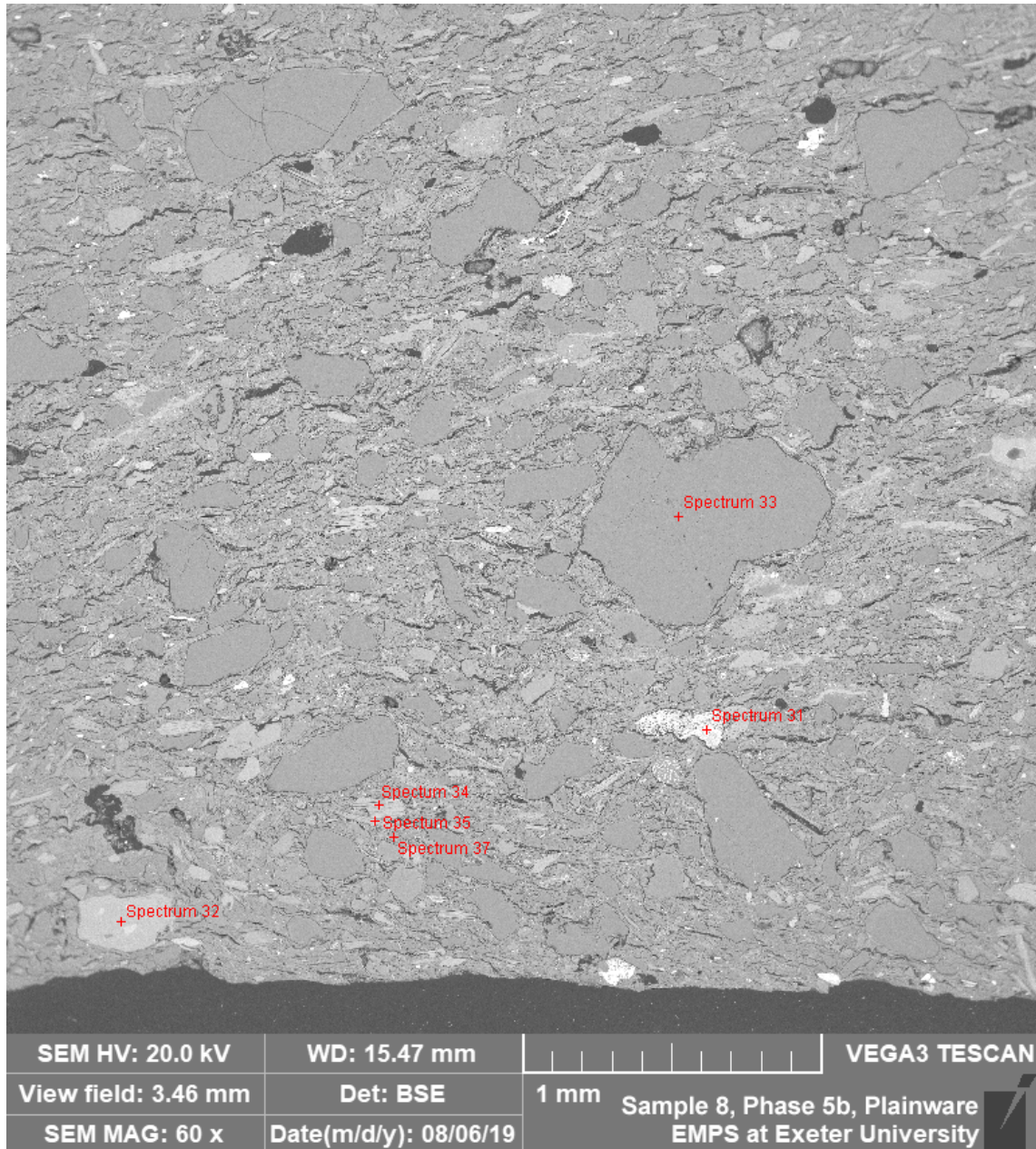


Figure II.3: SEM backscatter image of Sample 8 (Earthenware/Plainware sherd from Phase 5b) showing locations of EDS spectra

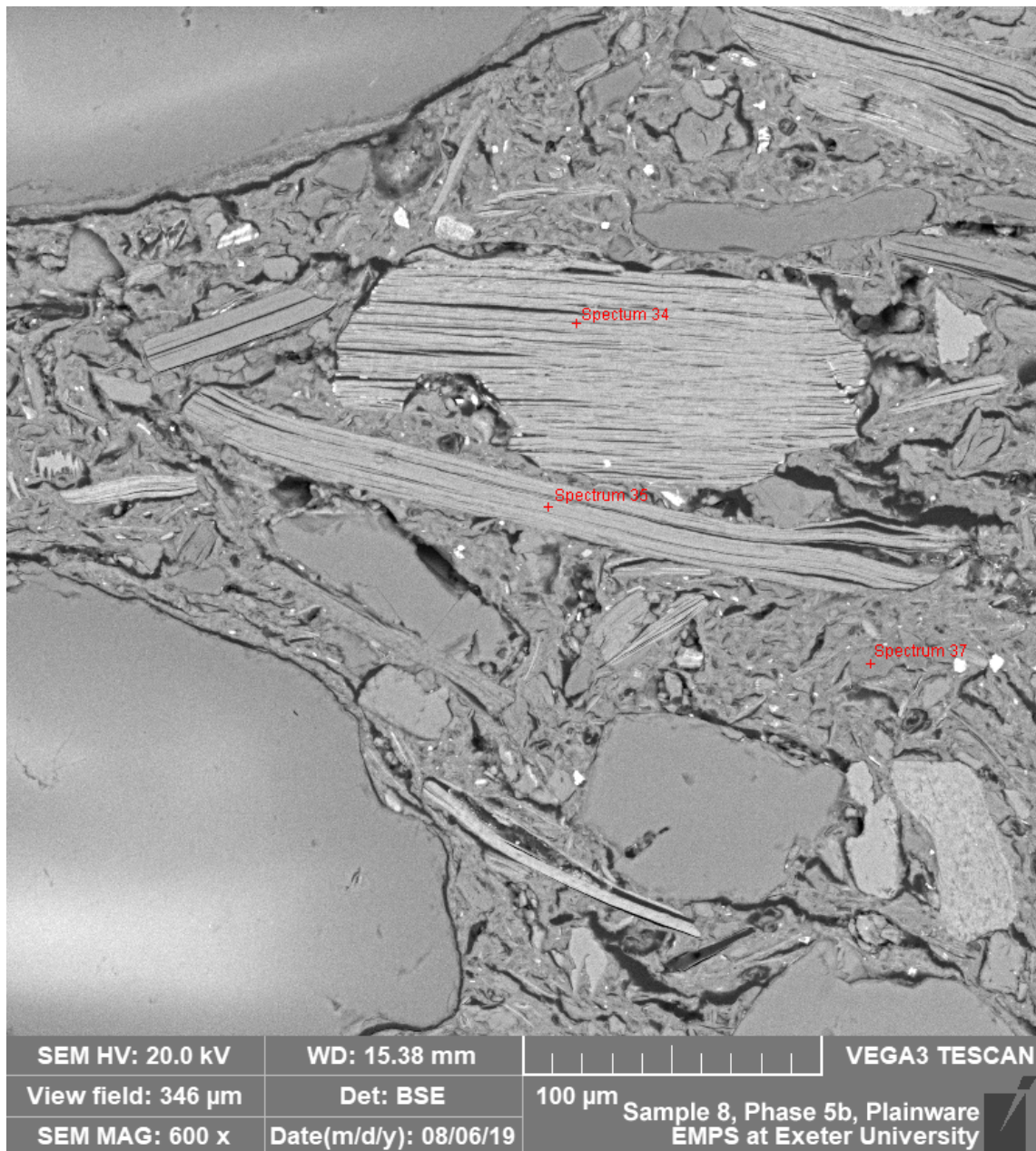


Figure II.4: SEM backscatter image of Sample 8 (Earthenware/Plainware sherd from Phase 5b) showing locations of EDS spectra



Figure II.5: EDS Spectra from Sample 8 (Earthenware/Plainware sherd from Phase 5b)

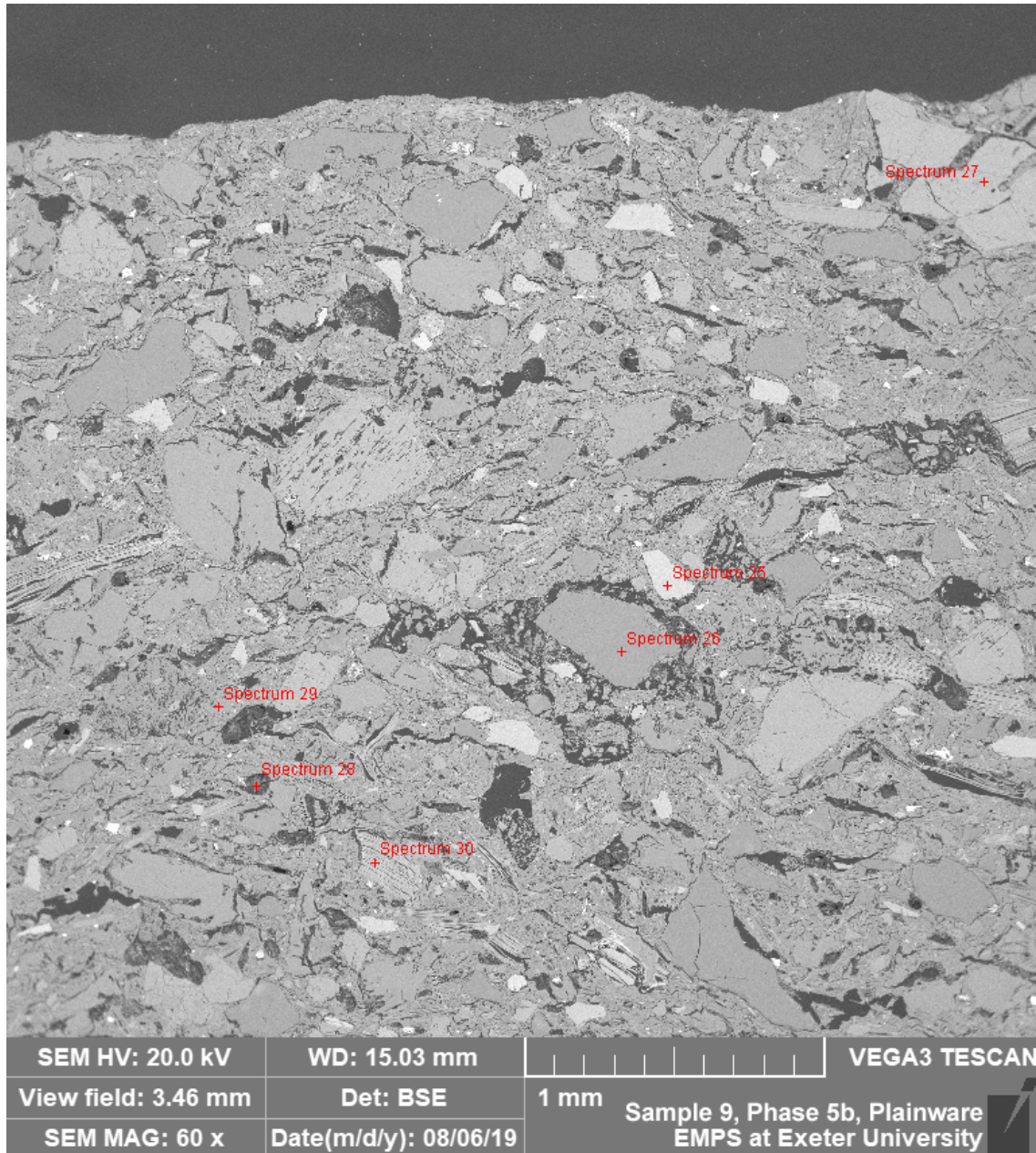


Figure II.6: SEM backscatter image of Sample 9 (Earthenware/Plainware sherd from Phase 5b) showing locations of EDS spectra

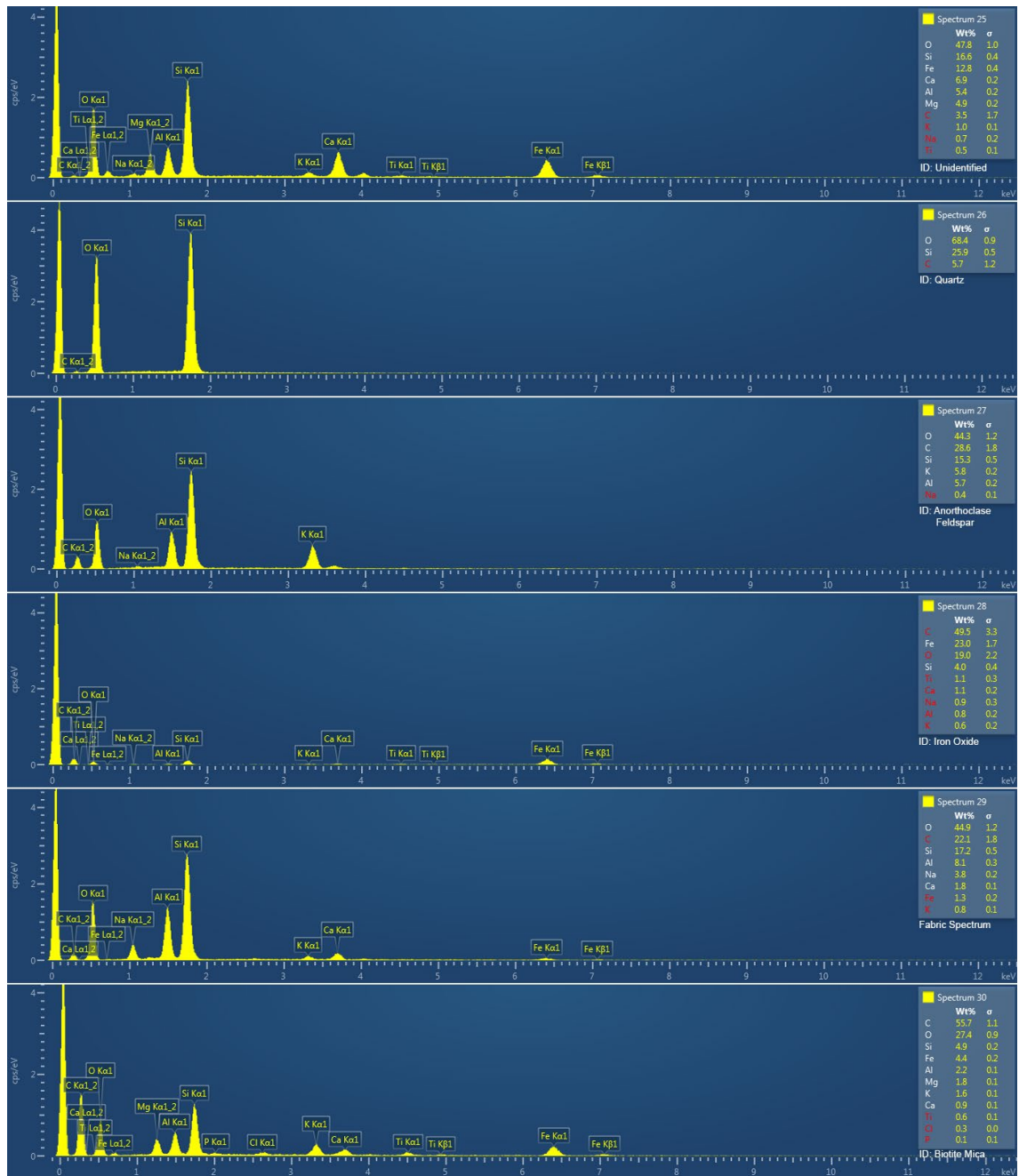


Figure II.7: EDS Spectra from Sample 9 (Earthenware/Plainware sherd from Phase 5b)

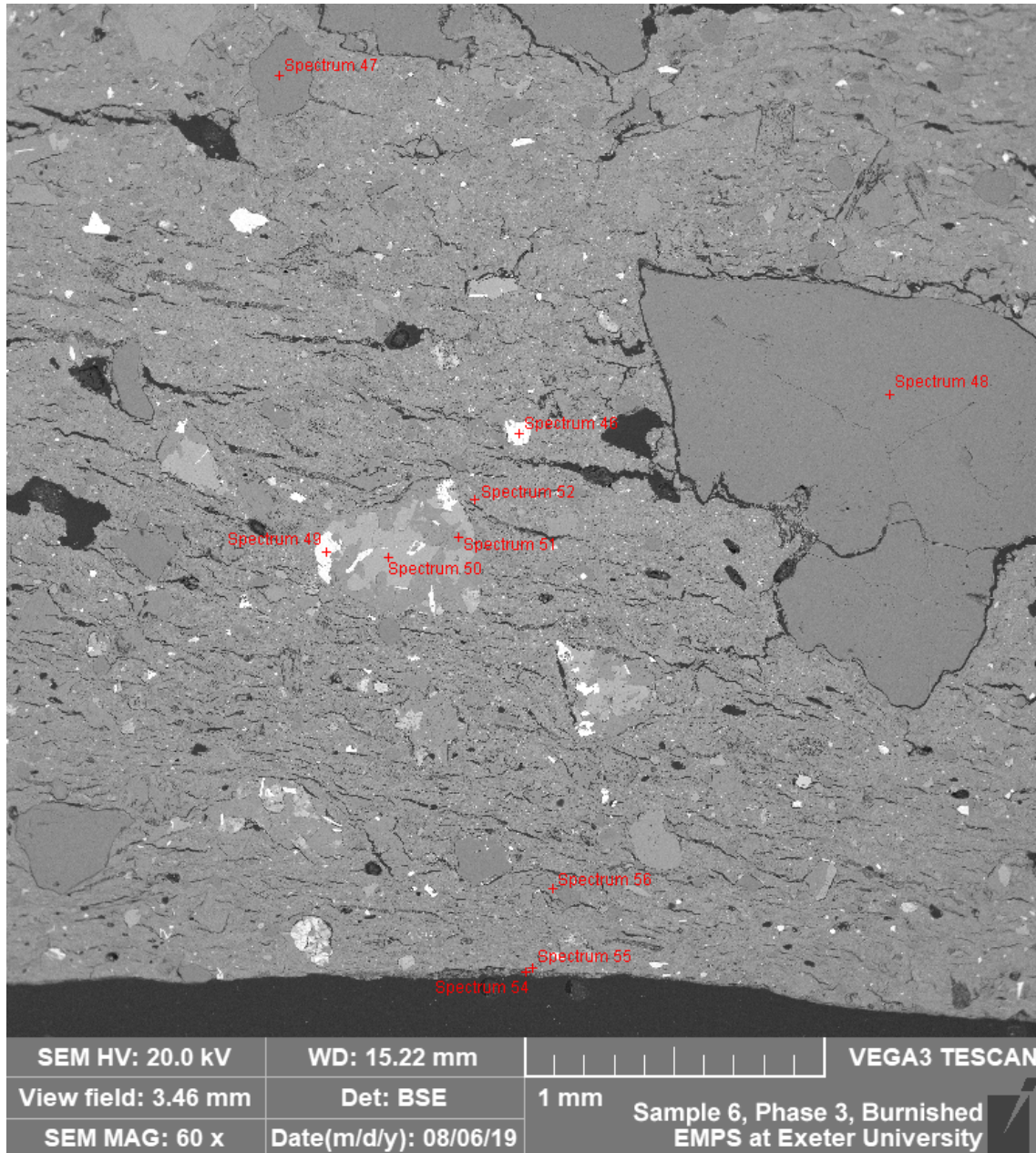


Figure II.8: SEM backscatter image of Sample 6 (Black/Brown Burnished ware sherd from Phase 3) showing locations of EDS spectra

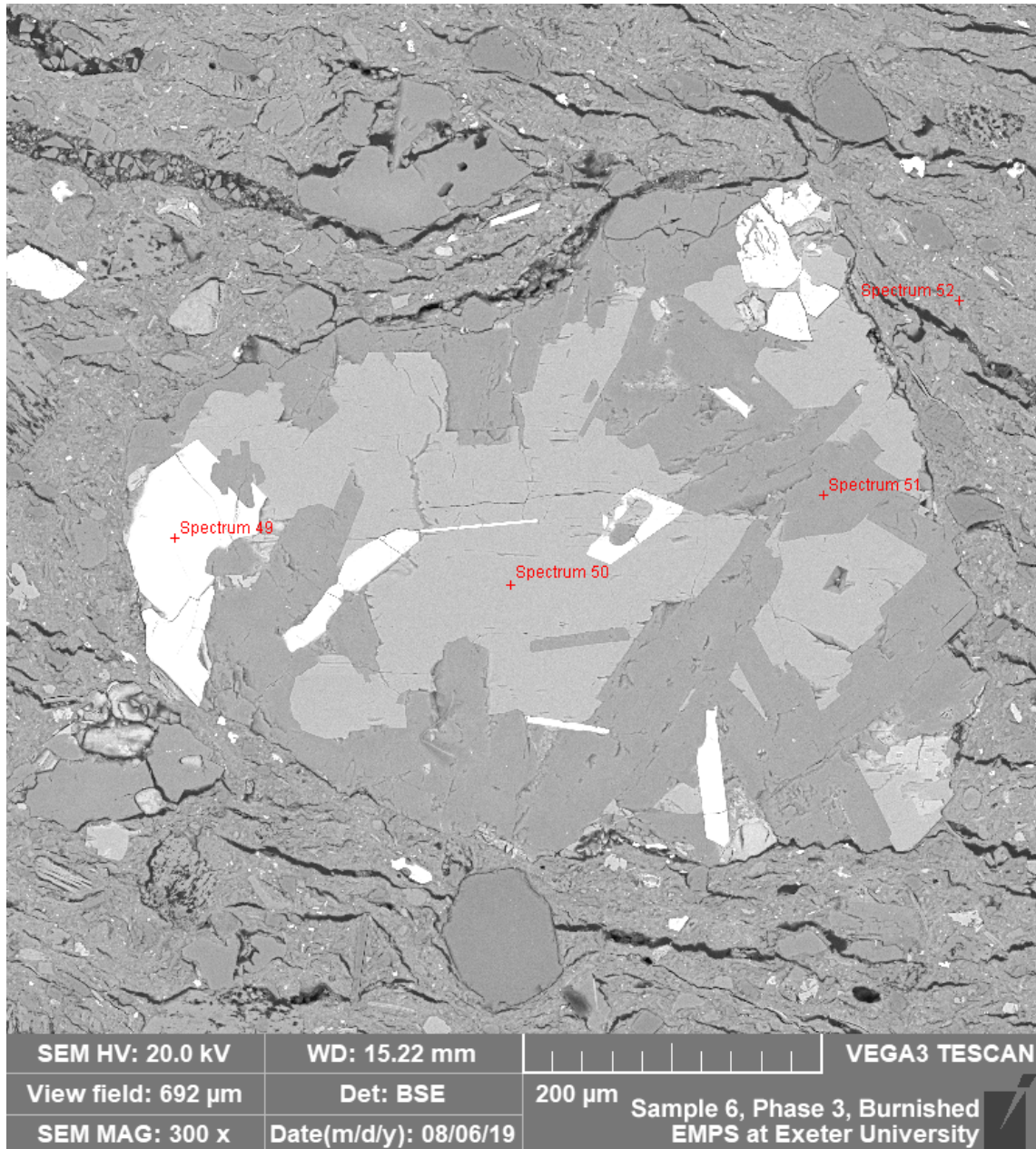


Figure II.9: SEM backscatter image of Sample 6 (Black/Brown Burnished ware sherd from Phase 3) showing locations of EDS spectra



Figure II.10: EDS Spectra from Sample 6 (Black/Brown Burnished ware sherd from Phase 3)

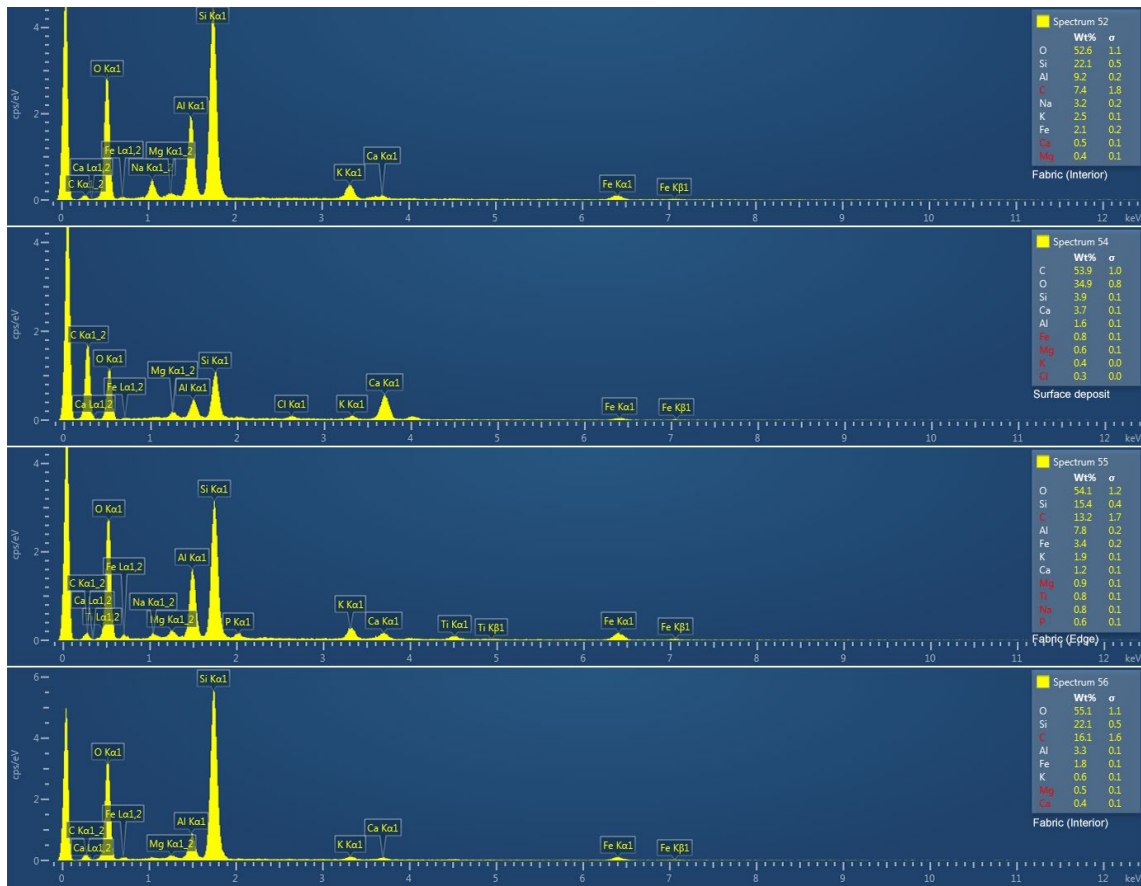


Figure II.11: EDS Spectra from Sample 6 (Black/Brown Burnished ware sherd from Phase 3)

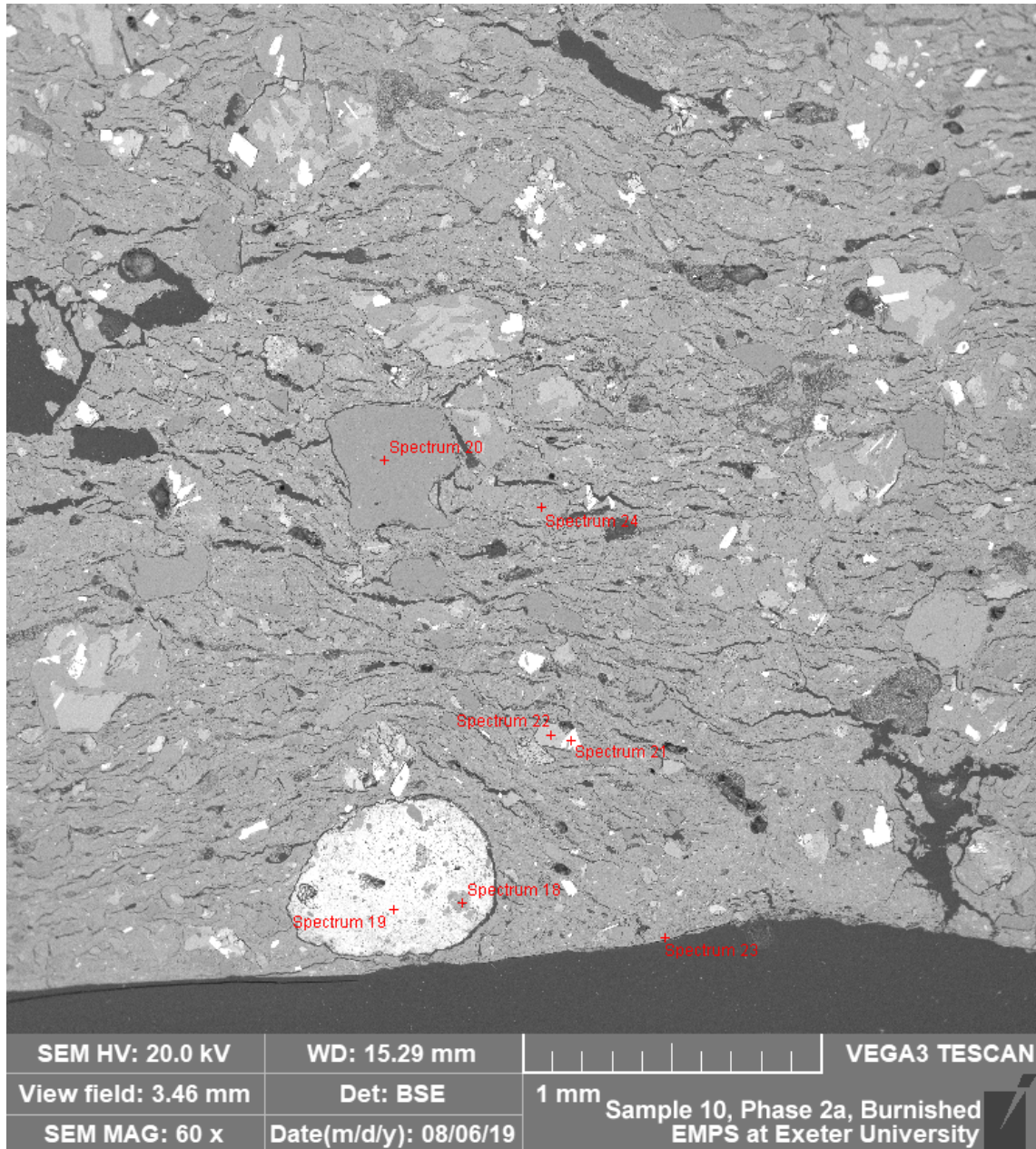


Figure II.12: SEM backscatter image of Sample 10 (Black/Brown Burnished ware sherd from Phase 2a) showing locations of EDS spectra

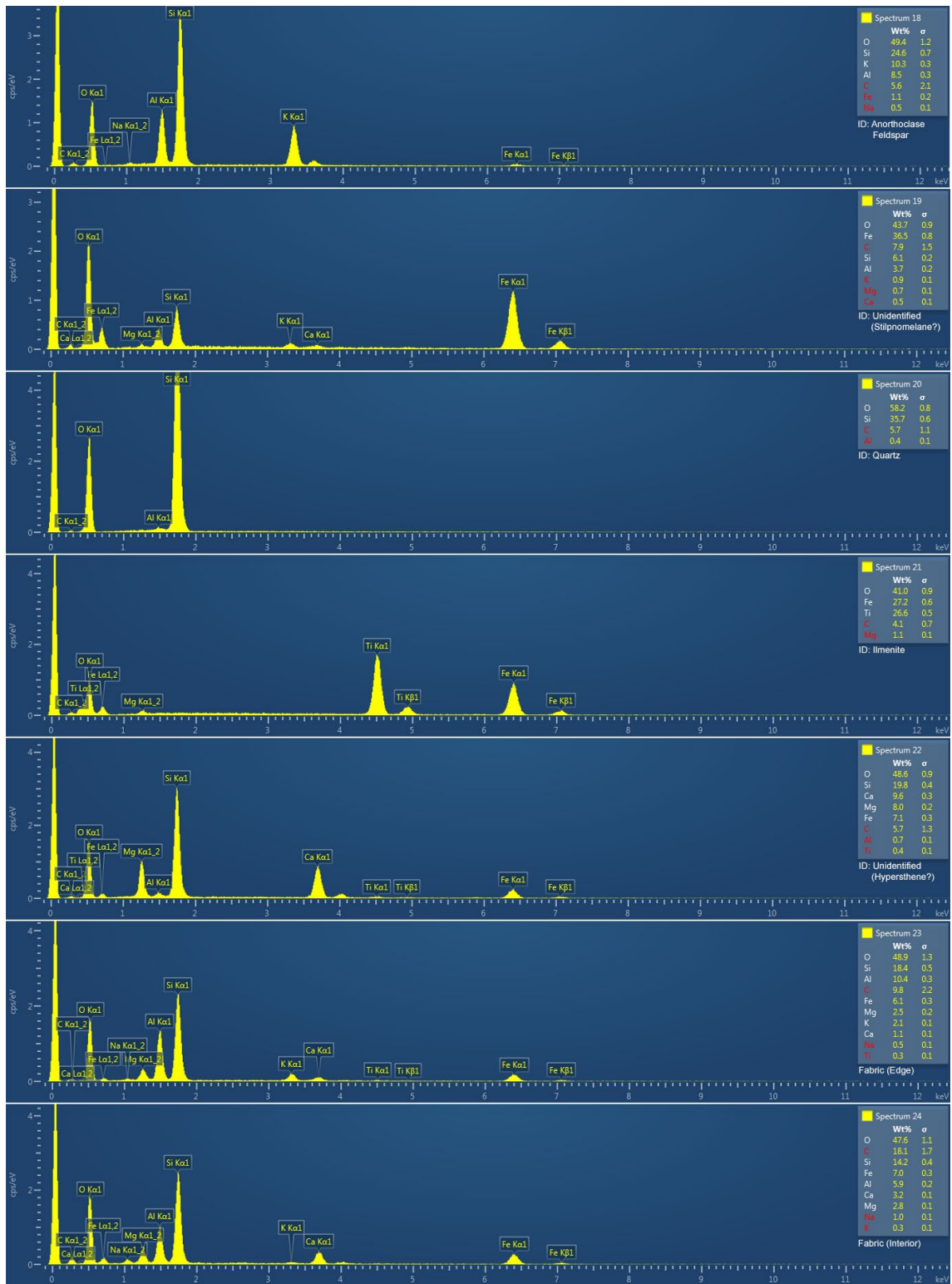


Figure II.13: EDS Spectra from Sample 10 (Black/Brown Burnished ware sherd from Phase 2a)

