

medieval ceramics **Papers**

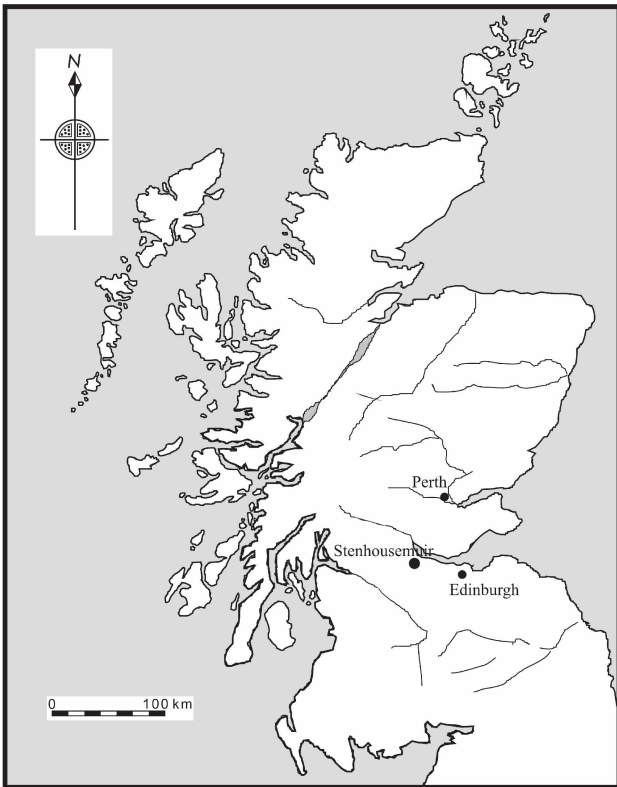


Figure 1
Location of Stenhousemuir



Figure 2
Site location plan

Recent excavations of pottery kilns and workshops at New Carron Road, Stenhousemuir, 2007

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Derek W Hall

Summary

Excavations in 2007 in advance of a housing development by Kier Homes Ltd in Stenhousemuir, near Falkirk, located further evidence for the late medieval pottery production centre previously

located in this area. The remains of a Musty Type 2 kiln (Musty 1974), apparently unfired, the limited remains of workshops and tantalising glimpses of earlier pottery production were discovered.

Background

Introduction (Figure 1)

Kier Homes Ltd commissioned SUAT Ltd to undertake an archaeological excavation on the site of a proposed new housing development at New Carron Road, Stenhousemuir. The proposed development area lay on the west side of New Carron Road, centred on NGR NS 881 830. The work (SUAT site code SH02) was undertaken during the period 8th May to 1st June 2007 in good weather conditions. The work was designed to satisfy the archaeological condition on Falkirk Council's development application reference 06/0215/FUL dated 9th November 2006.

Aims and objectives

This excavation was a follow on from a site evaluation (SH01) which had located substantial archaeological remains on top of the terrace at the W side of the site. It was designed to ensure the careful excavation and recording of archaeological structures and deposits prior to redevelopment of this part of the site.

The site (Figure 2)

The proposed site for new housing lay directly adjacent to and west of New Carron Road in Stenhousemuir near Falkirk. As a large part of the site was occupied by a peat bog; the area of the archaeological excavation was concentrated on the top of a plateau on the western side of the site.

Archaeological potential

Excavation and monitoring of sand quarrying by the Carron Iron company in the 1950's and early 1960's located upwards of eleven pottery kilns and associated structures directly to the north and west of this site (Hall and Hunter 2001). It was therefore considered

possible that further remains of the Stenhousemuir Redware pottery industry might be present.

Historical background

David Perry

The place-name of 'Stenhouse' possibly refers to 'Arthur's O'on', a stone-built circular structure resembling a kiln, of uncertain origin but generally regarded as a Roman temple. This structure formerly stood to the south of the mansion of Stenhouse, but was removed by the landowner, Sir Michael Bruce, to build a dam for a nearby meal mill in 1743 (NSA 1845, 358; Brown 1974; Brown and Vasey 1989). Despite its destruction, it continued to be represented on plans of the second half of the 18th century (RHP 1497 and RHP 1552). This building is mentioned as *furnum Arthuri* in a charter to Newbattle Abbey in 1293 (*Newbattle Registrum*, No 219), a reference which indicates its origins were unknown and already ancient at that time.

No references to a pottery industry were found in the course of the documentary research into Stenhousemuir, although the industry there probably dates to the 15th and 16th centuries, when the Sinclairs of Roslin were the landowners. It has been argued that the styles of decoration on some of the pottery from the Stenhousemuir kilns suggest a connection with the Knights of St John at Torphichen (Hall and Hunter 2001).

Archaeological method (Figure 3)

Following the results of initial hand and machine trial excavations, five areas of excavation were opened (A to E). A further area (F) was investigated by Geoff Bailey (Falkirk Council archaeologist) and his volunteers. Due to the presence of a live water main running across the site, it was not possible to open and investigate a large stripped area.

