8. DISCUSSION:

EARLY PREHISTORIC CERAMICS IN LEICESTERSHIRE AND THE WIDER EAST MIDLANDS

8.1 Introduction

This chapter discusses the results presented in Chapter 7 and places them into context through comparison with other sites and assemblages in the East Midlands. The research questions outlined in section 1.3 are revisited below illustrating how the results have contributed to their examination. Provenance of the ceramics from the three sites selected for analysis and, whether they were locally produced or otherwise, is considered alongside the available data from other sites (section 8.2). Correlations in ceramic data between site type and date are investigated in association with procurement, production and consumption (section 8.3). Factors governing the choice of raw materials, both locally and regionally, are contemplated particularly where the provenance of raw materials can be demonstrated to be non-local (section 8.4). The final section focuses on the identification of any patterns for raw material procurement and ceramic production on a regional and/or chronological basis (section 8.5). Details of the ceramics analysed are summarised in chronological order in Table 8.1.

Table 8.1 Summary of Ceramics by Period (Continued on next two pages)

Site	County	Date of Ceramics Analysed	Type of Ceramic	No of Sherds	Fabric	Source	Bibliographic Reference
Lismore Fields	Derbyshire	Early Neolithic	Carinated Bowl	152	Fine fabric with quartz sand and voids	Charnwood?	Beswick & Garton forthcoming
Great Briggs	Nottinghamshire	Early Neolithic	Carinated Bowl	340	Granitic & voids	Charnwood?	Guilbert 2009
Skendleby	Lincolnshire	Early Neolithic	Plain Bowl	70	Amorphous Black Opaque's	Locally Available	Evans & Simpson 1991
Briar Hill	Northamptonshire	Early Neolithic	Carinated, Plain, Decorated Bowls	86 rim sherds	Sandy fabrics/Fossil shell with one non-local fabric with glauconite	One non-local	Bamford 1985
Willington	Derbyshire	Early Neolithic	Carinated, Plain, Decorated Bowls	52	Gabbroic/Altered Igneous Inclusions?	Non-Local – Charnwood?	Beamish 2009
Great Briggs	Nottinghamshire	Middle Neolithic	Impressed Ware	178	Granitic fabric	Charnwood?	Guilbert 2009
Briar Hill	Northamptonshire	Middle Neolithic	Impressed Ware – Mortlake/Fengate	38	Sandy fabrics/Fossil shell/Limestone/Voids/Flint/Quartz	Locally Available	Bamford 1985

Site	County	Date of Ceramics Analysed	Type of Ceramic	No of Sherds	Fabric	Source	Bibliographic Reference
Rearsby Bypass	Leicestershire	Middle Neolithic	Impressed Ware – Mortlake	20	Flint and quartz inclusions	Locally Available	Clarke & Beamish 2007
Hallam Fields	Leicestershire	Middle Neolithic	Impressed Ware – Fengate	233	Calcitic/voids	Non-local? NE Leics/Trent Valley/Lincs?	Speed 2009
Willington	Derbyshire	Middle Neolithic	Impressed Ware – Ebbsfleet/Mortlake/Fengate	1917	Coarse fabrics with Quartz/Quartzite and lesser amounts of Flint/Sandstone/Igneous rock	Local & Non Local – Charnwood area?	Beamish 2009
Ashby Folville	Leicestershire	Middle Neolithic	Impressed Ware - Fengate	865	Flint/Quartz Sand	Local	Moore 2007
Briar Hill	Northamptonshire	Late Neo/EBA	Grooved Ware	14	Coarse fabric with sandstone and quartz	Locally Available	Bamford 1985
Rearsby Bypass	Leicestershire	Late Neo/EBA	Grooved Ware	24	Sandy fabric with grog	Locally Available	Clarke & Beamish 2007
Syston	Leicestershire	Late Neo/EBA	Grooved Ware	10	Quartz sand and grog?	Locally Available	Meek 1997