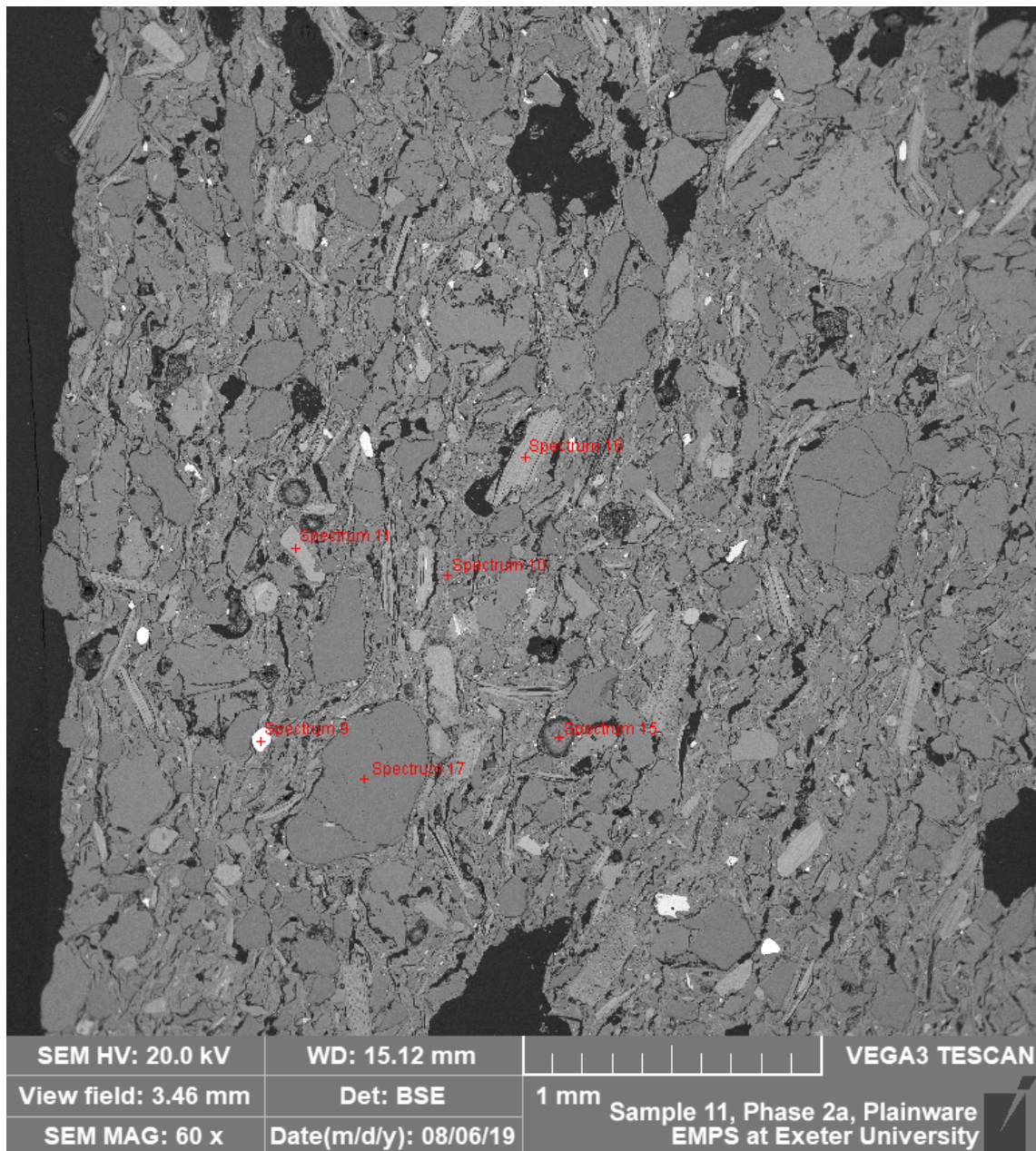


Figure II.14: SEM backscatter image of Sample 11 (Earthenware/Plainware sherd from Phase 2a) showing locations of EDS spectra

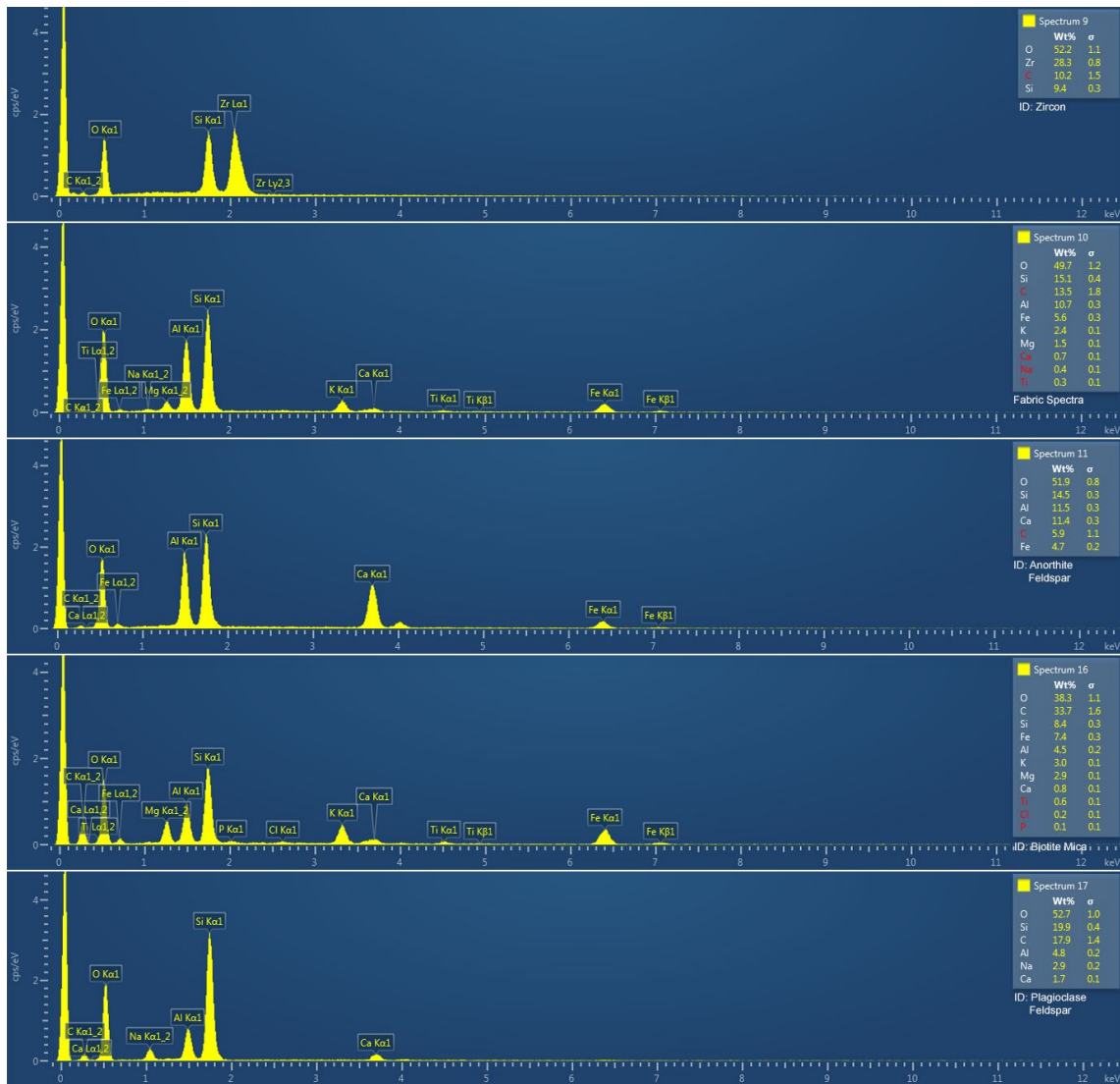


Figure II.15: EDS Spectra from Sample 11 (Earthenware/Plainware sherd from Phase 2a)

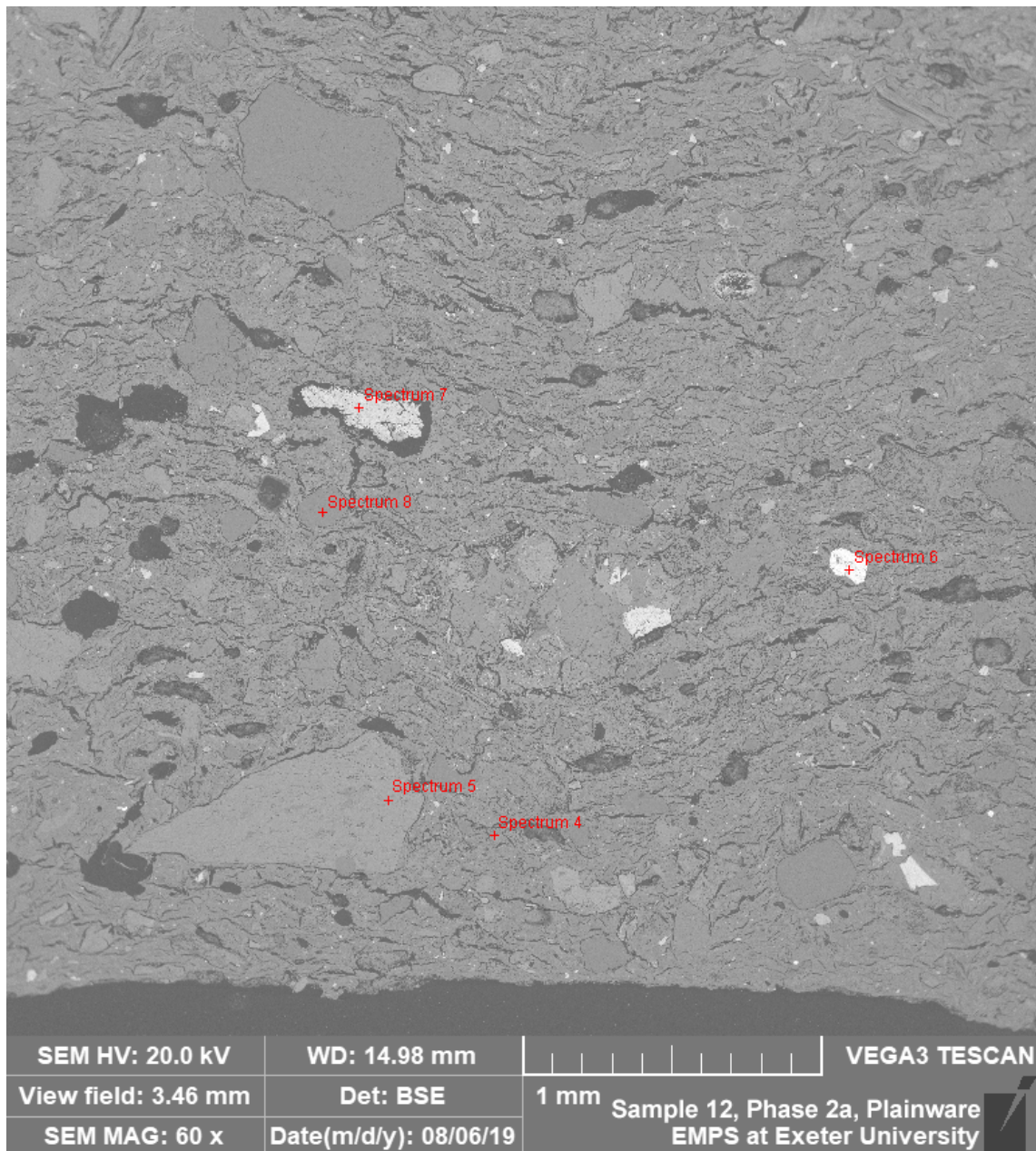


Figure II.16: SEM backscatter image of Sample 12 (Earthenware/Plainware sherd from Phase 2a) showing locations of EDS spectra

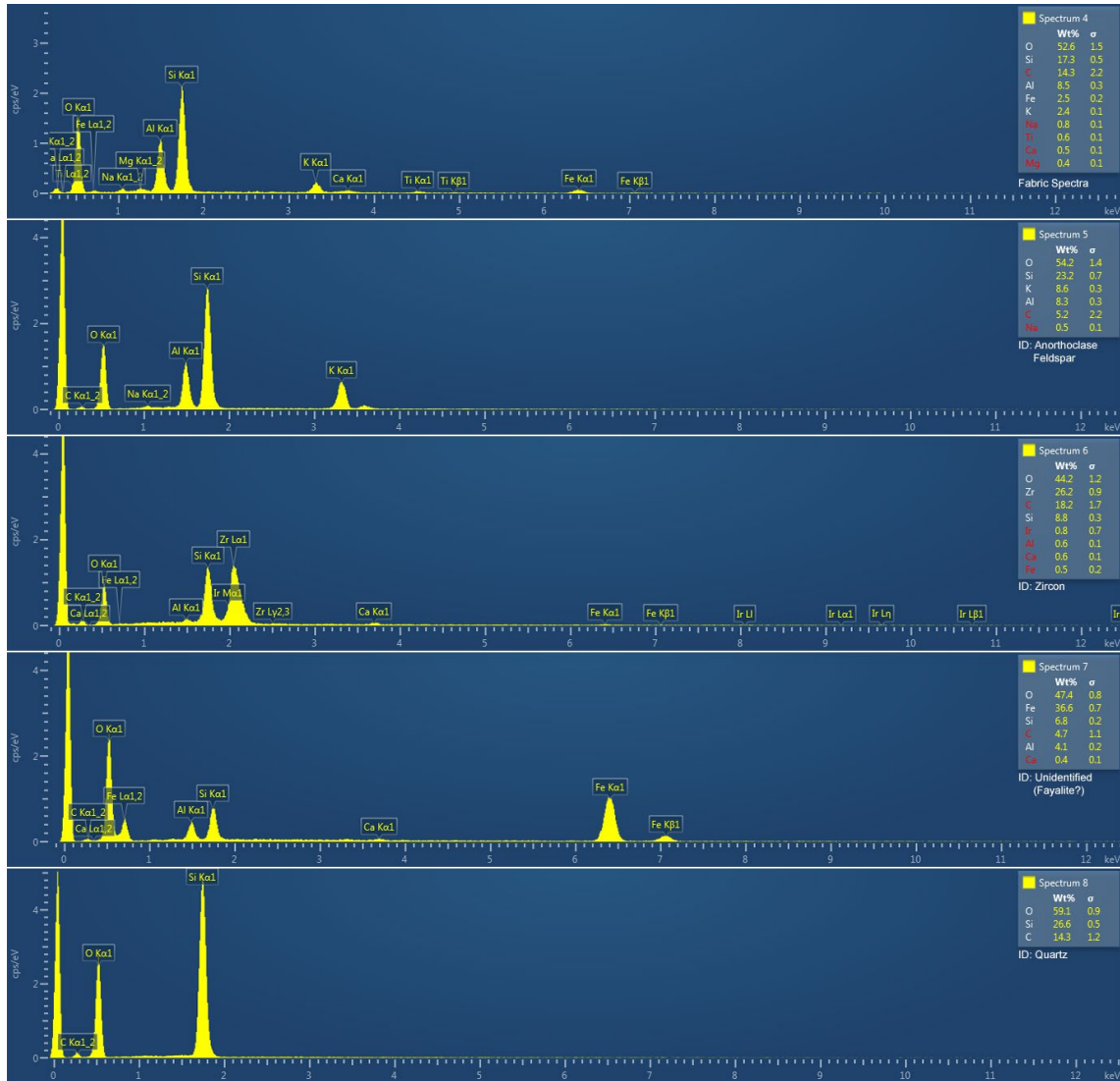


Figure II.17: EDS Spectra from Sample 12 (Earthenware/Plainware sherd from Phase 2a)

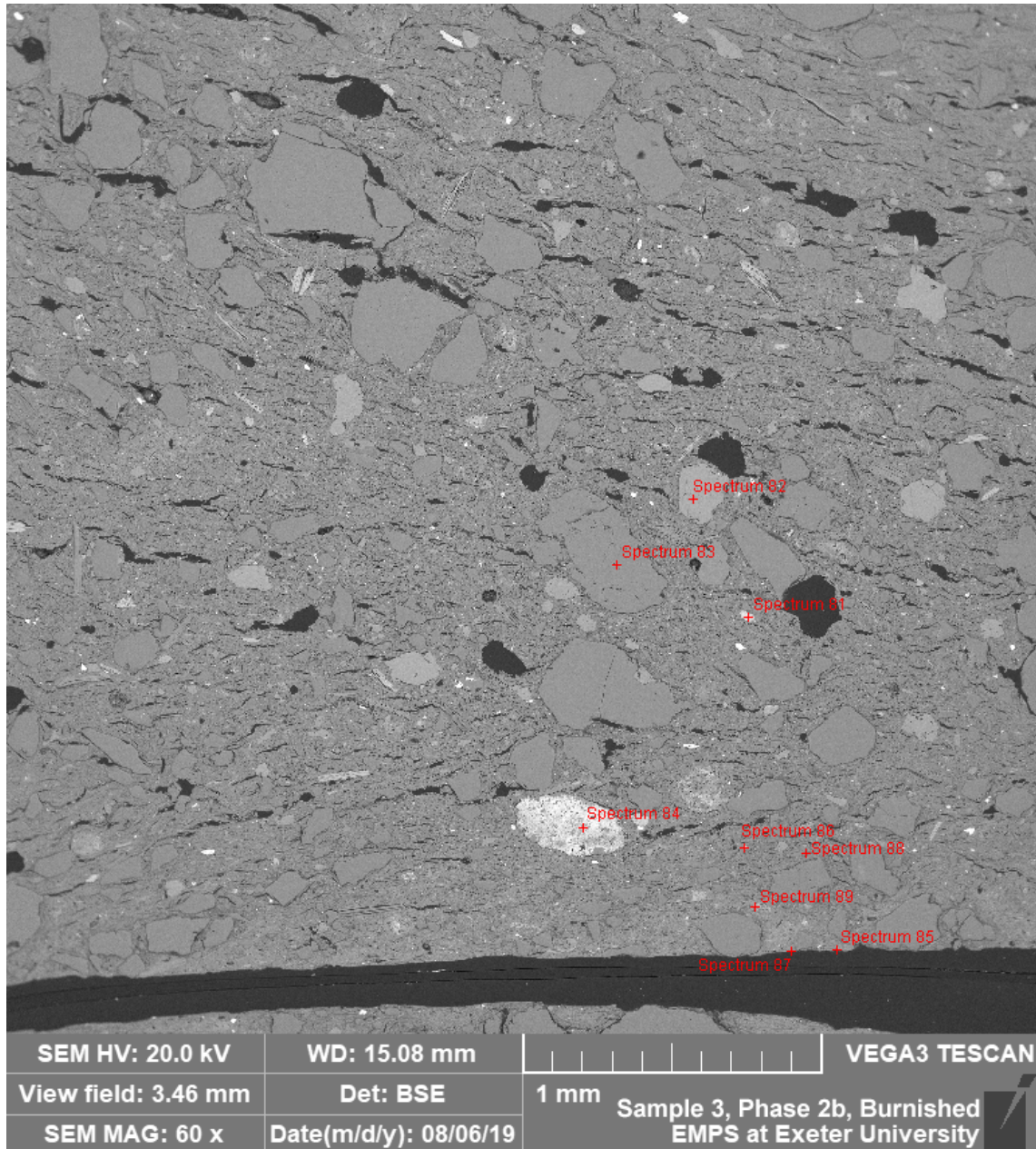


Figure II.18: SEM backscatter image of Sample 3 (Black/Brown Burnished ware sherd from Phase 2b) showing locations of EDS spectra

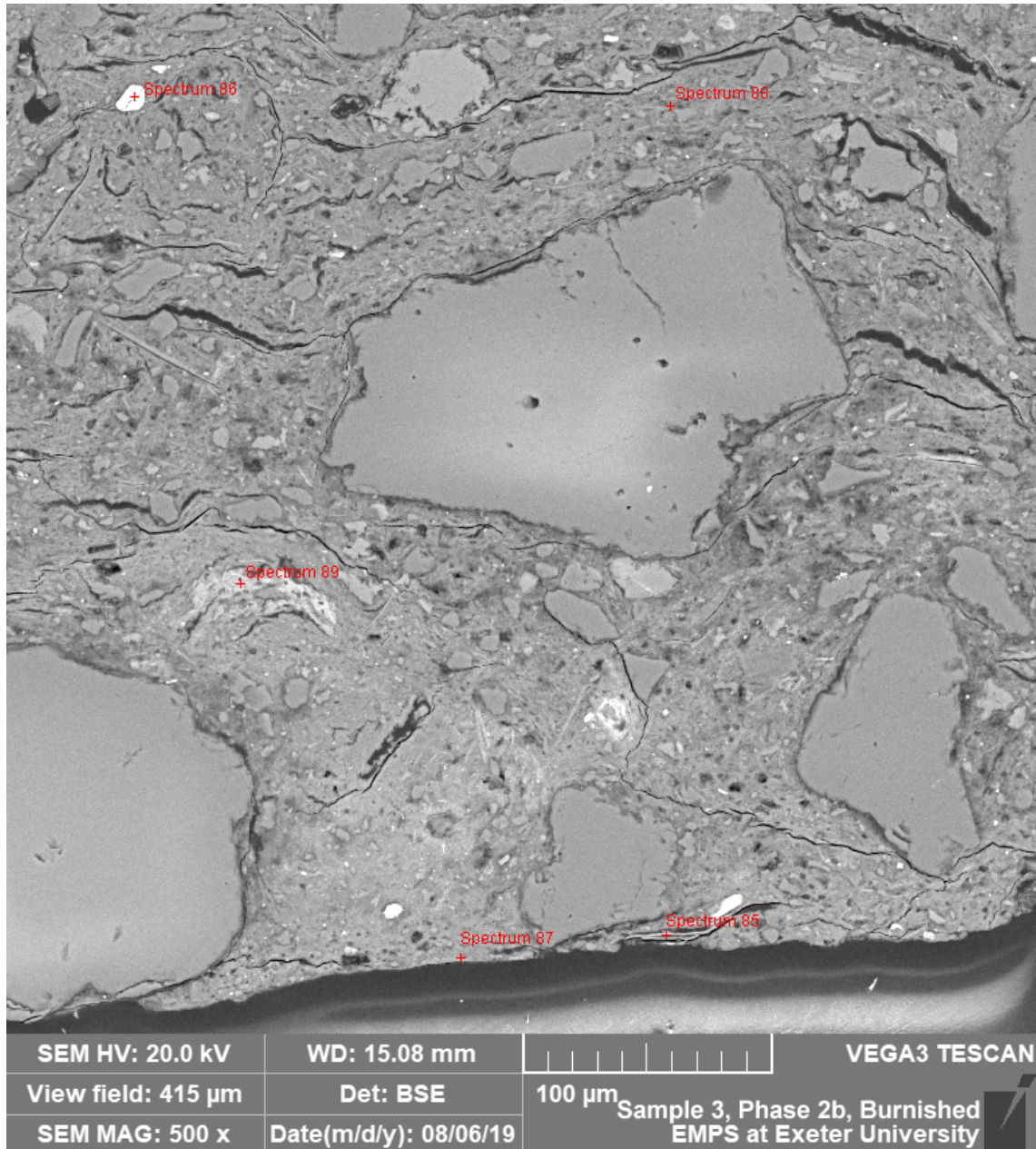


Figure II.19: Close up SEM backscatter image of Sample 3 (Black/Brown Burnished ware sherd from Phase 2b) showing locations of EDS spectra

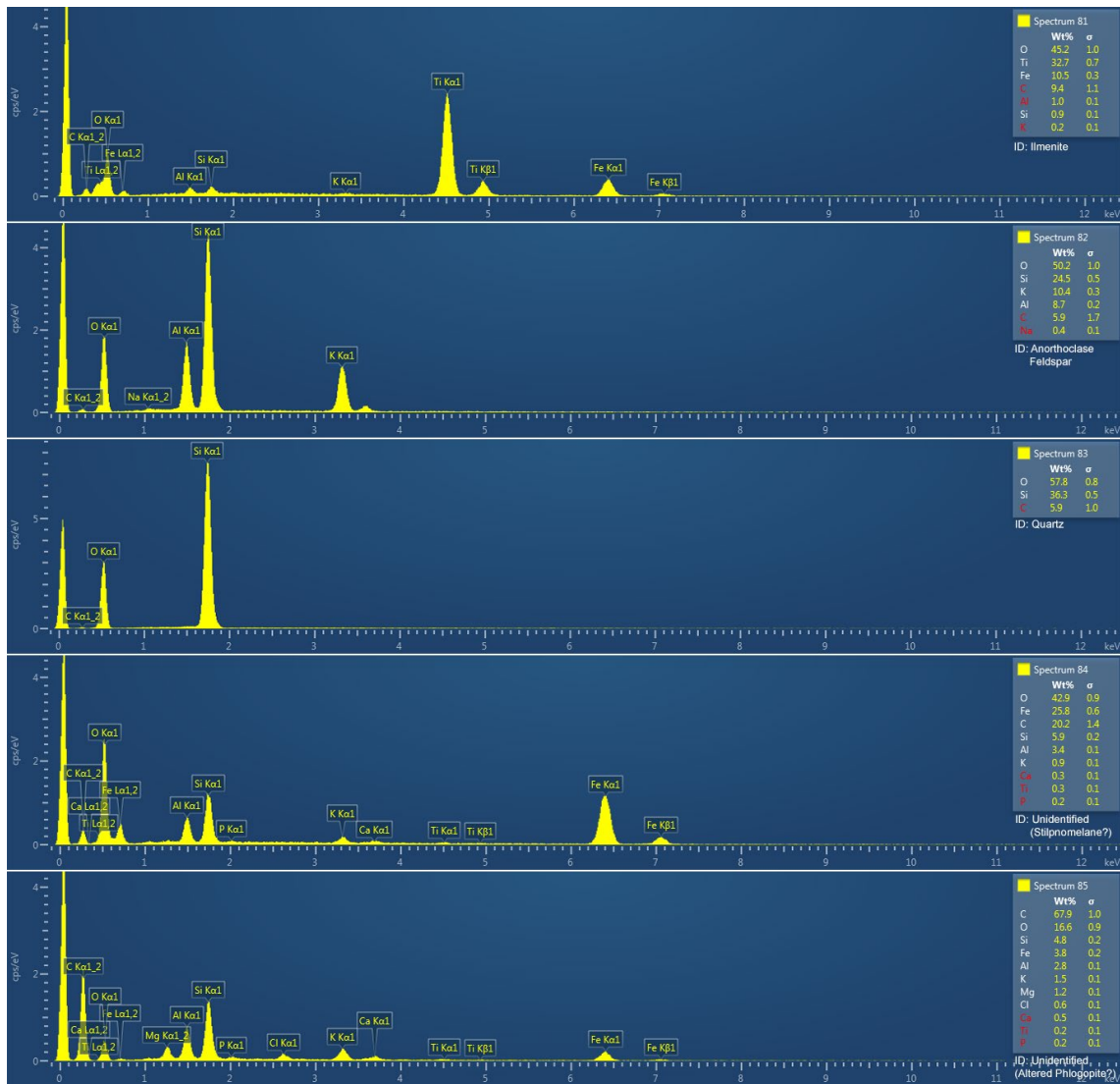


Figure II.20: EDS Spectra from Sample 3 (Black/Brown Burnished ware sherd from Phase 2b)

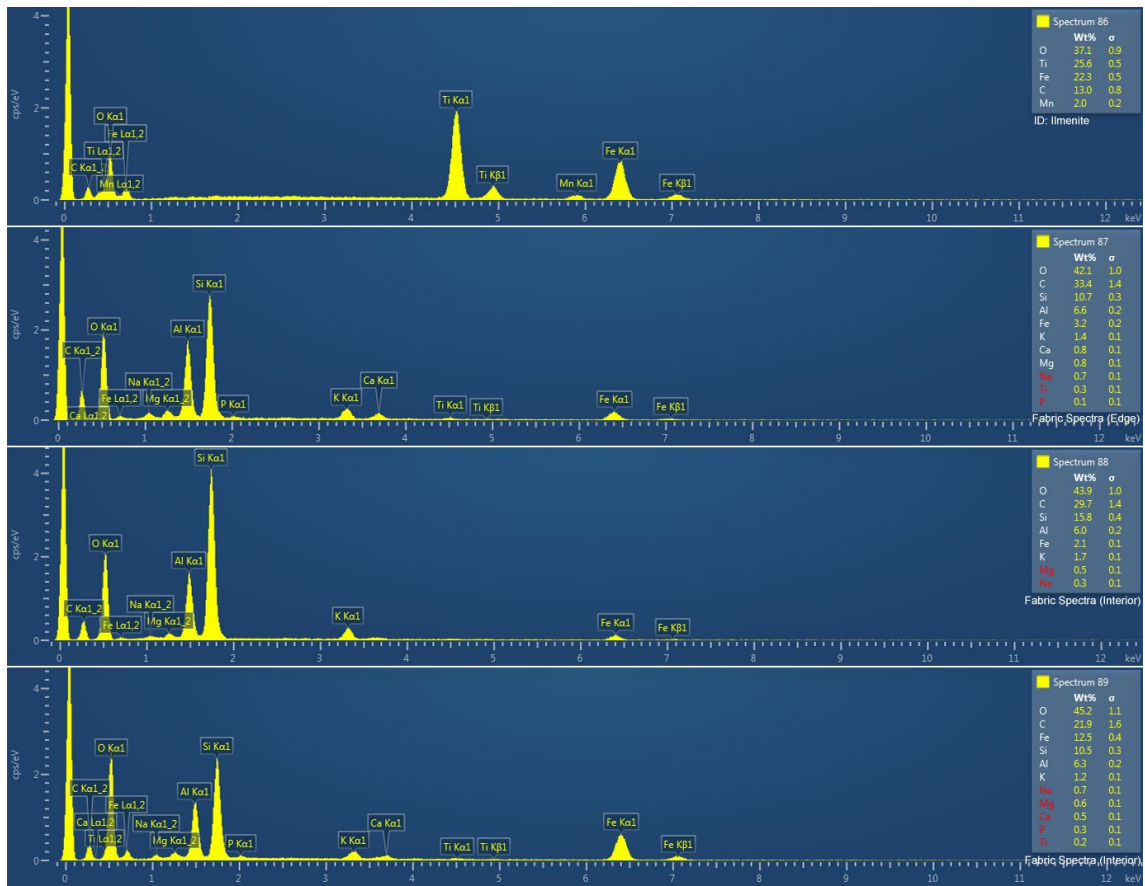


Figure II.21: EDS Spectra from Sample 3 (Black/Brown Burnished ware sherd from Phase 2b)

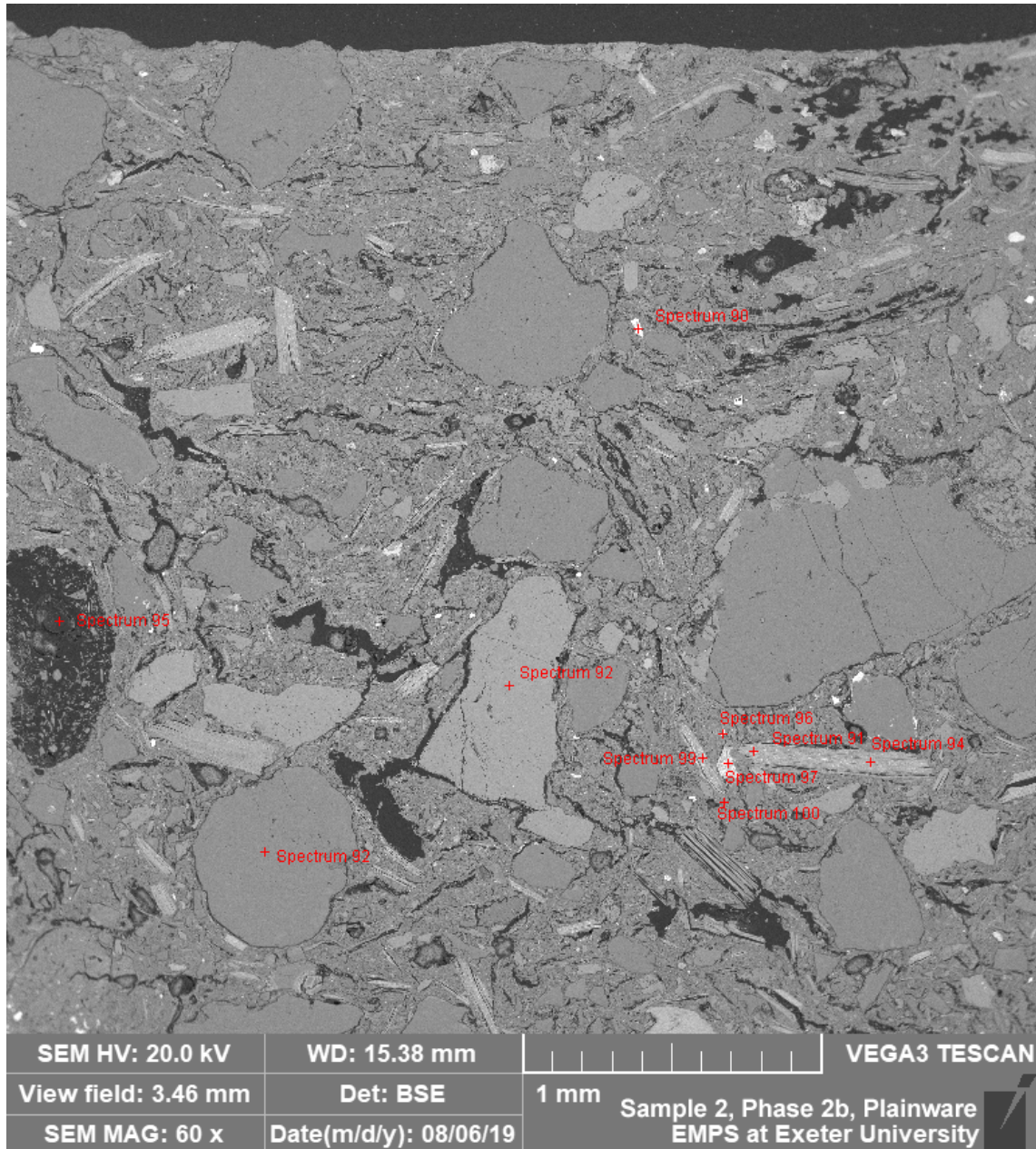


Figure II.22: SEM backscatter image of Sample 2 (Earthenware/Plain ware sherd from Phase 2b) showing locations of EDS spectra