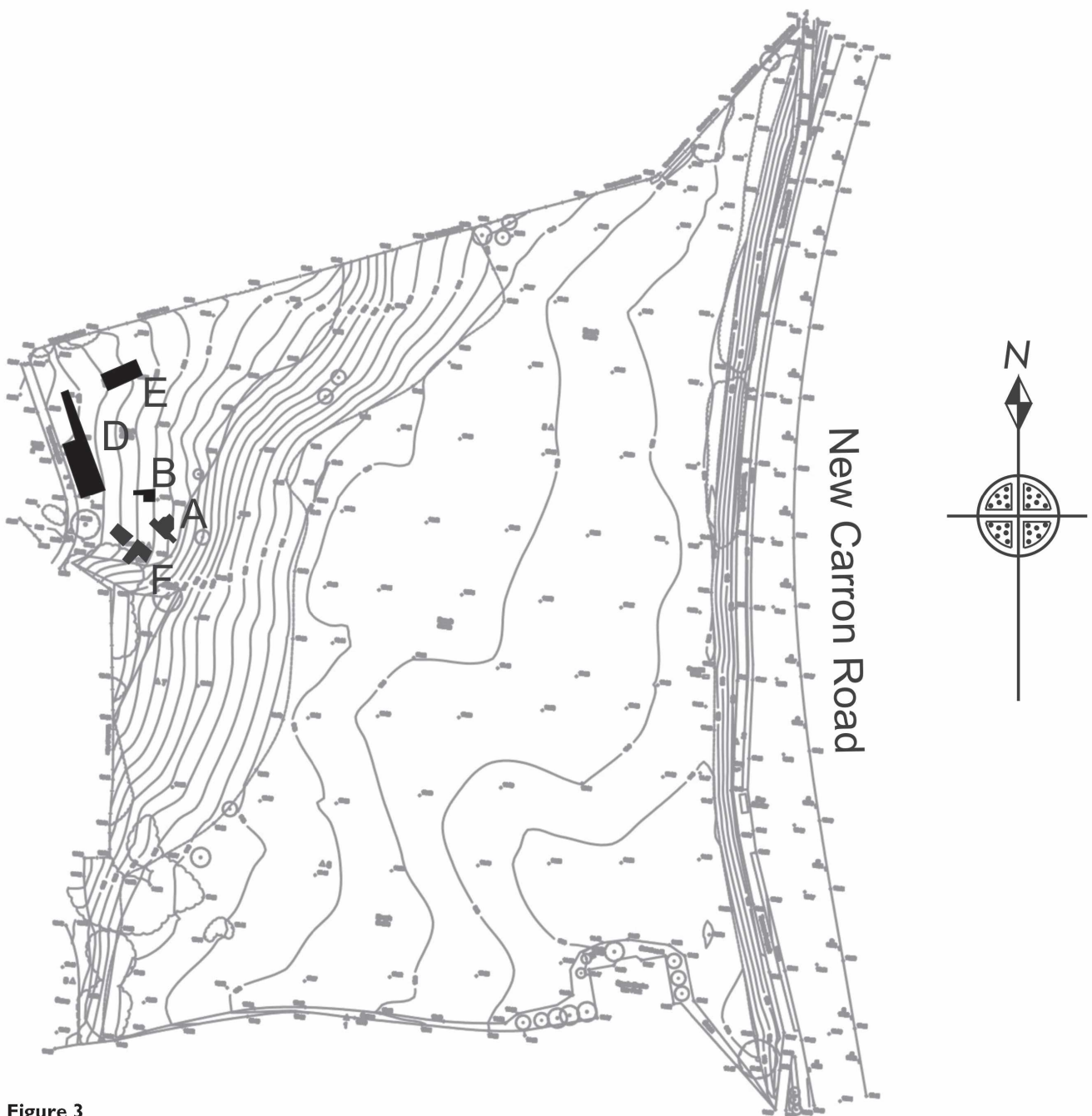


Figure 3
Trench locations Scale 1:150

Results of investigations

Trench A (Fig 4, 5, 6, 8 and 9)

This trench was concentrated over a stone structure (139) that had been defined in the evaluation, and measured 4.4m NW to SE by 4m NE to SW. A light brown sandy clay (109) overlay a dump of grey brown silty clay containing a large amount of Redware pottery sherds and occasional stones (103). Layer 103 overlay a dump of rounded and irregular stones and blue clay (107) which filled the interior of 139. Dump 107 also overlay 153, a dump of Redware pottery which lay to the W of 139.

Following the removal of the dumped material, 139 was defined as a stone-built oval structure which had been dug into the side of the hill. There was a deliberate gap in the structure at its W end associated with a sub-circular shallow cut feature (154). A similar gap at its E end had been blocked by the insertion of several large stones mixed with potsherds and kiln waste (161). A second sub-circular shallow cut feature (147) lay beyond the limit of this blocking. Both sub-circular cuts were dug into the top of a light brown silty clay (148) which contained small stones and occasional charcoal flecks. Stone structure 139 was both built on and cut into this deposit. Directly to the N of 139 lay a deposit of broken burnt daub and light brown silty clay (163)

