LATE NEOLITHIC ART AND SYMBOLISM AT ROTHLEY LODGE FARM, LEICESTER ROAD, ROTHLEY (SK 592 140)

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with contributions from:
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This paper highlights some of the most significant discoveries made during fieldwork at Rothley Lodge Farm, Leicester Road, Rothley, Leicestershire, undertaken in 2004 and 2005 (Hunt 2006). The fieldwork revealed deposits and material of mid–late Neolithic date (*c*.3600–2300 BC). Evidence of deliberately placed finds has been located in several of the archaeological features, including a large amorphous, flat-based pit, the fill of which contained several thousand finds, including decorated sherds of Grooved Ware pottery, a large lithic assemblage and a remarkable engraved stone plaque displaying figurative art (Cooper and Hunt 2005). Another pit also contained Grooved Ware, calcined stone axe fragments, calcined roe deer bone and a stone rubber with two ceramic spheres, which may represent a fertility symbol. The artefacts are interpreted as symbols of identity and transformation, perhaps connected with the 'closure' of a settlement.

INTRODUCTION

Evidence for Neolithic occupation is extremely rare both regionally and nationally. Remarkably, two sites with such evidence have been found in the same parish of Rothley, Leicestershire. The Rothley Temple Grange site was published in volume 88 of *TLAHS* (Speed 2015) and this paper presents some of the results from the fieldwork at Rothley Lodge Farm, 2km to the north-west of Rothley Temple Grange and 300m east of Mountsorrel, just to the east of the A6 between Loughborough and Leicester (Clay *et al.* 2006). This work was in advance of the development of new industrial units and comprised four agricultural fields covering *c*.16ha. Initially, a desk-based assessment (Countryside Planning and Management 1997), geophysical survey (Butler 1998) and fieldwalking survey (Browning and Butler 1998) were undertaken. While the geophysical survey was inconclusive and the overall density of artefacts recovered from the fieldwalking was low, some concentrations of lithic tools were discernible. In view of this, a field evaluation was carried out by ULAS in autumn 2004 targeting these concentrations.

Twenty-six trenches were excavated and mid–late Neolithic deposits were discovered in several of the trenches associated with Middle Neolithic Peterborough Ware, and Late Neolithic Grooved Ware (Hunt 2004). This evaluative work led to a full archaeological excavation in the winter of 2005, with three separate areas examined (Fig. 3).

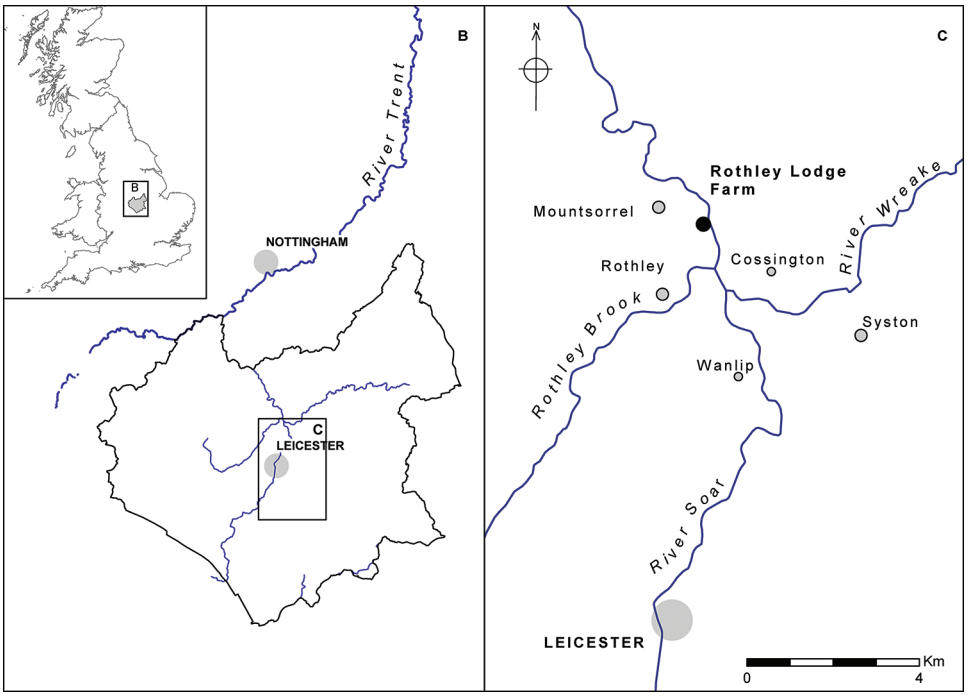

Fig. 1. Location of Rothley Lodge Farm, Leicester Road, Rothley.

The geology of the area varied from sand and gravel to Mercia Mudstone group clay and boulder clay. The three excavated areas were located along a similar contour, close to the base of a steep hill. Areas 1 and 2 were on Mercia Mudstone and glacial drift (boulder clay), while Area 3 was located on sand and gravel close to the western bank of the River Soar. Investigation of Area 2 had to be curtailed due to flooding. Despite many years of ploughing the archaeology was very well preserved, having been buried under a considerable depth of colluvium, which had also preserved the original land surface in some areas. The soils were examined on site by Richard McPhail of the University College, London, and are composed of a mixture of typical brown sand soils developed in glaciofluvial or river terrace drift (Newport soil series of Wick 1 soil association) on the upper slopes – which probably supplied contemporary sandy colluvium that seals much of the site and appears to be present at the Late Neolithic site – and stagnogleyic argillic brown earths formed in drift over Permo-Triassic mudstone–Mercian Mudstone (Dunnington Heath soil association; Ragg *et al*. 1983). Pleistocene drift deposition is probably responsible for some subsoil features such as sandy 'channel' fills, and grey and red clayey patches (McPhail 2006).

Although pits containing a small amount of flint and sherds of Peterborough Ware and Grooved Ware pottery were discovered in Area 3 (Figs 13–14), it was Area 1 that yielded the largest concentration of archaeological features, many associated with significant groups of Late Neolithic artefacts, including Grooved Ware, large lithic assemblages, a possible fertility symbol and a remarkable engraved stone plaque displaying figurative art (Cooper and Hunt 2005).

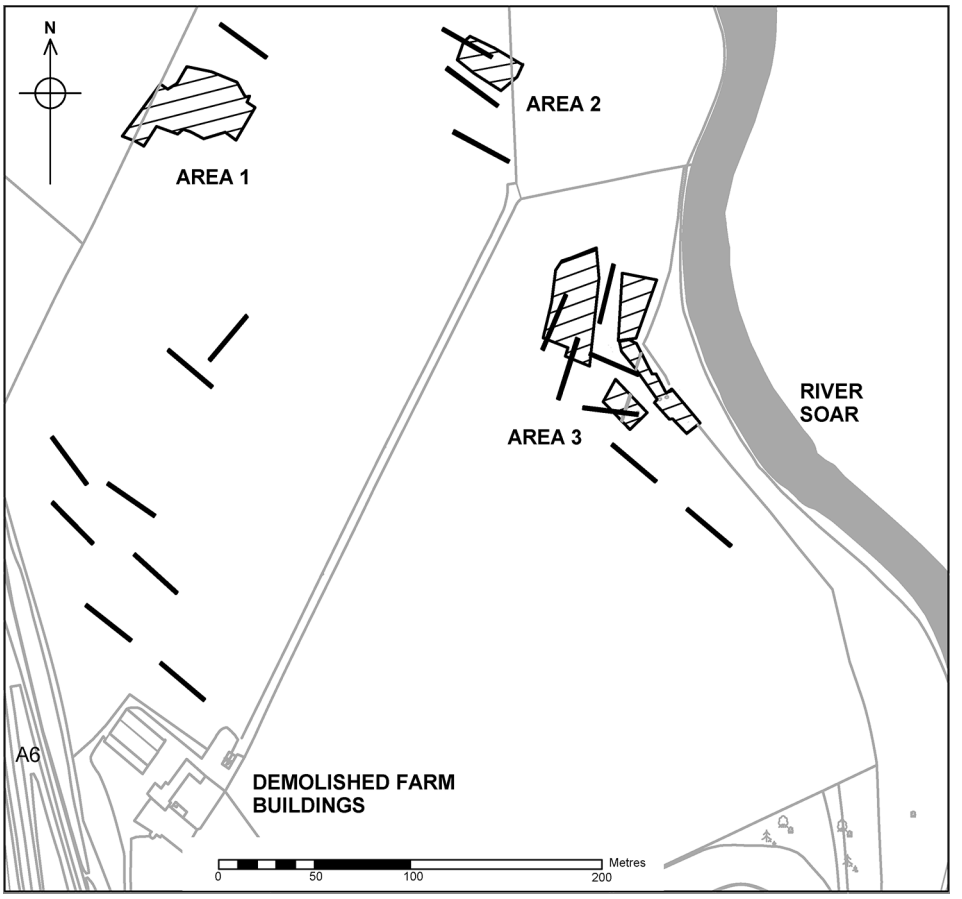

Fig. 2. Location of excavation areas at Rothley Lodge Farm.