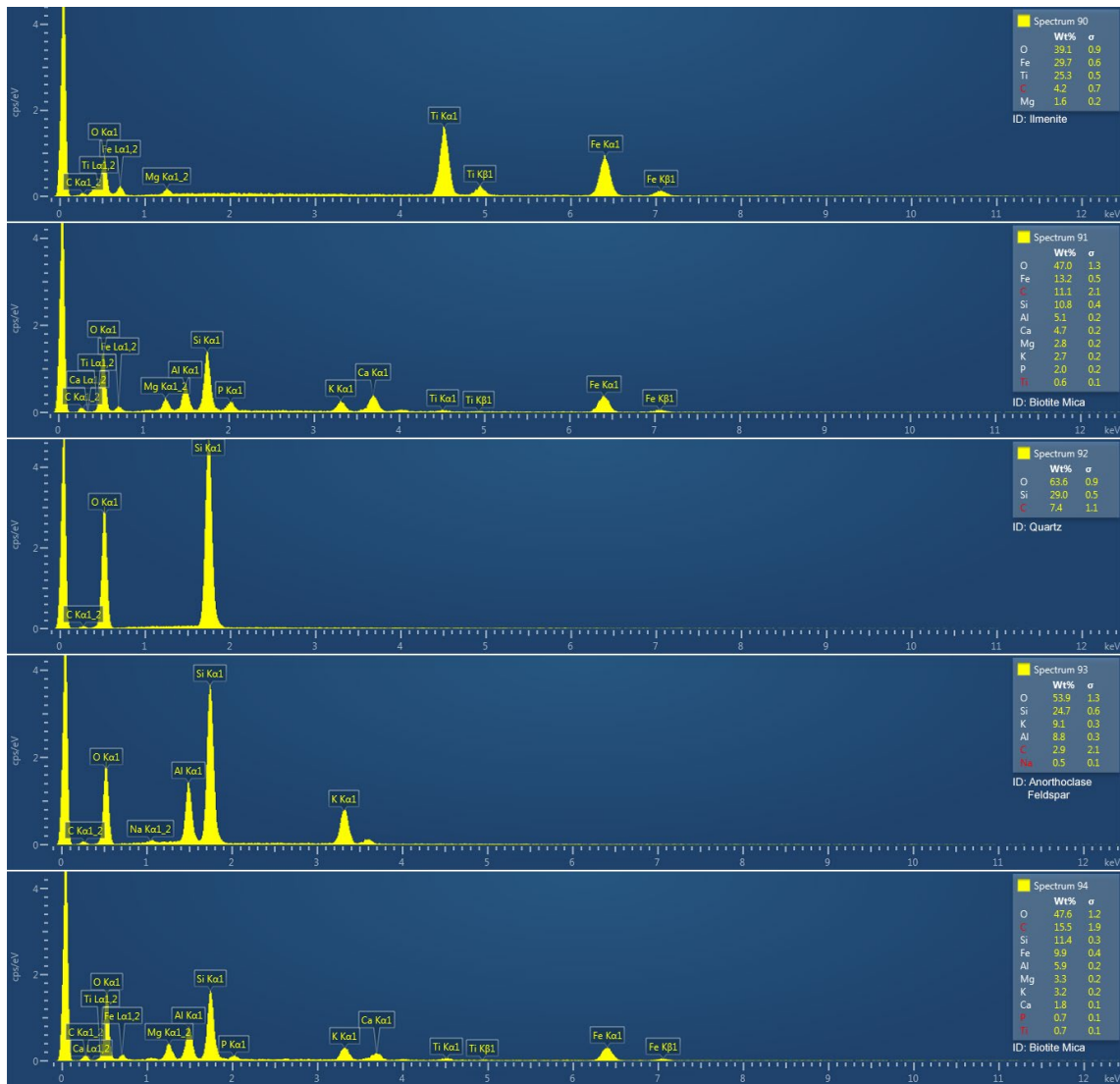


Figure II.23: EDS Spectra from Sample 2 (Earthenware/Plainware sherd from Phase 2b)

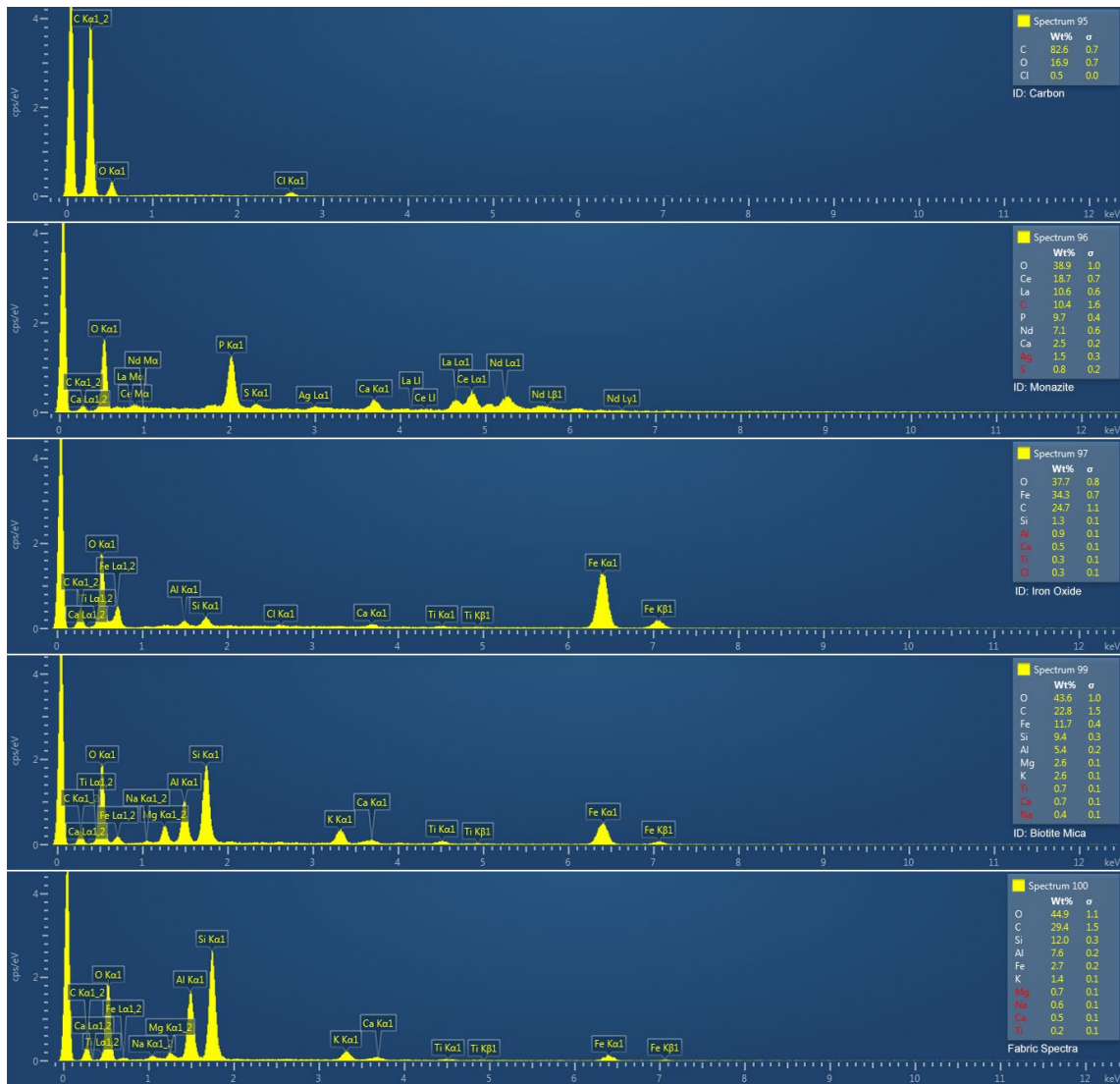


Figure II.24: EDS Spectra from Sample 2 (Earthenware/Plainware sherd from Phase 2b)

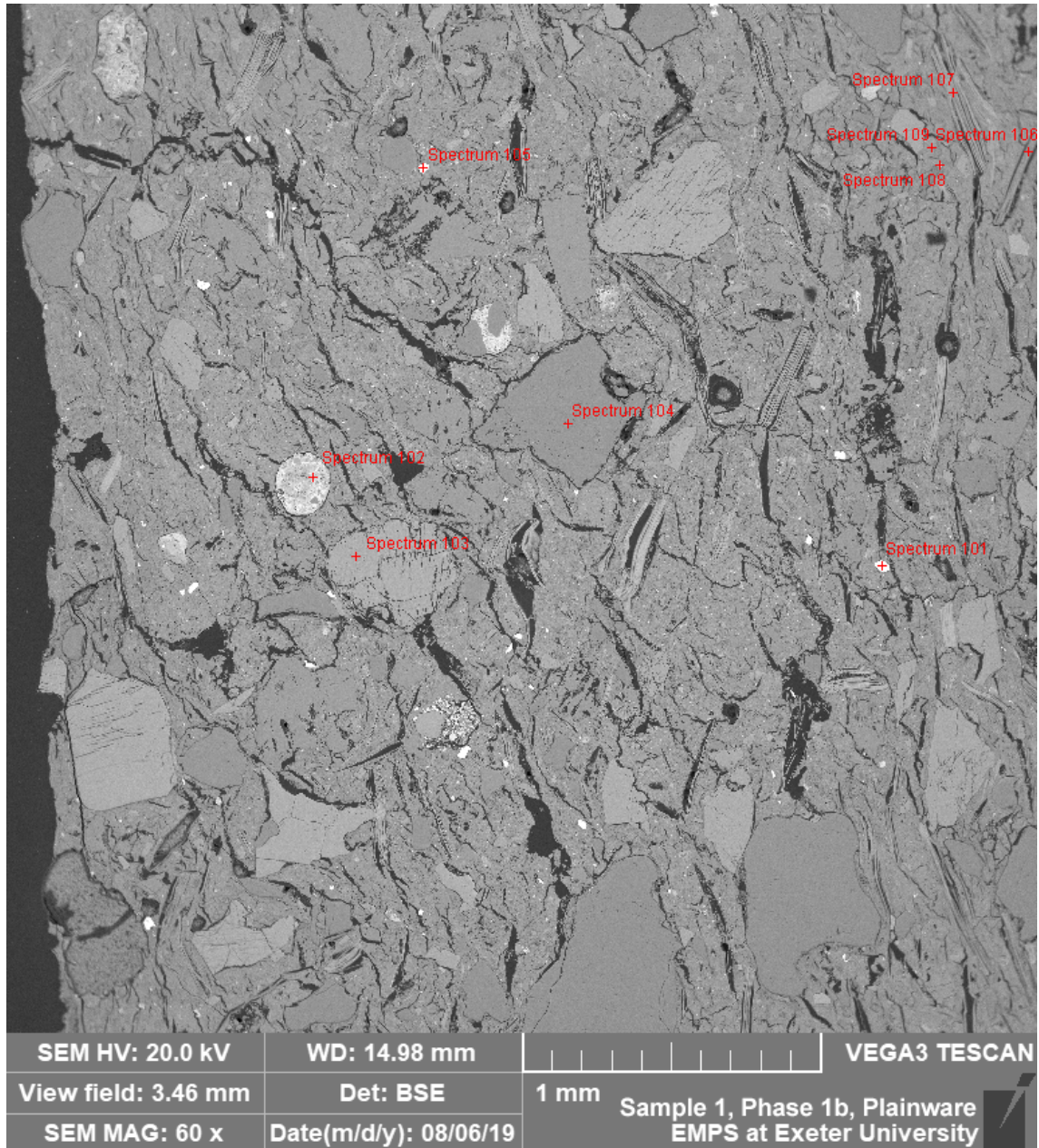


Figure II.25: SEM backscatter image of Sample 1 (Earthenware/Plain ware sherd from Phase 1b) showing locations of EDS spectra

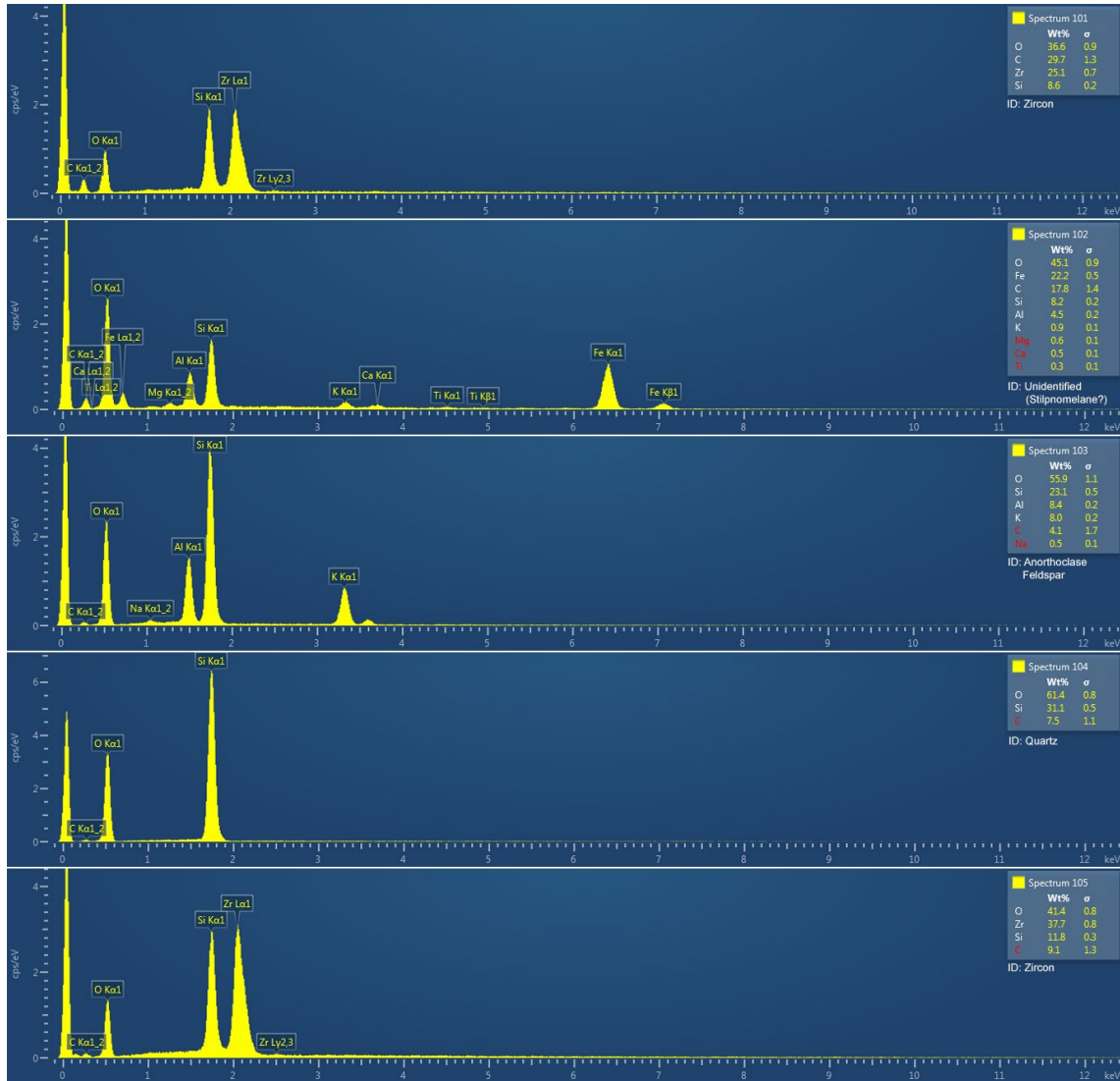


Figure II.26: EDS Spectra from Sample 1 (Earthenware/Plainware sherd from Phase 1b)

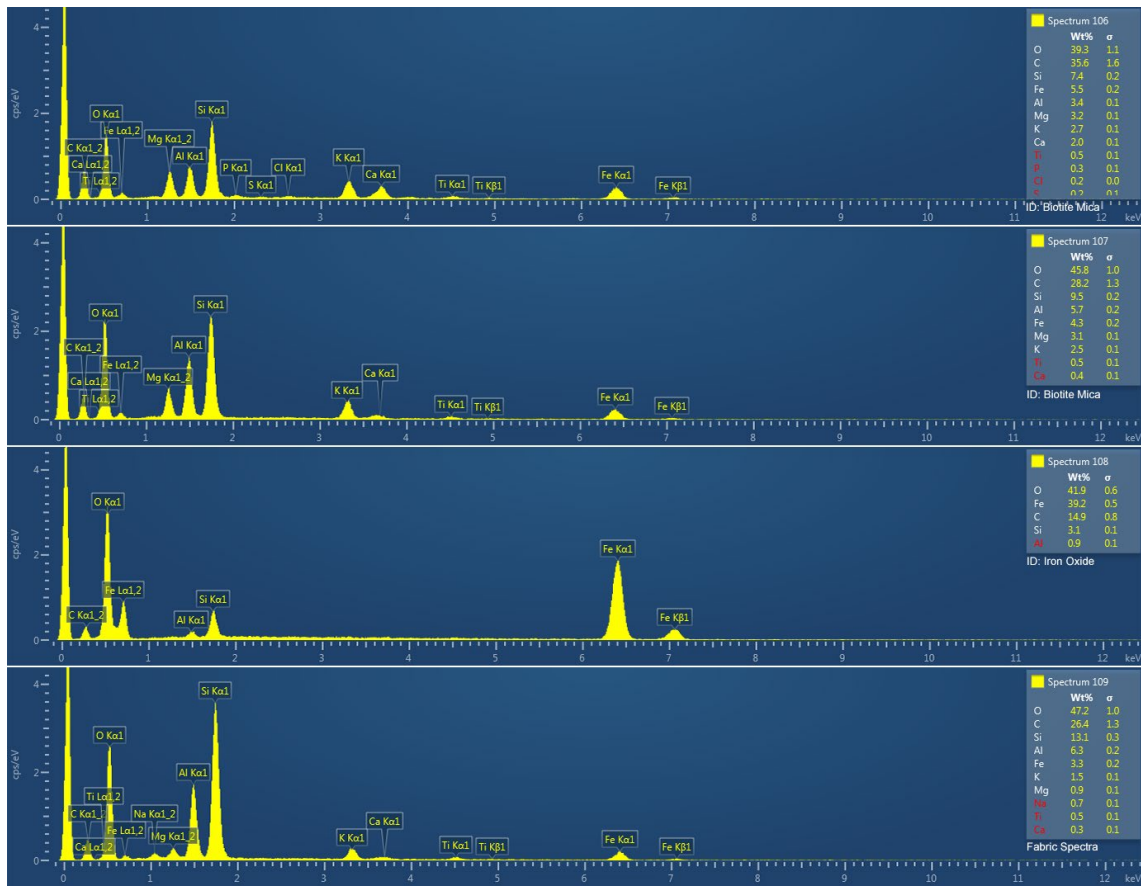


Figure II.27: EDS Spectra from Sample 1 (Earthenware/Plainware sherd from Phase 1b)

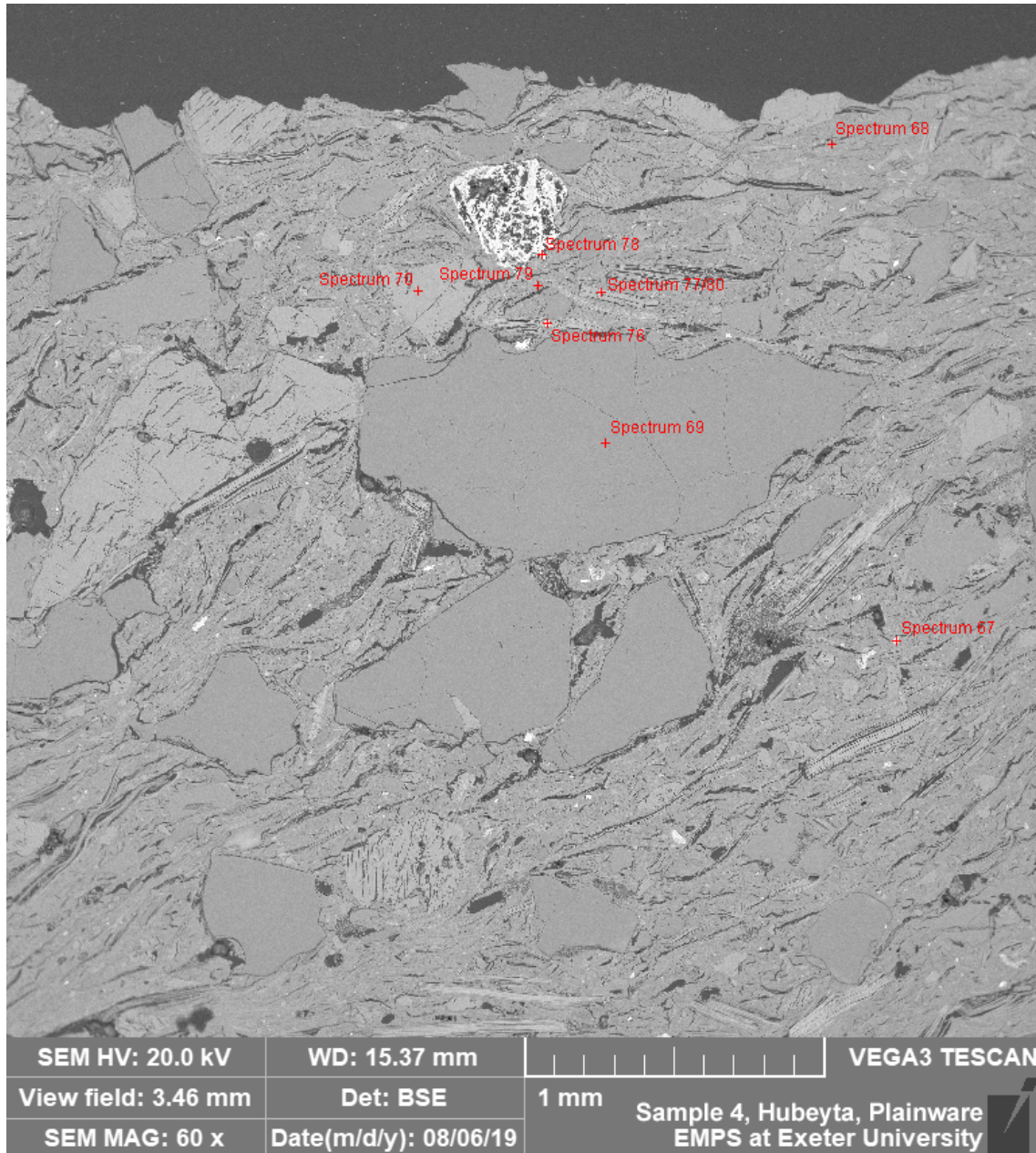


Figure II. 28: SEM backscatter image of Sample 4 (Plainware sherd from Hubeyta surface collection) showing locations of EDS spectra

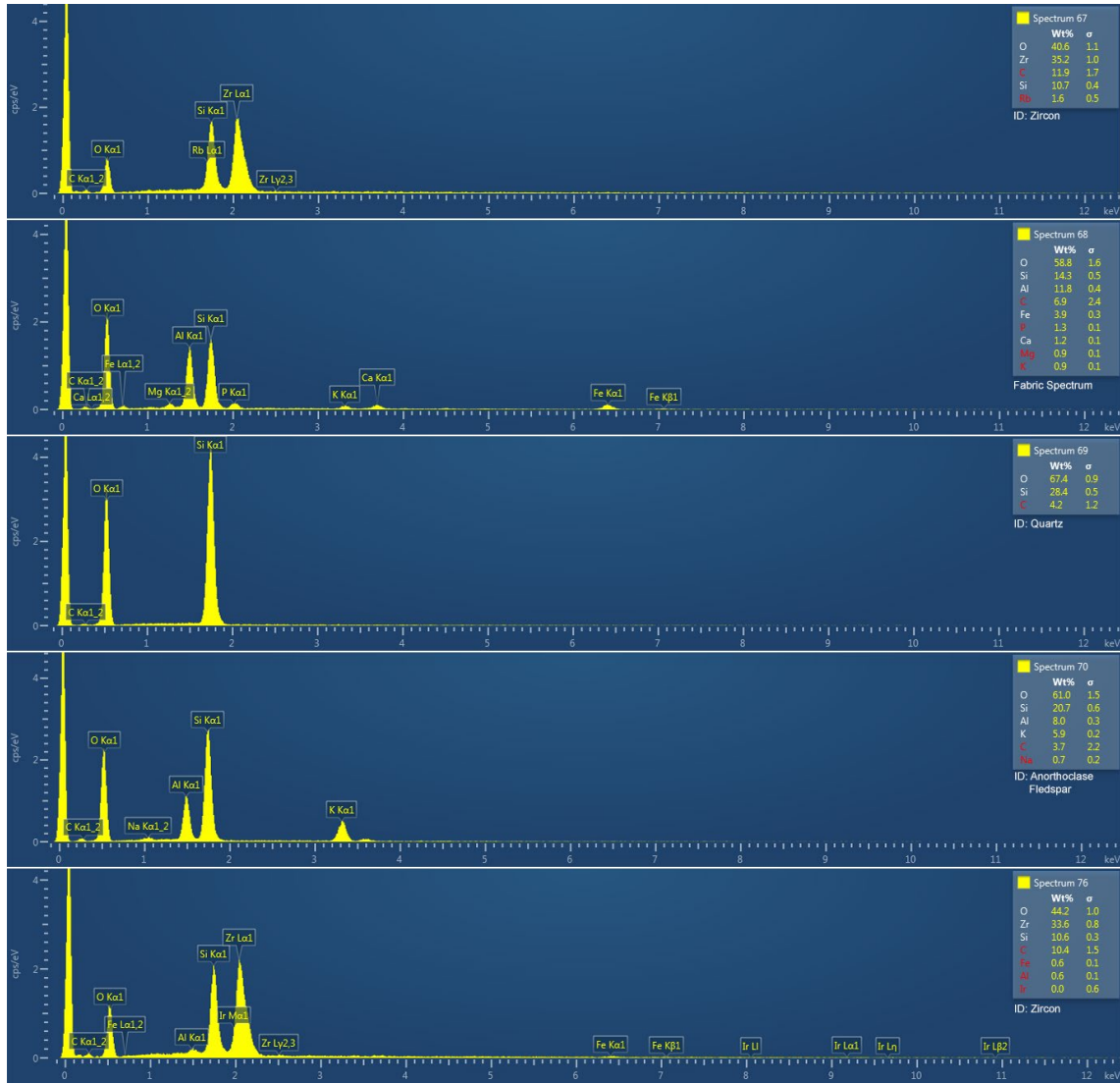


Figure II. 29: EDS Spectra from Sample 4 (Plainware sherd from surface collection at Hubeyta)

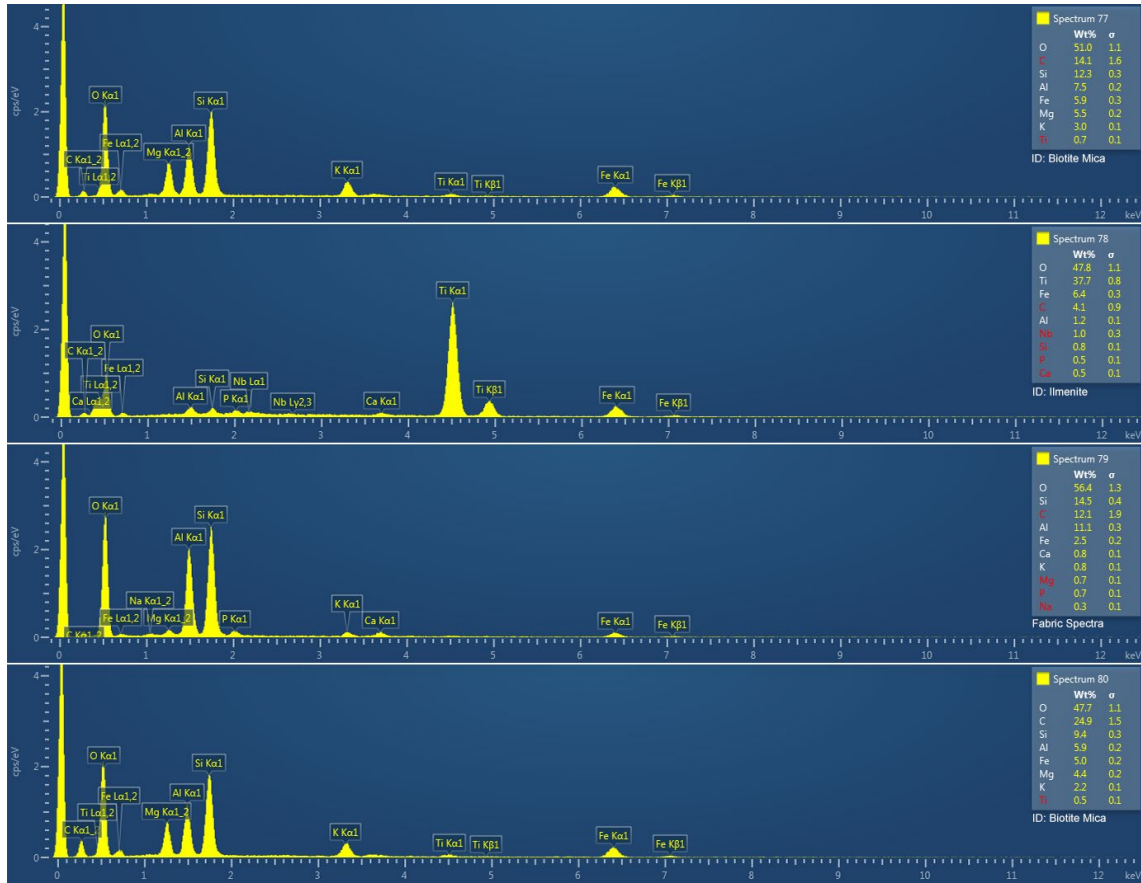


Figure II.30: EDS Spectra from Sample 4 (Plainware sherd from surface collection at Hubeyta)

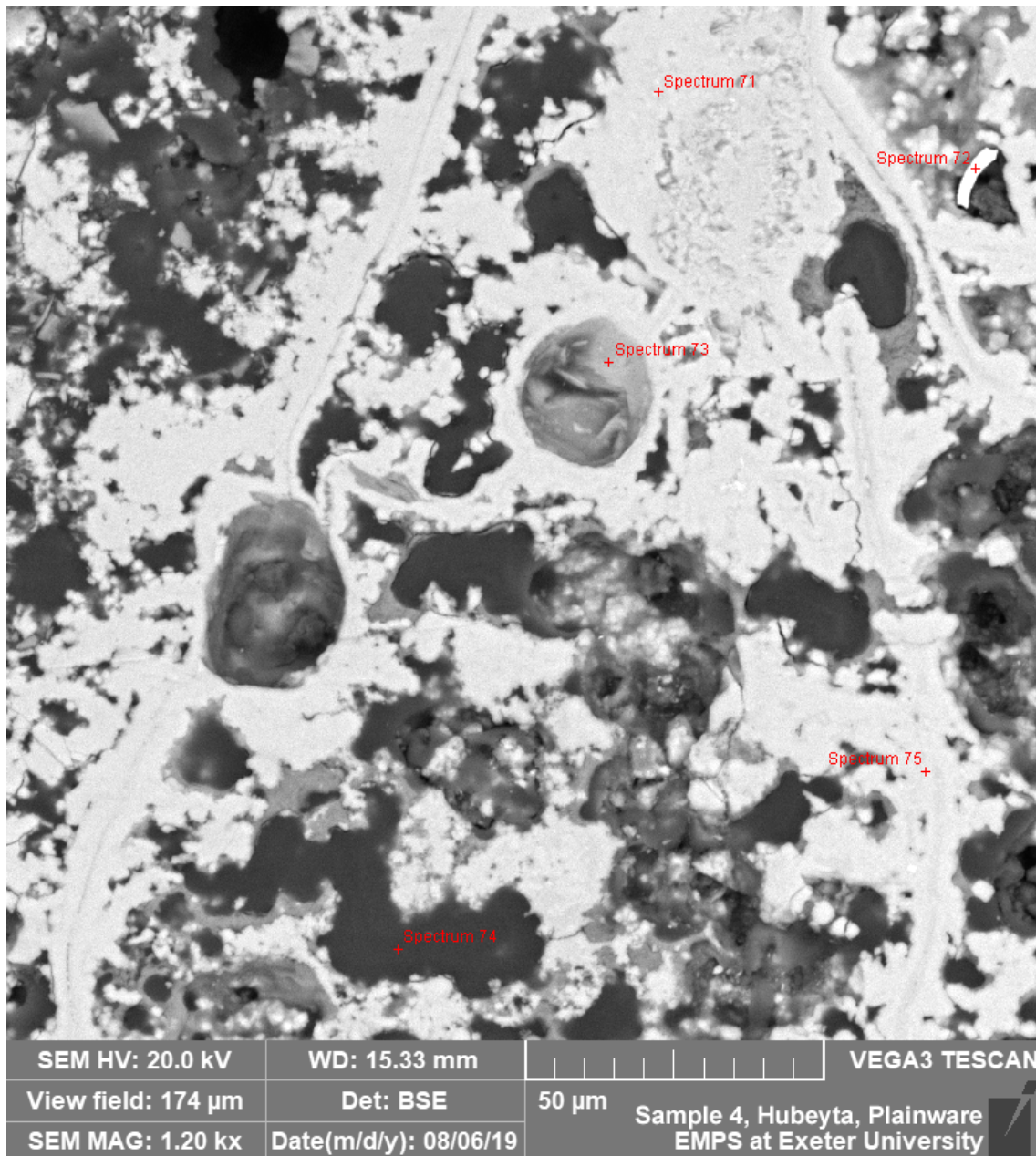


Figure II.31: Close up SEM backscatter image of Sample 4 (Plainware sherd from Hubeyta surface collection) showing locations of EDS spectra in an unusual inclusion