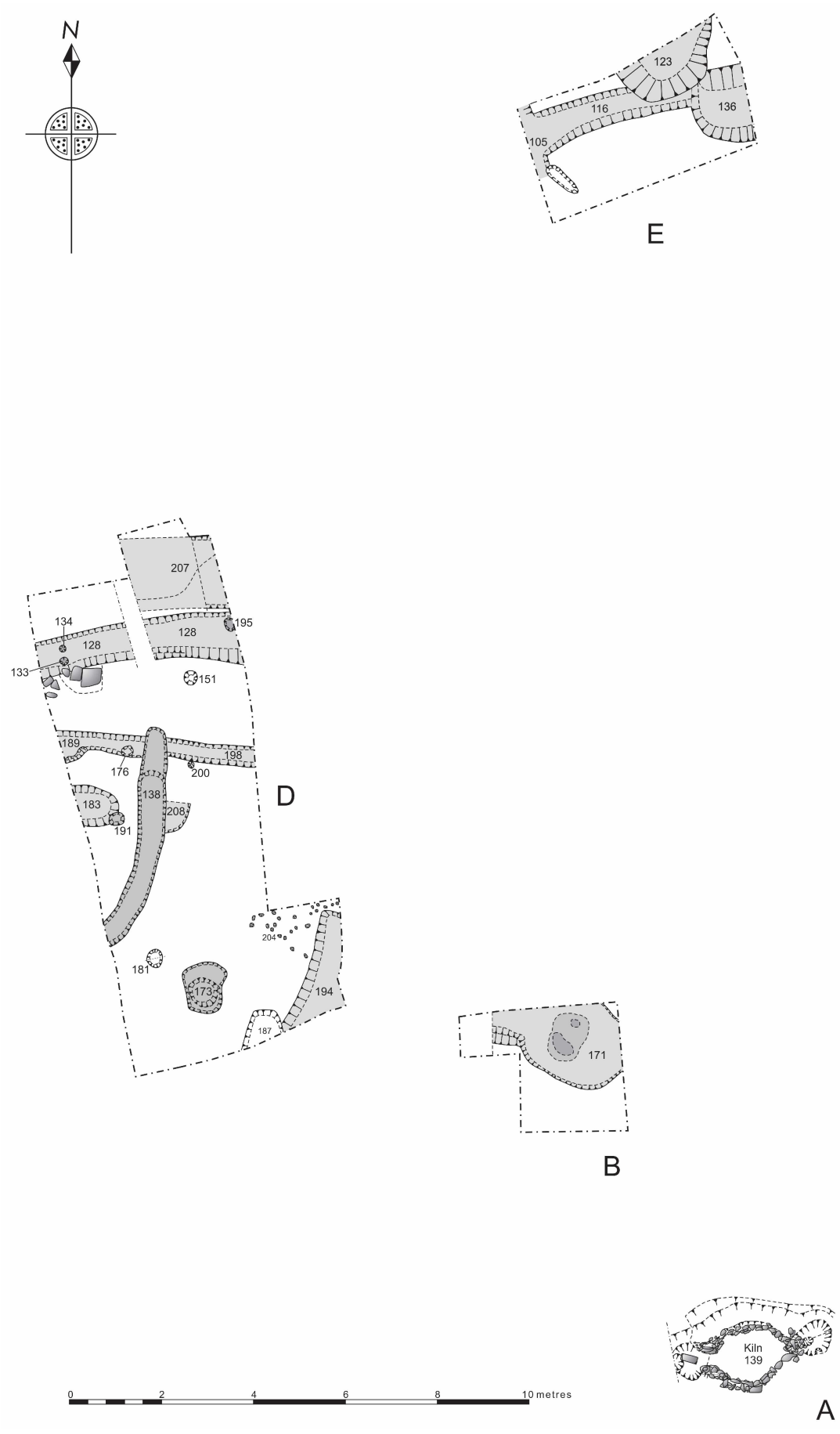


Figure 4
Excavated features in Areas A, B, D and E

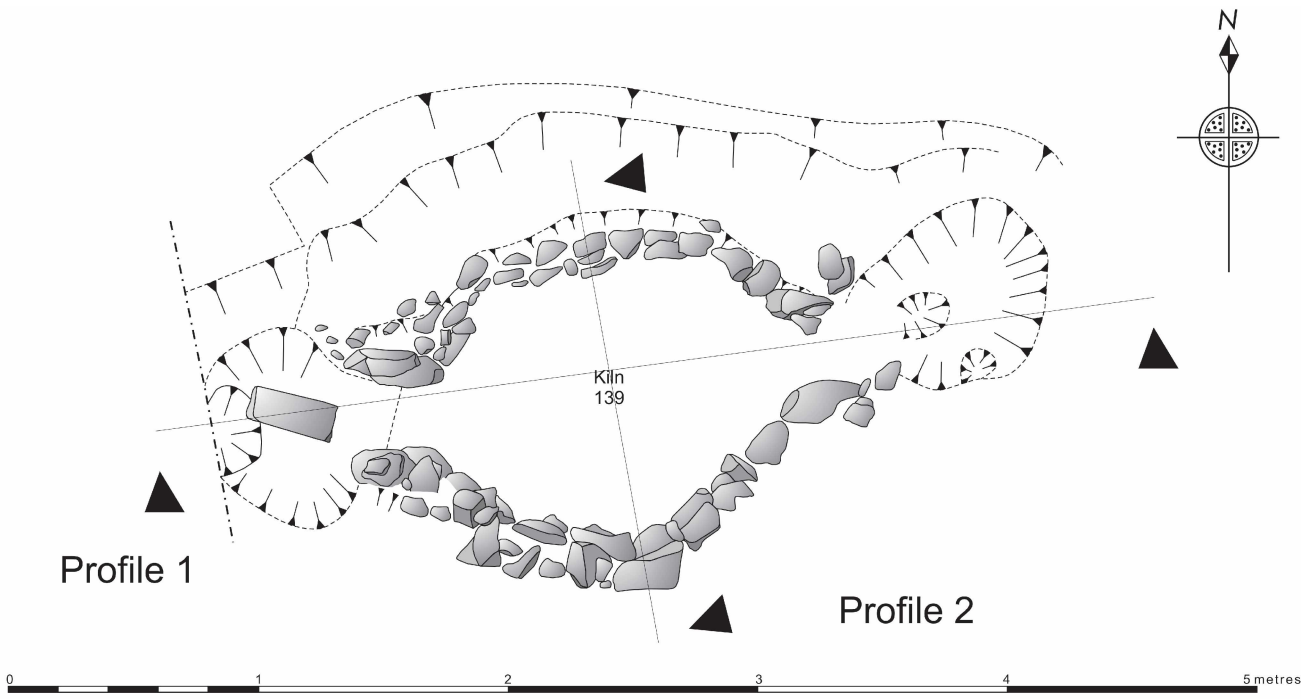


Figure 5
Plan of fully excavated kiln 139 showing location of drawn profiles

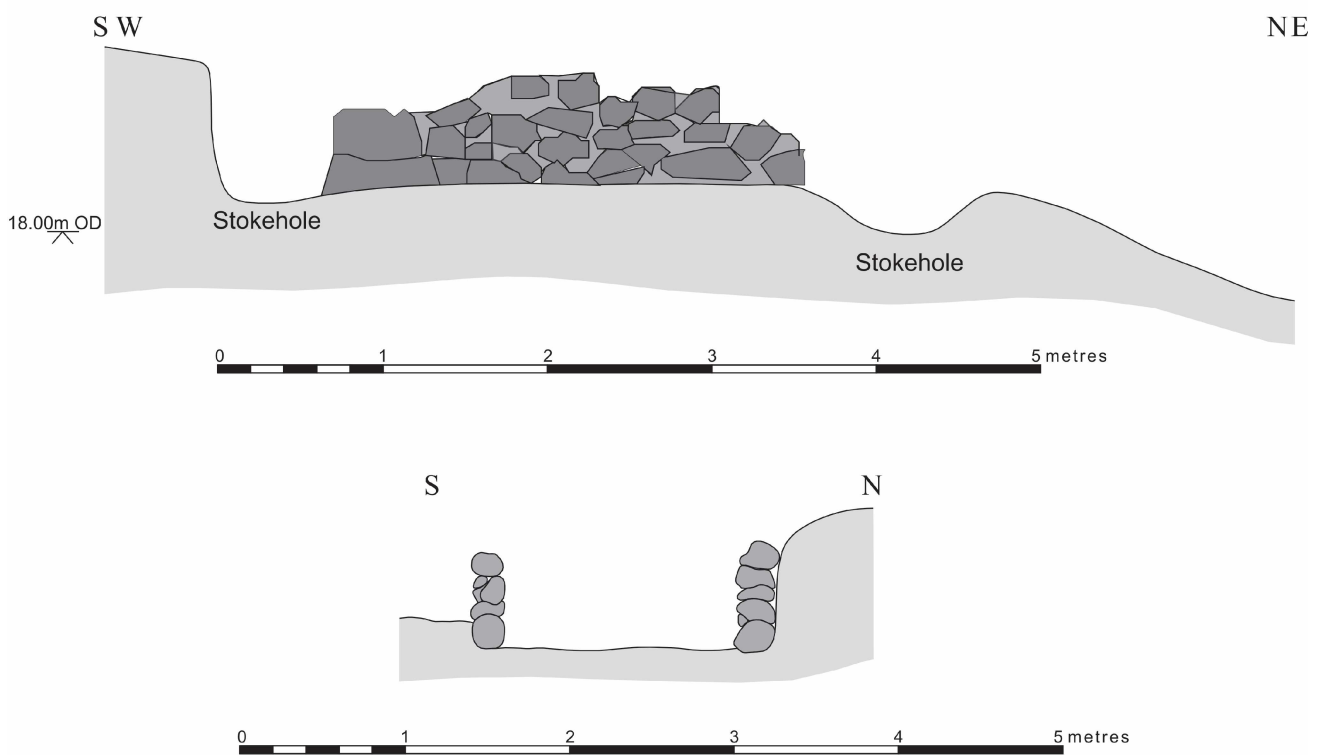


Figure 6
SE facing and NW facing profiles across kiln 139



Figure 7
Robbed out kiln 170 in Area B



Figure 8
Kiln 139 looking NE with blocked flue



Figure 9
Kiln 139 looking SW

which occupied a shallow linear cut feature (168), also dug into deposit 148.

Trench B (Figures 4 and 7)

This trench measured 2.6m N to S and 2.2m W to E, and was opened above another dump of Redware pottery and collapsed kiln structure (102) to the NW of Trench A. 102 overlay a mid-brown sandy clay (117) with frequent blue clay lumps and occasional stone, which contained abundant potsherds and charcoal. This material filled an oval cut feature 118. This feature cut through a light brown sandy clay (119) with frequent lumps of daub and stone and charcoal. Sandy clay 119 overlay a compacted layer of blue grey clay and daub lumps 158, which in turn overlay a moderate light brown silty clay 160. Silty clay 160 was the top fill of a sub-circular feature 170, which was cut through a moderate brown silty clay subsoil and had a layer of burnt charcoal and clay (171) on its base.

Trench C

This trench was opened over another defined area of pottery and waste, but this proved to be nothing more than a layer of this material rather than being associated with any structures or features. On removal this deposit overlay deep brown silty clay subsoil.

Trench D (Figure 4 and 10)

This trench was opened at the W limit of the site and measured 11m by 5m, with a narrow 2m extension



Figure 10
Area D showing possible peat stack in section

which ran right up to the N limit of the site. Up to 1.50m of topsoil was machined off to just above the natural sandy subsoil. At this level several linear cut features were exposed, running E to W (189, 198, 128 and 207) with at least one other feature (138) running at a NNE to SSW angle. At the SE corner of this trench, the edge of another cut feature (194) ran at a similar angle to 138.

Trench E (Figure 4)

This trench was opened at the northern end of the site and measured 7m E to W by 3m N to S. This area was focussed on a group of features that had been identified in the evaluation. A linear feature (105) was located running N to S across the trench, while another linear feature (116) ran E to W from the mid point of 105. Linear feature 116 was cut at its Eastern end by two rubbish pits 123 and 136, both of which contained pottery and kiln waste. A layer of blue clay 106 was exposed, partially overlaying the backfill of feature 105.

Trench F

This area was opened over a further concentrated dump of pottery and kiln waste with the intention of defining any further kiln structures that lay within it.

No further evidence for kiln remains was recovered. A linear cut feature was defined possibly relating to an attempt to keep this part of the site drained. A large assemblage of pottery was recovered from this area, and a selection has been included in the illustration catalogue (Fig 19).