RESULTS OF THE FIELDWORK

The archaeological deposits described below show cut numbers in square brackets (e.g. [148]) and fills in round brackets (e.g. (134)). Context numbers 1–99 cover the evaluation phase (Hunt 2004), while those over 100 are from the excavation phase. Find numbers are prefixed by sf.

Area 1

Several features were identified within Area 1 (Fig. 3). Four of these – [148], [156], [180] and [181] – contained particularly significant groups of finds.

Pit [148] and associated features (Figs 4–7)
This feature was amorphous in plan, and parts of it were curved and ill-defined, although its south-western and north-eastern corners appeared to be rectangular. It was 1.6m wide in the south-west corner and then broadened out into a larger

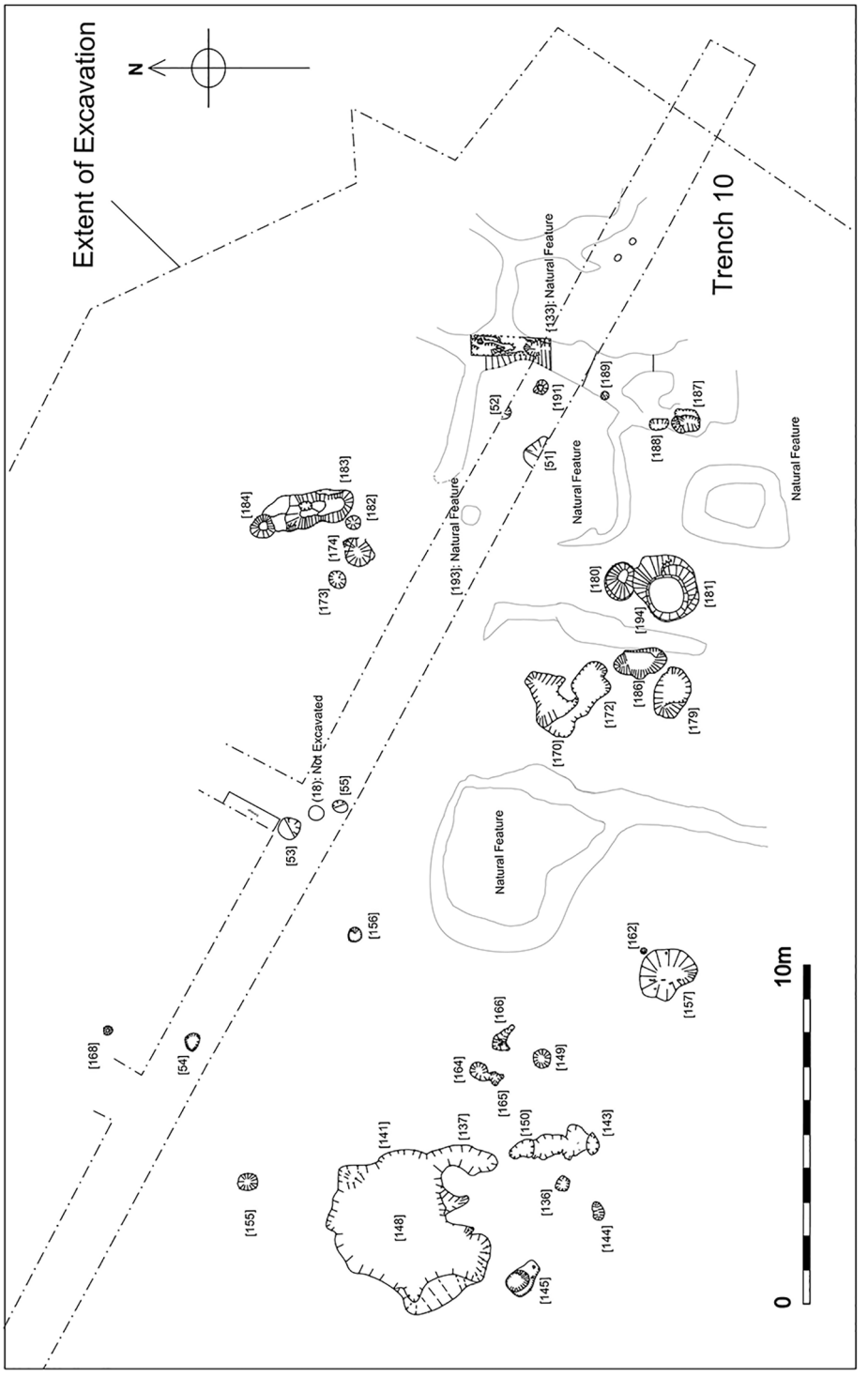

Fig. 3. Plan of Area 1.

main area, measuring approximately 5m by 4m. This main area was shallow and flat-based, and relatively uniform, with small patches that were marginally deeper (Fig. 6). The edges of the feature varied in steepness from a gentle slope to around a 45 degree angle. The lower part of the western side was very shallow at the top of the feature and then became steeper, which was almost mirrored by the north-east corner that was also shallower at its upper edge.

The entire feature, along with some of its neighbours, was cut into a loamy deposit, particularly in its northern side, which lay immediately above the Mercia Mudstone group substratum. This may represent remnants of a buried soil and perhaps suggests that the feature had been cut into a natural depression. Mid-brown-grey silt fills (185), (175), (179) and (159) were present at the base of the feature (Fig. 5), the silt suggesting that the feature had remained open and become waterlogged.

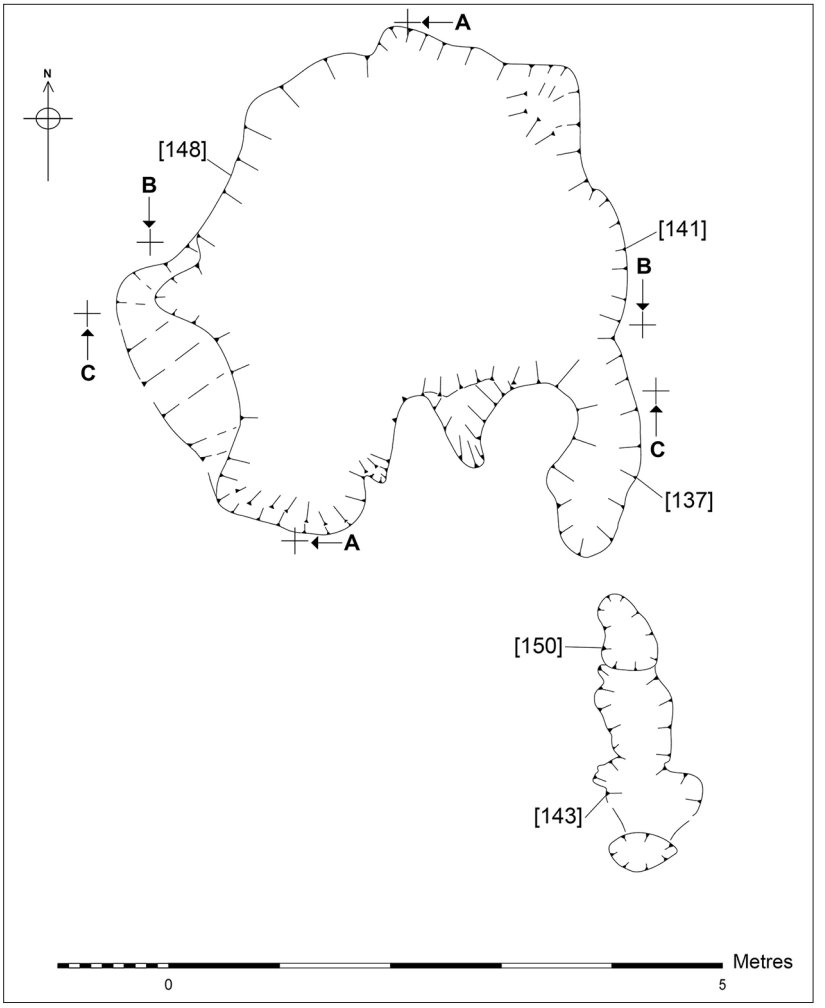

Fig. 4. Feature [148] following excavation of fills.