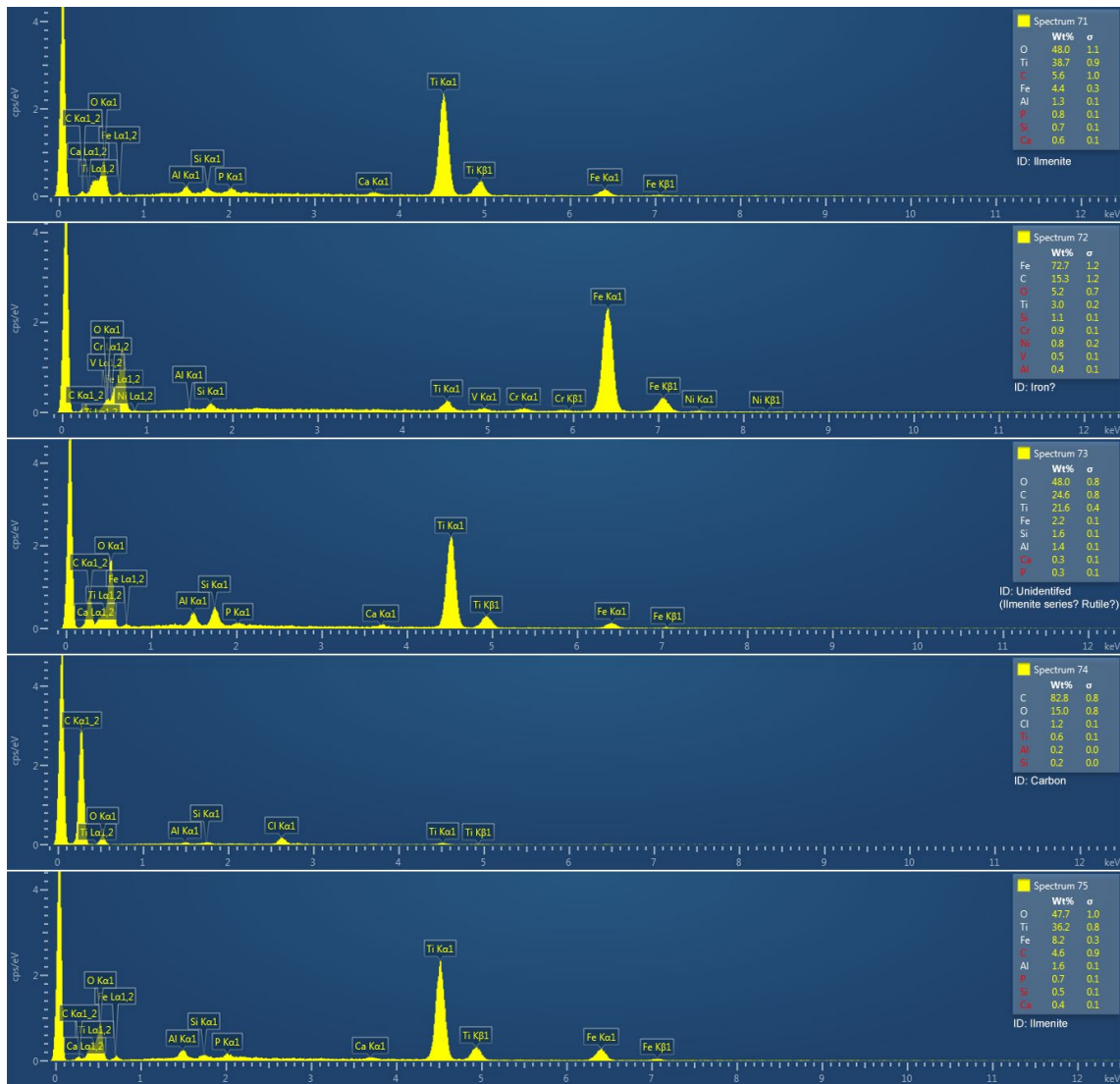


Figure II.32: EDS Spectra from unusual inclusion in Sample 4 (Plainware sherd from surface collection at Hubeyta)

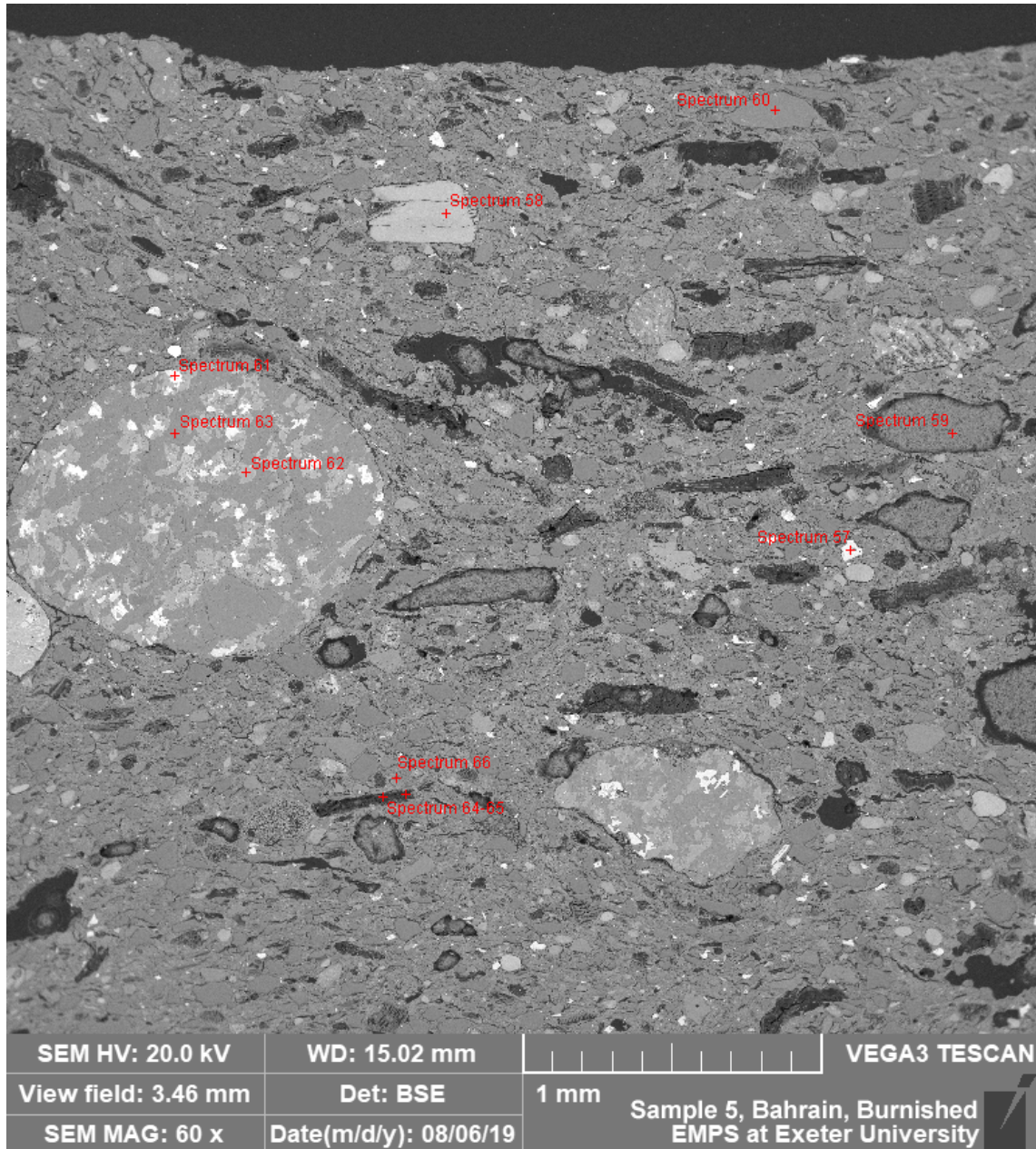


Figure II.33: SEM backscatter image of Sample 5 (Burnished sherd from Muharraq, Bahrain) showing locations of EDS spectra

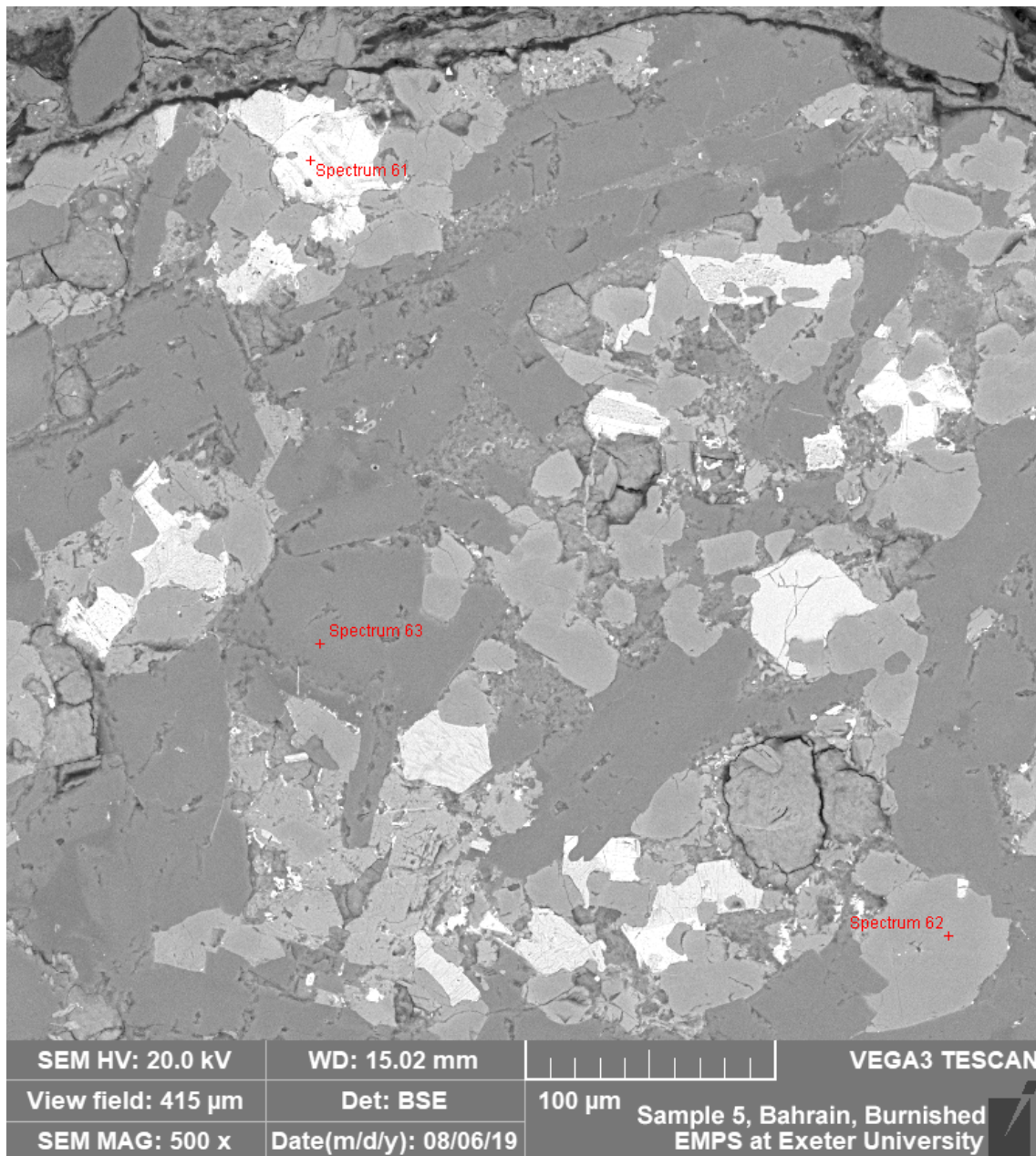


Figure II.34: Close up SEM backscatter image of Sample 5 (Burnished sherd from Muharraq, Bahrain) showing locations of EDS spectra

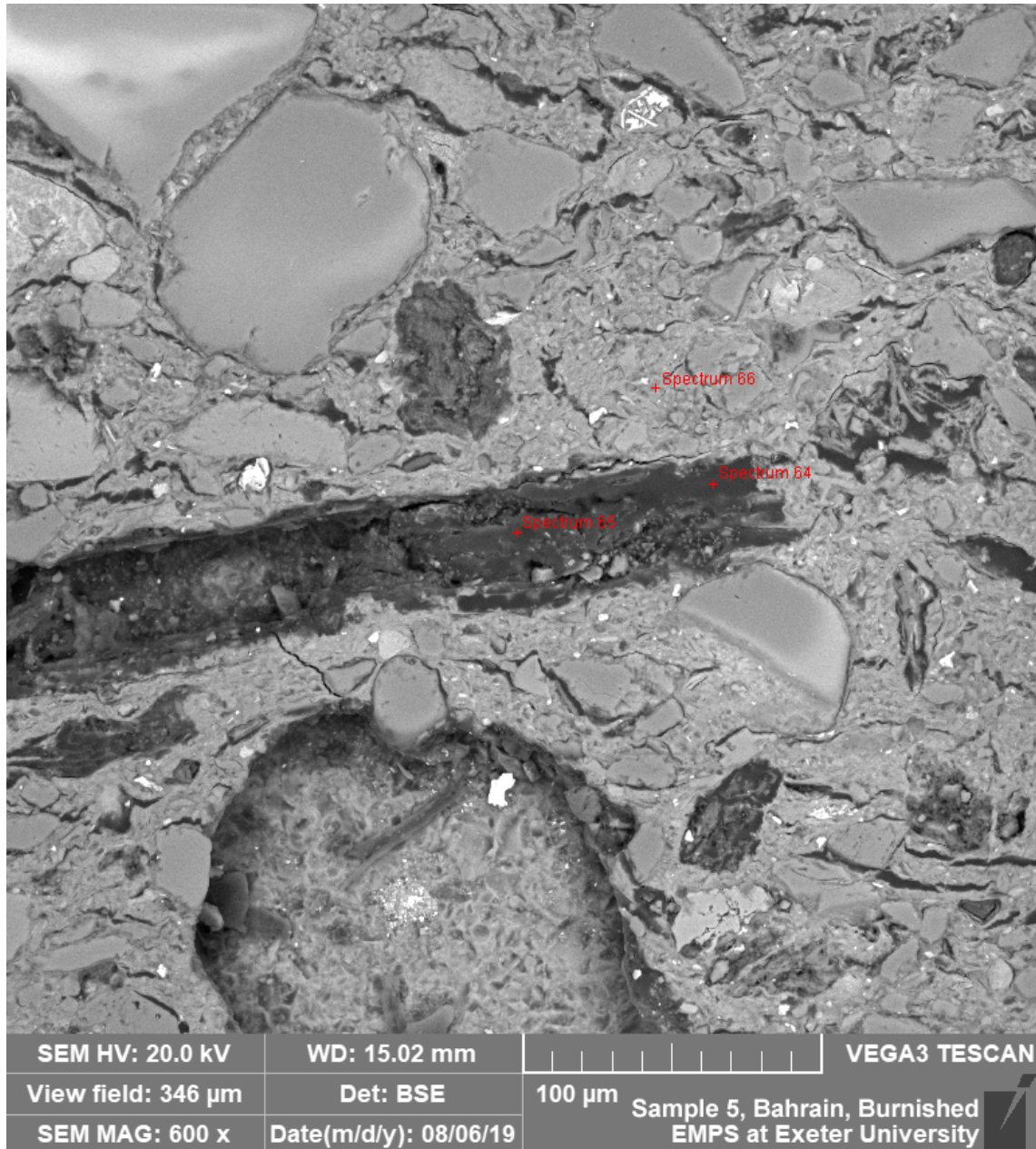


Figure II.35: Close up SEM backscatter image of Sample 5 (Burnished sherd from Muharraq, Bahrain) showing locations of EDS spectra

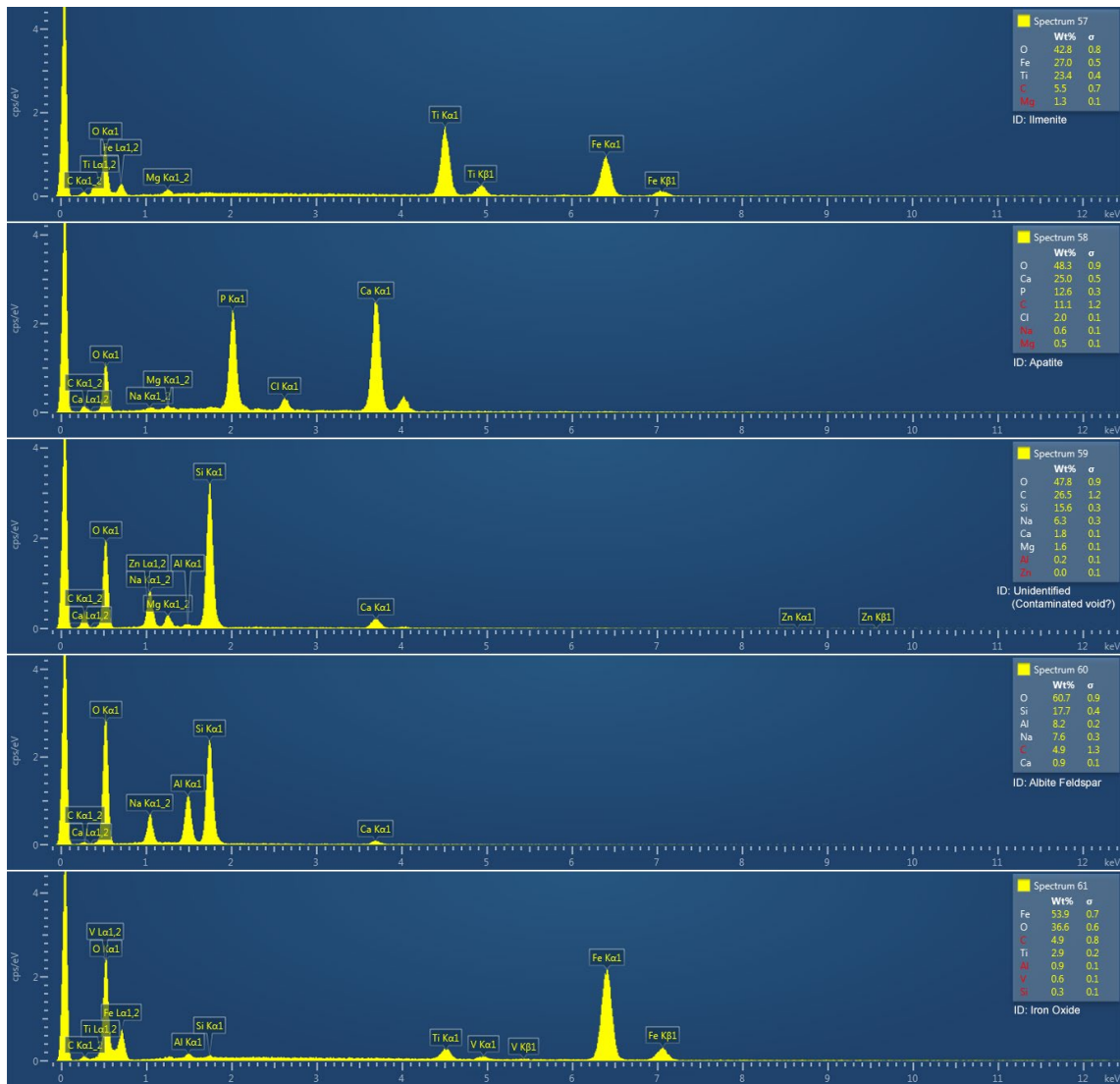


Figure II.36: EDS Spectra from Sample 5 (Burnished sherd from Muharraq, Bahrain)

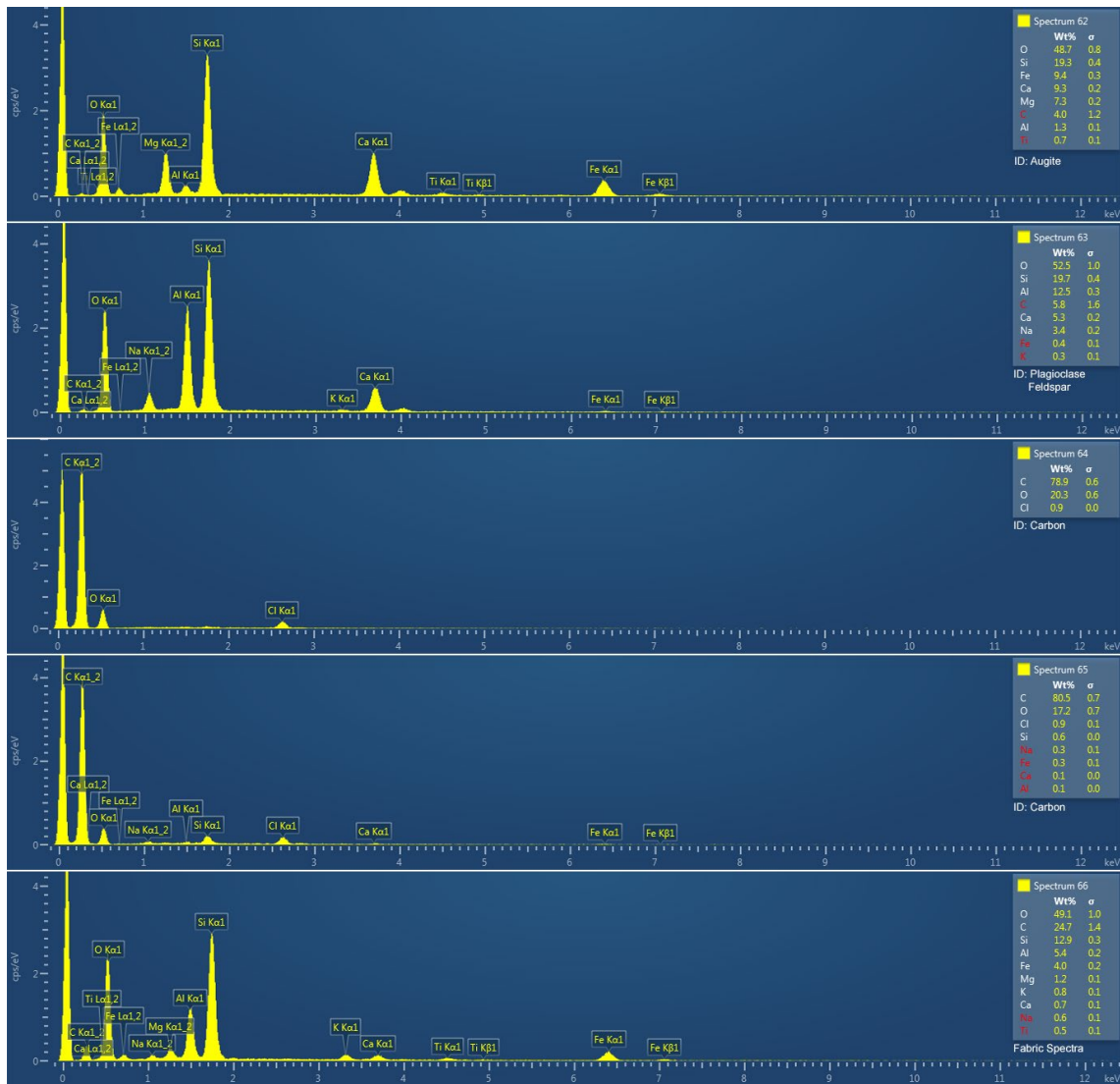


Figure II.37: EDS Spectra from Sample 5 (Burnished sherd from Muharraq, Bahrain)

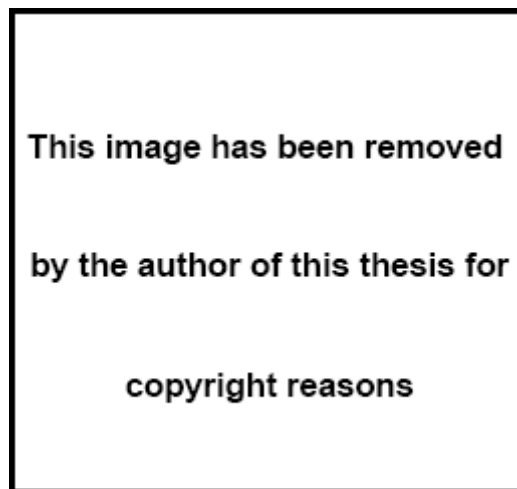


Figure II.38: Ternary phase diagram for feldspars (from Greenwood & Earnshaw, 1984: 414 Fig. 9.17)

Appendix III – Ceramic analysis supplementary data

| Context | Black Burn. | Brown Burn. | Red Burn. | Black Slip. | Brown Slip. | Plainware | Unident. | Total |
|----------------|--------------------|--------------------|------------------|--------------------|--------------------|------------------|-----------------|--------------|
| HAR18(B) 1 | 46 | 8 | 1 | 1 | 0 | 222 | 2 | 280 |
| HAR18(B) 2 | 23 | 5 | 0 | 1 | 0 | 161 | 1 | 191 |
| HAR18(B) 3 | 21 | 5 | 1 | 0 | 0 | 126 | 0 | 153 |
| HAR18(B) 4 | 46 | 20 | 1 | 0 | 1 | 241 | 2 | 311 |
| HAR18(B) 5 | 39 | 25 | 1 | 2 | 0 | 309 | 2 | 378 |
| HAR18(B) 6 | 59 | 8 | 3 | 3 | 0 | 395 | 3 | 471 |
| HAR18(B) 7 | 12 | 8 | 0 | 0 | 0 | 126 | 1 | 147 |
| HAR18(B) 8 | 25 | 6 | 3 | 1 | 0 | 205 | 0 | 240 |
| HAR18(B) 9 | 40 | 12 | 1 | 0 | 0 | 376 | 0 | 429 |
| HAR18(B) 10 | 47 | 6 | 2 | 0 | 0 | 248 | 1 | 304 |
| HAR18(B) 11 | 19 | 8 | 0 | 1 | 0 | 123 | 0 | 151 |
| HAR18(B) 12 | 2 | 1 | 0 | 0 | 0 | 65 | 0 | 68 |
| HAR18(B) 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR18(B) 14 | 27 | 6 | 1 | 0 | 0 | 116 | 1 | 151 |
| HAR18(B) 15 | 20 | 3 | 1 | 0 | 0 | 244 | 0 | 268 |
| HAR18(B) 16 | 11 | 2 | 1 | 0 | 0 | 80 | 0 | 94 |
| HAR18(B) 17 | 14 | 6 | 0 | 0 | 0 | 230 | 1 | 251 |
| HAR18(B) 18 | 9 | 3 | 0 | 0 | 0 | 72 | 0 | 84 |
| HAR18(B) 19 | 10 | 0 | 0 | 0 | 0 | 45 | 0 | 55 |
| HAR18(B) 20 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| HAR18(B) 21 | 23 | 1 | 0 | 0 | 0 | 113 | 0 | 137 |
| HAR18(B) 22 | 1 | 1 | 0 | 0 | 0 | 23 | 0 | 25 |
| HAR18(B) 23 | 2 | 0 | 0 | 0 | 0 | 29 | 0 | 31 |
| HAR18(B) 24 | 0 | 1 | 0 | 0 | 0 | 23 | 0 | 24 |
| HAR18(B) 25 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 12 |
| HAR18(B) 26 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 21 |
| HAR18(B) 27 | 0 | 0 | 0 | 0 | 0 | 12 | 1 | 13 |
| Total | 496 | 135 | 16 | 9 | 1 | 3619 | 15 | 4291 |
| Percentage | 11.56% | 3.15% | 0.37% | 0.21% | 0.02% | 84.34% | 0.35% | 100% |

Table III.1: Number of sherds per context from HAR18(B)

| Context | Black Burn. | Brown Burn. | Red Burn. | Black Slip. | Brown Slip. | Plainware | Unident. | Total |
|----------------|--------------------|--------------------|------------------|--------------------|--------------------|------------------|-----------------|--------------|
| HAR17(B) 1 | 10 | 1 | 0 | 0 | 2 | 40 | 0 | 53 |
| HAR17(B) 2 | 50 | 3 | 1 | 6 | 2 | 147 | 1 | 210 |
| HAR17(B) 3 | 43 | 5 | 0 | 11 | 3 | 233 | 0 | 295 |
| HAR17(B) 4 | 114 | 15 | 1 | 3 | 0 | 457 | 4 | 594 |
| HAR17(B) 5 | 68 | 17 | 4 | 2 | 0 | 287 | 1 | 379 |
| HAR17(B) 6 | 68 | 12 | 1 | 3 | 0 | 248 | 0 | 332 |
| HAR17(B) 7 | 69 | 6 | 0 | 1 | 0 | 191 | 1 | 268 |
| HAR17(B) 8 | 37 | 5 | 0 | 0 | 0 | 205 | 0 | 247 |
| HAR17(B) 9 | 13 | 3 | 0 | 0 | 0 | 135 | 0 | 151 |
| HAR17(B) 10 | 19 | 5 | 0 | 0 | 0 | 128 | 0 | 152 |
| HAR17(B) 11 | 16 | 0 | 0 | 0 | 0 | 59 | 0 | 75 |
| HAR17(B) 12 | 13 | 1 | 0 | 0 | 0 | 78 | 0 | 92 |
| HAR17(B) 13 | 10 | 0 | 0 | 0 | 0 | 83 | 2 | 95 |
| HAR17(B) 14 | 18 | 0 | 0 | 1 | 0 | 178 | 0 | 197 |
| HAR17(B) 15 | 15 | 0 | 3 | 0 | 0 | 76 | 2 | 96 |
| HAR17(B) 16 | 14 | 3 | 1 | 2 | 1 | 71 | 1 | 93 |
| HAR17(B) 17 | 23 | 3 | 1 | 0 | 0 | 71 | 0 | 98 |
| HAR17(B) 18 | 28 | 5 | 0 | 1 | 0 | 109 | 0 | 143 |
| HAR17(B) 19 | 23 | 4 | 0 | 0 | 0 | 121 | 0 | 148 |
| HAR17(B) 20 | 41 | 5 | 0 | 0 | 0 | 204 | 0 | 250 |
| HAR17(B) 21 | 55 | 8 | 0 | 0 | 0 | 120 | 0 | 183 |
| HAR17(B) 22 | 13 | 1 | 0 | 0 | 0 | 19 | 0 | 33 |
| HAR17(B) 23 | 8 | 3 | 0 | 0 | 0 | 33 | 0 | 44 |
| HAR17(B) 24 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 6 |
| Total | 768 | 106 | 12 | 30 | 8 | 3298 | 12 | 4234 |
| Percentages | 18.14% | 2.50% | 0.28% | 0.71% | 0.19% | 77.89% | 0.28% | 100% |

Table III.2: Number of sherds per context from HAR17(B)

| Context | Black Burn. | Brown Burn. | Red Burn. | Black Slip. | Plainware | Unident. | Total |
|----------------|--------------------|--------------------|------------------|--------------------|------------------|-----------------|--------------|
| HAR16(A) 1 | 24 | 0 | 3 | 3 | 158 | 0 | 188 |
| HAR16(A) 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HAR16(A) 3 | 28 | 5 | 5 | 1 | 132 | 1 | 172 |
| HAR16(A) 4 | 76 | 7 | 2 | 2 | 243 | 4 | 334 |
| HAR16(A) 5 | 12 | 0 | 0 | 0 | 43 | 1 | 56 |
| HAR16(A) 6 | 64 | 3 | 1 | 8 | 314 | 0 | 390 |
| HAR16(A) 7 | 44 | 13 | 2 | 0 | 125 | 2 | 186 |
| HAR16(A) 8 | 52 | 10 | 2 | 0 | 148 | 0 | 212 |
| HAR16(A) 9 | 154 | 21 | 2 | 0 | 373 | 2 | 552 |
| HAR16(A) 10 | 49 | 9 | 2 | 1 | 143 | 0 | 204 |
| HAR16(A) 11 | 25 | 4 | 1 | 1 | 67 | 0 | 98 |
| HAR16(A) 12 | 8 | 0 | 0 | 0 | 22 | 0 | 30 |
| Total | 536 | 72 | 20 | 16 | 1768 | 10 | 2422 |
| Percentages | 22.13% | 2.97% | 0.83% | 0.66% | 73.00% | 0.41% | 100% |

Table III.3: Number of sherds per context from HAR16(A)

| Context | Black Burn. | Brown Burn. | Red Burn. | Black Slip. | Plainware | Unident. | Total |
|----------------|--------------------|--------------------|------------------|--------------------|------------------|-----------------|--------------|
| HAR15(B) 1 | 3 | 0 | 0 | 0 | 5 | 0 | 8 |
| HAR15(B) 2 | 10 | 0 | 0 | 0 | 14 | 0 | 24 |
| HAR15(B) 3 | 8 | 2 | 0 | 0 | 11 | 0 | 21 |
| HAR15(B) 4 | 22 | 3 | 0 | 1 | 41 | 0 | 67 |
| HAR15(B) 5 | 55 | 4 | 0 | 0 | 51 | 0 | 110 |
| HAR15(B) 6 | 103 | 15 | 1 | 0 | 70 | 0 | 189 |
| HAR15(B) 7 | 2 | 2 | 0 | 0 | 1 | 0 | 5 |
| HAR15(B) 8 | 62 | 11 | 1 | 0 | 59 | 0 | 133 |
| HAR15(B) 9 | 18 | 4 | 0 | 0 | 24 | 0 | 46 |
| HAR15(B) 10 | 16 | 5 | 0 | 0 | 11 | 0 | 32 |
| Total | 299 | 46 | 2 | 1 | 287 | 0 | 635 |
| Percentages | 47.09% | 7.24% | 0.31% | 0.16% | 45.20% | 0.00% | 100% |

Table III.4: Number of sherds per context from HAR15(B) (note: assemblage was culled of non-diagnostic sherds prior to analysis)

| Context | Black Burn. | Brown Burn. | Red Burn. | Black Slip. | Plainware | Unident. | Total |
|----------------|--------------------|--------------------|------------------|--------------------|------------------|-----------------|--------------|
| HAR15(A) 1 | 1 | 0 | 0 | 0 | 3 | 0 | 4 |
| HAR15(A) 2 | 2 | 0 | 0 | 1 | 20 | 0 | 23 |
| HAR15(A) 3 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| HAR15(A) 4 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| HAR15(A) 5 | 0 | 0 | 0 | 0 | 15 | 0 | 15 |
| HAR15(A) 6 | 1 | 0 | 0 | 0 | 11 | 0 | 12 |
| HAR15(A) 7 | 4 | 0 | 0 | 0 | 8 | 0 | 12 |
| HAR15(A) 8 | 2 | 0 | 1 | 0 | 3 | 0 | 6 |
| HAR15(A) 9 | 1 | 0 | 0 | 0 | 3 | 0 | 4 |
| HAR15(A) 10 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| HAR15(A) 11 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| HAR15(A) W.C. | 0 | 1 | 0 | 0 | 14 | 0 | 15 |
| Total | 11 | 1 | 1 | 1 | 87 | 0 | 101 |
| Percentages | 10.89% | 0.99% | 0.99% | 0.99% | 86.14% | 0.00% | 100% |

Table III.5: Number of sherds per context for HAR15(A) (note: assemblage was culled of non-diagnostic sherds prior to analysis)

| Context | Black Burn. | Brown Burn. | Red Burn. | Black Slip. | Plainware | Unident. | Total |
|----------------|--------------------|--------------------|------------------|--------------------|------------------|-----------------|--------------|
| HAR18(E) 2 | 20 | 0 | 0 | 1 | 74 | 0 | 95 |
| HAR18(E) 3 | 16 | 1 | 0 | 0 | 84 | 0 | 101 |
| HAR18(E) 4 | 15 | 2 | 0 | 0 | 67 | 0 | 84 |
| HAR18(E) 5 | 23 | 1 | 1 | 0 | 79 | 0 | 104 |
| HAR18(E) 6 | 33 | 1 | 0 | 0 | 119 | 0 | 153 |
| HAR18(E) 7 | 18 | 3 | 2 | 0 | 129 | 2 | 154 |
| HAR18(E) 8 | 11 | 0 | 0 | 0 | 58 | 0 | 69 |
| HAR18(E) 9 | 4 | 1 | 0 | 0 | 57 | 1 | 63 |
| Total | 140 | 9 | 3 | 1 | 667 | 3 | 823 |
| Percentage | 16.99% | 1.09% | 0.36% | 0.12% | 80.95% | 0.49% | 100% |