Interpretation

Trench A (Figures 4, 5, 6, 8 and 9)

The stone built structure 139 appears to be the remains of a pottery kiln with opposing flues. This kiln type, a Musty Type 2a, has also been found in excavations at Rattray in Aberdeenshire (Musty 1974; Murray and Murray 1993), Colstoun in East Lothian (Hall 2007) and in previous excavations at Stenhousemuir (Hall and Hunter 2001). Its most unusual feature was the fact that its NE flue had been deliberately blocked and, apart from a single stone at its western flue, there was little or no sign of any burning on any part of the structure including the opposed stoke holes. Despite this, evidence for a collapsed clay dome was present on its N side (deposit 163), which would surely suggest that it had been fired at least once.

Trench B (Figures 4 and 7)

Cut feature 170 appears to represent the remains of a pottery kiln whose structural elements have been completely robbed out for use elsewhere. A layer of charcoal and burning on the base of this feature has been carbon dated to 1400–1490 AD (2 sigma probability level). This action appears to relate to the burning of material after the removal of the kiln's structure, and the carbon date should therefore be regarded as a *terminus ante quem* date for the use of the kiln.

Trench D (Figures 4 and 10)

There would appear to be at least two phases of activity on this part of the site. The earliest of these is represented by linear features 128, 198 and 207 and associated pits and postholes 176, 200, 208, 183, 181 and 173. All the linear features would appear to represent boundary lines presumably relating to buildings or areas of activity that lie beyond the excavated area. A C14 date of 1390–1450 AD at 2 sigma from the fill of cut 183 dates this phase of pottery production to the late 14th to mid 15th centuries. The second phase is harder to define, but is represented by a narrow, steep-sided linear cut feature (138) that comes to a butt end where it crosses the line of cut 198. The deposits associated with the use of these excavated features contain at least one example of what would appear to be a peat stack (156).

Trench E (Figures 4)

The two linear features 105 and 116 appear to represent the remains of boundary lines similar to those that were located in Area D. In fact all the features in Trenches C and D are probably related, and represent enclosed areas associated with pottery manufacture. Rubbish pits 123 and 136 contained pottery and structural waste and post-dated these structural features.

The pottery assemblage

The 2007 excavations retrieved 10,809 sherds of Redware pottery from the excavations of Areas A to E. During the excavation it was decided not to keep all of the pottery, and a sensible statistical selection was made of a representative sample from all of the excavated areas.

Vessel forms**Jugs** (Figures 11, 12, 13, 14, 16, 17 and 19)

The most common vessel type produced by the kilns at Stenhousemuir is the jug. The standard type of this vessel is a very simple plain vessel with an upright



Figure 11
Top half of jug from Area F with face mask and incised floral decoration

rim and applied strap handle (Fig 14 Cat 1). These are normally splash-glazed green. A version of this vessel was also made that has a very distinctive facemask on its rim or its body (Figs 11, 12 and 19). It is possible to see a range of styles that were used for the bases of these vessels. Some of the vessels from the backfill of kiln 139 have very simple flat bases, but there is also a sizeable group with deliberately thumbled bases, very much in the style of imported German stonewares that begin to be imported into Scotland from 1350 onwards (Hurst 1986, 176–193).

Open vessels (Figures 15)

There are plain bowls present from Contexts 108, 137 and 184, and an example with a thumbled basal angle from 163. There are fragments of 'dripping pans' from Contexts 103, 107 and 117.

Other vessels (Figures 13 and 18)

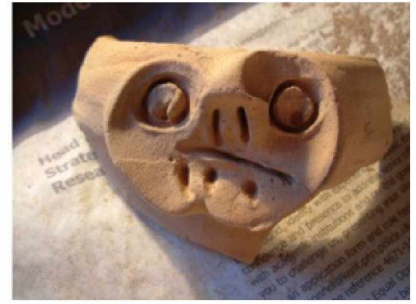
There is a single example of the top of a handled urinal from Context 117, and thumbled lug handles from Context 108. A single fragment from a sugar mould was recovered from Context 137 (Cat 108). Fragments from 'bung hole' pitchers were located in Contexts 107 and 117, and examples of vessels with tubular spouts were recovered from 108 and 137. There are fragments from dripping pans from 117 and 127, and a base of a candlestick from 108. Area D produced several rim and handle junctions from handled jars, the best example being the virtually complete vessel from context 137 (Figure 13; Figure 18 Cat 100).



Area A Context 107



Area B Context 102



Area F



Area A Context 153



Area F



Area F



Area A Context 108



Area A Context 157



Area F



Area F



Area F



Area A Context 153

Figure 12
Selection of face masks



Figure 13
(left) Virtually complete handled jar from Area D and (right) top half of handled urinal from Area B



Kiln furniture (Fig 20)

Fragments of kiln props were recovered from Contexts 163 and 184 (Area A) and 137 (Area D). These are all in the very distinctive ‘cooling tower’ shape, like the props that were previously recovered from Stenhousemuir (Hall and Hunter 2001).

Decoration (Fig 12)

As with the previously published assemblages from Stenhousemuir, the pottery is distinguished by a mixture of styles of decoration featuring both incised and applied motifs. Floral patterns are very popular being present in both incised and applied forms. There is a single example of an incised saltire cross with ring and dot decoration from Area F. Probably the most common style of decoration is the face mask which seems to have been used on both plain and highly decorated vessels. It is clear that the apparent high percentage of decorated material noted in the previously excavated material from Stenhousemuir is due to the selective retention of decorated pottery by the excavators. Decorated material, although present from the 2007 excavations, is not as common as might have been expected. Although most of the vessels exhibit some signs of glazing, it would appear that dipping the vessels in glaze rather than splash-glazing them only happened towards the later end of the industry.

Kilns and firing

The excavations at New Carron Road, Stenhousemuir have located further evidence for structures and features associated with the late medieval Redware pottery industry of Stenhousemuir. The single kiln excavated was of an identical type to those previously excavated in the vicinity by Doreen Hunter in the 1950’s (Hall

and Hunter 2001). Although the areas investigated were limited both by the presence of a live water main and the constraints of an operational building site, they have produced the first tantalising evidence at this site for at least two phases of activity associated with pottery manufacture. The C14 dates from this excavation and the styles of some of the ceramics recovered suggest the presence of pottery manufacture at Stenhousemuir in the 15th century, whereas previous research had suggested that the Stenhousemuir potters were operating in the mid to late 16th centuries (Ibid 2001). This suggests an earlier possible start date for this Redware industry.

The apparent lack of any firing in the kiln located and excavated in Area A is curious and difficult to explain, however there are a couple of possibilities: firstly, this double-flued kiln may have been built in the wrong place and could therefore never function as intended or, alternatively, the nature of firing of the Redware pottery of Stenhousemuir did not involve a high enough temperature to leave any trace on either the stone-built kiln or the surrounding area.

Of these two possibilities the most likely would appear to be the first one. The kiln is actually built into the side of a hill, and its SW stokehole and flue were at least 1m below ground level. It is difficult to see how it would have ever been possible to get a good enough draft from both stoke holes to ensure that this kiln operated at the correct temperature.

However, it is worth noting that the prevailing wind direction in this part of the Forth Valley matches the positioning of the stoke holes and flues on a SW to NE axis. If the potters had difficulty with getting this kiln to fire properly this may explain why its eastern flue was deliberately blocked, although it is not obvious what it may have then been used for.