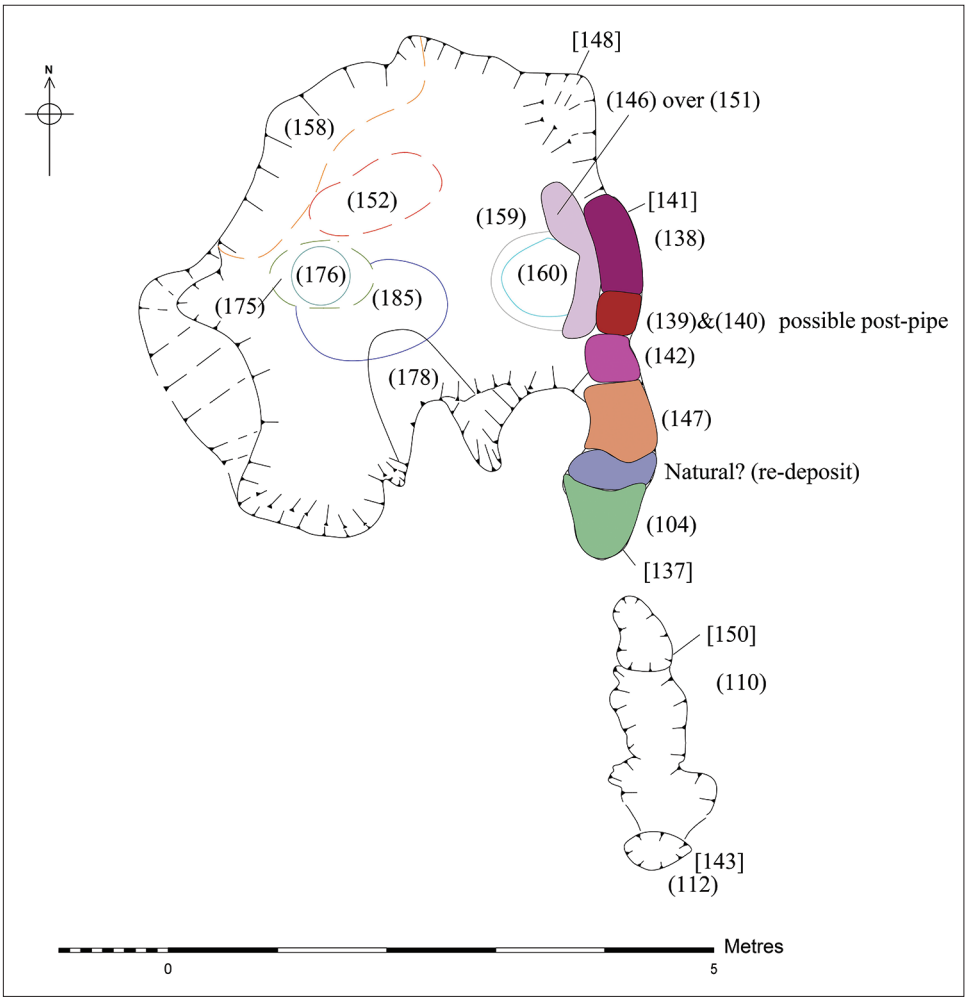

Fig. 5. Primary contexts within Feature [148] and later deposits along the eastern side [137], [141], with Features [143] and [150] to the south-east.

Above these silty areas were patches of clay and burnt clay concentrated in isolated areas throughout the feature, some contained within the main lower fill (153)/(177), which filled the whole of the lower horizon of [148], while other patches of burnt clay, (160), (176) and (178) were below (153/(177) (Fig. 5). A less substantial patch of unburnt clay (152) lay close to the north-western edge. Few finds were recovered from these clays, and burnt clay fills compared to the surrounding deposits. Overlying these fills, and in part the natural Mercia Mudstone group clay substratum, was a dark grey, charcoal rich, clayey sand (153)/(177). This deposit contained substantial quantities of flint, including a transverse arrowhead, and many scrapers and serrated blades. There was also substantially more pottery in this layer than in (134)/(135) above, especially in the north-west corner, much of

which was located directly on the base of the feature. These included three Grooved Ware vessels found close to the base in this context, as was the carved stone plaque (Fig. 7). The fill also contained traces of burnt bone.

Above (153)/(177) was a dark brownish grey clayey-sand (134)/(135), between 0.1m and 0.2m deep, which again contained high densities of flint, including a number of retouched implements including arrowheads, blades and scrapers. The fill also contained Grooved Ware pottery and traces of burnt clay. A C14 date of 2849–2780 cal BC (68 per cent probability SUERC-61190) was obtained from a residue on a Grooved Ware sherd. The finds were broadly distributed and the pottery sherds were smaller than those in the lower fill (153)/(177), which may suggest that the material had been redeposited. Apart from the high density of charcoal within (153)/(177), the two main fills (153)/(177) and (134)/(135) were very similar. The upper fill (134)/(135) was very heavily disturbed by roots and worm action, and this may account for the lower fill containing the larger heavier artefacts and coarse components, which may have been taken down to the lower horizon by worm/biological action.

The feature has been changed or adapted at some point by the insertion of another element along its eastern side (Fig. 5). A gully [141] had been cut into [148], and may have continued to the south as [143] and [150]. Feature [137] did not cut into [148], but continued the line of [141] southwards for another 1.8m. There was then a small gap of 0.45m until the line of this gully was continued by [150], a narrow, shallower feature. This feature was not as well defined as [141] or [137], having been truncated, possibly due to a slight rise in the land surface at this point. They were both shallow and rather poorly defined features, with dark brown and reddish brown clay-silt fills (110) and (112), and contained a small quantity of flint. The north-facing section of [148] and [141] showed the western cut of [141], cutting through fills (135), (159) and (160) (Fig. 6). Fills (139) and (140) may represent the fill of a post-hole and evidence of a post pipe. All the fills within [137] and [141] were similar, and contained similar finds to those within the main feature [148]. Fills (104), (142), (147), (138) and (139) were reddish brown clay-silts with small stones. The amorphous shape of [148] appears to have been due to its having been enlarged and widened, and it may have been excavated into a natural hollow, possibly a tree throw feature. Perhaps of note is a tree throw feature of similar dimensions, to the south-east (Fig. 3).