Table III.6: Number of sherds per context for HAR18(E)

| Context Number | Date |
|--------------------------|---------------------------------------|
| HAR15(A) 10 | Cal. AD 1155-1255 |
| HAR15(B) 6 | Cal. AD 1155-1260 |
| HAR15(B) 10 | Cal. AD 1165-1265 |
| HAR16(A) 6 | Cal. AD 1290-1410 |
| HAR16(A) 7 | Cal. AD 1255-1290 |
| HAR16(A) 9 | Cal. AD 1190-1275 |
| HAR17(B) 6 – Hearth | Cal. AD 1220-1285 |
| HAR17(B) 10 | Cal. AD 1035-1215 |
| HAR17(B) 15 | Cal. AD 475-485 & Cal. AD 535-620 |
| HAR17(B) 24 – Hearth | Cal. AD 775-975 |
| HAR17(B) 24 – Under Wall | Cal. AD 1015-1050 & Cal. AD 1080-1150 |

Table III.7: Cumulative AMS radiocarbon dates from the Harlaa units, (after Insoll, 2017a: 5; 2018b: 3-4)

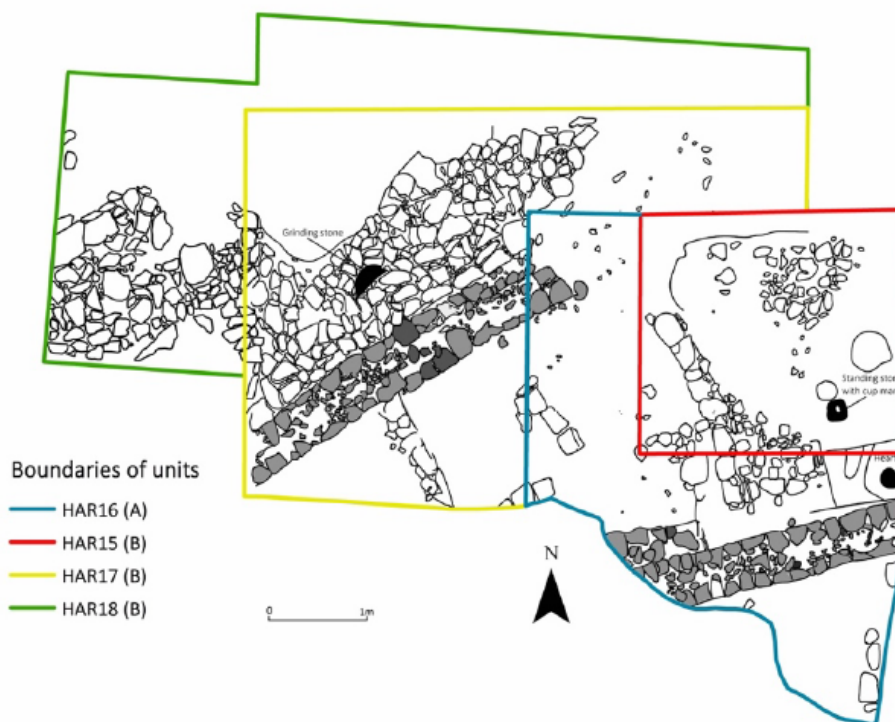


Figure III.1: Boundaries of the Excavation units in Unit(B), the jewellery workshop (Insoll, 2018b: 1)

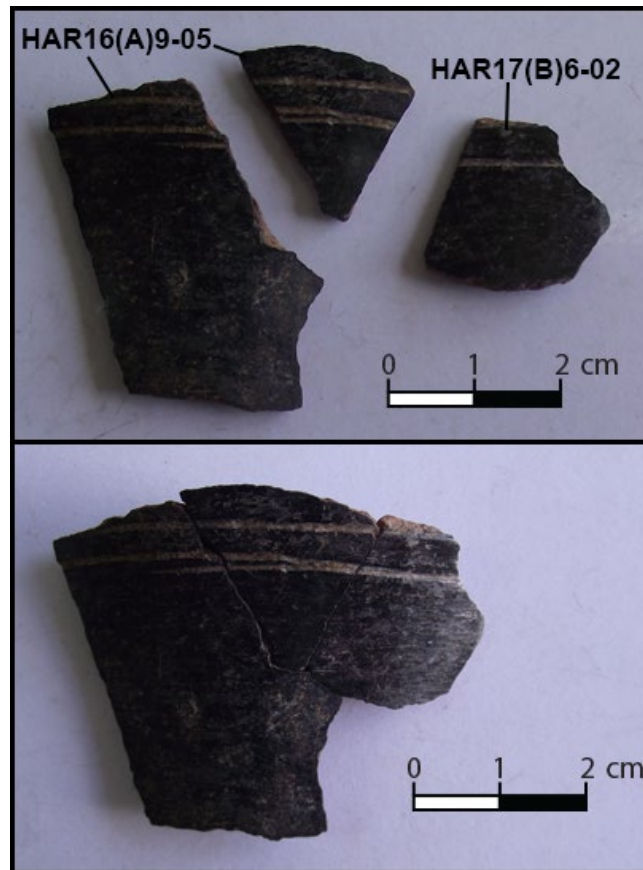


Figure III.2: Joining sherds from an incised Black/Brown Burnished ware sherd from Phases 3 (HAR16[A]9-05) and Phase 5b (HAR17[B]6-02)

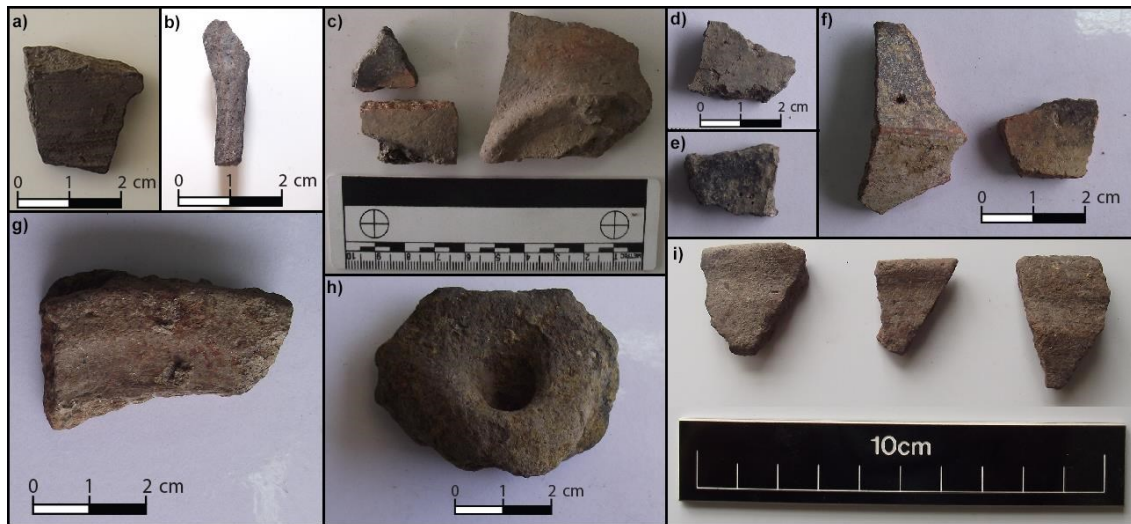


Figure III.3: Unidentified damaged sherds, a),b) HAR17(B)16-10 (Phase 5a); c) HAR17(B)4-49 (Phase 5b); d),e) HAR16(A)4-30 (Phase 5b); f) HAR16(A)9-64a,b (Phase 3); g) HAR16(A)5-11 (Phase 5b); h) HAR16(A)7-18 (Phase 4); i) HAR18(B)6-49 (Phase 4)



Figure III.4: a) HAR17(B)15-10a,b (Phase 1a); b) HAR18(E)9-07; c), d) HAR18(B)14-16 (Phase 2a); e) HAR18(B)5-51 (Phase 4); f) HAR18(B)17-18 (Phase 2a); g), h) HAR18(B)7-30 (Phase 2a); i) HAR18(E)7-14a,b; j) HAR16(A)4-31a-c (Phase 5b); k), l) HAR16(A)7-19 (Phase 4)



Figure III.5: Sherd HAR17(B)2-06, Red Burnished ware body sherd ground into a disc, potentially for use as a gourd stopper

| Phase | Context | Type | Origin | Date (century AD) |
|----------|-------------|----------|----------|---|
| Phase 2a | HAR18(B) 8 | Celadon | Lonquan | 11 th - 13 th |
| Phase 2a | HAR18(B) 8 | Celadon | Lonquan | 11 th - 14 th |
| Phase 2a | HAR18(B) 9 | Celadon | Yue? | 10 th |
| Phase 2a | HAR18(B) 9 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR18(B) 9 | Qingbai? | Dehua | 12 th - 13 th |
| Phase 2a | HAR18(B) 11 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR18(B) 11 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR18(B) 11 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR18(B) 11 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR18(B) 12 | Celadon | Yue? | 10 th |
| Phase 2a | HAR18(B) 15 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR17(B) 7 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR17(B) 7 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR17(B) 7 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR17(B) 8 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR17(B) 8 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR17(B) 8 | Celadon | Yaozhou? | 11 th |
| Phase 2a | HAR17(B) 8 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR17(B) 8 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR17(B) 8 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR17(B) 9 | Celadon | Yaozhou? | 11 th |
| Phase 2a | HAR17(B) 10 | Celadon | Lonquan | Late 13 th -15 th |
| Phase 2a | HAR15(B) 10 | Celadon | Lonquan | Late 13 th -15 th |

Table III.8: All Chinese ceramics from Phase 2a, the earliest phase they were recovered from in Unit(B) (jewellery workshop) (after Insoll, 2018b; Parsons, in prep.)

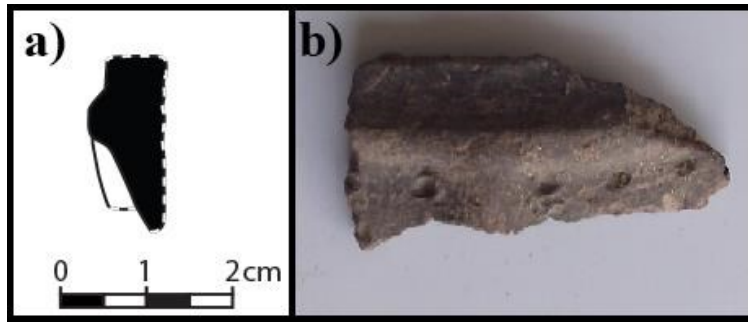


Figure III.6: Black/Brown Burnished ware sherd with appliqué ridges and punctate decoration, sherd HAR18(E)3-06



Figure III.7: Black/Brown Burnished ware extended ring base with finger pressed ring, sherd HAR16(A)11-05 from Phase 2a

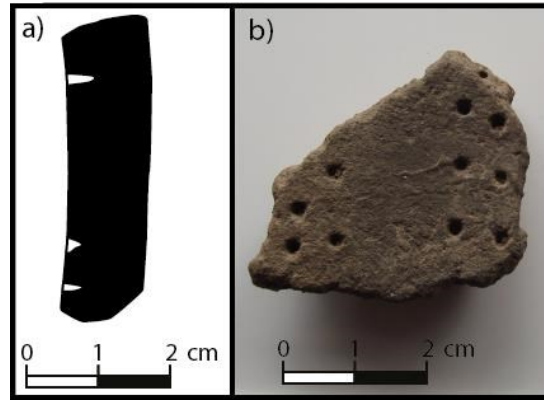


Figure III.8: Deep punctate decorated sherd HAR18(B)10-24 (Phase 2a)

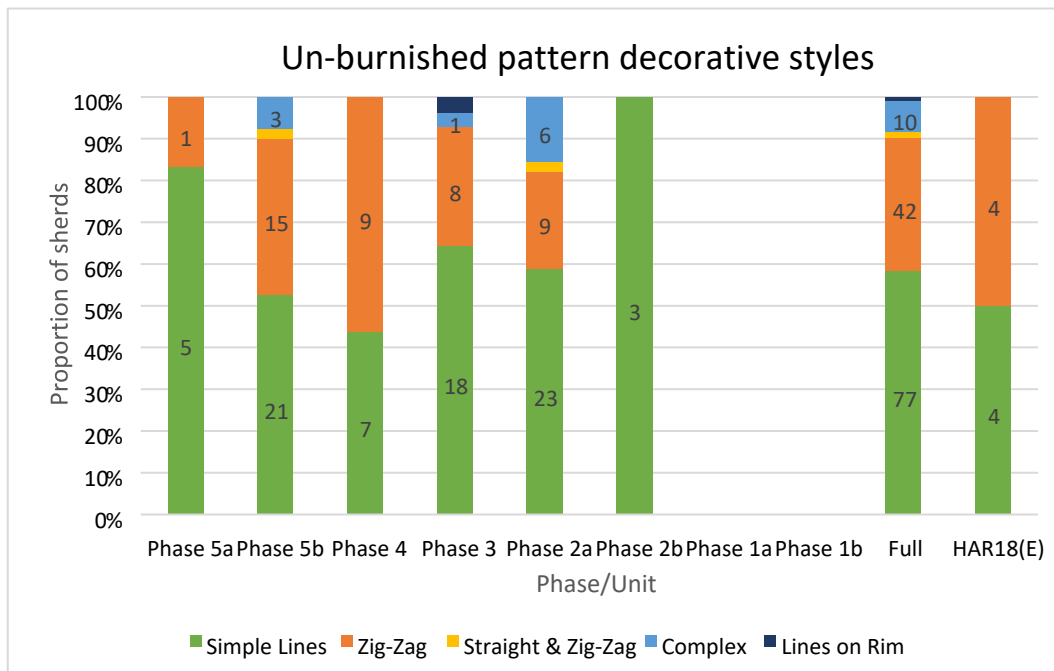


Figure III.9: Un-burnished pattern decorative styles by phase

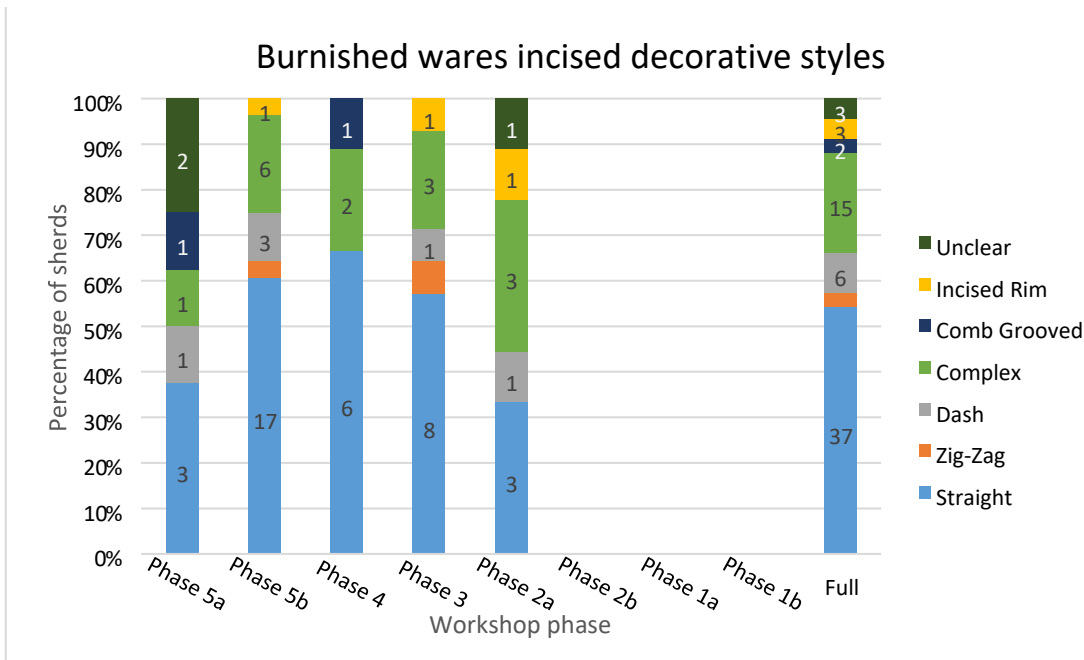


Figure III.10: Incised decoration styles on burnished wares from Unit(B) (jewellery workshop)



Figure III.11: Sherd HAR17(B)10-03 Light Brown Burnished ware thickened rim with appliqué dots on the rim (Phase 2b)

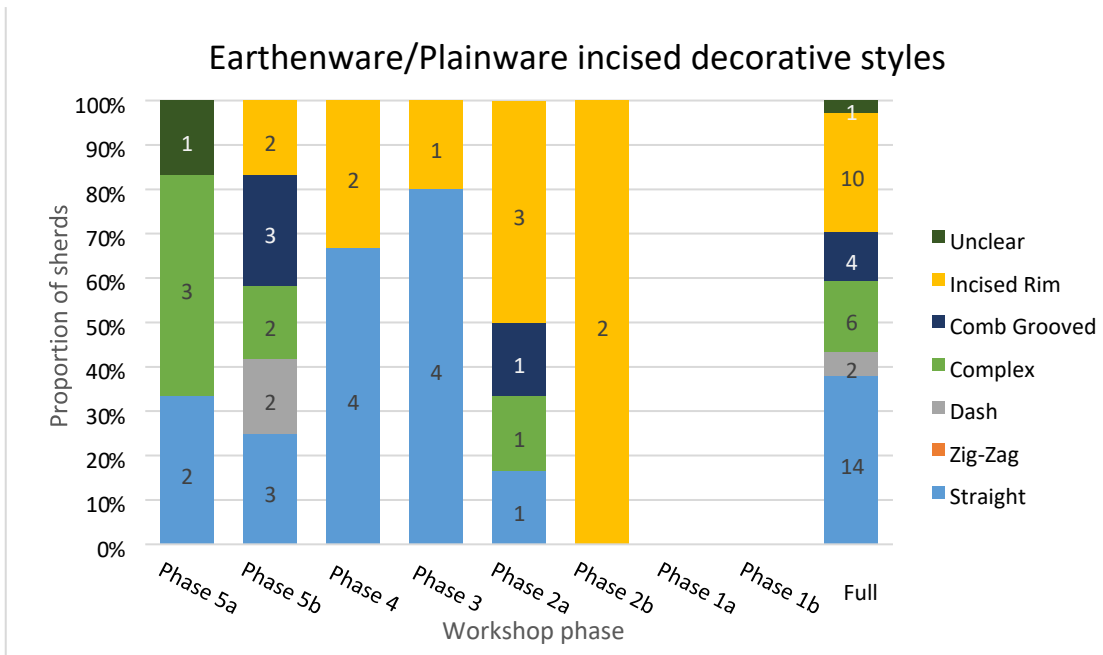


Figure III.12: Incised decorative styles on Earthenware/Plainware sherds from Unit(B) (jewellery workshop)

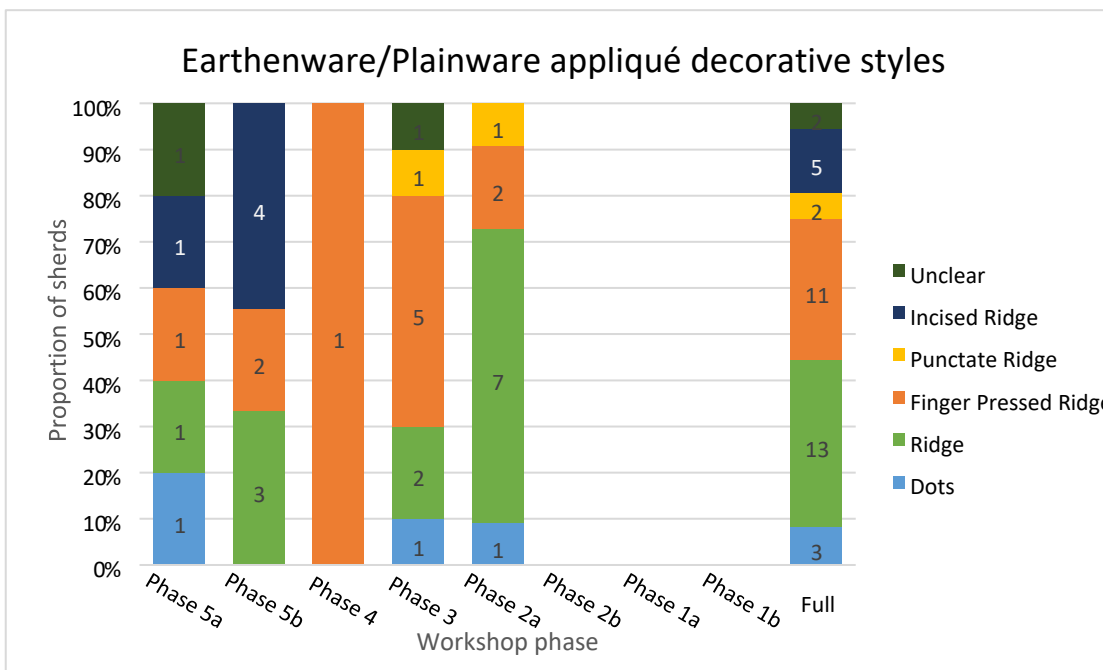


Figure III.13: Appliqué decorative styles on Earthenware/Plainware sherds from Unit(B) (jewellery workshop)

| Phase | Code | Ware | Form | Angle | Diam. (cm) | Dec. |
|----------|---------------|-------------|--------------------|------------|---------------|-------------------|
| Phase 5a | HAR17(B)3-13 | Plainware | Flat, Thickened | Out-turned | - | Incised |
| Phase 5b | HAR18(B)4-21 | Brown Slip. | Flat, Inner Lip | In-turned | 19 | Incised |
| Phase 5b | HAR17(B)16-9 | Earthenware | Tapered | Unident. | - | Pinched |
| Phase 5b | HAR17(B)18-16 | Earthenware | Simple | Out-turned | 8 | Incised |
| Phase 5b | HAR16(A)4-28 | Earthenware | Flat, Inner Lip | In-turned | 17 | Punctate |
| Phase 5b | HAR16(A)6-36 | Earthenware | Flat, Angled | Closed | 9 | Incised |
| Phase 5b | HAR15(B)5-34 | Earthenware | Flat | Out-turned | 19 | Punctate |
| Phase 5b | HAR15(B)5-35 | Earthenware | Simple | Out-turned | - | Incised |
| Phase 4 | HAR18(B)5-50 | Earthenware | Flat | In-turned | 20 | Incised |
| Phase 4 | HAR18(B)6-34 | Earthenware | Flat, Lip | In-turned | 37 | Finger Pressed |
| Phase 4 | HAR15(B)6-43 | Brown Burn. | Flat, Inner Lip | Out-turned | 21 | Appliqué dots |
| Phase 3 | HAR17(B)20-12 | Black Burn. | Flat, Lip | In-turned | 11 | Un- burnished |
| Phase 3 | HAR16(A)8-16 | Brown Burn. | Flat, Angled | Out-turned | 19 | Incised |
| Phase 3 | HAR16(A)9-19 | Black Burn. | Flat | Out-turned | 16 | Un- burnished |
| Phase 3 | HAR16(A)9-53 | Earthenware | Rounded, Lip | In-turned | - | Incised |
| Phase 3 | HAR15(B)8-13 | Black Burn. | Flat, Inner Lip | Out-turned | 20 | Appliqué dots |
| Phase 3 | HAR15(B)8-40 | Earthenware | Flat, Lip | In-turned | 27 | Finger Pressed |
| Phase 2a | HAR18(B)8-29 | Earthenware | Simple | Out-turned | 13 | Incised |
| Phase 2a | HAR18(B)9-8 | Black Burn. | Flat | Out-turned | 20 | Incised |
| Phase 2a | HAR17(B)7-27 | Earthenware | Flat, Angled | Out-turned | 16 | Incised |
| Phase 2a | HAR17(B)9-6 | Earthenware | Flat | Out-turned | 6 | Incised |
| Phase 2a | HAR17(B)10-3 | Brown Burn. | Flat, Thickened | Out-turned | 17 | Appliqué dots |
| Phase 2b | HAR17(B)13-7 | Earthenware | Simple | In-turned | - | Incised |
| Phase 2b | HAR18(B)19-6 | Earthenware | Simple | In-turned | 16 | Incised |
| HAR15(A) | HAR15(A)5-4 | Earthenware | Flat | Out-turned | 11 | Incised |

Table III.9: Decorated rims from Harlaa

| Phase | Black Burn. | Brown Burn. | Red Burn. | Black Slipped | Earthenware/ Plainware | Total |
|-----------------|-------------|-------------|-----------|---------------|------------------------|-------|
| Phase 5a | 8 | 3 | 0 | 0 | 4 | 15 |
| Phase 5b | 96 | 25 | 1 | 2 | 12 | 136 |
| Phase 4 | 68 | 14 | 2 | 1 | 0 | 85 |
| Phase 3 | 60 | 8 | 1 | 0 | 6 | 75 |
| Phase 2a | 55 | 17 | 2 | 1 | 4 | 79 |
| Phase 2b | 4 | 0 | 0 | 0 | 1 | 5 |
| Phase 1a | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 |
| Workshop | 291 | 67 | 6 | 4 | 27 | 395 |
| HAR15(A) | 4 | 0 | 0 | 0 | 0 | 4 |
| HAR18(E) | 16 | 1 | 0 | 1 | 0 | 18 |
| Total | 311 | 68 | 6 | 5 | 27 | 417 |

Table III.10: Distribution of carinated sherds by ware type at Harlaa

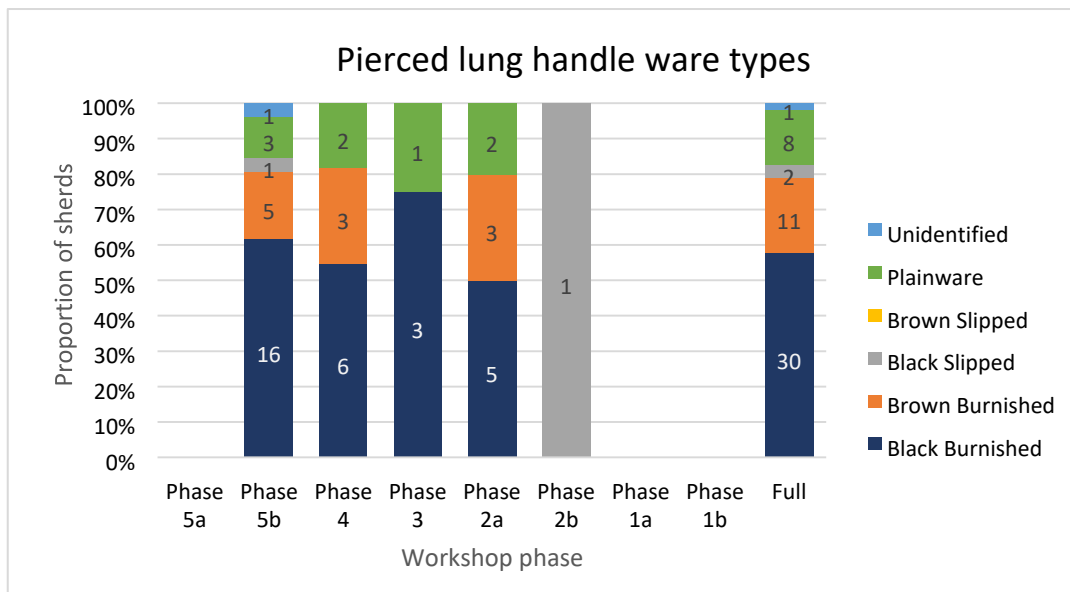


Figure III.14: Pierced lug handle ware types by phase for Unit(B) (jewellery workshop)

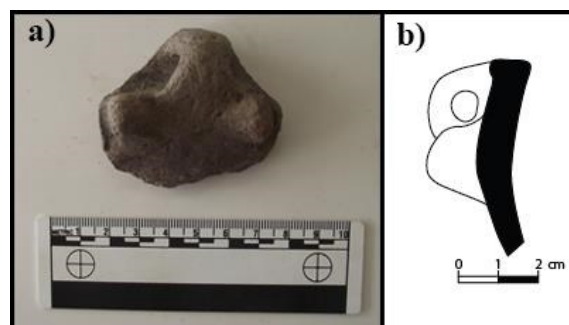


Figure III.15: Sherd HAR17(B)15-29 Earthenware/Plainware pierced lug handle with two "ears" (no diameter, Phase 1a)

| Phase | Black Burn. | Brown Burn. | Black Slip. | Brown Slip. | Earthenware/ Plainware | Total |
|----------|-------------|-------------|-------------|-------------|------------------------|-------|
| Phase 5a | 1 | 0 | 0 | 0 | 23 | 24 |
| Phase 5b | 1 | 0 | 0 | 1 | 75 | 77 |
| Phase 4 | 2 | 0 | 1 | 0 | 45 | 48 |
| Phase 3 | 0 | 1 | 0 | 0 | 13 | 14 |
| Phase 2a | 0 | 0 | 1 | 0 | 47 | 48 |
| Phase 2b | 0 | 0 | 0 | 0 | 4 | 4 |
| Phase 1a | 0 | 0 | 0 | 0 | 4 | 4 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 |
| Workshop | 4 | 1 | 2 | 1 | 211 | 219 |
| HAR15(A) | 0 | 0 | 0 | 0 | 8 | 8 |
| HAR18(E) | 0 | 0 | 0 | 0 | 11 | 11 |
| Total | 4 | 1 | 2 | 1 | 230 | 238 |

Table III.11: Ribbon handle ware types by phase from Harlaa

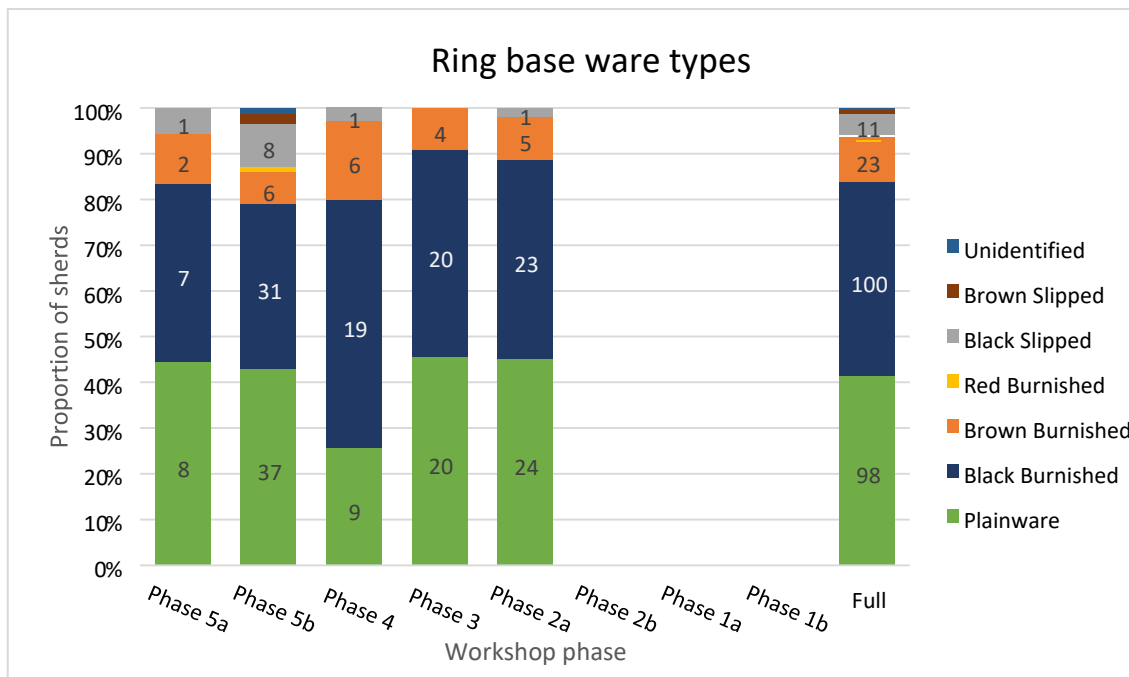


Figure III.16: Ring base ware types by phase for Unit(B) (jewellery workshop)

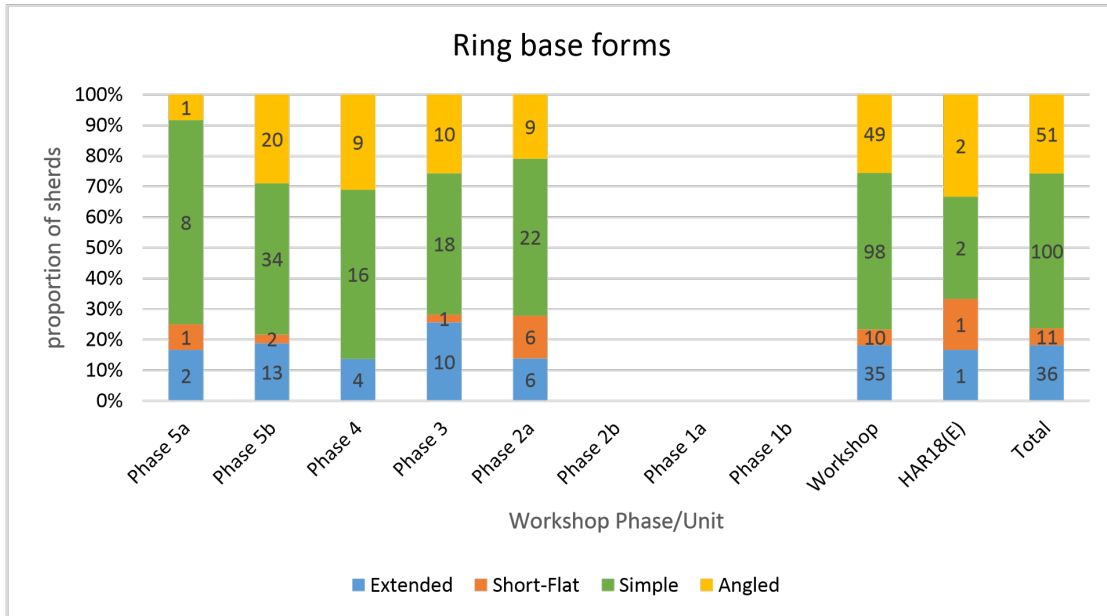


Figure III.17: Ring base forms for all ware types

| Phase | Extended | Short-Flat | Simple | Angled | Unidentified | Total |
|-----------------|----------|------------|--------|--------|--------------|-------|
| Phase 5a | 2 | 0 | 4 | 0 | 3 | 9 |
| Phase 5b | 3 | 1 | 21 | 7 | 5 | 37 |
| Phase 4 | 3 | 0 | 10 | 7 | 6 | 26 |
| Phase 3 | 4 | 0 | 12 | 6 | 2 | 24 |
| Phase 2a | 1 | 2 | 13 | 6 | 6 | 28 |
| Phase 2b | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1a | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 |
| Workshop | 13 | 3 | 60 | 26 | 22 | 124 |
| HAR18(E) | 1 | 0 | 2 | 2 | 0 | 5 |
| Full | 14 | 3 | 62 | 28 | 22 | 129 |
| Percentage | 10.85% | 2.33% | 48.06% | 21.71% | 17.05% | 100% |