The other, possibly ‘robbed out’ kiln in area B was located further W on top of the plateau, and may have been located in a more favourable position, however

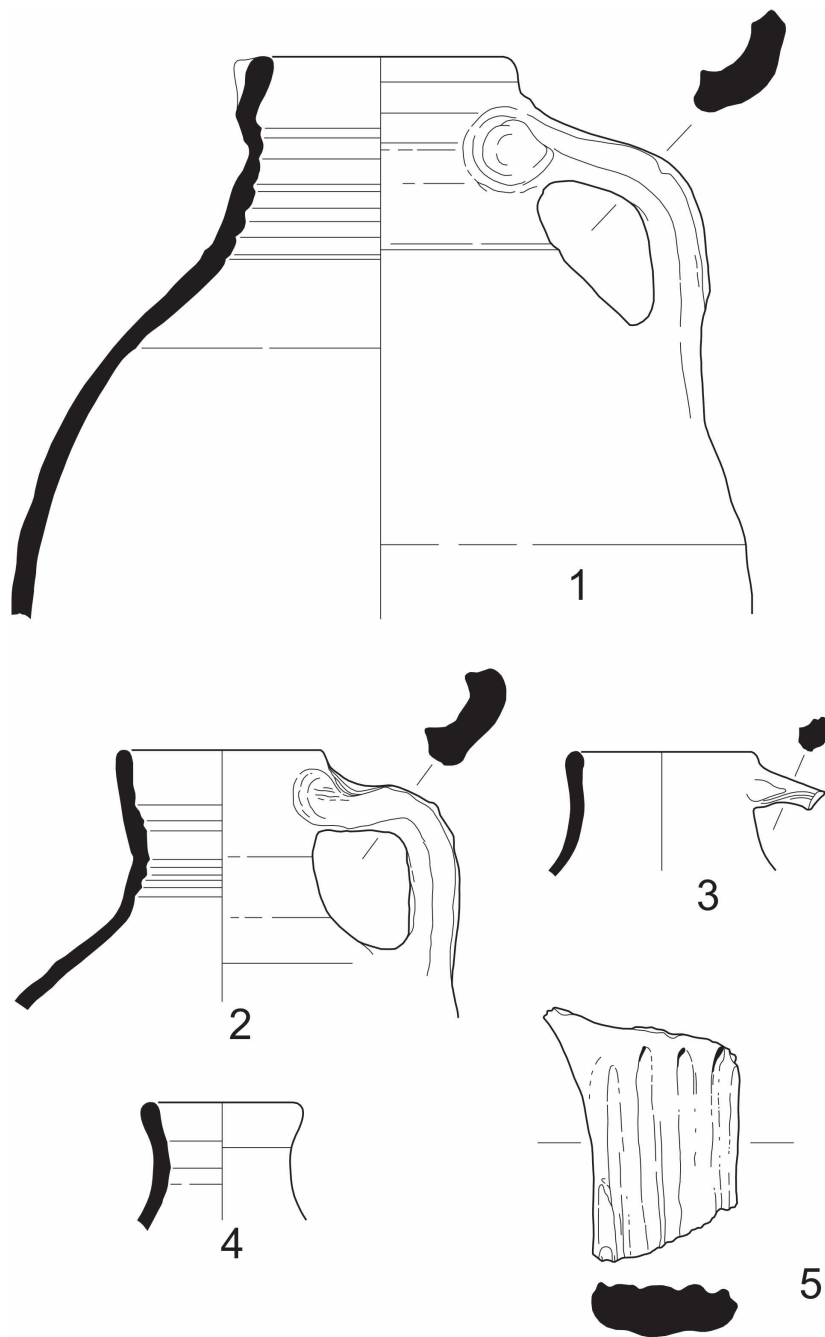


Figure 14 Area A Scale 1:3

- 1 Context I53. Rim, straphandle and upper body of jug
- 2 Context I53. Rim, straphandle and neck of jug
- 3 Context I07. Rim and strap handle junction from jug
- 4 Context I08. Rim from narrow necked jug
- 5 Context I63. Ribbed strap handle from jug