Over 400 sherds of Grooved Ware representing Clacton and Woodland styles were recovered from [148], with the most complete vessels from the lower fill (153)/(177) (below, p. 42; Figs 28–31). Over 2,000 lithic finds were located within the feature including scrapers and arrowheads, and the engraved stone plaque (see below). The lithic assemblage from the feature was mostly debitage, but included some 25 flint scrapers, many in fine condition and abandoned long before being exhausted. Transverse arrowheads, knives and several serrated blades were also present (Fig. 7; Figs 24–25). Six of the samples from pit [148] contained charred plant remains, a single item in each. The specimens included cereal grains, although it was not possible to identify them to species due to their poor preservation, a possible fragment of large grass (Poaceae) seed and fragments of hazelnut shell (*Corylus avellana* L.). Calcined bone fragments were also recovered from the

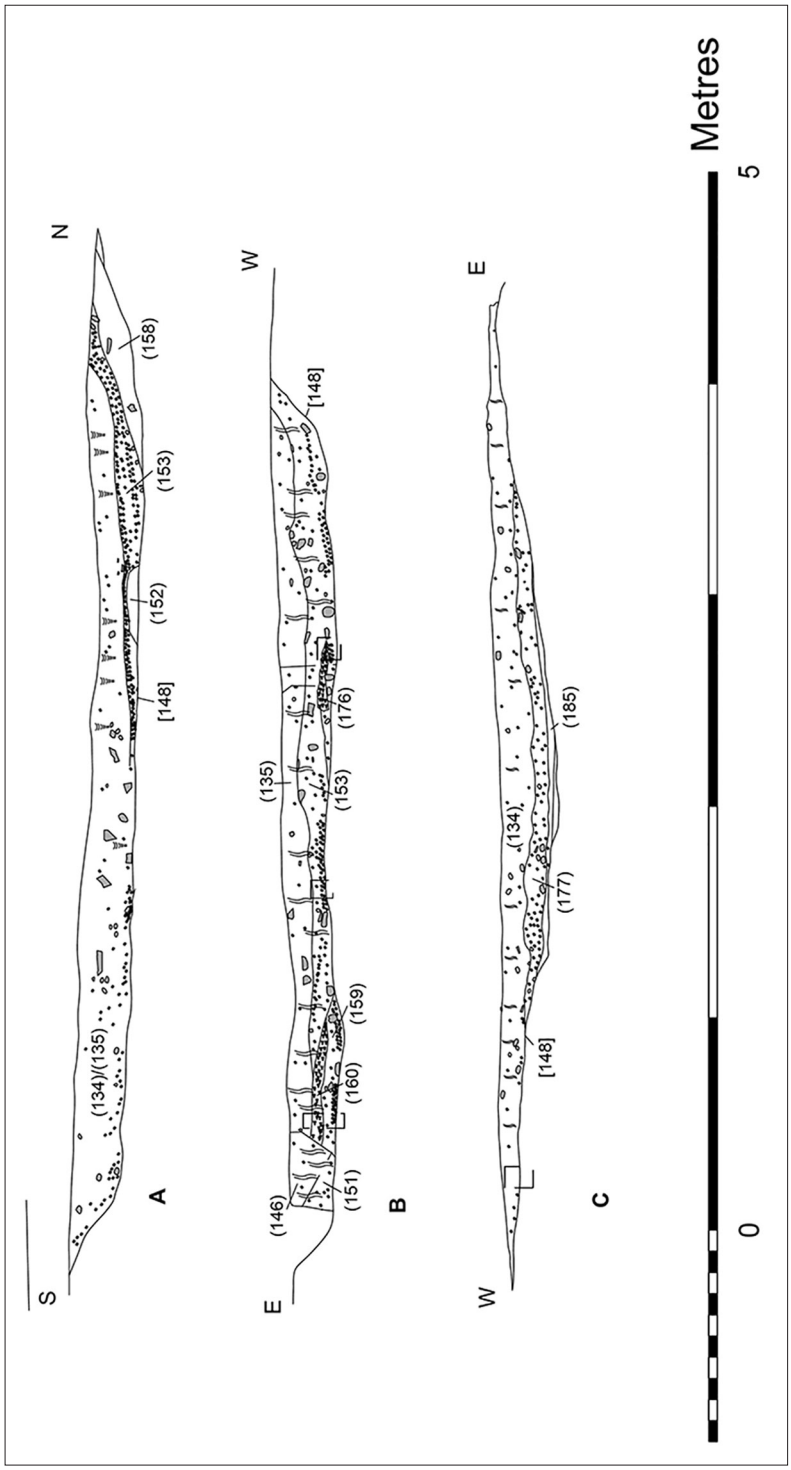

Fig. 6. North–south and east–west sections across Feature [148]. Location of sections shown on Fig. 4.

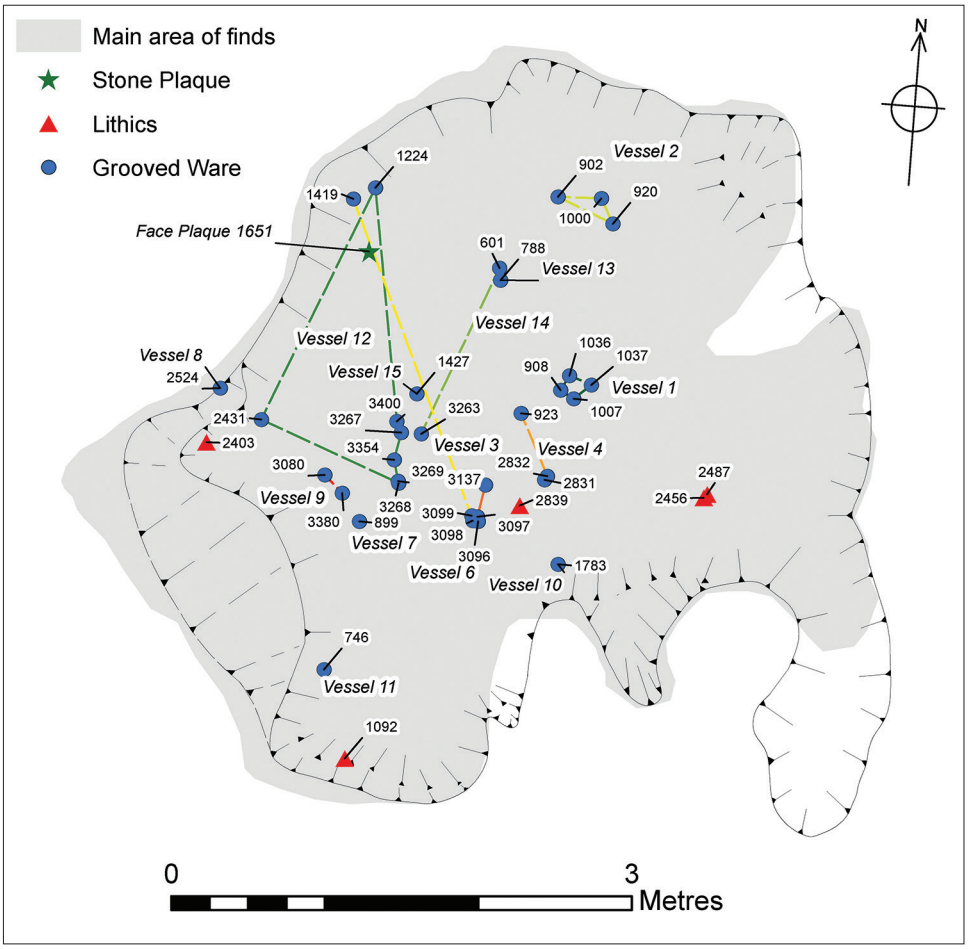

Fig. 7. Distribution of finds mentioned in the text within [148]. See Figs 15–17, 27, 28–30. Tone shows general area of find concentrations.

feature. The majority were classed as medium-sized mammal shaft fragments, along with a possible horncore fragment. Large mammal-size rib fragments suggest that the remains of more than one taxa had been deposited within the feature.

Pit [156] (Figs 9–11)

Feature [156] was circular (*c.*0.45m in diameter), with relatively steep, sloping sides and a curved base, the eastern side being marginally the steepest. The fill (116) was a dark brown clayey sand, with large quantities of charcoal and pebbles. The pit contained a large quantity of burnt flint, some of which derived from the remains of a polished flint axe head that had been intensely heated until it shattered. A large Grooved Ware vessel was also within the pit, mostly concentrated in the southern side (Fig. 32.17), whilst the burnt flint, for the most part, was beneath the pottery vessel towards the base of the pit. This feature also contained the largest assemblage

Fig. 8. Post-excavation view of [148] looking north.

of animal bone, all calcined, including the tarsals and metatarsals of roe deer from a minimum of two individuals. The spatial arrangement of bones suggested that they were deposited around, rather than within, the pottery vessel (Fig. 11).