Site	County	Date of Ceramics Analysed	Type of Ceramic	No of Sherds	Fabric	Source	Bibliographic Reference
Briar Hill	Northamptonshire	Late Neo/EBA	Beaker	149	Flint and grog	Locally Available	Bamford 1985
Rearsby Bypass	Leicestershire	Late Neo/EBA	Beaker	50	Sandy fabric with grog	Locally Available	Clarke & Beamish 2007
Syston	Leicestershire	Late Neo/EBA	Beaker	18	Quartz sand	Locally Available	Meek 1997
Castle Donington	Leicestershire	Late Neo/EBA	Beaker	37	Quartz Sand	Locally Available	Coward 2004
Willington	Derbyshire	Late Neo/EBA	Beaker/Other EBA	86	Grog/Sand/Shell	Locally Available	Beamish 2009
Lockington	Leicestershire	Neolithic	Type not specified	318	22 fabrics identified – Neo fabric igneous rock	Charnwood?	Hughes 2000
Eye Kettleby	Leicestershire	EBA	Not Stated	104	Igneous/Granite/Grog/Sand/ Sandstone	Local & Non-Local – Charnwood?	Finn 2011
Cossington	Leicestershire	EBA	Food Vessel/Collared Urn	277	Granitic (rounded/smooth)	Likely Local (Stream bed deposits)	Thomas 2008

8.2 Provenance

The results of the thin section analysis from Rearsby Bypass (section 7.3), Syston (section 7.4) and Castle Donington (section 7.5) largely support the local procurement and production of ceramics. However, it is becoming apparent from the growing body of evidence within the East Midlands that non-local production did indeed occur, albeit infrequently, with possible preferential geologies being exploited.

Earlier Neolithic

The collated petrographic evidence from the earlier Neolithic comes from Lismore Fields, Derbyshire (section 4.5.1), Great Briggs, Nottinghamshire (section 4.5.2), Skendleby, Lincolnshire (section 4.5.3) and Briar Hill, Northamptonshire (section 4.5.4). Ceramic production at the early Neolithic settlement site of Lismore Fields was determined to have been local, or at least those Carinated Bowls chosen as a representative sample indicated that the fabric contents could all have been obtained locally (section 4.5.1). The ring ditch site at Great Briggs, however, contained a portion of the sampled Carinated Bowls which were demonstrated to contain non-local elements (section 4.5.2). The potential source of these materials was identified as the Charnwood Forest area of Leicestershire, roughly 30km to the south of Great Briggs. A potential complicating factor is the fact that this area was also the source of the Group XX axes (Guilbert 2009: 114). The incorporation of fragments of broken axes into the clay of a pot has been postulated and it is possible that Group XX material could have been used in the same way. The petrographic analysis on the pottery assemblage from

Skendleby identified material which could easily be located within the surrounding area (section 4.5.3). The presence of granite, quartz and sandstone was not considered significant although no potential sources of these were discussed within the report. The Briar Hill causewayed enclosure petrographic results indicated a possible non-local fabric within the Mildenhall assemblage which contained glauconite, the nearest source of which was 20 miles away and was apparently of higher quality than the locally produced fabrics (section 4.5.4). However, given the presumed nature of causewayed enclosures as being the focal point of different groups, the recovery of this non-local material is not altogether unsurprising. What is perhaps more surprising is that more non-local ceramic material has not been recovered from this type of site.

Whilst the ceramic data set of early Neolithic ceramics within the East Midlands is small, particularly where settlement and domestic sites are concerned, it is possible to suggest some very broad conclusions. The two sites (Great Briggs and Briar Hill) where non-local production has been identified are classified as either ritual or monument sites. The domestic site at Lismore Fields and the long barrow at Skendleby, which certainly could be deemed ritual, both contained locally produced or sourced ceramics. Therefore, it may be surmised that non-local ceramics are more likely to be found at sites with ritual or monument connections as opposed to domestic sites, though this statement is based upon a very small sample.

Middle Neolithic

Sites with middle Neolithic components consist of Great Briggs, Nottinghamshire (section 4.5.2), Skendleby, Lincolnshire (section 4.5.3), Briar Hill, Northamptonshire (section 4.5.4), Rearsby Bypass, Leicestershire (section 7.3), Hallam Fields, Leicestershire (section 4.5.5), Willington, Derbyshire (section 4.5.6) and Ashby Folville, Leicestershire (section 4.5.10). Impressed Ware from Great Briggs was identified as having granitic material originating within the Charnwood Forest area of Leicestershire (section 4.5.2). This in itself is interesting as a potential continuity of exploitation of the same geological sources given that the Carinated Bowls from Great Briggs also had material from this area. The middle Neolithic material from Skendleby appeared locally produced, similar to the earlier Neolithic material (section 4.5.3) and the Briar Hill Impressed Wares were also considered to have a local source within the Nene valley (section 4.5.4). The sites from Leicestershire vary in that Rearsby Bypass (section 7.3) and Ashby Folville (section 4.5.10), despite being fairly closely located to Charnwood Forest, had no obvious non-local material. Whereas, the Fengate style Impressed Ware from Hallam Fields (section 4.5.5) contained shelly/calcitic material which did not appear to represent a locally available source. Subsequent ICP-AES analysis indicated that the clay for these vessels may have been imported from the Trent Valley, East Yorkshire or the Lincolnshire Wolds. This is especially interesting given that material from Great Briggs located within the Trent Valley contained source material from circa 4km from the Hallam Fields site. The Impressed Ware material of middle Neolithic date from Willington contained fabrics of non-local provenance including two separate

fabric types whose point of origin may have been the Charnwood/Mountsorrel area of Leicestershire (section 4.5.6).