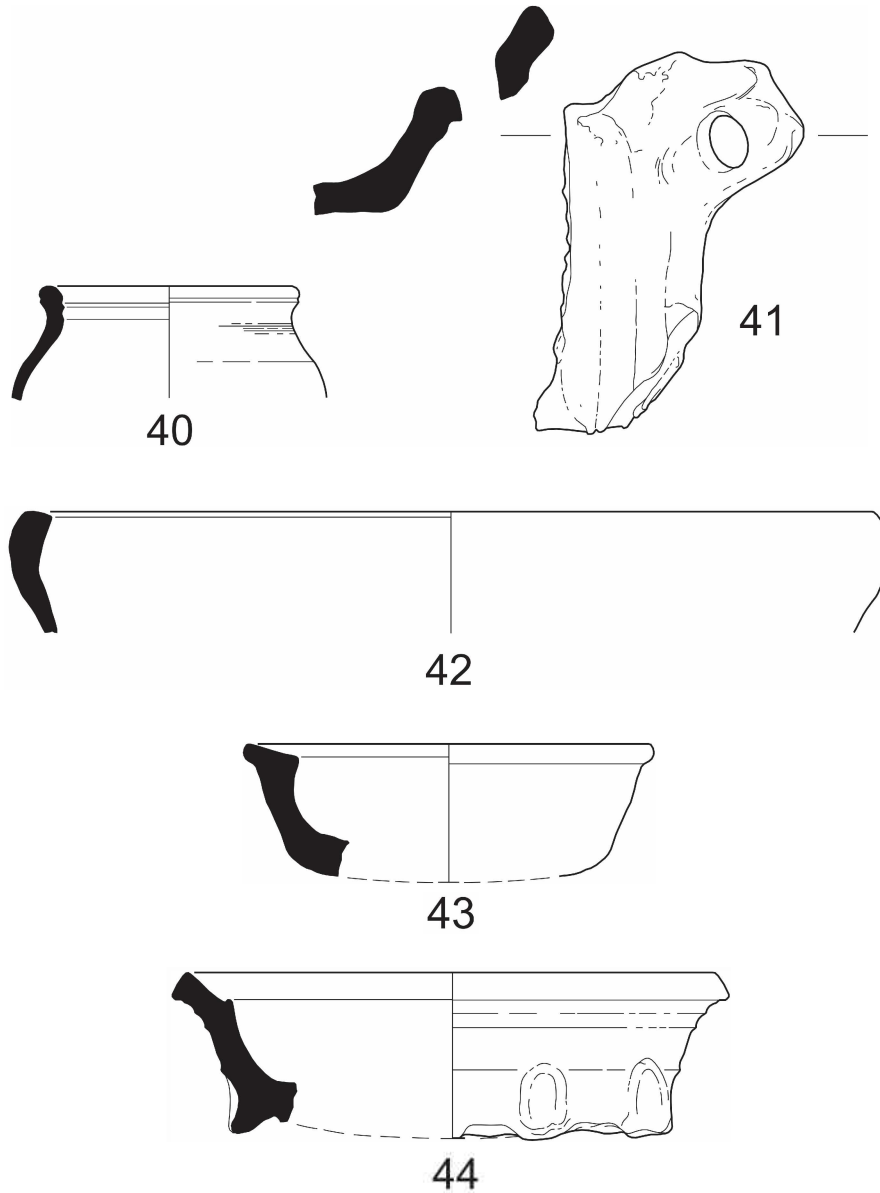


Figure 15 Area A Scale 1:3

40 Context 107. Rim and neck profile from jar

41 Context 103. Handle and rim to base profile from dripping pan

42 Context 108. Rimsherd from bowl

43 Context 108. Rim to base profile from small bowl

44 Context 163. Virtually complete bowl with thumbbed base

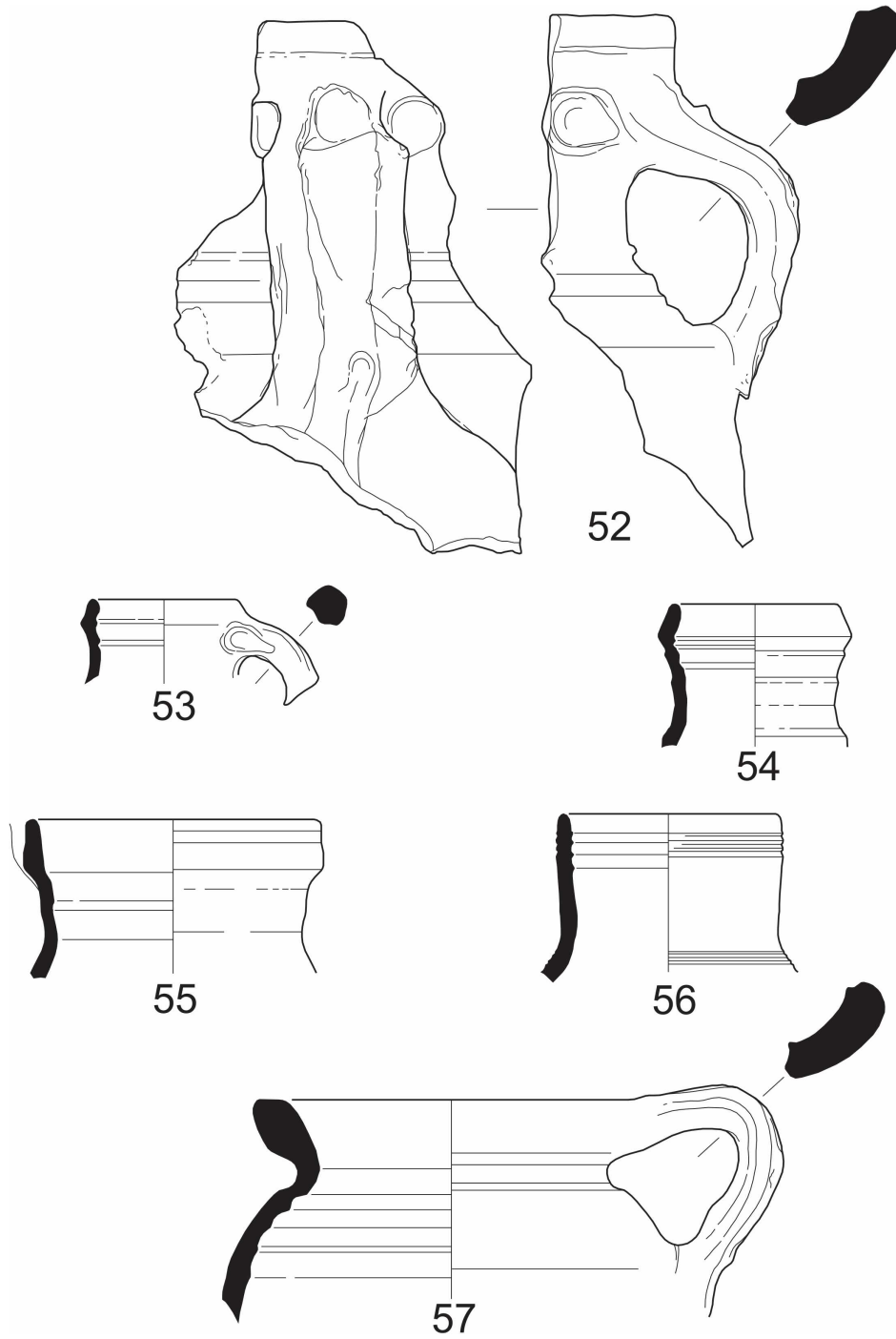


Figure 16 Area B Scale 1:3

52 Context 117. Rim, strap handle and side walls from jug

53 Context 117. Rim and strap handle junction from jug

54 Context 165. Rim from narrow necked jug

55 Context 165. Rim and pulled spout from jug

56 Context 165. Rim and neck from jug

57 Context 117. Rim and strap handle from jar

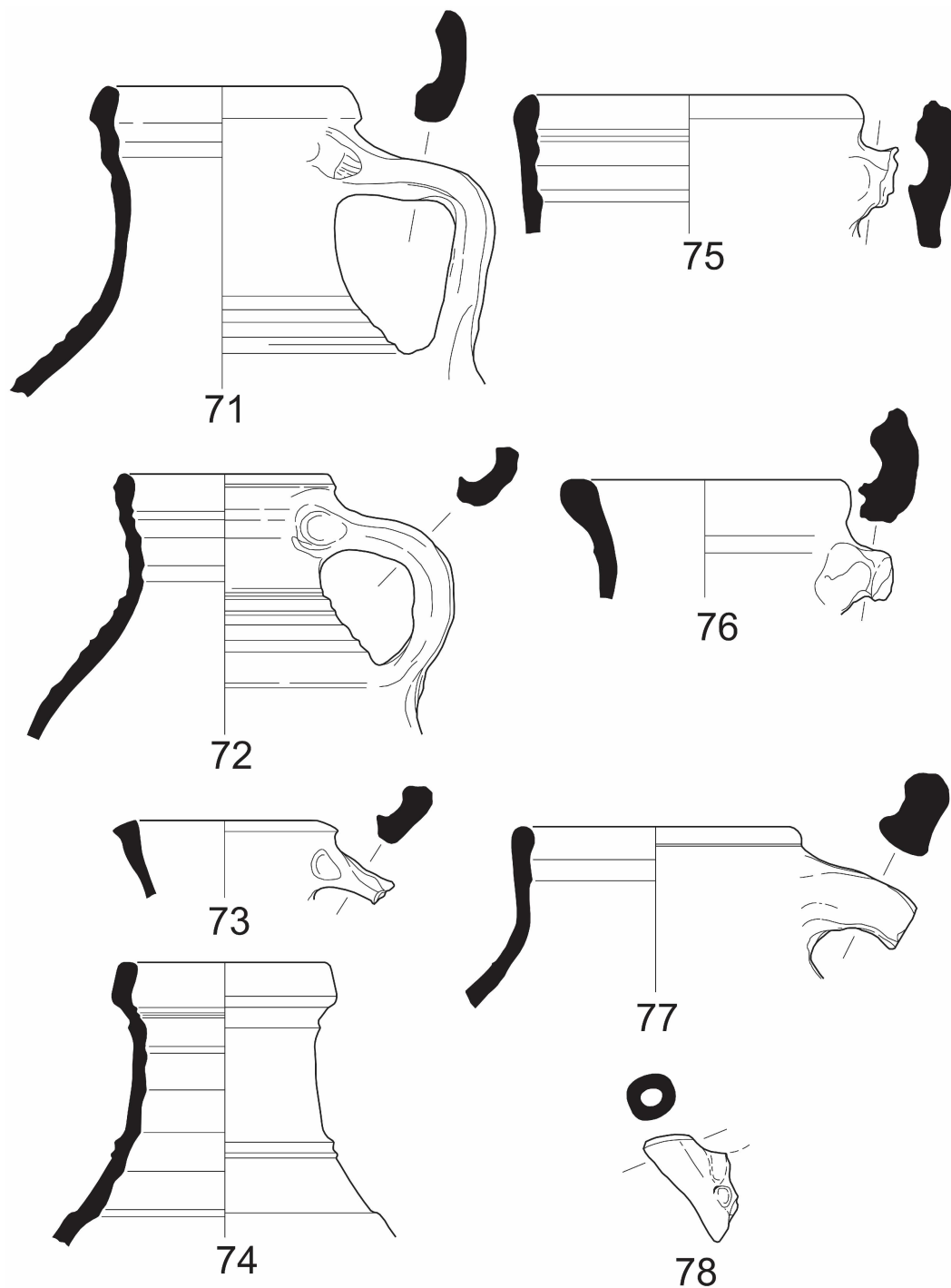


Figure 17 Area D Scale 1:3

71 Context 137. Rim, neck and strap handle junction from jug

72 Context 137. Rim, neck and strap handle junction from jug

73 Context 156. Rim, neck and strap handle junction from jug

74 Context 159. Rim and narrow neck from jug

75 Context 184. Rim and strap handle junction from jug

76 Context 188. Rim and strap handle junction from jug

77 Context 203. Rim and strap handle junction from jug

78 Context 127. Small tubular spout from jug

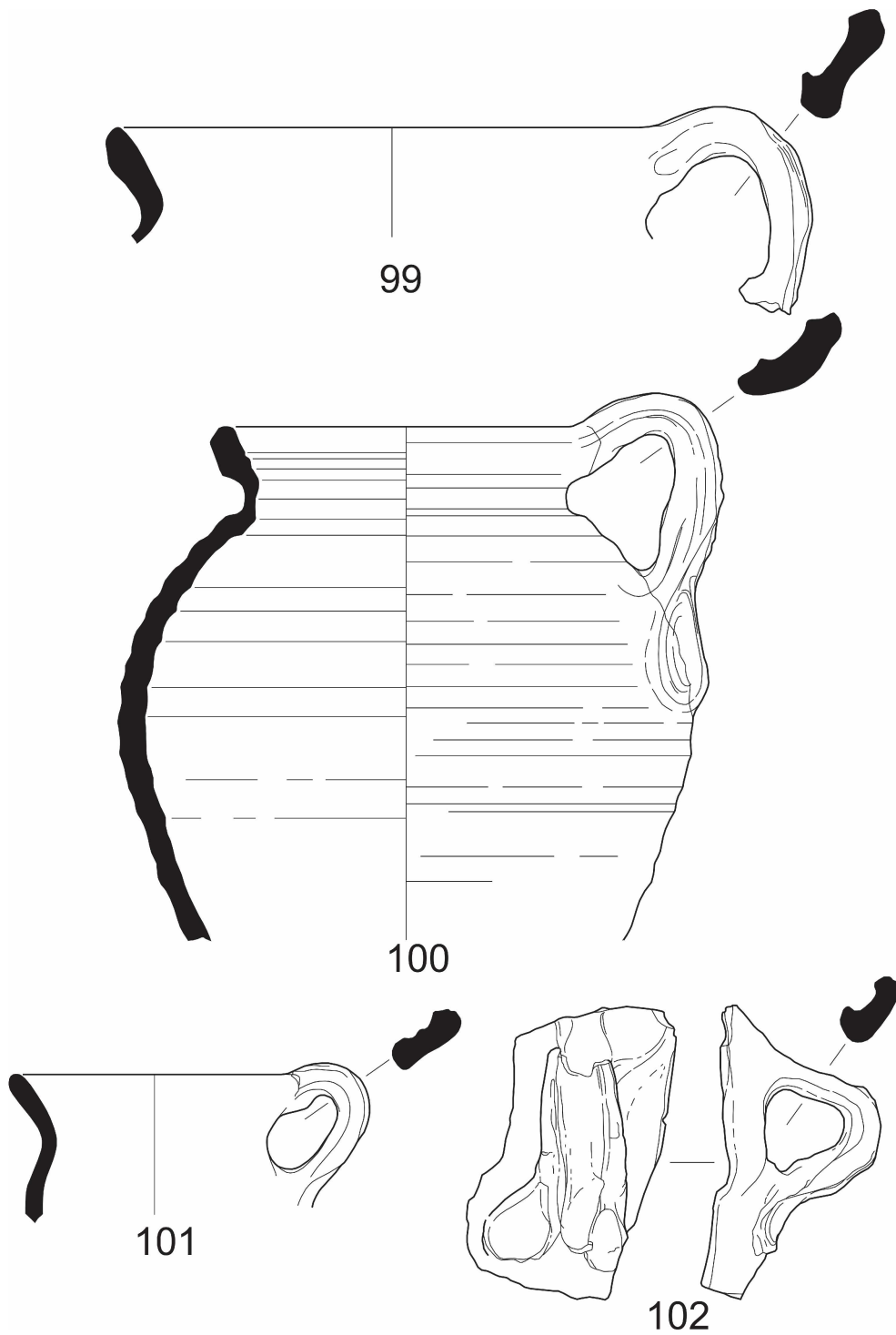


Figure 18 Area D Scale 1:3

99 Context 129. Rim and strap handle junction from a jar

100 Context 137. Virtually complete handled jar decorated with incised line

101 Context 137. Rim and strap handle junction from jar

102 Context 137. Strap handle junction

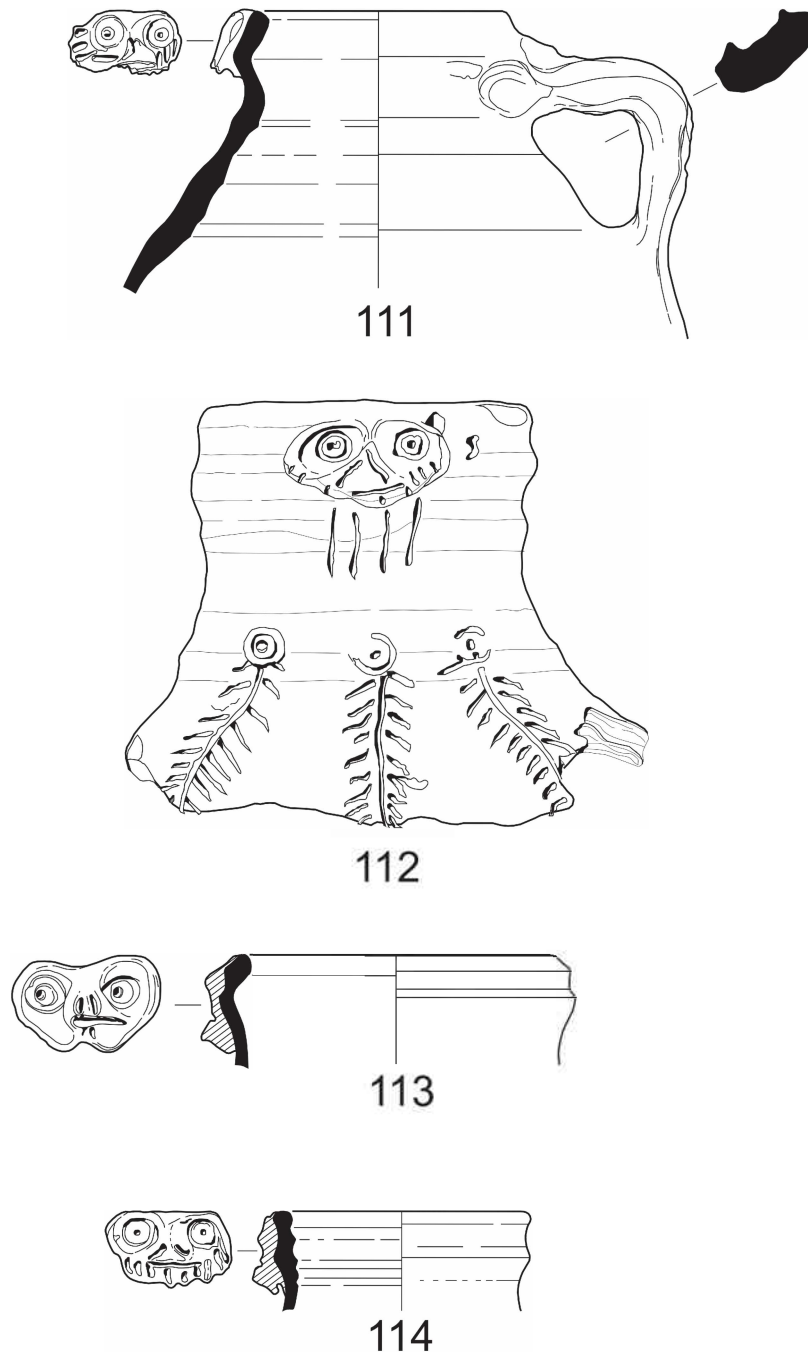


Figure 19 Area F Scale 1:3

111 Unstratified. Jug rim with facemask and strap handle junction

112 Unstratified. Jug rim and neck with facemask and incised floral decoration

113 Unstratified. Jug rim with facemask

114 Unstratified. Jug rim with facemask

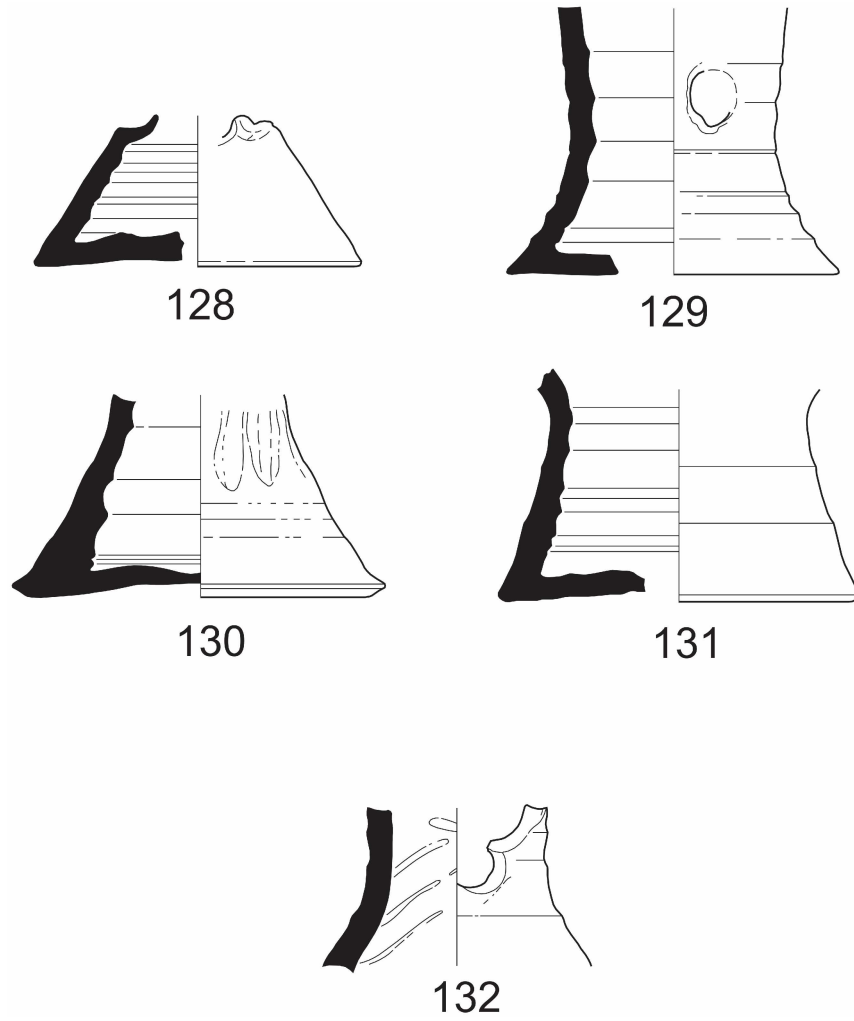


Figure 20 Kiln Furniture (Areas A and D) Scale 1:3

128 Context 163 (Area A). Fragment from kiln prop

129 Context 137 (Area D). Fragment from kiln prop