The northern side of the pit contained a very well preserved pinky grey stone rubber, which appeared to have been placed in the side of the pit, at a *c.*45 degree angle, outside of the pottery vessel (Figs 10–11; 18–19). The large rubber was fabricated from a slab of skerry sandstone and showed signs of wear at one end. The calcined bone remains were situated in, around and underneath the pottery. Also beneath the pottery vessel, in the western side of the pit, was a ball of orange fired clay, perfectly spherical and measuring 40mm in diameter. A second more distorted fired clay ball, with a diameter of 35mm, was also present (see Figs 11 and 20). It appears that calcined animal bone and axe fragments had been placed in the pit first, with the fertility symbol and pottery vessels placed above.

Pits [180] and [181]/[194] (Fig. 12)

Two intercutting pits were located to the east of [156]. Pit [180] to the north comprised a small shallow, roughly circular, pit with a mid-reddish brown coarse sand fill (126). This had been cut to the south by [181]/[194], a larger deeper feature with a primary dark grey brown silt sand fill (196), below a dark grey brown silty-clay containing much burnt clay and flint. Possible evidence that this was a recut of an earlier feature [194] (125) was present to the north. Overlying this was a

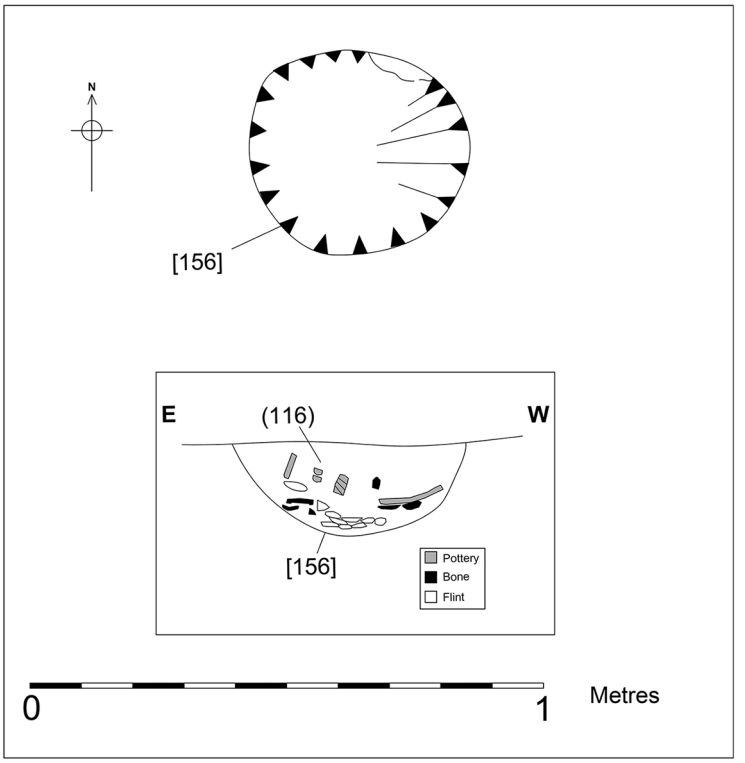

Fig. 9. Plan and section of [156].

Fig. 10. View of [156] showing position of stone rubber (Fig. 19).

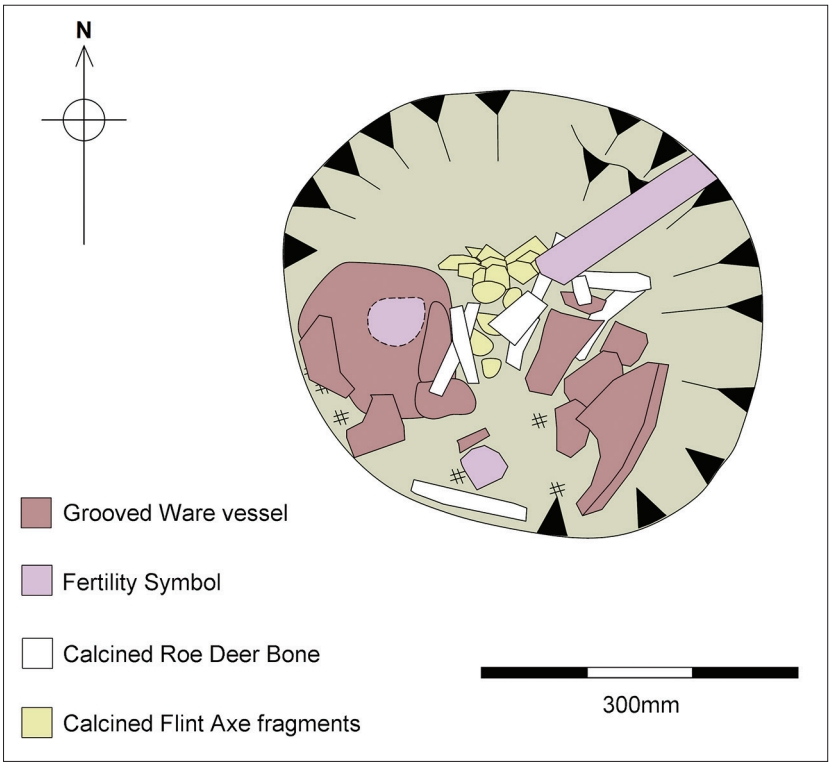

Fig. 11. Finds distribution within [156] (116), including Fertility symbol (Figs 18–20) and Grooved Ware vessel (Fig. 32.17).

grey brown silt (127) containing flint scrapers (Fig. 25.8–10), Grooved Ware pottery (Figs 32–33.18–21) and a ground stone axe (probably Charnwood Group XX) worked down as a core (Fig. 22). The faunal remains included fragmentary cattle teeth, which, taking into account the highly erosive soils, suggests that a complete or partial cattle skull may have originally been deposited in the pit. A few fragments of unidentifiable calcined bone were also present. A C14 date of 2814–2579 cal BC (68 per cent probability SUERC-62381) was obtained from residue on a sherd of Grooved Ware from (127).

Pits/Post-holes (18), [51], [52], [53], [54], [55], [136], [144], [145], [149], [155], [164], [165], [166], [170], [172], [173], [174], [179], [182], [183], [184], [186], [187], [188], [189], [191]. Stake-hole [162]. Gullies [143], [150]. Natural features [133], [193]

To the south-east and north-east of [148], a disparate group of pits/post-holes were recorded. Feature [145] was approximately 2m to the south-west of [148], oriented north-west to south-east, with the broader end facing north-west. The north-west end was the deepest part of the feature, which was circular with steep sides and a bowl-shaped base. The fill (105) was a dark brown clayey-silt which contained some flint flakes and a scraper. Feature [136] lay 4m south of [148] and less than 2m from