As with the earlier Neolithic, there is the occasional appearance of non-local fabrics within the middle Neolithic assemblages in the East Midlands. Material from Great Briggs and Willington may well have been produced within the Charnwood Forest area of Leicestershire and both sites have elements of ritual activity. Hallam Fields consisted of two adjacent pits and no overt ritualistic elements (Figure 4.2), however, the pottery from these features may equally have come as far or further afield as the material from Great Briggs and Willington. No obvious trends or patterns are apparent within the middle Neolithic as both ritual and domestic sites are represented except both demonstrate the exploitation of mineral sources from the Charnwood Forest area. One common feature between Great Briggs and Willington is the presence of Group XX axes (Guilbert 2009: 114; Beamish 2009: 108). The absence of non-local ceramics at the Briar Hill causewayed enclosure is interesting, although this class of monument had possibly reached the end of its main phase of activity by this time and thus saw reduced usage (Cunliffe 2012: 167).

Later Neolithic and Early Bronze Age

The later Neolithic and early Bronze Age petrographic assemblages included Rearsby Bypass (section 7.3), Syston (section 7.4), Castle Donington (section 7.5), Skendleby, Lincolnshire (section 4.5.3), Willington, Derbyshire (section 4.5.6), Eye Kettleby, Leicestershire (section 4.5.7), Cossington, Leicestershire (section 4.5.8) and Lockington,

Leicestershire (section 4.5.9). The petrographic assessments undertaken for Rearsby, Syston, Castle Donington and Lockington have provided no evidence for non-local points of origin. This is not the case for Eye Kettleby or Cossington. The Eye Kettleby late Neolithic and early Bronze Age fabric classifications had three fabrics containing igneous material possibly originating from the granitic outcrops at Charnwood Forest (Woodward & Marsden 2011: 120-121). The barrow at Cossington produced two possible early Bronze Age fabrics of non-local provenance (Vince 2007: 1-7). One fabric may have been produced from the Trent Valley Triassic geology although it is possible that locally available boulder clays could contain a similar material. The second fabric may have been sourced from the Charnwood Forest area. The Willington material, comprising samples from a Beaker and a Bi-Conical Urn, indicate a local source, probably the nearby gravel beds (Johnson & Whitbread 2009: 87-88). The Beakers from Skendleby are reported to be of local production or at least from materials available locally (Woods 1991: 38-39).

The later Neolithic and early Bronze Age petrographic synopsis demonstrates varied results. The selected sites show a greater exploitation of the Charnwood Forest area by closer sources, in this instance Eye Kettleby and Cossington, whilst there was no demonstrable exploitation from areas further afield, such as Willington. Why this hiatus occurs is not known but could be due to the reduction in importance of flint axes and the growth in metallic ones. Again it should be borne in mind that the sample size for this study is small. The one emerging pattern is that both Eye Kettleby and Cossington are funerary monuments.

8.3 Procurement, Production and Consumption: Patterns

The ceramic record available from Leicestershire and the wider East Midlands demonstrates the possible source of material and its place of deposition. However, the specific pathways undertaken by the materials used to make the final vessel can only be hypothesised, though the results do provide some indications. Whilst the results from Rearsby Bypass, Syston and Castle Donington suggest that vessels may not have travelled far from their place of manufacture, others, such as the Fengate material found at Hallam Fields do indicate a longer journey from point of origin to the vessels place of deposition.

Earlier Neolithic

The early Neolithic evidence for non-local pottery comes from Great Briggs, Nottinghamshire (section 4.5.2) and Briar Hill, Northamptonshire (section 4.5.4). Distance travelled for the pottery (or raw materials) is roughly 20km for Great Briggs (Guilbert 2009: 112) and 32km (20 miles) for Briar Hill (Bamford 1985: 109). These distances do not seem too extreme when compared to the distances travelled by items such as the Group VI axes from Langdale, Cumbria, also found at Great Briggs (Guilbert 2009: 114). However, ceramic vessels are not as sturdy as axes, nor as easily portable, which may be a contributing factor. Ethnographic studies by Arnold (1985: 38-52) have shown that, generally speaking, 84% of clay sources are found within 7km of the production site, while 88% of inclusion sources are found within 6km. Consequently

the distance involved in Great Briggs and Briar Hill could be explained by their ritual significance.