Table III.12: Burnished wares ring base forms at Harlaa

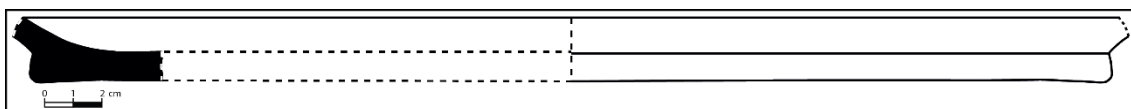


Figure III.18: Sherd HAR17(B)4-20, Black/Brown Burnished ware large flat base fragment

| Phase | Extended | Short-Flat | Simple | Angled | Unidentified | Total |
|-----------------|----------|------------|--------|--------|--------------|-------|
| Phase 5a | 0 | 1 | 3 | 1 | 3 | 8 |
| Phase 5b | 9 | 0 | 8 | 11 | 8 | 36 |
| Phase 4 | 1 | 0 | 5 | 2 | 1 | 9 |
| Phase 3 | 6 | 1 | 6 | 4 | 3 | 20 |
| Phase 2a | 5 | 4 | 9 | 3 | 3 | 24 |
| Phase 2b | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1a | 0 | 0 | 0 | 0 | 0 | 0 |
| Phase 1b | 0 | 0 | 0 | 0 | 0 | 0 |
| Workshop | 21 | 6 | 31 | 21 | 18 | 97 |
| HAR18(E) | 0 | 1 | 0 | 0 | 0 | 1 |
| Full | 21 | 7 | 31 | 21 | 18 | 98 |
| Percentage | 21.43% | 7.14% | 31.63% | 21.43% | 18.37% | 100% |

Table III.13: Earthenware/Plainware ring base forms at Harlaa

| Phase | 5a | 5b | 4 | 3 | 2a | 2b | 1a | 1b | Full | HAR15 (A) | HAR18 (E) | Total |
|--------------------|----|-----|-----|-----|-----|----|----|----|------|-----------|-----------|-------|
| Simple | 28 | 118 | 40 | 49 | 73 | 43 | 6 | 4 | 361 | 26 | 24 | 411 |
| Flat | 13 | 60 | 31 | 33 | 57 | 14 | 3 | 1 | 212 | 26 | 13 | 251 |
| Flat, Lip | 7 | 19 | 11 | 9 | 8 | 2 | 1 | 0 | 57 | 0 | 4 | 61 |
| Flat, Angled | 8 | 30 | 9 | 9 | 22 | 2 | 3 | 0 | 83 | 5 | 1 | 89 |
| Flat, Thickened | 0 | 7 | 0 | 1 | 4 | 0 | 0 | 0 | 12 | 1 | 1 | 14 |
| Flat, Inner Lip | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 4 |
| Tapered | 4 | 7 | 4 | 3 | 7 | 2 | 0 | 0 | 27 | 0 | 2 | 29 |
| Rounded, Lip | 3 | 6 | 4 | 1 | 8 | 3 | 4 | 1 | 30 | 0 | 2 | 32 |
| Rounded, Thickened | 1 | 0 | 2 | 1 | 1 | 3 | 0 | 0 | 8 | 0 | 0 | 8 |
| Unique (ledge) | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 5 |
| Unique (other) | 1 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 6 | 0 | 2 | 8 |
| Unident. | 1 | 18 | 2 | 7 | 6 | 3 | 2 | 0 | 39 | 1 | 1 | 41 |
| Total | 66 | 270 | 104 | 116 | 191 | 72 | 19 | 6 | 844 | 59 | 50 | 953 |

Table III.14: Earthenware/Plainware rim forms from Harlaa

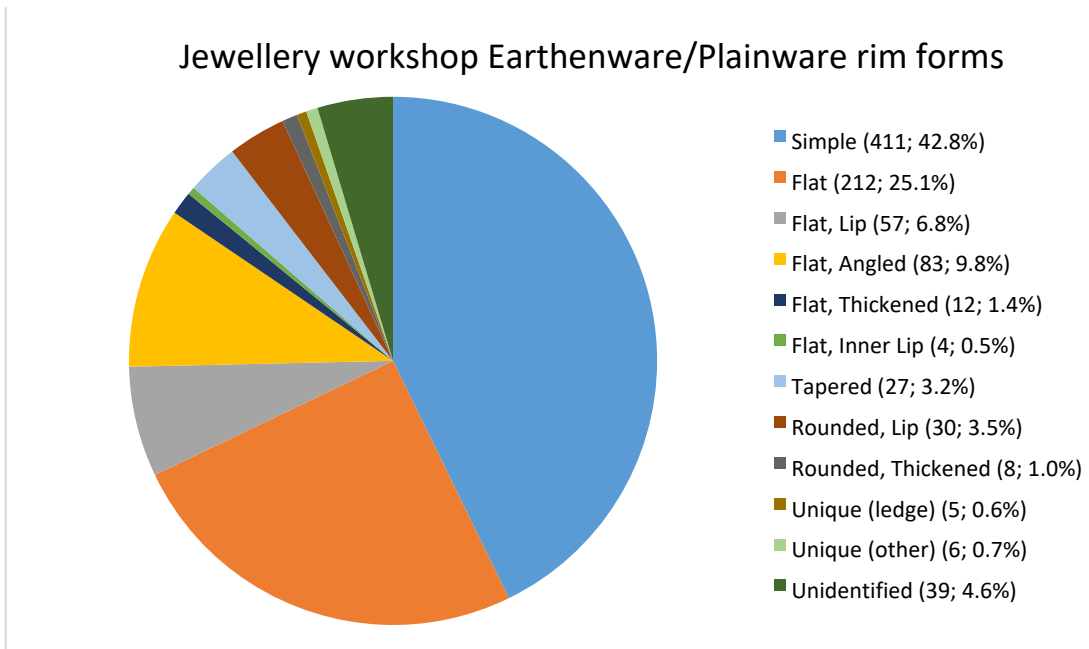


Figure III.19: Proportion of Earthenware/Plainware rim forms in Unit(B) (jewellery workshop)

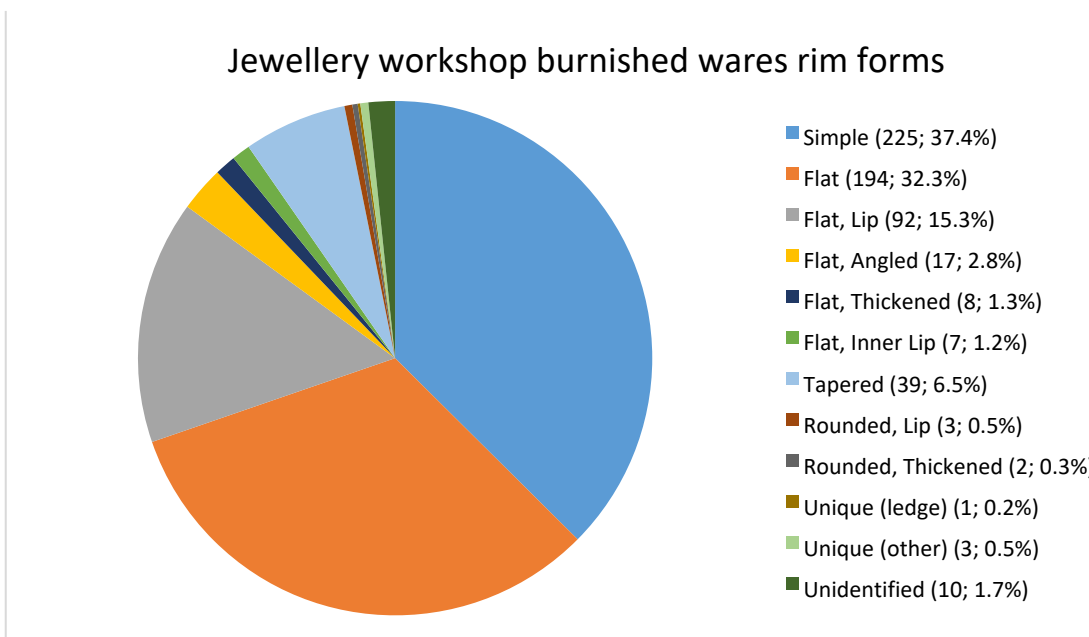


Figure III.20: Proportion of burnished wares rim forms in Unit(B) (jewellery workshop)

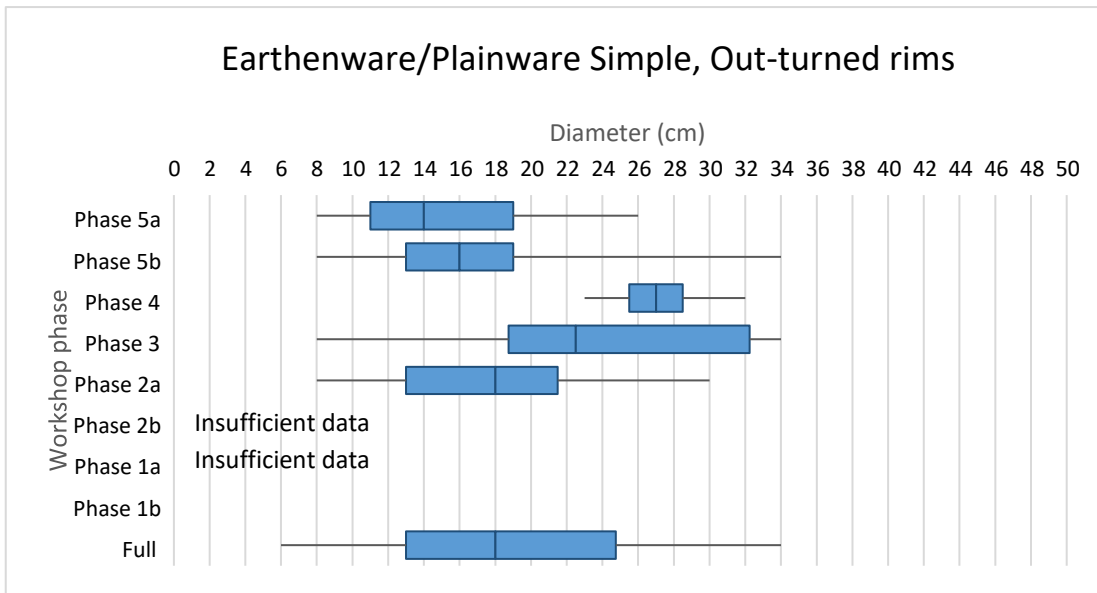


Figure III.21: Box-plot of Earthenware/Plainware Simple, Out-turned rim diameters from Unit(B) (jewellery workshop)

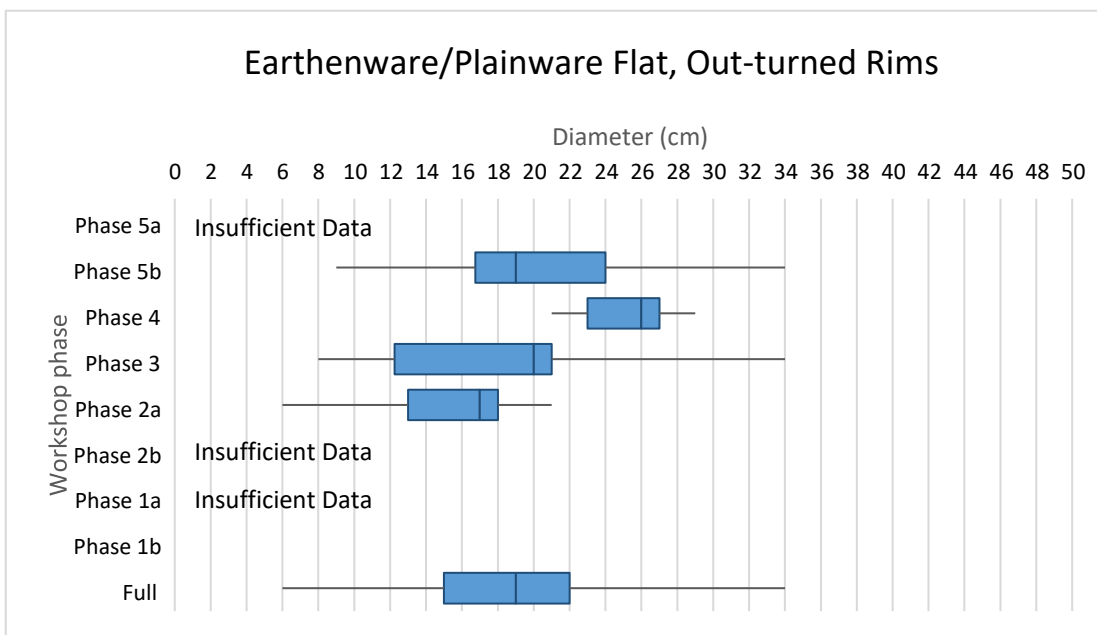


Figure III.22: Box-plot of Earthenware/Plainware Flat, Out-turned rim diameters from Unit(B) (jewellery workshop)

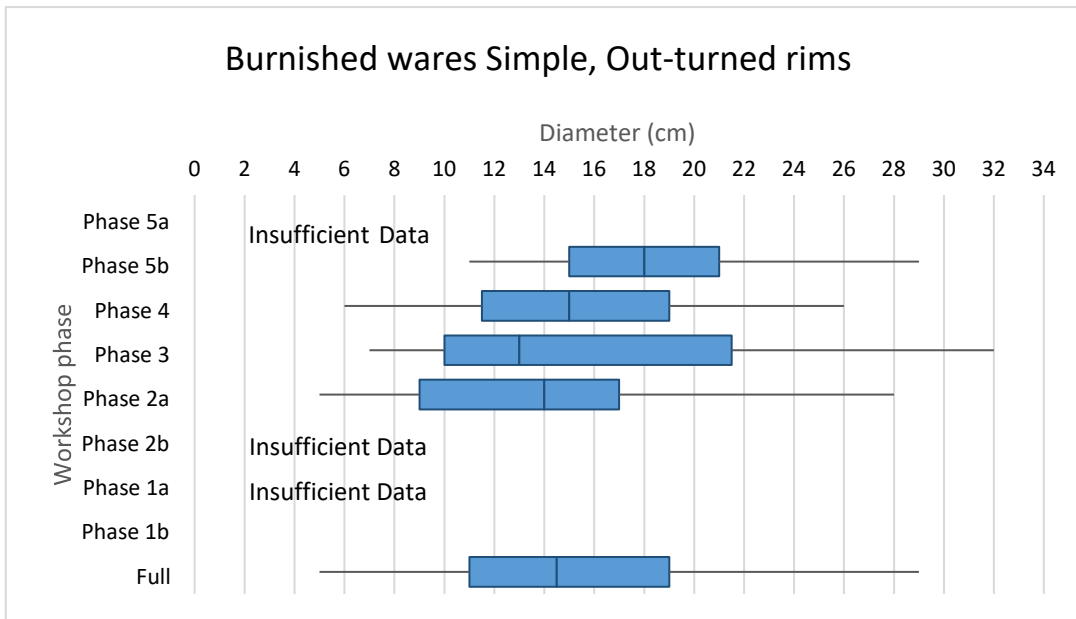


Figure III.23: Box-plot of burnished wares Simple, Out-turned rim diameters from Unit (B) (jewellery workshop)

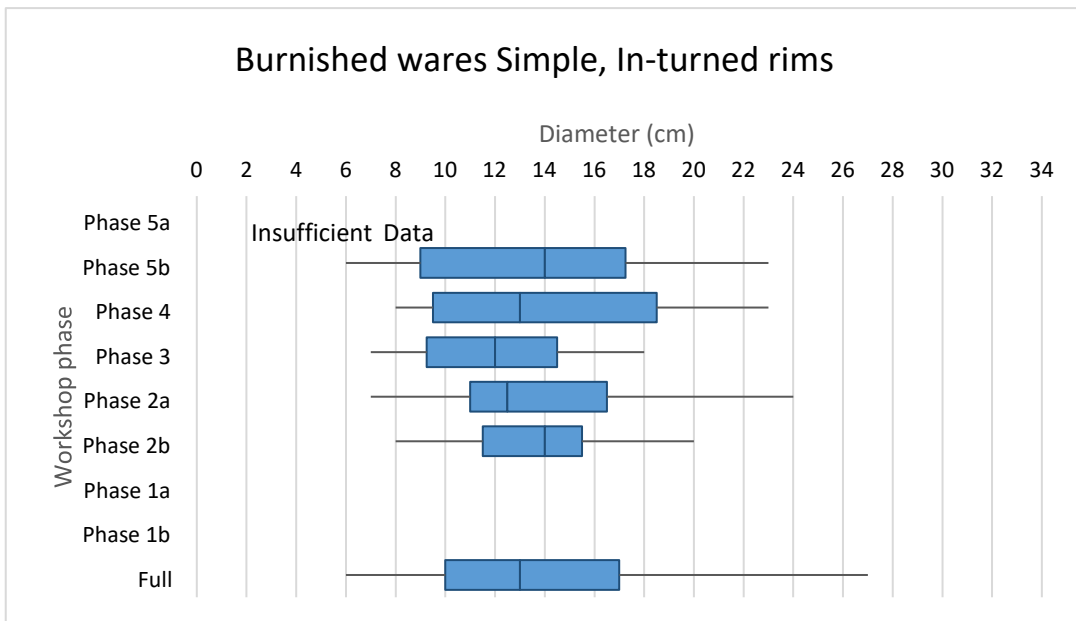


Figure III.24: Box-plot of burnished wares Simple, In-turned rim diameters from Unit(B) (jewellery workshop)

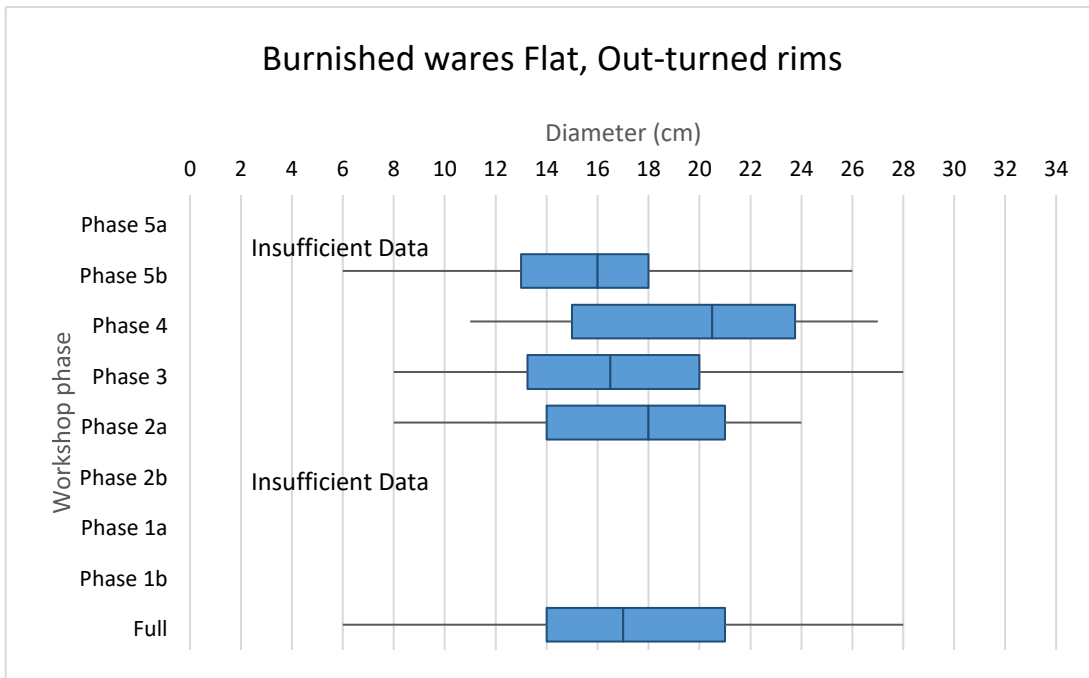


Figure III.25: Box-plot of burnished wares Flat, Out-turned rim diameters from Unit(B) (jewellery workshop)

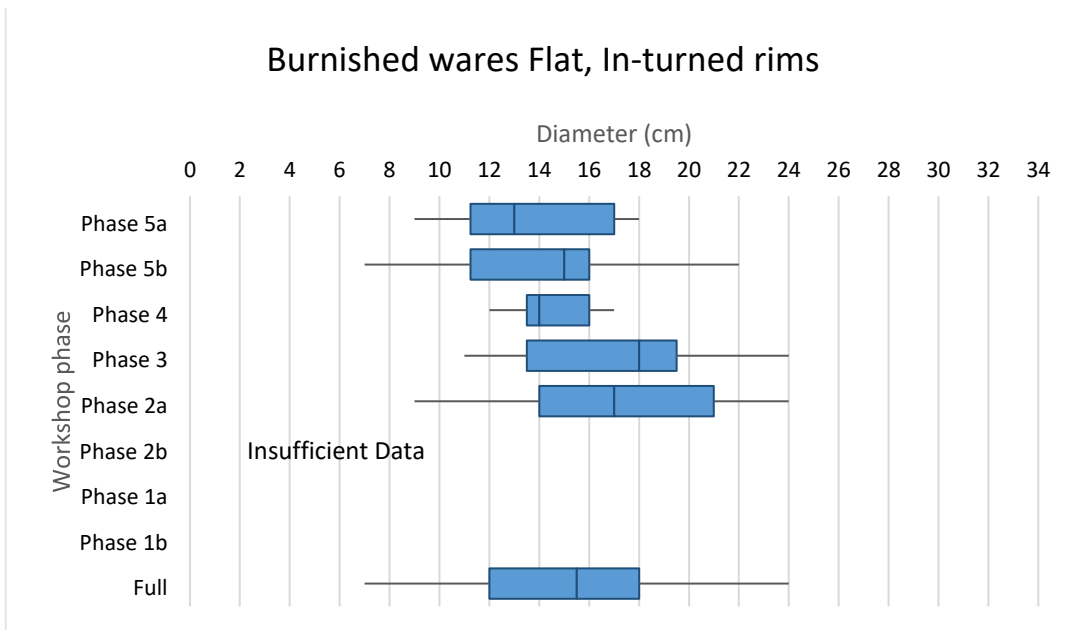


Figure III.26: Box-plot of burnished wares Flat, In-turned rim diameters from Unit(B) (jewellery workshop)

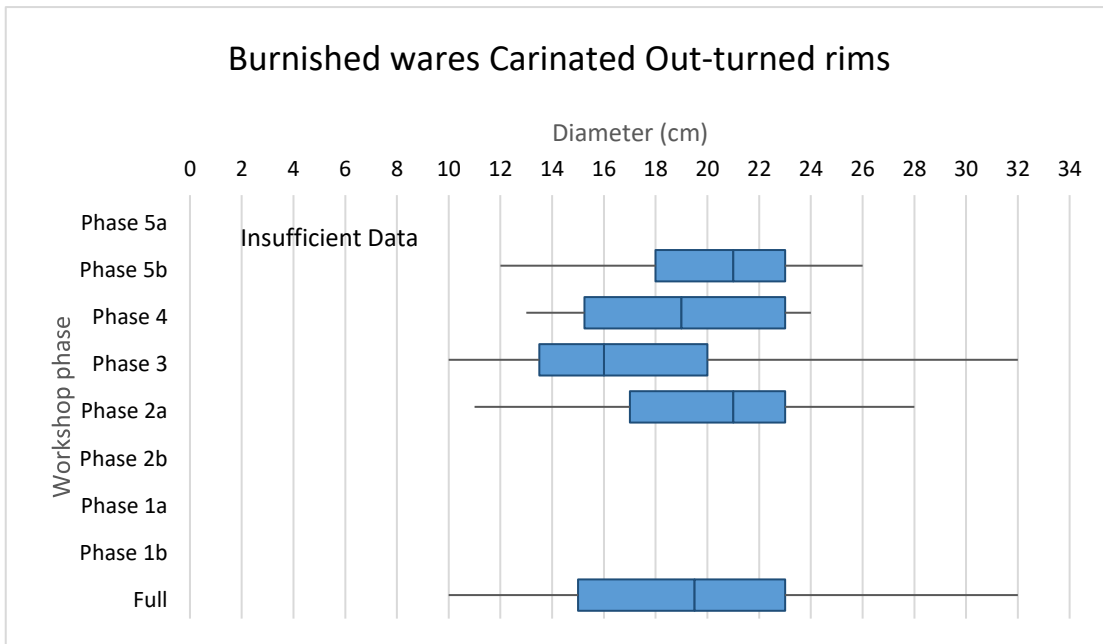


Figure III.27: Box-plot of burnished wares carinated Out-turned rim diameters from Unit (B) (jewellery workshop)

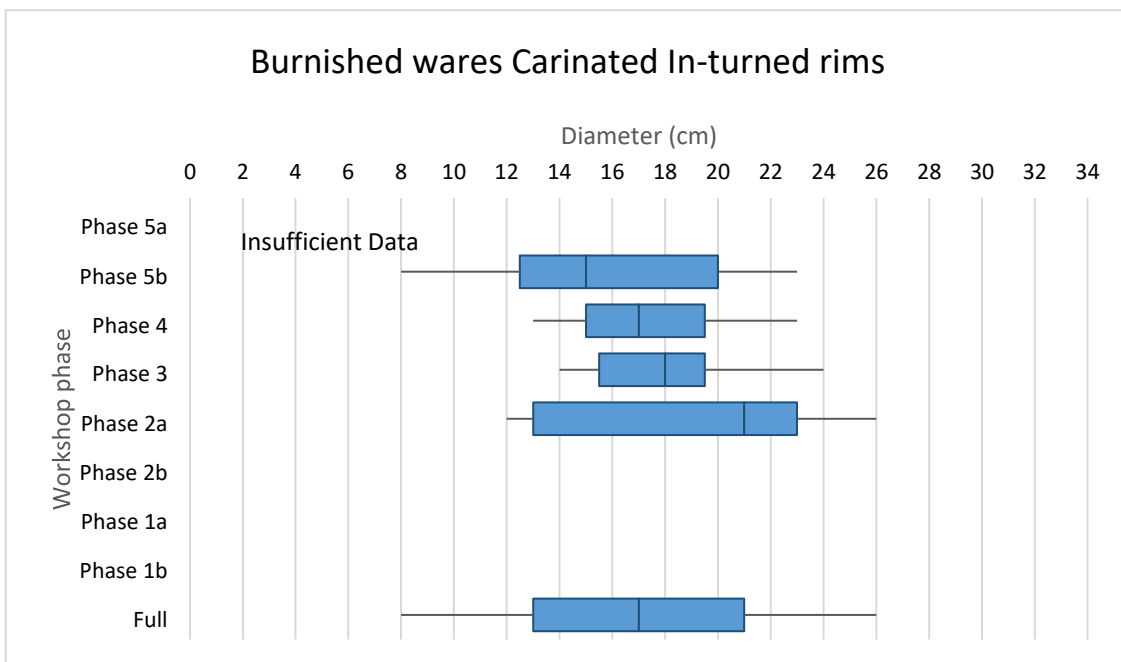


Figure III.28: Box-plot of burnished wares carinated In-turned rim diameters from Unit(B) (jewellery workshop)

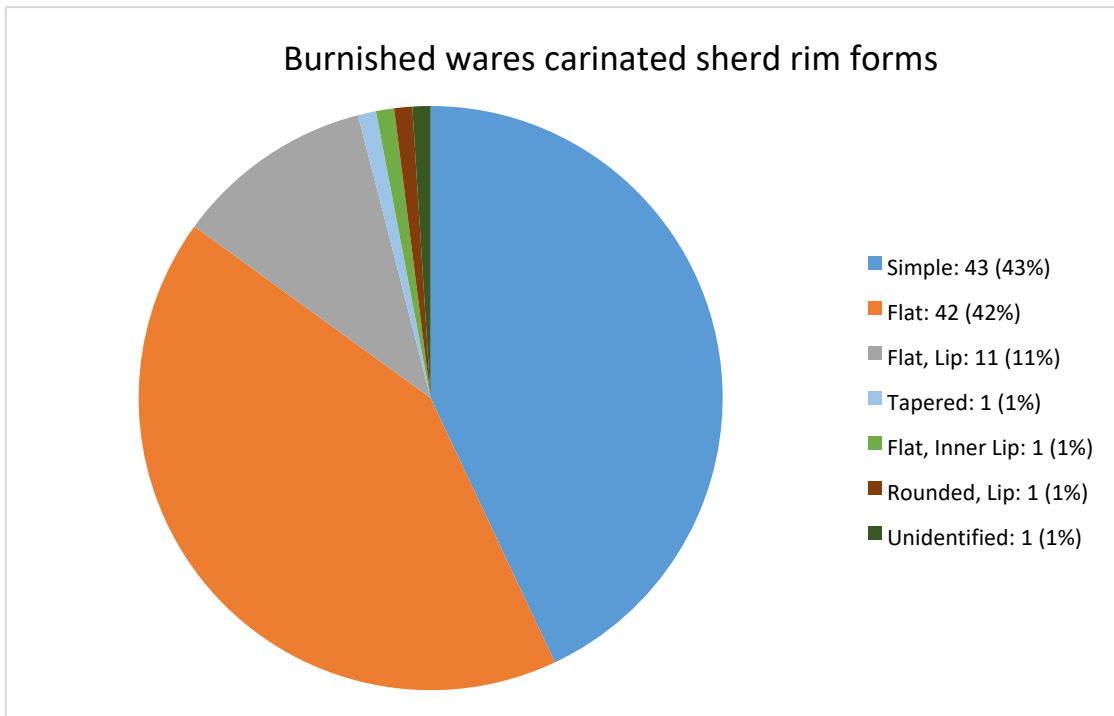


Figure III.29: Burnished ware carinated sherd rim forms

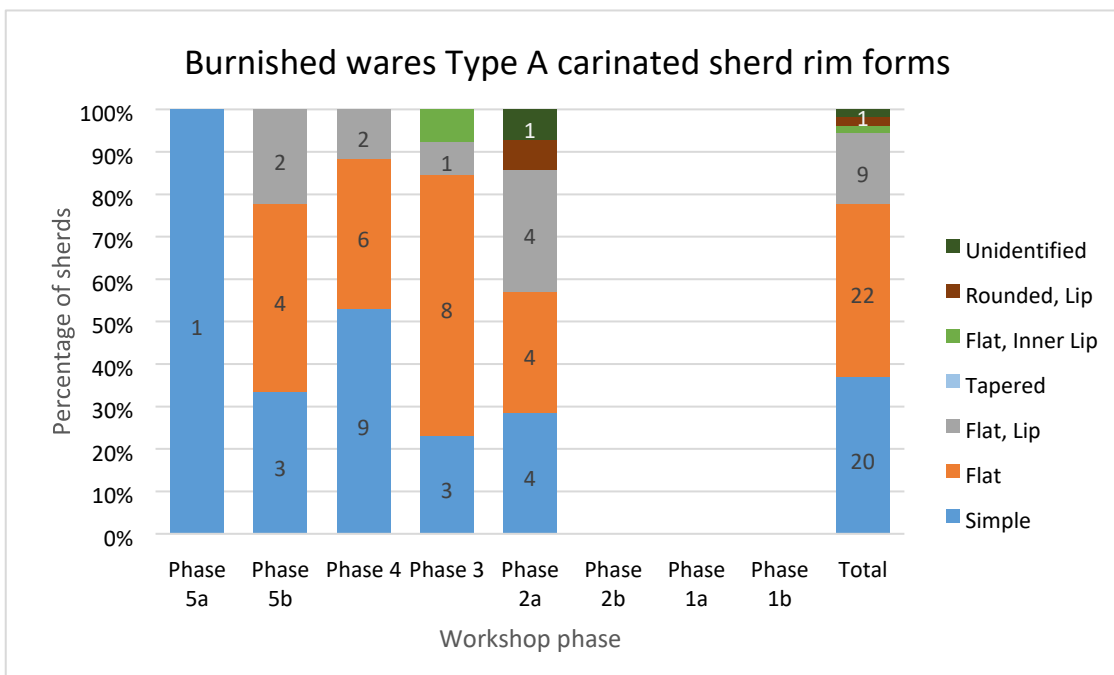


Figure III.30: Burnished ware Type A carinated rim forms by phase for Unit(B) (jewellery workshop)

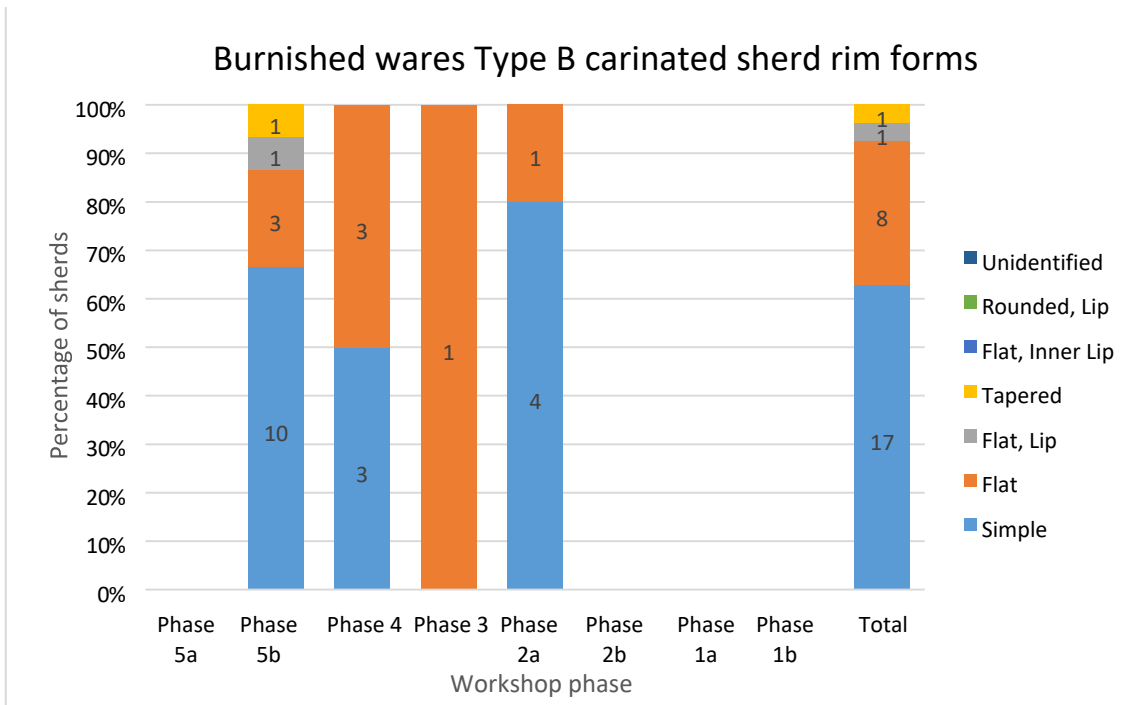


Figure III.31: Burnished ware Type B carinated rim forms by phase from Unit(B) (jewellery workshop)