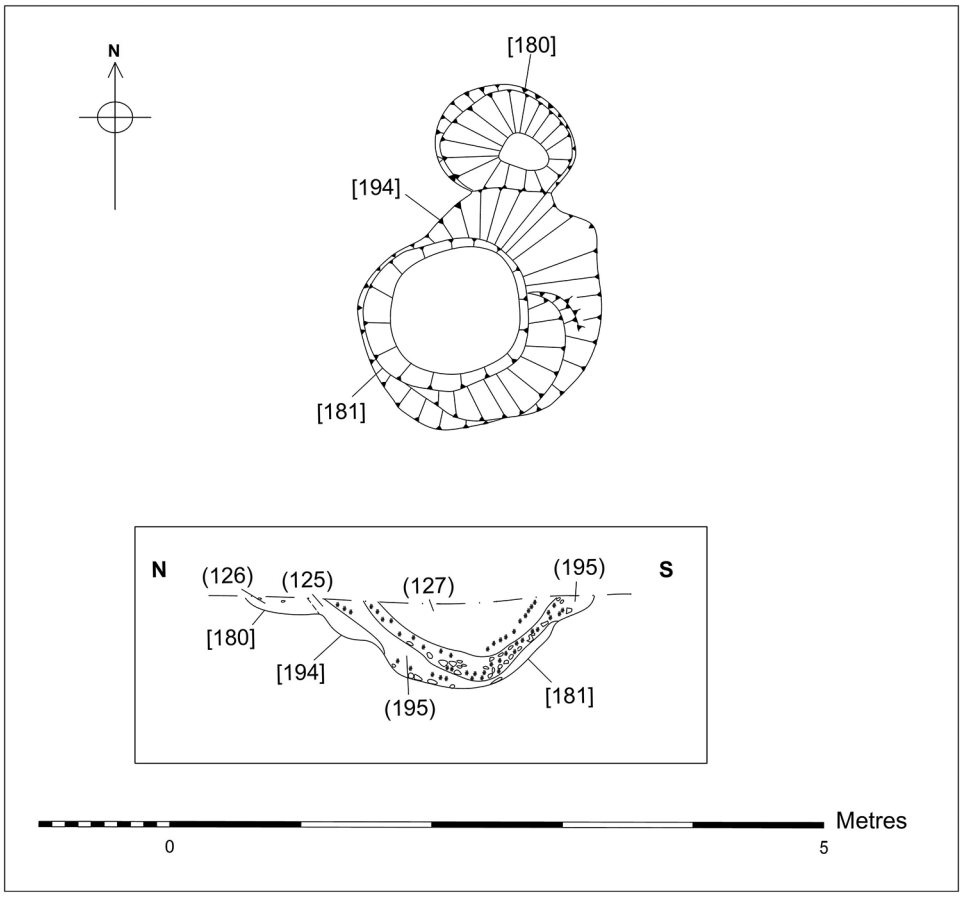

Fig. 12. Plan and section of [180] and [181].

the western side of [150]. This was a small (0.45m), sub-circular but poorly defined feature with a reddish brown clayey-silt fill (111), with very few small stones and traces of charcoal, containing a few pieces of flint. A small roughly sub-oval feature [144] with a fill (113) of reddish brown silty-sand with stones, a small quantity of charcoal flakes, and some small flint flakes, lay 5m to the south of [148] and immediately south-west of [136].

Sub-circular pit [155], 3m to the north of [148], was cut into the same loamy sub-soil, as were the upper horizons of [148]. The very uniform pale reddish brown silty-sand fill (154) contained a very few small stones, one fire-cracked pebble, three flint flakes and a ground stone axe (probably Charnwood Group XX), which showed the removal of its surface by later flaking (Fig. 22).

Features [149], [164], [165] and [166] made up a small group to the east of [148] and [141]. Circular post-hole [149] was the most coherent of the group, containing a very dark brown silty-sand fill (109). The feature was packed with medium and large pebbles, some of which having been heavily scorched or burnt, mainly on

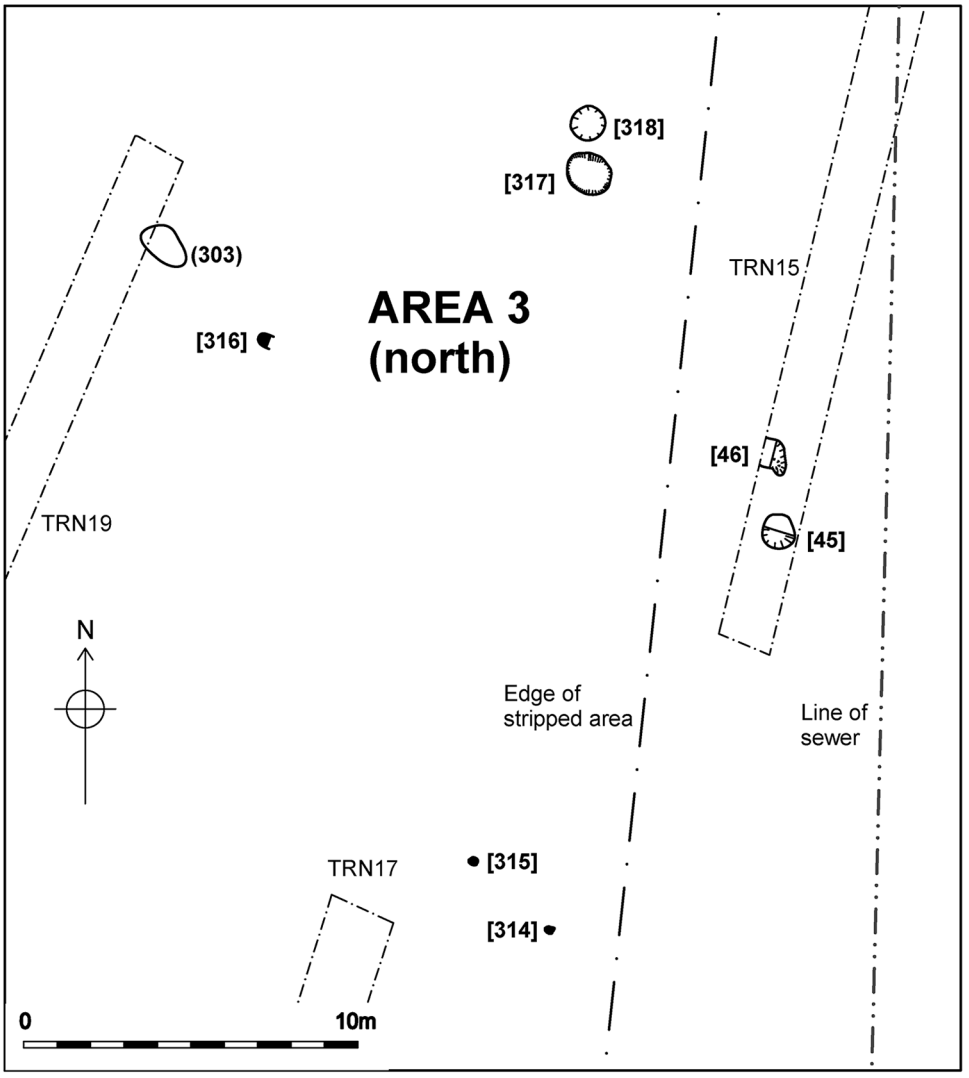

Fig. 13. Plan of Area 3 (North).

the east side. The fill also contained charcoal, pottery and flint. The largest stones may be packing material for a post, and the scorching may suggest that the post burnt down *in situ*. Three other adjacent features [164], [165] and [166] are more amorphous, and may have been damaged by animal burrowing.

Feature [157] was an isolated and irregular sub-oval feature containing pottery and flint flakes, whilst Feature [168] was a very small circular feature in the northern part of the area, with a loose yellowish brown silty-sand fill containing two small flint flakes. Features [170] and [172] were most likely two adjoining pits, with [170] cutting into [172] along its north-western edge. Both features had similar dark brown/grey brown silty-sand fills (171) and (169), which contained flint.

Features [53], [54] and [55] to the north were all relatively steep sided and *c.*0.30m deep, and contained dark brown clay-silt fills (19), (20) and (17) respectively. Feature [53] (19), which had been recut, contained Grooved Ware pottery and flint, while [54] (20) contained a heavily calcined scraper and several sherds of Grooved Ware pottery (Fig. 34). A sample from (20) contained a large number of barley (*Hordeum vulgare* L.) grains.

To the north-east a group of three post-holes [173], [174] and [182], and a gully [183], were located containing dark brown clay-silt fills, but with no finds. Two irregular natural features, possibly formed by large tree roots, were examined to the south-east of this group [133], [193]. A polished flint axe (Fig. 21) and flint flakes were present in [133].