Middle Neolithic

The patterns of exploitation of resources alters slightly during the middle Neolithic. It appears there is some continuity of procurement identified at Great Briggs. Inhabitants at Willington, also located in the Trent Valley, appear to be exploiting the same Charnwood Forest source of material as the inhabitants of Great Briggs. Other links between Great Briggs and Willington aside from the ritual nature of both sites is the recovery of Group VI and Group XX axes, both high status items, at both sites (Guilbert 2009: 114; Beamish 2009: 108). There is one possible further link between the Trent Valley and the Charnwood Forest area, with Fengate material being found at Hallam Fields, Leicestershire which may have a provenance in the Trent Valley. Admittedly the vessels could also have originated in East Yorkshire or Lincolnshire. However, this represents a possible future avenue of research focused on establishing a narrower provenance for the Hallam Fields middle Neolithic material.

Late Neolithic and Early Bronze Age

The results from the late Neolithic and early Bronze Age demonstrate a change in exploitation patterns. Long distance exploitation of resources appears to have reduced with more emphasis on the local use of materials. Certainly most of the sites have resorted to locally available raw materials and where there is procurement, this is possibly for funerary ritual purposes as shown at Eye Kettleby and Cossington. It

remains to be established whether the vessels at these sites (which contain Charnwood Forest granitic materials) were directly associated with burials. Long distance trade is still a flourishing part of society, as evidenced by the Amorican blade at Lockington (Hughes 2000: 100-101) and the extensive range of exotic goods now being exchanged, such as jet, amber and faience (Cunliffe 2012: 182) but pottery appears to be less central to this trade and exchange network.

8.4 Choice of Raw Materials

It has been demonstrated that the choice of raw materials can affect the resulting ceramic product (Sterba *et al*. 2009: 1582-1589), as well as the vessels resistance to thermal shock (Tite *et al*. 2001: 301-324). This section is organised by location of raw material source.

Throughout this research, the area of Charnwood Forest has repeatedly shown itself as a choice location for raw materials, not completely to the exclusion of all other sources, but as a continued and possibly preferred source. The earlier Neolithic saw the inhabitants of the Great Briggs area exploiting raw materials from Charnwood Forest (section 4.5.2). This exploitation continued into the middle Neolithic with raw material, or finished items also travelling to Willington, Derbyshire (section 4.5.6). These three sites (Great Briggs, Willington and Charnwood Forest) are not closely situated and do not appear to be linked by specific linear route ways (Figure 5.4) making this pattern of exploitation an interesting one. Possible reasons for the exploitation of this specific resource have been postulated by Knight *et al.* (2003) as

part of a study into the later prehistoric and Saxon exploitation of the same raw materials. These reasons include the fact that the raw materials from this area possessed properties favourable for vessel formation, firing and thermal shock resistance. These materials were also readily availability and easy to process (crush etc) (Knight *et al.* 2003: 119-120). Certainly this last point has been raised elsewhere in this report that as the source of the Group XX axes, the locale could have held significance (section 4.5.2). The exploitation of the Charnwood Forest area continued into the late Neolithic and early Bronze Age, as evidenced at Cossington and Eye Kettleby. However, both sites are either within or close to the threshold of distance for the procurement of raw materials and inclusions identified by Arnold, namely 7km from the production site, or within 6km of inclusion sources, so their exploitation of the Charnwood Forest area may not be particularly exceptional (Arnold 1985: 38-52). Charnwood Forest continued to be exploited for several millennia, with examples found at Eye Kettleby in the later Bronze Age (Woodward & Marsden 2009: 122). Other sites utilising raw materials from this area have also been identified dating to the Iron Age (Knight *et al.* 2003: 111-125; Carney 2010) and Anglo-Saxon periods (Williams 1997: 214-220).

The Mildenhall material from the Briar Hill causewayed enclosure has been identified as containing glauconite (section 4.5.4). The vessels in this fabric were of a different style and finish, and technologically superior to other fabrics and vessels (Bamford 1985: 109). The closest source of glauconite is at least 32km from Briar Hill. The use of this mineral in Iron Age ceramics is recorded, for example, on the Channel Tunnel Rail

Link excavations at Hocker's Lane (Lyne 2006). However, no firm location for the source of glauconite is provided within the report and although it presumably had attractive properties for use in ceramics by its widespread use in later periods, its technological and symbolic attributes are not explored further here.