130 Context 137 (Area D). Fragment from kiln prop

131 Context 184 (Area D). Fragment from kiln prop

there is not a vast amount of evidence for burning associated with that feature either. These excavations also produced fragments of the very distinctive 'cooling tower' shaped kiln props that have been found previously (Hall and Hunter 2001).

Workshops and structures

The features excavated in Areas D and E appear to be linear trenches presumably representing structural elements of former buildings or boundary lines associated with pottery manufacture. There has been little comparative excavation of pottery production sites in Scotland, but there certainly would have been drying sheds, fuel and clay stores and manufacturing areas. The suggested workshop areas in Trench D contain some evidence for the use of peat at some stage in the manufacturing process. None of this material was found directly associated with either of the pottery kilns, suggesting that it is more likely to be connected with another process in pottery manufacture such as the drying of pots prior to their firing in the kiln. However the excavated Redware pottery kilns at Rattray in Aberdeenshire did produce evidence for peat firing, so it is possible that this method was also used at Stenhousemuir (pers comm. C Murray). Documentary research on the other neighbouring pottery industry at Throsk which operated in the 16th and 17th centuries has failed to find any direct evidence for peat as a fuel (per comm. J Harrison; Harrison 2002).

Conclusions

The excavations of 2007 have confirmed the results of the previous work by Doreen Hunter in the 1950s but have also recovered evidence for pottery production at a slightly earlier period than previously assumed. They have also recovered evidence for structures or buildings associated with pottery manufacture. These are hard to define, and the site may lie in close proximity to more substantial structures to the west. The