Appendix IV – Survey supplementary data

| Material | Tran(A) | Tran(B) | Tran(C) | Tran(D) | Tran(E) | Total |
|---------------------|----------------|----------------|----------------|----------------|----------------|--------------|
| Local Ceramic | 312 | 295 | 730 | 784 | 1568 | 3689 |
| Imported Ceramic | 1 | 0 | 1 | 3 | 7 | 12 |
| Shell | 89 | 80 | 40 | 5 | 15 | 229 |
| Shell Bead | 0 | 0 | 1 | 0 | 0 | 1 |
| Glass Bead | 0 | 1 | 1 | 1 | 2 | 5 |
| Worked Stone | 1 | 1 | 1 | 1 | 10 | 14 |
| Obsidian/Chert | 0 | 0 | 0 | 0 | 4 | 4 |
| Slag | 1 | 1 | 1 | 0 | 5 | 8 |
| Total | 404 | 378 | 775 | 794 | 1611 | 3962 |
| Transect Length (m) | 50 | 45 | 82 | 120 | 102 | 399 |

Table IV.1: Breakdown by transect of all material recovered as part of the fieldwalking survey

| Survey Transect | Diagnostic | | Body | | Total |
|----------------------------|-------------------|--------------|-------------|--------------|--------------|
| | Sherds | Percent. | Sherds | Percent. | |
| Transect (A) | 50 | 16.0% | 262 | 84.0% | 312 |
| Transect (B) | 61 | 20.7% | 234 | 79.3% | 295 |
| Transect (C) | 124 | 17.0% | 606 | 83.0% | 730 |
| Transect (D) | 154 | 19.6% | 630 | 80.4% | 784 |
| Transect (E) | 333 | 21.2% | 1235 | 78.8% | 1568 |
| Total | 722 | 19.6% | 2967 | 80.4% | 3689 |

Table IV.2: Proportion of diagnostic sherds by survey transect

| Unit | Black Burn. | Brown Burn. | Black Slip. | Brown Slip. | Plainware | Unident. | Total |
|--------------|------------------------|------------------------|------------------------|------------------------|------------------|-----------------|--------------|
| (A).1 | 1 | 2 | 0 | 0 | 31 | 1 | 35 |
| (A).2 | 1 | 0 | 0 | 0 | 18 | 0 | 19 |
| (A).3 | 0 | 2 | 1 | 1 | 9 | 1 | 14 |
| (A).4 | 0 | 0 | 0 | 0 | 8 | 0 | 8 |
| (A).5 | 0 | 0 | 1 | 0 | 14 | 0 | 15 |
| (A).6 | 5 | 1 | 3 | 0 | 46 | 0 | 55 |
| (A).7 | 1 | 0 | 1 | 0 | 41 | 0 | 43 |
| (A).8 | 1 | 2 | 1 | 0 | 51 | 0 | 55 |
| (A).9 | 0 | 1 | 0 | 2 | 27 | 0 | 30 |
| (A).10 | 3 | 6 | 0 | 0 | 29 | 0 | 38 |
| Total | 12 | 14 | 7 | 3 | 274 | 2 | 312 |
| Percentage | 3.85% | 4.49% | 2.24% | 0.96% | 87.82% | 0.64% | 100% |

Table IV.3: Break down of wares by unit for Transect (A), potential features and associated spill marked in red (see Table 6.2 and App.Fig. IV.1 for potential feature numbers)

| Unit | Black Burn. | Brown Burn. | Black Slip. | Brown Slip. | Plainware | Unident. | Total |
|------------|-------------|-------------|-------------|-------------|-----------|----------|-------|
| (B).1 | 4 | 4 | 0 | 0 | 46 | 3 | 57 |
| (B).2 | 5 | 1 | 0 | 0 | 43 | 0 | 49 |
| (B).3 | 1 | 0 | 1 | 1 | 26 | 0 | 29 |
| (B).4 | 0 | 1 | 2 | 0 | 28 | 0 | 31 |
| (B).5 | 6 | 2 | 0 | 0 | 56 | 1 | 65 |
| (B).6 | 0 | 0 | 1 | 0 | 18 | 0 | 19 |
| (B).7 | - | - | - | - | - | - | - |
| (B).8 | 1 | 0 | 0 | 0 | 23 | 0 | 24 |
| (B).9 | 2 | 1 | 1 | 0 | 17 | 0 | 21 |
| Total | 19 | 9 | 5 | 1 | 257 | 4 | 295 |
| Percentage | 6.44% | 3.05% | 1.69% | 0.34% | 87.12% | 1.36% | 100% |

Table IV.4: Break down of wares by unit for Transect (B), potential features and associated spill marked in red (see Table 6.2 and App.Fig. IV.1 for potential feature numbers)

| Unit | Black Burn. | Brown Burn. | Red Burn. | Black Slip. | Brown Slip. | Plainware | Unident. | Total |
|------------|-------------|-------------|-----------|-------------|-------------|-----------|----------|-------|
| (C).1 | 2 | 1 | 0 | 0 | 0 | 19 | 0 | 22 |
| (C).2 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 26 |
| (C).3 | 0 | 1 | 0 | 1 | 0 | 14 | 0 | 16 |
| (C).4 | 1 | 0 | 0 | 3 | 0 | 27 | 1 | 32 |
| (C).5 | 1 | 1 | 0 | 0 | 0 | 25 | 0 | 27 |
| (C).6 | 2 | 2 | 0 | 0 | 0 | 28 | 0 | 32 |
| (C).7 | 0 | 2 | 0 | 0 | 0 | 11 | 0 | 13 |
| (C).8 | - | - | - | - | - | - | - | - |
| (C).9 | 2 | 0 | 1 | 0 | 0 | 16 | 0 | 19 |
| (C).10 | 2 | 0 | 3 | 0 | 0 | 31 | 0 | 36 |
| (C).11 | 2 | 1 | 0 | 0 | 0 | 19 | 0 | 22 |
| (C).12 | 2 | 1 | 1 | 0 | 1 | 20 | 1 | 26 |
| (C).13 | 3 | 0 | 0 | 0 | 0 | 22 | 0 | 25 |
| (C).14 | 1 | 1 | 0 | 0 | 0 | 49 | 0 | 51 |
| (C).15 | 0 | 0 | 0 | 0 | 1 | 10 | 0 | 11 |
| (C).16 | 2 | 0 | 1 | 0 | 0 | 17 | 0 | 20 |
| (C).17 | 5 | 0 | 0 | 0 | 0 | 16 | 0 | 21 |
| (C).18 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 14 |
| (C).19 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 20 |
| (C).20 | 2 | 0 | 0 | 0 | 0 | 19 | 0 | 21 |
| (C).21 | 9 | 2 | 1 | 0 | 1 | 35 | 0 | 48 |
| (C).22 | 3 | 5 | 0 | 0 | 0 | 61 | 1 | 70 |
| (C).23 | 2 | 1 | 0 | 0 | 1 | 26 | 1 | 31 |
| (C).24 | 9 | 3 | 1 | 0 | 0 | 26 | 0 | 39 |
| (C).25 | 2 | 1 | 0 | 0 | 0 | 21 | 0 | 24 |
| (C).26 | 5 | 1 | 0 | 0 | 0 | 20 | 0 | 26 |
| (C).27 | 4 | 1 | 0 | 0 | 3 | 30 | 0 | 38 |
| Total | 61 | 24 | 8 | 4 | 7 | 622 | 4 | 730 |
| Percentage | 8.36% | 3.29% | 1.10% | 0.55% | 0.96% | 85.21% | 0.55% | 100% |

Table IV.5: Break down of wares by unit for Transect (C), potential features and associated spill marked in red (see Table 6.2 and App.Fig. IV.1 for potential feature numbers)

| Unit | Black Burn. | Brown Burn. | Red Burn. | Brown Slip. | Black Slip. | Plainware | Unident. | Total |
|------------|-------------|-------------|-----------|-------------|-------------|-----------|----------|-------|
| (D).1 | 3 | 1 | 0 | 0 | 0 | 17 | 0 | 21 |
| (D).2 | 3 | 1 | 0 | 0 | 0 | 24 | 0 | 28 |
| (D).3 | 0 | 2 | 0 | 1 | 0 | 18 | 0 | 21 |
| (D).4 | 1 | 2 | 0 | 0 | 1 | 20 | 0 | 24 |
| (D).5 | 2 | 0 | 1 | 0 | 2 | 28 | 0 | 33 |
| (D).6 | 5 | 1 | 0 | 0 | 0 | 31 | 1 | 38 |
| (D).7 | 3 | 2 | 0 | 0 | 0 | 30 | 0 | 35 |
| (D).8 | 1 | 2 | 0 | 1 | 0 | 30 | 0 | 34 |
| (D).9 | 3 | 3 | 0 | 2 | 0 | 32 | 0 | 40 |
| (D).10 | 2 | 1 | 0 | 0 | 0 | 25 | 0 | 28 |
| (D).11 | 2 | 3 | 0 | 0 | 0 | 47 | 0 | 52 |
| (D).12 | 1 | 0 | 0 | 1 | 0 | 42 | 0 | 44 |
| (D).13 | 5 | 0 | 0 | 0 | 1 | 34 | 0 | 40 |
| (D).14 | 6 | 2 | 0 | 0 | 0 | 34 | 0 | 42 |
| (D).15 | 3 | 1 | 0 | 0 | 1 | 33 | 0 | 38 |
| (D).16 | 1 | 2 | 0 | 0 | 0 | 24 | 0 | 27 |
| (D).17 | 4 | 3 | 0 | 1 | 1 | 62 | 0 | 71 |
| (D).18 | 3 | 1 | 0 | 0 | 0 | 19 | 0 | 23 |
| (D).19 | 13 | 3 | 0 | 0 | 0 | 54 | 0 | 70 |
| (D).20 | 4 | 3 | 0 | 0 | 1 | 31 | 0 | 39 |
| (D).21 | 1 | 0 | 0 | 1 | 0 | 9 | 0 | 11 |
| (D).22 | 0 | 3 | 0 | 0 | 0 | 16 | 1 | 20 |
| (D).23 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 4 |
| (D).24 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 67 | 36 | 1 | 7 | 7 | 664 | 2 | 784 |
| Percentage | 8.55% | 4.59% | 0.13% | 0.89% | 0.89% | 84.69% | 0.26% | 100% |

Table IV.6: Break down of wares by unit for Transect (D), potential features and associated spill marked in red (see Table 6.2 and App.Fig. IV.2 for potential feature numbers)

| Unit | Black Burn. | Brown Burn. | Red Burn. | Brown Slip. | Black Slip. | Plainware | Unident. | Total |
|------------|-------------|-------------|-----------|-------------|-------------|-----------|----------|-------|
| (E).1 | 4 | 2 | 0 | 0 | 0 | 31 | 0 | 37 |
| (E).2 | 3 | 2 | 1 | 0 | 0 | 24 | 0 | 30 |
| (E).3 | 7 | 1 | 0 | 2 | 0 | 26 | 0 | 36 |
| (E).4 | 3 | 3 | 0 | 0 | 0 | 28 | 0 | 34 |
| (E).5 | 2 | 0 | 0 | 0 | 2 | 32 | 0 | 36 |
| (E).6 | 13 | 2 | 1 | 0 | 0 | 53 | 0 | 69 |
| (E).7 | 2 | 0 | 0 | 0 | 0 | 33 | 0 | 35 |
| (E).8 | 5 | 0 | 0 | 0 | 1 | 24 | 0 | 30 |
| (E).9 | 4 | 0 | 1 | 0 | 0 | 25 | 1 | 31 |
| (E).10 | 2 | 1 | 0 | 0 | 0 | 11 | 0 | 14 |
| (E).11 | 4 | 1 | 0 | 0 | 0 | 21 | 0 | 26 |
| (E).12 | 1 | 1 | 2 | 0 | 0 | 29 | 0 | 33 |
| (E).13 | 7 | 2 | 0 | 0 | 0 | 45 | 0 | 54 |
| (E).14 | 7 | 3 | 0 | 0 | 0 | 40 | 0 | 50 |
| (E).15 | 4 | 1 | 0 | 0 | 0 | 22 | 0 | 27 |
| (E).16 | 2 | 0 | 0 | 0 | 0 | 15 | 0 | 17 |
| (E).17 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 |
| (E).18 | 2 | 2 | 0 | 0 | 0 | 36 | 0 | 40 |
| (E).19 | 1 | 0 | 0 | 0 | 0 | 25 | 0 | 26 |
| (E).20 | 4 | 1 | 0 | 0 | 0 | 28 | 0 | 33 |
| (E).21 | 2 | 1 | 0 | 0 | 0 | 20 | 0 | 23 |
| (E).22 | 0 | 2 | 0 | 0 | 0 | 25 | 0 | 27 |
| (E).23 | 2 | 0 | 0 | 0 | 1 | 25 | 1 | 29 |
| (E).24 | 5 | 6 | 0 | 0 | 2 | 46 | 0 | 59 |
| (E).25 | 5 | 4 | 0 | 0 | 0 | 43 | 1 | 53 |
| (E).26 | 8 | 2 | 0 | 2 | 0 | 84 | 3 | 99 |
| (E).27 | 4 | 4 | 1 | 0 | 0 | 98 | 2 | 109 |
| (E).28 | 13 | 2 | 1 | 5 | 0 | 113 | 1 | 135 |
| (E).29 | 5 | 4 | 0 | 0 | 0 | 56 | 0 | 65 |
| (E).30 | 5 | 4 | 0 | 1 | 0 | 63 | 1 | 74 |
| (E).31 | 11 | 1 | 0 | 1 | 0 | 54 | 0 | 67 |
| (E).32 | 3 | 3 | 1 | 0 | 1 | 85 | 0 | 93 |
| (E).33 | 2 | 1 | 0 | 0 | 0 | 26 | 1 | 30 |
| (E).34 | 1 | 2 | 0 | 2 | 0 | 32 | 2 | 39 |
| Total | 143 | 58 | 8 | 13 | 7 | 1326 | 13 | 1568 |
| Percentage | 9.12% | 3.70% | 0.51% | 0.83% | 0.45% | 84.57% | 0.83% | 100% |

Table IV.7: Break down of wares by unit for Transect (E), potential features and associated spill marked in red (see Table 6.2 and App.Fig. IV.3 for potential feature numbers)

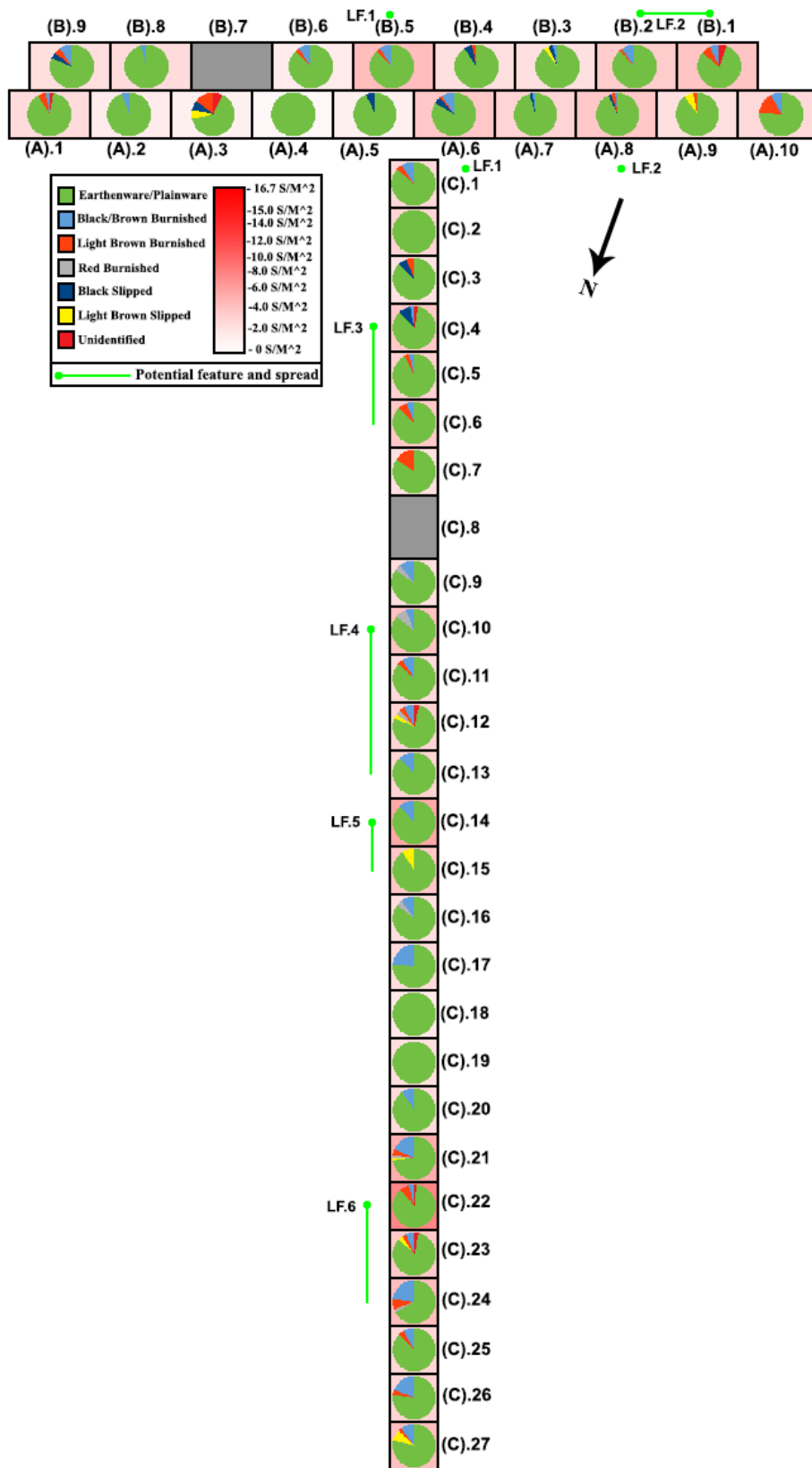


Figure IV.1: Sherd Density and ware distribution for Transects (A), (B) and (C), Transect (A) & (B) units were 5x3 m and Transect (C) units were 3x3 m (see App. Table 3-5 for detailed sherd count)

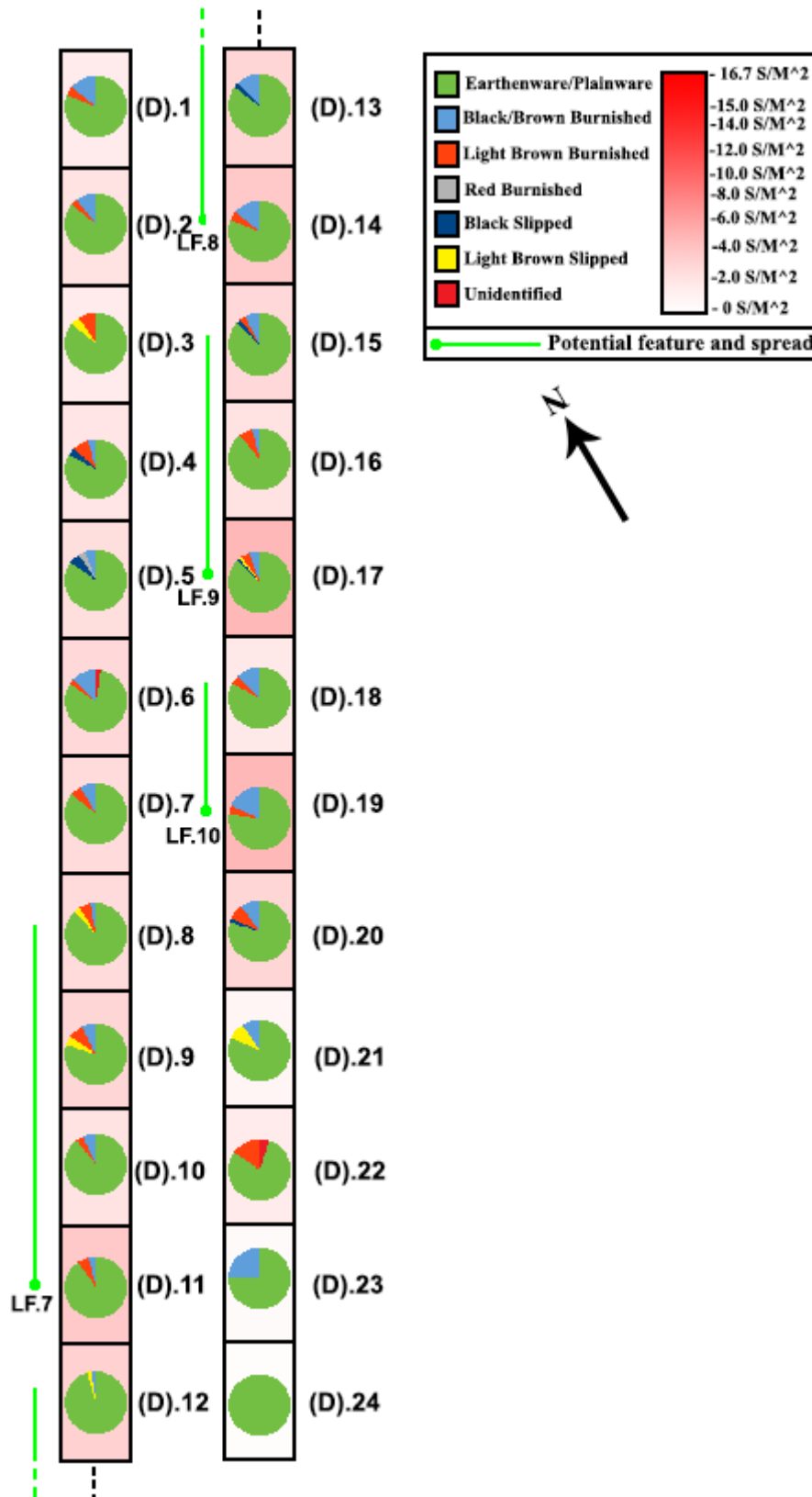


Figure IV.2: Sherd Density and ware distribution for Transect (D), units were 5x3 m (see App.Table IV.6 for detailed sherd count)

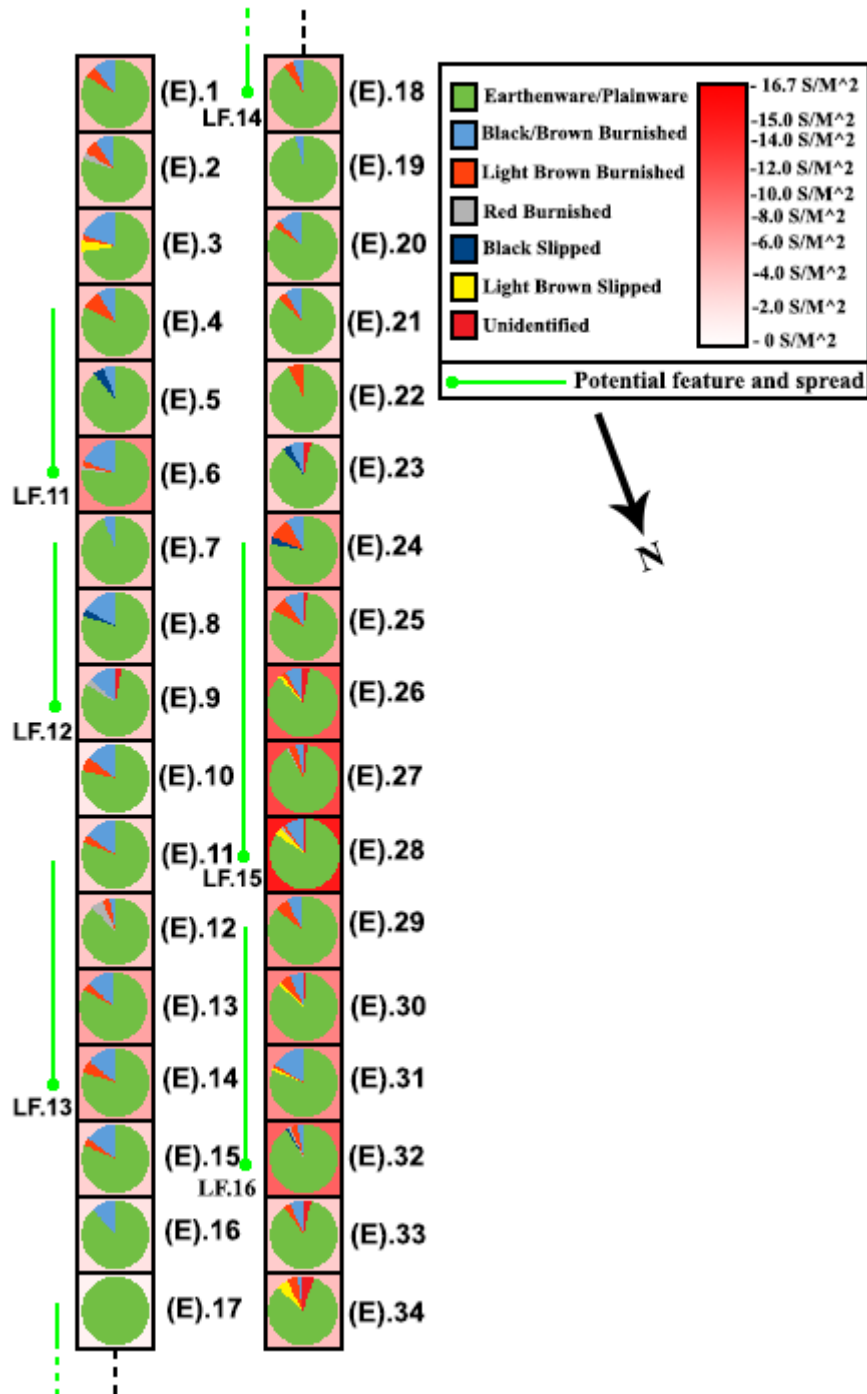


Figure IV.3: Sherd Density and ware distribution for Transect (E), units were 3x3 m (see App. Table IV.7 for detailed sherd count)

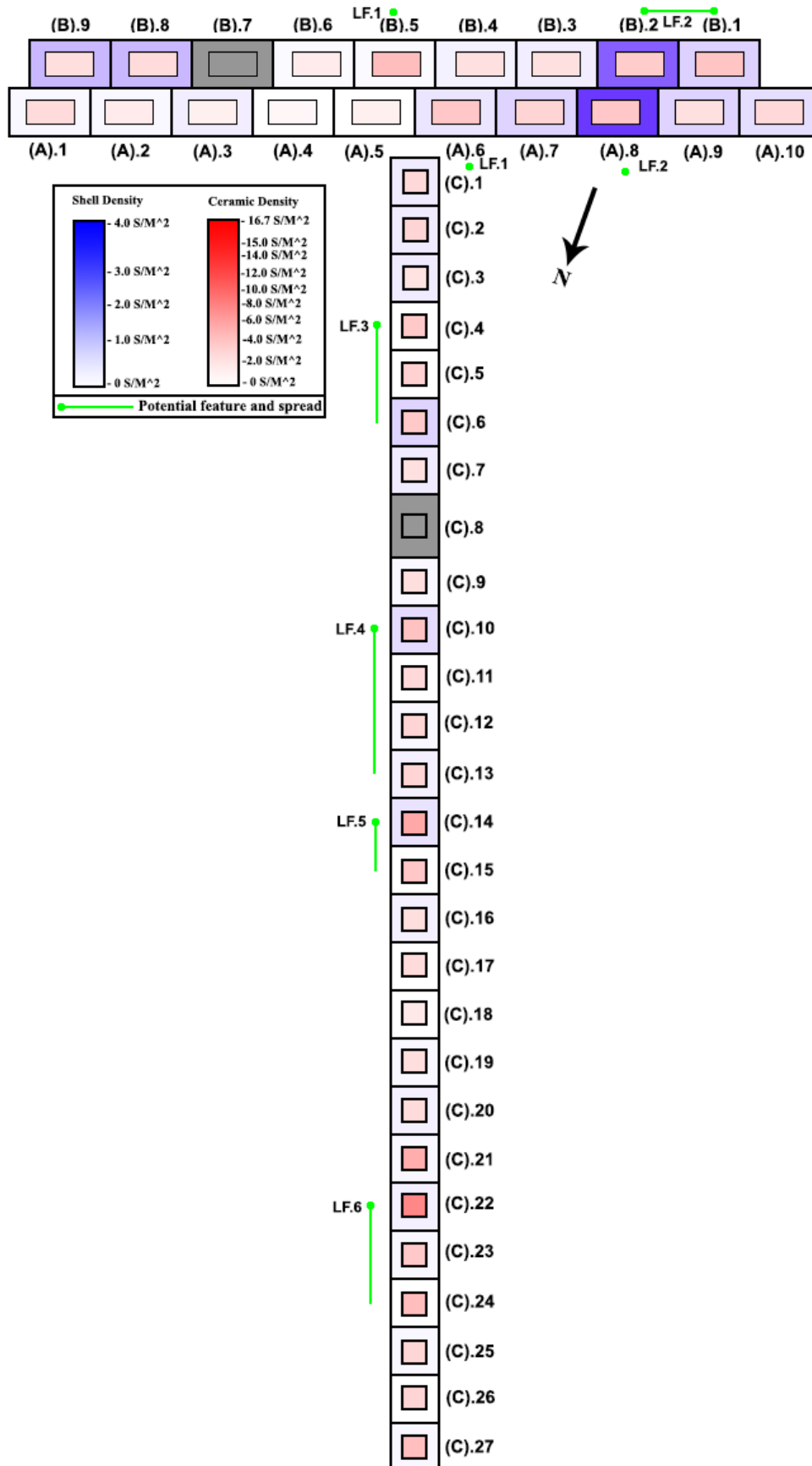


Figure IV.4: Shell Density and Sherd Density for Transects (A), (B) and (C), Transect (A) & (B) units were 5x3 m and Transect (C) units were 3x3m

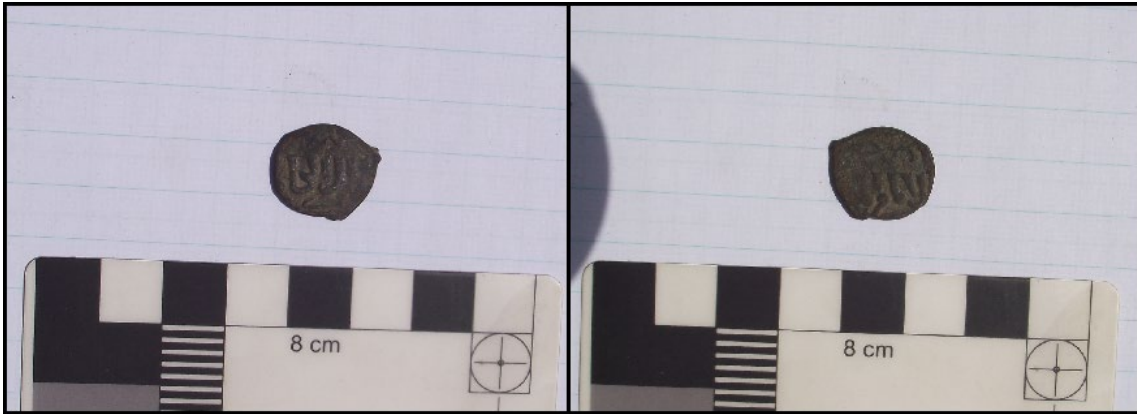


Figure IV.5: Arabic coin found by farmer in the vicinity of Transect (E), GPS coordinates of location: N0948609, E041.90924 (see Fig. 6.1)


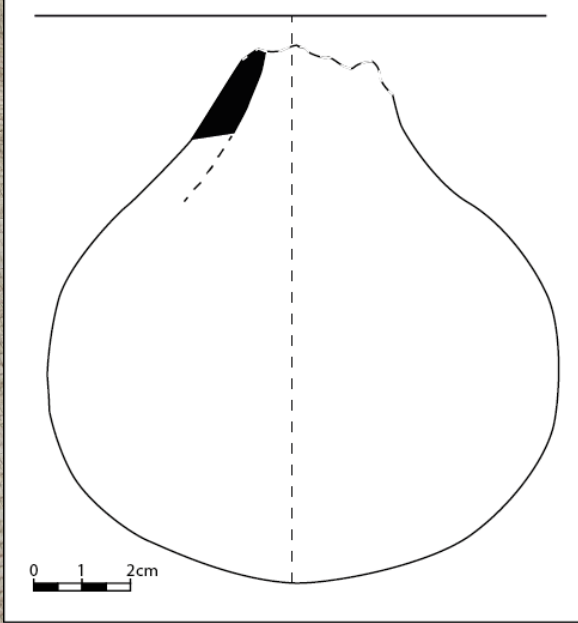



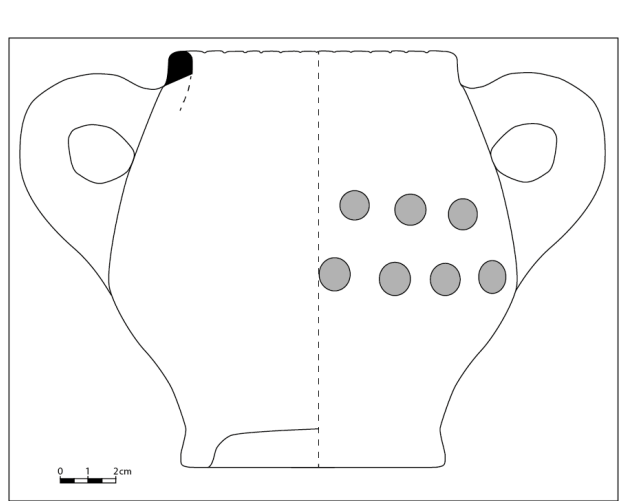
Figure IV.6: Imported ceramics recovered during the survey: a) Martaban jar sherd Tran(A).10-08; (A).10; b) Martaban jar sherd Tran(C).24-06; c) Unidentified unglazed sherd Tran(D).6-07; d) Yemeni Black on Yellow ware rim Tran(D).9-09; e) Unidentified glazed ware sherd Tran(D).24-01; f) Egyptian Mamluk Fritware sherd Tran(E).6-12; g) Martaban jar sherd Tran(E).9-10; h) Yemeni/Iranian Polychrome Glazed ware sherd Tran(E).11-05; i) Worn Yemeni glazed ware sherd Tran(E).20-12; j) Unidentified unglazed wheelmade sherd Tran(E) 25-11; k) Ayyubid-Mamluk Egyptian “Grenade” Flask sherd Tran(E).26-18; l) Islamic unglazed ware sherd Tran(E).29-14