The choice of source material for the middle Neolithic Fengate style ceramics at Hallam Fields is more difficult to establish. This is because the ICP-AES results have indicated a wide geographic location for the provenance (section 4.5.5). The Trent Valley would be an obvious choice due to the ease of travel along waterways from there to the Hallam Fields sites in Birstall, Leicestershire. However, it is not possible to state a point of origin with any certainty.

8.5 Regional and Chronological Differences

There are apparent differences both regionally and chronologically within the procurement of raw materials and final vessel deposition within Leicestershire and the wider East Midlands. Regionally speaking, within the earlier Neolithic, exploitation was largely focused on local resources with the exception of the ritual sites at Great Briggs, Nottinghamshire and Briar Hill, Northamptonshire which displayed evidence for with incoming raw materials from Leicestershire for Great Briggs and an unidentified source for Briar Hill. Regarding the sites studied in this research (Rearsby Bypass, Syston and Castle Donington), there is no demonstrable evidence for the importation or exportation of ceramic raw materials or finished ceramic goods. Petrographic evidence for any type of non-local procurement and production for this period of the Neolithic

has yet to be determined for Leicestershire due to the paucity of data and consequently forms an unfortunate gap in this assessment. However, the presence of imported material at Great Briggs, Nottinghamshire does suggest some level of exchange, trade or exploitation within the Charnwood Forest area of Leicestershire.

The middle Neolithic sees more widespread importation and exportation of ceramic material, whether raw or finished. Despite evidence from the three primary sites in Leicestershire (Rearsby Bypass, Syston and Castle Donington) illustrating no firm evidence for trade, exchange and non-local procurement, the county does appear to be the focal point for procurement of raw materials for other sites in the East Midlands, for example, Willington, Derbyshire and Great Briggs, Nottinghamshire. The site at Hallam Fields, Leicestershire also displayed evidence for imported materials from the Trent Valley, East Yorkshire or possibly Lincolnshire. Therefore, where the sites sampled in this research are concerned, absence of any evidence for non-local raw materials is certainly not representative of the county in general, as future studies will no doubt illustrate.

It is worth noting that the only time Lincolnshire is identified as a possible point of origin for raw materials in this research dataset is at Hallam Fields, Leicestershire and even this is not certain. Therefore, this may indicate a preference for raw materials in the counties of Leicestershire, Derbyshire and Nottingham over Lincolnshire and also Northamptonshire. The two selected sites located within Lincolnshire (Skendleby – section 4.5.3) and Northamptonshire (Briar Hill – section 4.5.4) are a fair distance from

the other sites selected for analysis (see Figure 4.1) and do indicate the use of local materials as opposed to materials from further afield (for example, Leicestershire, Derbyshire and Nottinghamshire). Although this possible pattern is more likely representative of the site selection protocols in this research, another interesting factor to consider is the location of watercourses. The sites from Leicestershire, Derbyshire and Nottinghamshire are linked by more than just proximity. They are all relatively close to a set of conjoining water courses – the River Trent, River Soar and River Wreake. This factor may have been a prime factor in establishing a trade and exchange network during the earlier prehistoric periods (Davison *et al.* 2006: 641-652), resulting in the easier distribution of raw materials. It is clear that in order to demonstrate if there are any definite patterns of procurement within the East Midlands, whereby certain areas are favoured over others a significantly larger dataset is required.

The late Neolithic and early Bronze Age East Midlands has less evidence of long distance ceramic trade than the preceding periods although trade in other materials, particularly exotic and prestige goods, was occurring (Cunliffe 2012: 182). Small scale exploitation over some distances was happening albeit just focused on Leicestershire. The technological benefits of the igneous material at Charnwood Forest has already been demonstrated (Knight *et al.* 2003: 111-125; Carney 2010) and its continued utilisation as a deliberate inclusion indicates its preferential selection over more locally available materials. Therefore, the reason behind the apparent decline in long distance ceramic trade in the study area selected for this research is not known.

8.6 Summary

The results of this research investigated the procurement, production and consumption of Neolithic and early Bronze Age ceramics within the East Midlands. The production of primary data from three sites in Leicestershire was undertaken and incorporated into a larger dataset to tackle the overall research aim and research questions. The results indicate that the three primary sites exploited local materials and sources for the procurement and production of ceramics. Whilst this does not entirely match the regional patterns, it has enabled extrapolation from these results for Rearsby, Syston and Castle Donington within Leicestershire to similar type sites in the wider East Midlands region and to site types of a different character.