Area 3 (Figs 13–14)

Pits [45], [46], [47], [60], [313], [314], [315], [316], [317], [318], [321], [322], [323], [324]

Fourteen dispersed pits were located in Area 3 (Figs 13–14), three of which contained finds. Feature [46] was a pit with a shallow north-eastern side and a deeper

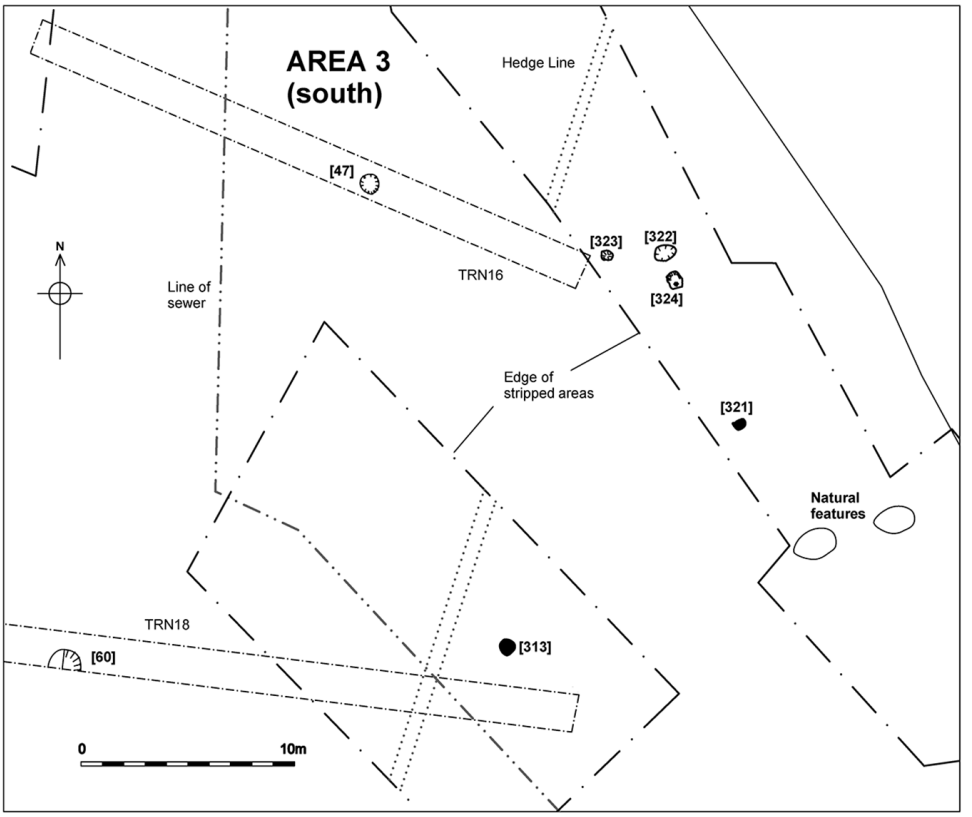

Fig. 14. Plan of Area 3 (South).

south-western side. The fill (39) consisted of a pale brownish grey sandy-silt with rare rounded stones, and contained three sherds of Peterborough Ware and three pieces of flint. Its form may suggest that it is a post-hole from which the fill has spread outwards. Feature [45] is a more substantial pit with a dark brown clay-silt fill (40), which also contained a flint core and burnt stone. Feature [47] was a large round pit with steep sides and base, with a dark brownish grey clay-sand fill (41), which contained a considerable amount of Peterborough Ware (Fig. 26). Worked flint, charcoal, a charred elder seed (*Sambucus nigra* L.) and a fragment of hazelnut shell were also present. Pit [321] contained a sherd of Grooved Ware.

THE FINDS

THE ENGRAVED PLAQUE
with Roy Loveday

An engraved stone plaque was located in the northern section of [148] (Fig. 7). This was most likely part of a larger piece, was roughly triangular in shape and measured *c.*200mm × 135mm. It was made of local finely grained sandstone, probably derived from a skerry bed in the Mercia Mudstone deposits. As a complete artefact it is likely to have been symmetrical, and its decoration can be interpreted as containing a stylised face within a rectangular frame (Figs 15–17). The 'face' appears to have been built up from lines of varying thickness, and eyes, a nose and a mouth can be interpreted. The nose was formed by a slightly squashed lozenge, with a linking chevron that formed the cheek. There are slight traces of a possible mouth, probably formed by another lozenge. The decoration has affinities with the Clacton/Woodlands-style Grooved Ware which was also present in the assemblage.

In Britain, stone plaques are known with decoration often associated with Grooved Ware, but not with decoration that could be interpreted as figurative art. Although not complete, the plaque appears to exhibit decorative forms rarely encountered in Neolithic Britain, including open concentric rings, which appear to represent eyes, unfilled lozenges and framing. While spirals are relatively well attested, concentric rings are rarely found as motifs and closely spaced rings with an open central space are possibly unique. Concentric rings, albeit of a different style, are present on kerbs at Newgrange, Knowth and Loughcrew, Co. Meath (Eogan 1973; O'Kelly 1973; 1982; Prendergast 2011), Knappers, Dunbartonshire (Richie and Adamson 1981), and Calderstone (Forde-Johnstone 1958, fig. 6E1, E10). These motifs are also rarely found on Grooved Ware, although an example is known from Marden, Wiltshire (Longworth 1971, 35; Cleal 1999, 3, illus. 1.1f), while lozenges are relatively common but are usually filled.

A pit at King Barrow Ridge, Amesbury contained two engraved chalk plaques with geometrical patterns, including lozenge motifs, and were associated with Clacton-style Grooved Ware (Harding 1988, 322–5). The decoration on the plaque has some affinities with the stylised faces carved upon the chalk drums, found in 1889 in a barrow on Folkton Wold, East Yorkshire (Greenwell 1890). Double lines defining lozenges and concentric rings, albeit with no central space, are present on the upper surface of Folkton drums II and III (Longworth 1999; Jones *et al.* 2015). The rarity

Figs 15–16. Engraved stone plaque. Sf1651 [148] (153). Scale mm.

of figurative motifs had led them to be considered taboos (Longworth 1999, 86). A notable exception, however, is the decorated mace-head from Knowth resembling a stylised human head (Eogan and Richardson 1982; Eogan 1986, fig. 57).

Engraved stone plaques, some depicting figurative art, are known from third millennium BC contexts in other parts of Europe, including France, Spain and Italy (D'Anna 1977; Gonçalves 2006). Like the Rothley example, some show rectangular frames and concave upper surfaces (e.g. an example from La Lombarde, South-west France; D'Anna 1977, 93, fig. 34). Figurative motifs within double frames are present on some Breton buckler/shield motifs (Loveday 1999, 129, fig. 2f).

These unusual depictions (most European figurative art is characterised by a convex upper surface with a small projection) are a feature of angled passage graves (Shee Twohig 1981) that seem to have been built during the final centuries of the fourth millennium cal BC. Substantial wooden houses that closely match the tomb plans have, however, been closely dated to twenty-eighth/twenty-seventh centuries cal BC (Scarre 2011, 262–4), contemporary with the Grooved Ware from [148]. These structures serve to remind us that the missing organic component is likely to have been the principal recipient of both figurative and other carving.

If the possibility of a conceptual link, however attenuated, is entertained between the Breton figures and the engraved plaque, it may be telling that the former often occupy entry/threshold positions within the tombs (e.g. at Luffang, the depiction that probably furnishes the closest resemblance blocks the entrance to the main chamber; Shee Twohig 1981, fig. 139). This suggests they may have functioned as

Fig. 17. Engraved stone plaque – detail.

embodiments of guardian spirits of houses of the dead and, by extension to the closely comparable wooden structures, probably also houses of the living.

The stone plaque and possibly other artefacts deposited at Rothley may have played an important role as symbols of identity. The schist plaques of Iberia, with which there are some shared affinities in the geometric and 'eye' motifs, have been interpreted as markers of identity for local and regional groups, and a means of legitimising and perpetuating an ideology of their social difference (Lillios 2002; 2008).

THE FERTILITY SYMBOL

Pit [156] contained a rectangular stone artefact, interpreted as a stone rubber, and two ceramic balls. Of note is the angle at which the stone rubber had been buried, which may symbolise an erect phallus (Figs 9–11). The stone is unusual, being far more angular than other rubbers which were used to grind cereals against a larger lower stone (e.g. examples from Etton; Pryor 1998, 258–9). The angularity of the Rothley artefact may be as a result of the way the skerry bed mudstone laminates. It does show signs of wear at one end in common with other examples (Fig. 19).

Fig. 18. Fertility symbol from [156] (see Figs 10–11).

Fig. 19. Stone rubber. Sf 1106 [156] (116).