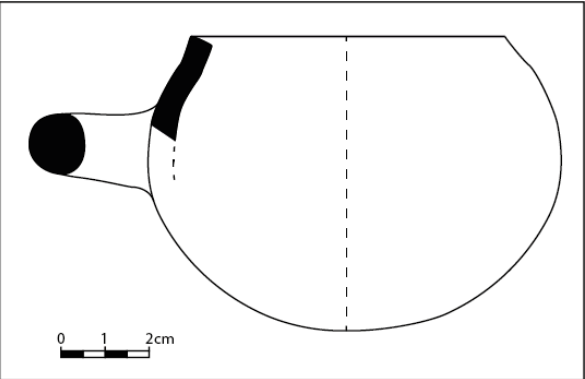
| Rim Form | Tran (A) | | Tran (B) | | Tran (C) | | Tran (D) | | Tran (E) | | Total | |
|--------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|--------|--------|
| | Sherds | Per. | Sherds | Per. | Sherds | Per. | Sherds | Per. | Sherds | Per. | Sherds | Per. |
| Simple | 13 | 50.00% | 13 | 43.30% | 29 | 49.20% | 22 | 31.00% | 93 | 44.50% | 170 | 43.00% |
| Flat | 5 | 19.20% | 12 | 40.00% | 19 | 32.20% | 27 | 38.00% | 49 | 23.40% | 112 | 28.40% |
| Flat, Lip | 2 | 7.70% | 2 | 6.70% | 3 | 5.10% | 6 | 8.50% | 9 | 4.30% | 22 | 5.60% |
| Flat, Inner Lip | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 3 | 1.40% | 3 | 0.80% |
| Flat, Thickened | 0 | 0.00% | 0 | 0.00% | 1 | 1.70% | 0 | 0.00% | 3 | 1.40% | 4 | 1.00% |
| Flat, Angled | 4 | 15.40% | 1 | 3.30% | 3 | 5.10% | 6 | 8.50% | 24 | 11.50% | 38 | 9.60% |
| Tapered | 2 | 7.70% | 2 | 6.70% | 2 | 3.40% | 2 | 2.80% | 16 | 7.70% | 24 | 6.10% |
| Rounded, Lip | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 1 | 1.40% | 1 | 0.50% | 2 | 0.50% |
| Rounded, Thickened | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Unique (Ledge) | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Unique (other) | 0 | 0.00% | 0 | 0.00% | 1 | 1.70% | 1 | 1.40% | 4 | 1.90% | 6 | 1.50% |
| Unidentified | 0 | 0.00% | 0 | 0.00% | 1 | 1.70% | 6 | 8.50% | 7 | 3.30% | 14 | 3.50% |
| Total | 26 | 100% | 30 | 100% | 59 | 100% | 71 | 100% | 209 | 100% | 395 | 100% |


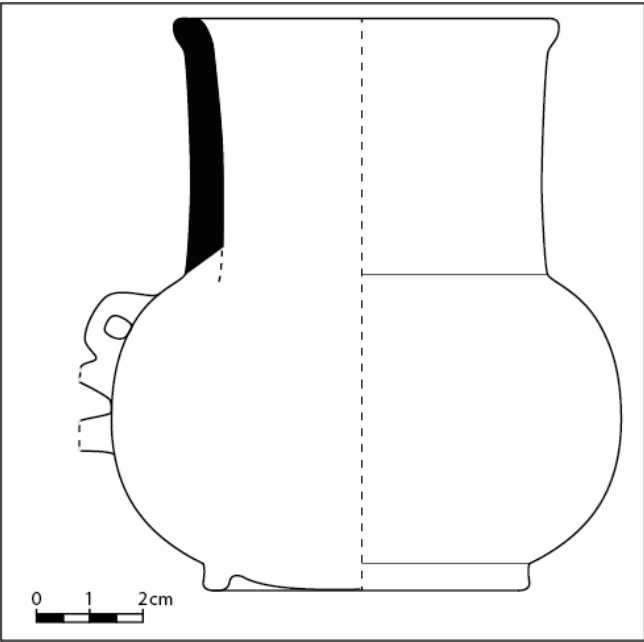
Table IV.8: Fieldwalking survey rim forms by Transect


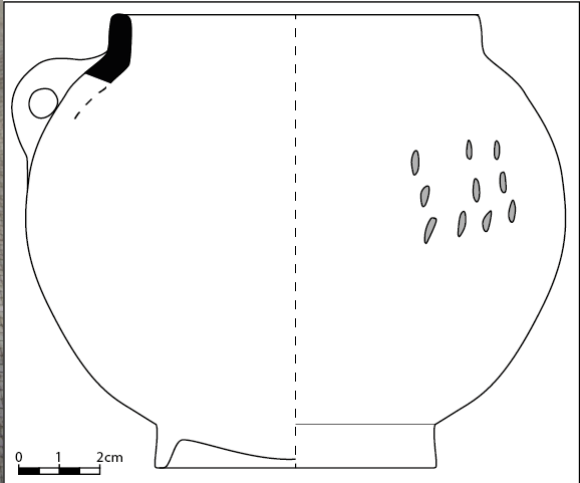
Appendix V – Gazetteer of complete vessels recovered by local farmers at Harlaa


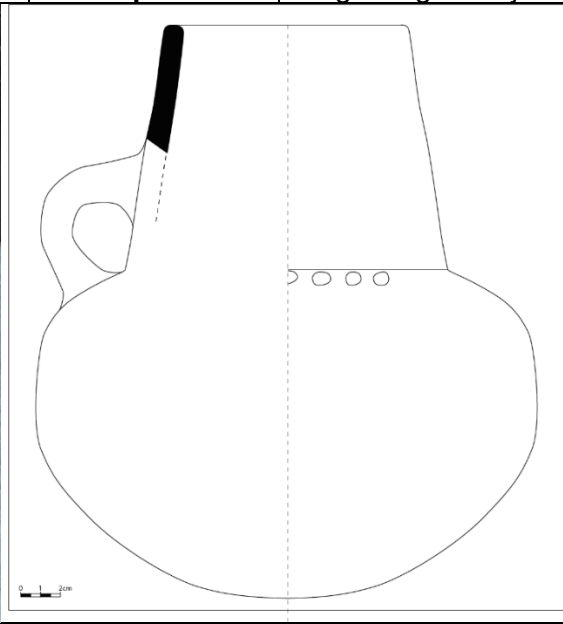
| | | | |
|--|-------------|---|-----------------------|
| Vessel: | Vessel_01 | Description: | Globular Bottle |
|  | |  | |
| Year Recorded: | 2017 | Ware Type: | Black/Brown Burnished |
| Base: | Rounded | Rim Form: | N/A |
| Rim Diam: | N/A | Handle: | - |
| Decoration: | - | Other Features: | |
| Notes: | Broken neck | | |


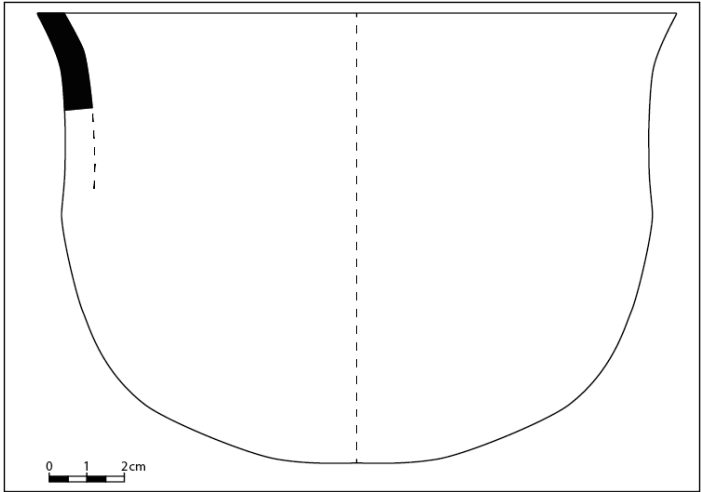
| | | | |
|---|-------------------|--|-----------------------------|
| Vessel: | Vessel_02 | Description: | Brazier/steamer |
|  | |  | |
| Year Recorded: | 2017 | Ware Type: | Earthenware/Plainware |
| Base: | Ring base (10 cm) | Rim Form: | Simple |
| Rim Diam: | 11 cm | Handle: | Two Vertical Ribbon Handles |
| Decoration: | Grooved rim | Other Features: | Large piercings |
| Notes: | | | |


| | | | |
|---|-----------|--|---------------------------------|
| Vessel: | Vessel_03 | Description: | Handled closed bowl |
|  | |  | |
| Year Recorded: | 2017 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Flat |
| Rim Diam: | 9 cm | Handle: | Single Horizontal ribbon handle |
| Decoration: | - | Other Features: | |
| Notes: | | | |


| | | | |
|--|------------------|--|-------------------------|
| Vessel: | Vessel_04 | Description: | Small globular bottle |
|  | |  | |
| Year Recorded: | 2017 | Ware Type: | Black/Brown Burnished |
| Base: | Ring base (6 cm) | Rim Form: | Simple, Flared |
| Rim Diam: | 7 cm | Handle: | Twin pierced lug handle |
| Decoration: | - | Other Features: | |
| Notes: | Damaged handle | | |


| | | | |
|---|--|--|---------------------------|
| Vessel: | Vessel 05 | Description: | Closed bowl |
|  | |  | |
| Year Recorded: | 2017 | Ware Type: | Black/Brown Burnished |
| Base: | Ring base (7 cm) | Rim Form: | Simple |
| Rim Diam: | 9 cm | Handle: | Single pierced lug handle |
| Decoration: | - | Other Features: | Slashed piercings |
| Notes: | 4 sets of piercings around body (see App.Fig. VI.1 for location of panels) | | |


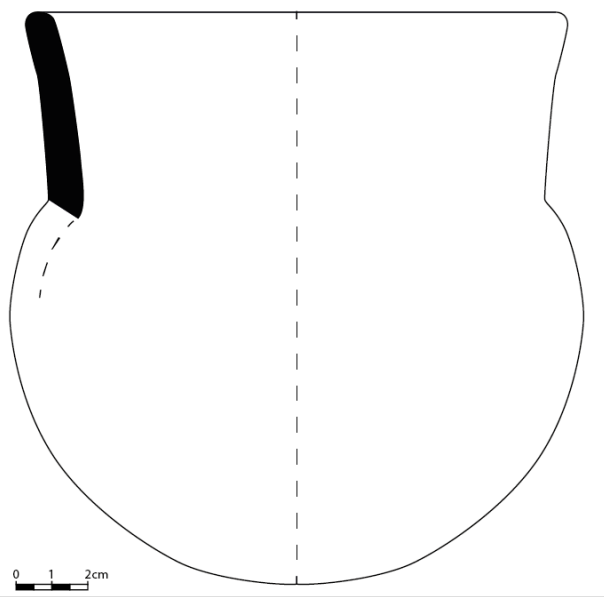
| | | | |
|---|---|--|-------------------------------|
| Vessel: | Vessel 06 | Description: | Large long-neck jar |
|  | |  | |
| Year Recorded: | 2018 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Simple |
| Rim Diam: | 12 cm | Handle: | Single vertical ribbon handle |
| Decoration: | Finger pressed | Other Features: | |
| Notes: | Circular hole cut into lower body (see Fig. 7.1b) | | |


| | | | |
|---|-----------|--|-----------------------|
| Vessel: | Vessel 07 | Description: | Tall Bowl |
|  | |  | |
| Year Recorded: | 2018/2019 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Flat |
| Rim Diam: | 14 cm | Handle: | - |
| Decoration: | - | Other Features: | |
| Notes: | | | |


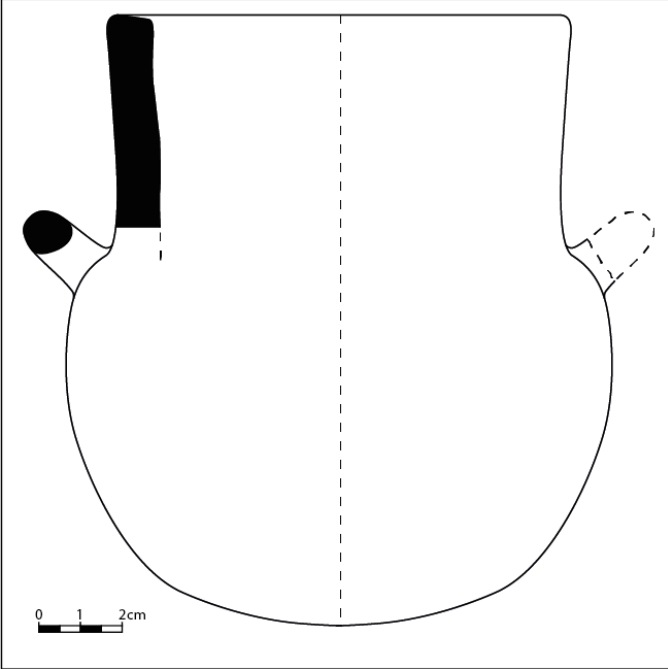
| | | | |
|--|-----------|------------------------|-----------------------|
| Vessel: | Vessel 08 | Description: | Closed bowl |
|  | | | |
| Year Recorded: | 2018 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Tapered |
| Rim Diam: | N/A | Handle: | - |
| Decoration: | - | Other Features: | |
| Notes: | Damaged | | |


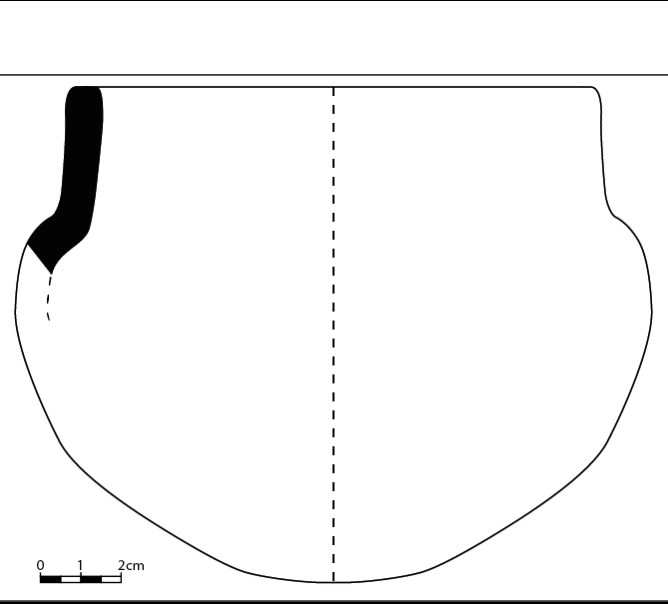
| | | | |
|--|-------------------|------------------------|-------------------------------|
| Vessel: | Vessel 11 | Description: | Closed Pot |
|  | | | |
| Year Recorded: | 2019 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Flat, Lip |
| Rim Diam: | 19 cm | Handle: | Two Horizontal Ribbon handles |
| Decoration: | - | Other Features: | Spout |
| Notes: | One handle broken | | |


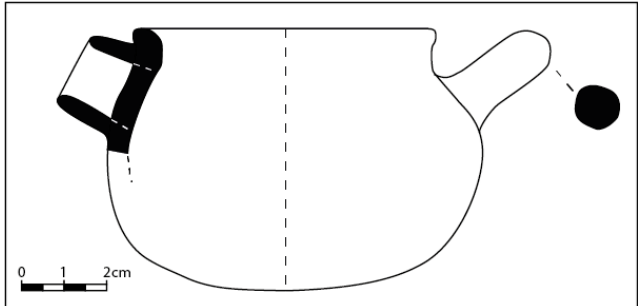
| | | | |
|--|---|------------------------|---------------------------------|
| Vessel: | Vessel 10 | Description: | "Tea pot" |
|  | | | |
| Year Recorded: | 2019 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Simple/Tapered |
| Rim Diam: | 8 cm | Handle: | Single Horizontal ribbon handle |
| Decoration: | - | Other Features: | Spout |
| Notes: | See vessel 15 for profile of a similar form | | |


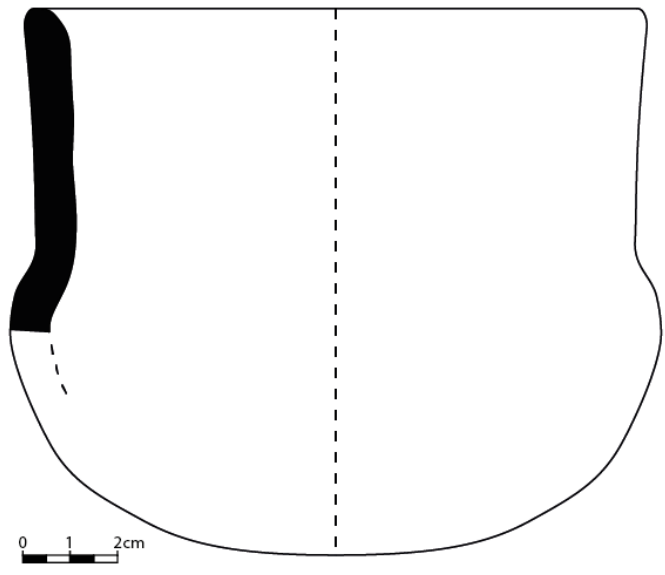
| | | | |
|---|-----------|--|-----------------------|
| Vessel: | Vessel 11 | Description: | Long necked pot |
|  | |  | |
| Year Recorded: | 2019 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Simple |
| Rim Diam: | 15 cm | Handle: | - |
| Decoration: | - | Other Features: | |
| Notes: | | | |

| | | | |
|--|----------------------------|------------------------|-----------------------------|
| Vessel: | Vessel 12 | Description: | Long necked jar |
|  | | | |
| Year Recorded: | 2019 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Flat, Lip |
| Rim Diam: | 10 cm | Handle: | Two Vertical ribbon handles |
| Decoration: | Punctate and Appliqué dots | Other Features: | |
| Notes: | Broken handles | | |

| | | | |
|---|-------------------|--|-------------------------------|
| Vessel: | Vessel 13 | Description: | Long necked jar |
|  | |  | |
| Year Recorded: | 2019 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Flat |
| Rim Diam: | 11 cm | Spout/Handle: | Two horizontal ribbon handles |
| Decoration: | - | Other Features: | |
| Notes: | One handle broken | | |

| | | | |
|---|-----------|--|-----------------------|
| Vessel: | Vessel 14 | Description: | Necked pot |
|  | |  | |
| Year Recorded: | 2019 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Flat |
| Rim Diam: | 13 cm | Handle: | - |
| Decoration: | - | Other Features: | |
| Notes: | | | |

| | | | |
|---|-----------|--|--------------------------|
| Vessel: | Vessel 15 | Description: | "Tea Pot" |
|  | |  | |
| Year Recorded: | 2019 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Simple |
| Rim Diam: | 7 cm | Handle: | Horizontal ribbon handle |
| Decoration: | - | Other Features: | Spout |
| Notes: | | | |

| | | | |
|---|-----------|--|-----------------------|
| Vessel: | Vessel 16 | Description: | Necked pot |
|  | |  | |
| Year Recorded: | 2019 | Ware Type: | Earthenware/Plainware |
| Base: | Rounded | Rim Form: | Simple |
| Rim Diam: | 14 cm | Handle: | - |
| Decoration: | - | Other Features: | |
| Notes: | | | |

Appendix VI – Discussion supplementary data

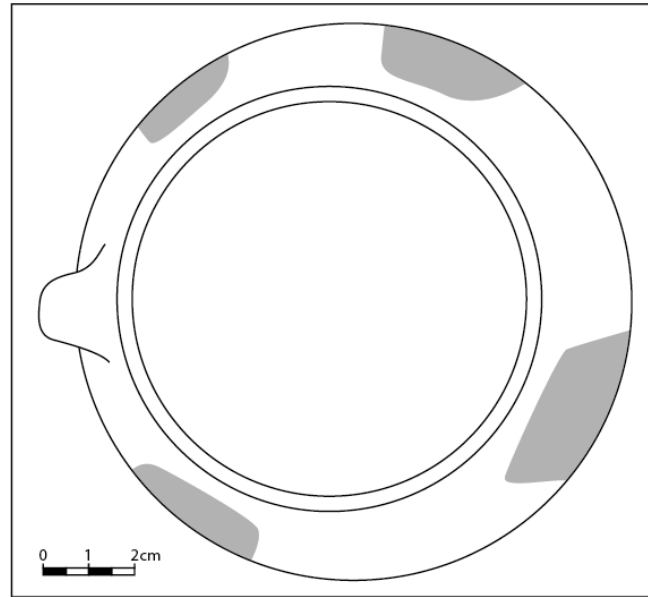


Figure VI.1: Top down view of complete Vessel 05 (see Appendix V), grey areas show panels of slashed piercings on body



Figure VI.2: See Table 5.3 for descriptions of sherds and wares a) Sherd HAR16(A)4-13 (Phase 5b); b) Sherd HAR16(A)4-28 (Phase 5b); c) Sherd HAR16(A)6-21 (Phase 5b); d) Sherds HAR17(B)4-49A, HAR17(B)4-49B and HAR17(B)4-49C (Phase 5b); e) Sherd HAR18(B)5-21 (Phase 4); f) Sherd HAR18(B)5-34 (Phase 4); g) Sherd HAR18(B)5-34, profile showing depth of heat damage; h) Sherd HAR18(B)7-10 (Phase 2a); i) Sherd HAR18(B)8-14 (Phase 2a); j) Sherds HAR18(B)9-15A and HAR18(B)9-15B (Phase 2a); k) Sherds HAR18(B)9-16A, HAR18(B)9-16B and HAR18(B)9-16C (Phase 2a)

| Site | No. of Sherds | Body Sherds | Rim Sherds |
|----------------|---------------|-------------|------------|
| AMNUR 14 (A) | 146 | 117 | 29 |
| SHA 14 (A) | 82 | 65 | 17 |
| PAL 14 (A) | 134 | 108 | 26 |
| Overall Totals | 362 | 290 | 72 |

| Site | Brown Slipped and Burnished | Black Slipped and Burnished | Red Slipped and Burnished | Brown Slipped | Black Slipped | Red Slipped | Brown Burnished | Black Burnished | Red Burnished | Orange Slipped | Brown Fabric | Orange Fabric | Pink Fabric | Red Fabric | Black Fabric | White Fabric |
|----------------|-----------------------------|-----------------------------|---------------------------|---------------|---------------|-------------|-----------------|-----------------|---------------|----------------|--------------|---------------|-------------|------------|--------------|--------------|
| AMNUR 14 (A) | 4 | 14 | 3 | 6 | 27 | 7 | 5 | 7 | 5 | 3 | 5 | 6 | 4 | | | |
| SHA 14 (A) | | | | 8 | 17 | 18 | 1 | 4 | | 1 | | 10 | | | | |
| PAL 14 (A) | 3 | 2 | | 3 | 45 | 23 | 1 | 3 | | | 11 | 1 | 2 | 2 | 1 | 1 |
| Overall Totals | 7 | 16 | 3 | 17 | 89 | 48 | 7 | 14 | 5 | 4 | 15 | 17 | 6 | 2 | 1 | 1 |

Figure VI.3: Local ceramic sherds recovered from Harar and identified ware types (Insoll et. al., 2014: 202)

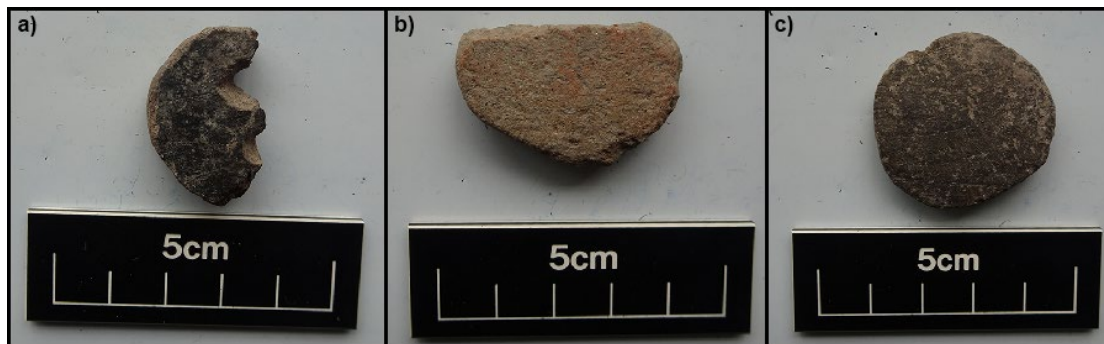


Figure VI.4: Local ceramic worked discs identified in the small finds assemblage (all Phase 5b): a) Black/Brown Burnished ware worked disc with two drilled holes from HAR18(B) 2; b) Earthenware/Plainware worked disc from HAR18(B) 4; c) Earthenware/Plainware worked disc from HAR16(A) 4



Figure VI.5: See Table 7.2 for descriptions of sherds, ware and residue a) Sherd HAR18(B)1-01 (Phase 5a); b) HAR15(B)5-24 (Phase 5b); c) HAR15(B)5-26 (Phase 5b); d) HAR15(B)5-32 (Phase 5b) Ring-base; e) HAR15(B)5-32 Interior; f) HAR16(A)4-12A (Phase 5b); g) HAR16(A)4-12B (Phase 5b); h) HAR16(A)6-18A (Phase 5b); i) HAR16(A)6-18B (Phase 5b); j) HAR17(B)3-21 (Phase 5b); k) HAR18(B)2-16 (Phase 5b); l) HAR15(B)6-37 (Phase 4); m) HAR15(B)6-46 (Phase 4); n) HAR17(B)21-01 (Phase 4); o) HAR17(B)21-01 profile showing thick deposit; p) HAR16(A)8-18 (Phase 3); q) HAR16(A)9-35A (Phase 3); r) HAR16(A)9-35B (Phase 3); s) HAR17(B)20-01 (Phase 3); t) HAR17(B)7-07 (Phase 2a); u) HAR18(B)7-19 (Phase 2a); v) HAR18(B)9-15A and HAR18(B)9-15b (Phase 2a); w) HAR18(B)12-02 (Phase 2a)

| Phase | Context | Ware | Count | Phase | Context | Ware | Count |
|-------|-------------|-----------------|-------|-------|-------------|-----------------|-------|
| 5a | HAR18(B) 1 | Plainware | 1 | 4 | HAR17(B) 21 | Plainware | 1 |
| 5a | HAR17(B) 16 | Black Burnished | 1 | 4 | HAR16(A) 7 | Plainware | 2 |
| 5a | HAR17(B) 16 | Plainware | 7 | 3 | HAR17(B) 20 | Plainware | 4 |
| 5a | HAR17(B) 2 | Red Burnished | 1 | 3 | HAR16(A) 8 | Plainware | 3 |
| 5a | HAR17(B) 2 | Plainware | 1 | 3 | HAR16(A) 9 | Black Burnished | 1 |
| 5a | HAR16(A) 1 | Black Burnished | 1 | 3 | HAR16(A) 9 | Plainware | 18 |
| 5a | HAR16(A) 1 | Plainware | 11 | 2a | HAR17(B) 23 | Plainware | 3 |
| 5b | HAR17(B) 17 | Plainware | 5 | 2a | HAR17(B) 7 | Plainware | 12 |
| 5b | HAR17(B) 18 | Plainware | 8 | 2a | HAR17(B) 8 | Plainware | 7 |
| 5b | HAR17(B) 19 | Plainware | 5 | 2a | HAR17(B) 9 | Plainware | 3 |
| 5b | HAR17(B) 4 | Plainware | 9 | 2a | HAR17(B) 10 | Plainware | 8 |
| 5b | HAR17(B) 5 | Black Burnished | 1 | 2a | HAR16(A) 10 | Black Burnished | 1 |
| 5b | HAR17(B) 5 | Plainware | 8 | 2a | HAR16(A) 10 | Plainware | 2 |
| 5b | HAR17(B) 6 | Plainware | 5 | 2a | HAR16(A) 11 | Plainware | 1 |
| 5b | HAR16(A) 3 | Plainware | 4 | 2a | HAR16(A) 12 | Black Burnished | 1 |
| 5b | HAR16(A) 4 | Plainware | 12 | 2a | HAR16(A) 12 | Plainware | 1 |
| 5b | HAR16(A) 5 | Plainware | 3 | 2b | HAR18(B) 18 | Plainware | 1 |
| 5b | HAR16(A) 6 | Black Burnished | 1 | 2b | HAR17(B) 11 | Plainware | 4 |
| 5b | HAR16(A) 6 | Plainware | 12 | 2b | HAR17(B) 12 | Plainware | 6 |
| 5b | HAR15(B) 4 | Plainware | 1 | 2b | HAR17(B) 13 | Plainware | 4 |
| 5b | HAR15(B) 5 | Plainware | 1 | 2b | HAR17(B) 14 | Plainware | 6 |
| 4 | HAR18(B) 5 | Plainware | 1 | 1a | HAR17(B) 15 | Plainware | 3 |
| 4 | HAR18(B) 6 | Plainware | 1 | | | | |

Table VI.1: Worked discs by unit for 2015-2018 field seasons at Harlaa

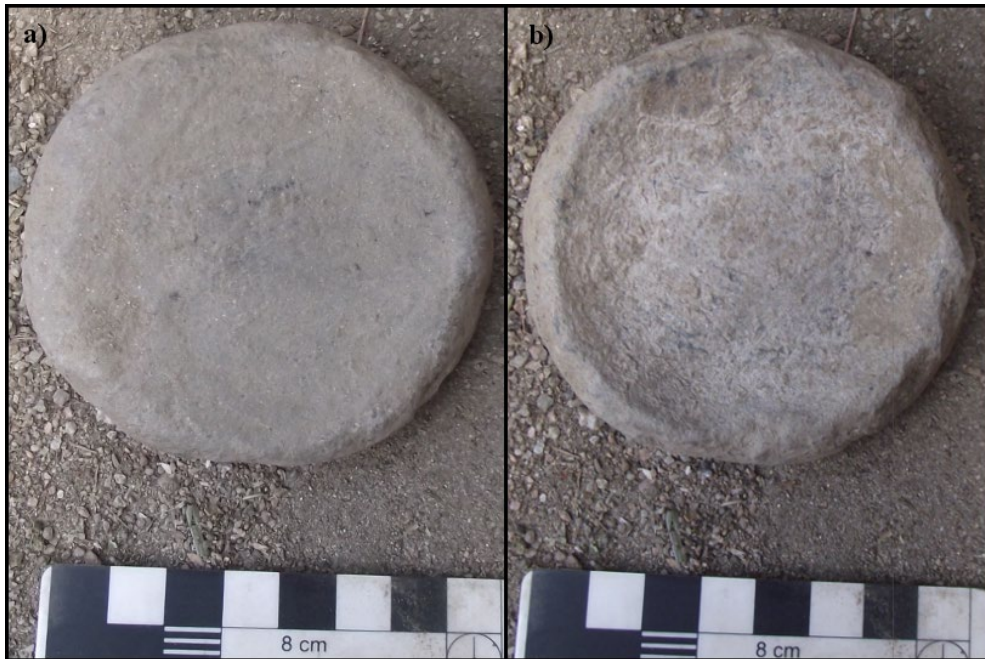


Figure VI.6: Earthenware/Plainware ring base worked into disc, recovered by farmer and recorded in 2019 season

| Code | Ware | Description |
|-----------------|-----------|---|
| HUL19 S/C-01 | Burnished | Light Brown Burnished Flat, Lip, Out-turned rim with body carination, 33 cm diameter |
| HUL19 S/C-02 | Plainware | Plainware ring base, smoothed interior, partially smoothed exterior, 12 cm diameter |
| HUL19 S/C-03 | Plainware | Flat, Lip, In-turned rim, smoothed exterior/interior, orange-red fabric fading to black, 33 cm diameter |
| HUL19 S/C-04 | Plainware | Large, thick (~ 2cm) body sherd, rough exterior |
| HUL19 S/C-05 | Plainware | Flattened ribbon handle join |
| HUL19 S/C-06 | Plainware | Ribbon handle fragment |
| HUL19 S/C-07 | Plainware | Simple, Unknown angle rim |
| HUL19 S/C-08 | Plainware | Simple, In-turned rim, 17 cm diameter |
| HUL19 S/C-09 | Plainware | Flat, Out-turned rim, 17 cm diameter |
| HUL19 S/C-10 | Plainware | Flat, Lip, In-turned rim, no diameter |
| HUL19 S/C-11a-e | Plainware | 5 Body sherds, 2 removed for analysis |

Table VI.2: Surface collected sherds from Hulul during the 2019 season

| Code | Ware | Description |
|--------------|-----------|---|
| HUB19 S/C-01 | Plainware | Simple, unknown angle rim, well smoothed interior and exterior |
| HUB19 S/C-02 | Plainware | Simple, In-turned rim, smoothed exterior (taken for analysis) |
| HUB19 S/C-03 | Plainware | Complete ribbon handle and body sherd, smoothed finish |
| HUB19 S/C-04 | Plainware | Ribbon handle join, smoothed finish |
| HUB19 S/C-05 | Plainware | Flattened ribbon handle fragment, smoothed finish |
| HUB19 S/C-06 | Plainware | Simple, In-turned rim with curving appliqué ridge, no diameter, roughly smoothed finish |
| HUB19 S/C-07 | Plainware | Simple, Out-turned rim with incised decoration on rim, roughly smoothed finish |
| HUB19 S/C-08 | Plainware | Simple, Out-turned rim, well smoothed interior and exterior, 16 cm diameter |
| HUB19 S/C-09 | Plainware | Flat, Angled, in-turned rim, red-black smoothed finish, grey fabric, 36 cm diameter |
| HUB19 S/C-10 | Plainware | Flat, In-turned rim, roughly smoothed finish, 36 cm diameter |
| HUB19 S/C-11 | Plainware | Large plate rim, smoothed interior and rim, rough base, 40 cm diameter |

Table VI.3: Surface collected sherds from Hubeyta during the 2019 season



Figure VI.7: Earthenware/Plainware lids recovered by local farmers at Harlaa, recorded in the 2018 season

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Figure VI.8: Collection of imported and local ceramics recovered from Suakin (Breen et. al., 2011: 218)



Figure VI.9: Select sherds collected from Hulul and Hubeyta in 2019, a), b) Large Flat, Lip, In-turned rim sherd HUL19 S/C-03 from Hulul; c) Simple, In-turned rim with Appliqué decoration HUB19S/C -06 from Hubeyta; d) Simple, Out-turned rim with grooved rim HUB19S/C-07 from Hubeyta; e) Interior of large plate HUB19 S/C-11 from Hubeyta; f) Exterior of large plate Hub19 S/C-11 with rough base from Hubeyta



Figure VI.10: Unique bases from Handoga (Grau, 1989: 9)

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Figure VI.11: Examples of trackware vessels from Zabid (Ciuk & Keall, 1996:46-52)

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