excavations at New Carron Road have posed some interesting questions regarding the method of firing which was employed in the manufacture of pottery on this site and suggest that we need to rethink our assumptions regarding fuel use and the level of temperatures required to fire Redware pottery. Of most interest is the tantalising evidence for earlier production in the vicinity as is suggested by at least one of the C14 dates from area D and some of the pottery recovered from the Northern part of the site in Trench E. The New Carron Road excavation sheds some very useful light on a still little-understood facet of life in medieval Scotland, and confirms the importance of the continued monitoring of development in the vicinity of previously discovered sites.

Acknowledgements

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- RHP 1552 Plan of the grounds feu'd and leased by the Carron Company from Sir Michael Bruce of Stenhouse. Accurately surveyed and drawn by John Scott 1751.

Résumé

En 2007 des fouilles archéologiques menées préalablement à l'aménagement d'une zone d'habitation construite par Kier Homes Ltd à Stenhousemuir près de Falkirk ont révélé des informations supplémentaires sur le centre de production de poterie de la fin du Moyen Âge déjà connu dans cette zone. Les fouilles ont permis de découvrir les vestiges d'un four de type Musty Type 2, apparemment non utilisé et des vestiges limités d'ateliers ainsi que des traces intéressantes d'une industrie plus ancienne de production de céramique.

Zusammenfassung

Die Ausgrabungen in 2007, vor Errichtung einer Wohnsiedlung durch die Firma Kier Homes Ltd in Stenhousemuir bei Falkirk, ergaben weitere Beweise für das spätmittelalterliche Töpferwaren-Herstellungszentrum, das schon früher in dieser Gegend gefunden wurde. Die Überreste eines Brennofens ‚Musty Type 2‘, der scheinbar noch unbefeuert war, begrenzte Reste von Werkstätten und spannende Einblicke in frühere Töpferwarenherstellung wurden entdeckt.