Its association with the two ceramic balls would suggest a fertility symbol, with the rubber perhaps selected for its size and shape (Figs 18–20). A fired clay ball of similar size to those from [156] has been located at Etton, associated with a fired clay phallus (Kinnes 1998), while similar chalk objects from Grimes Graves have also been interpreted as fertility deposits (Piggott 1954; Mercer 1981). Chalk

Fig. 20. Ceramic spherical objects. (Left: Sf 1150 [156] (116); Right: Sf 1123 [156] (116)).

balls are also known from Maumbury Rings (Bradley 1975; Bradley and Thomas 1984, 132) and Mount Pleasant (Wainwright 1979, 167–71; Bradley and Thomas 1984, 132).

Had it been located in a different position it is unlikely that the stone rubber would have been identified as a phallic symbol. While described as a fertility symbol, this may be somewhat euphemistic, as the angle of the rubber and juxtaposition of the ceramic balls may be more accurately described as representing potency, virility and masculinity. As with the stone plaque the group may be linked with identity, while the 'flattened' phallus may also have been selected to signify transformation, perhaps again symbolising renewal and regeneration (Thomas 1999; Pollard 2001, 323; Whittle *et al.* 2011).

THE LITHICS

Lynden Cooper

The lithic finds totalled 2,978, and included 25 flint scrapers, four arrowheads and two probable Group XX (Charnwood) axes, which had been deliberately destroyed. Over 2,000 of these came from [148]. While debitage made up most of the assemblage, many of the 25 flint scrapers were in fine condition and had been deposited before being exhausted.

An early Neolithic polished flint axe was present in a natural feature in Area 1 [133] (Fig. 21). Highly calcined flakes from a polished stone axe were present in [156] associated with calcined bone, and overlain by a Grooved Ware vessel and the fertility symbol (Fig. 11). Two probable Group XX (Charnwood) axes from [155] and [180] showed evidence of the original ground surface having been systematically

Fig. 21. Early Neolithic polished flint axe. Sf 1 [133] (132) from natural feature in Area 1.

removed by flaking (Figs 22–23). The resulting cores were capable of producing further flakes, but they had been abandoned before being exhausted. The remnant butt of one had been worked down as a core with a keeled platform (Fig. 23).

An example of a Group VI Axe which has also been deliberately destroyed was located in an Early Neolithic context at Rothley Temple Lodge (Cooper L. 2015). The deliberate destruction of axes has been identified in Later Neolithic contexts from the late phases at Etton causewayed enclosure (Edmonds 1998) and Barholm (Simpson 1993). Edmonds (1998, 268) also suggests that axes may have been closely identified with specific people and their network of social relations. Lars Larson (2011) notes that destruction of axes by fire is common in Late Neolithic Scandinavian megalithic tombs – white calcined flint perhaps mimicking calcined bone. From his study of Scandinavian sites he suggests that axes may have been heat-treated before they were placed on the fire (Larsson 2000), with

Fig. 22. Neolithic ground stone axe (probably Charnwood Group XX) following systematic removal of ground surface by later flaking. Sf 929 [155] (154).

Fig. 23. Neolithic ground stone axe (probably Charnwood Group XX) worked down as a core with a keeled platform. Sf 3434 [180] (127).

the intention to keep them in large fragments after their transformation by fire. Axes are more affected than any other artefact and this occurs from the Early to the Late Neolithic.

Four Transverse arrowheads were recovered from [148], including two chisel types in local grey brown flint (Fig. 24.1–2) and two British oblique types in local grey brown flint and grey Wolds flint (Fig. 24.3–4). Other lithic tools from [148] include a Backed/scale-flaked knife, possibly used as a piercer (Fig. 24.5). This had a prepared, faceted butt with ventral stigmata from soft stone percussion, and was in a distinctive banded flint, light mottled grey (upper two-thirds), yielding sharply to dark grey/black (lower third). A piercer and serrated blade on banded flint showed a slight trace of sickle gloss (Fig. 24.6), while a Discoidal knife was from a dark grey/black non-local flint (Fig. 24.7). Examples of the 25 scrapers include four end scrapers (Fig. 25.8, 10, 12 and 14), two end and side scrapers (Fig. 25.9 and 11), and a scraper on a polished grey Wolds flint axe fragment (Fig. 25.13).

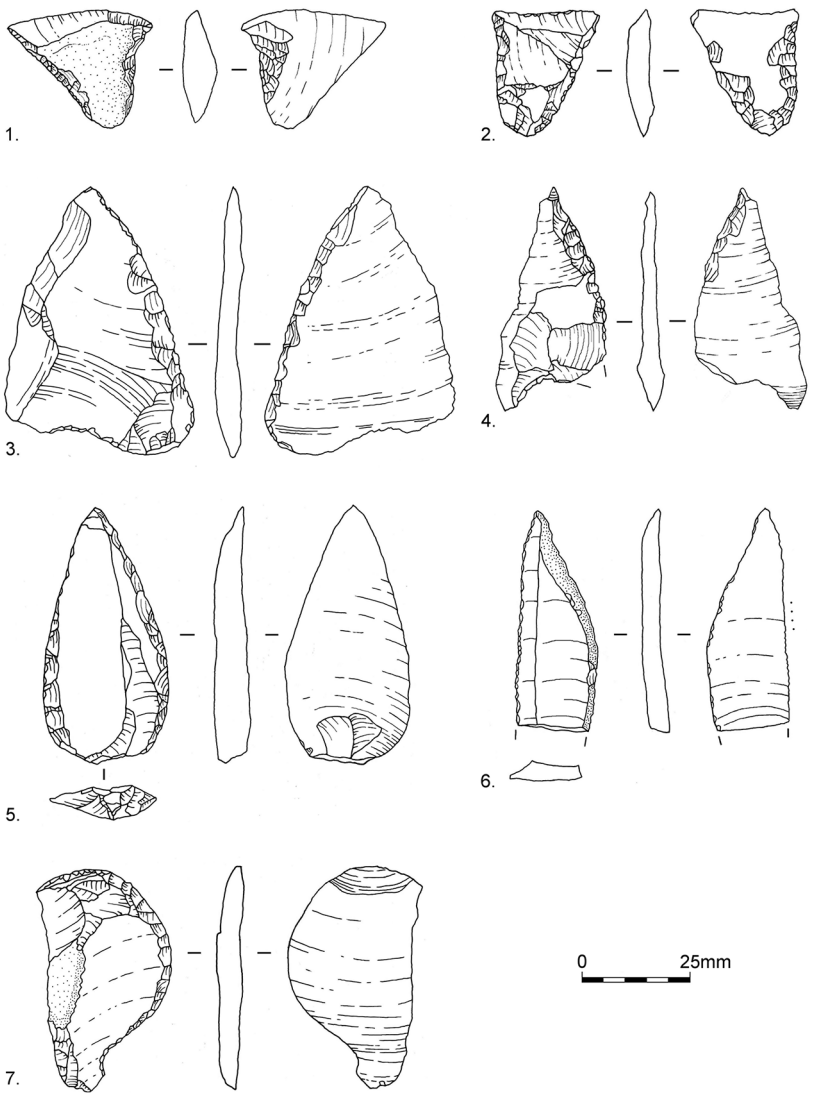

Fig. 24. Lithics.

List of illustrated objects

1. Sf2227 [148] 134. Transverse arrowhead, chisel type, local grey brown flint.
2. Sf2487 [148] 134. Transverse arrowhead, chisel type, local grey brown flint.
3. Sf3243 [148] 195. Transverse arrowhead, British oblique type, local grey brown flint.
4. Sf2456 [148] 134. Transverse arrowhead, British oblique type, grey Wolds flint.
5. Sf2784 [148] 127. Backed/scale-flaked knife possibly used as a piercer. Distinctive banded flint, light mottled grey (upper two-thirds) yielding sharply to dark grey/black (lower third). Prepared, faceted butt with ventral stigmata from soft stone percussion.
6. Sf1092 [148] 134. Piercer and serrated blade on banded flint (cf. sf2784). Slight trace of sickle gloss.
7. Sf3161 [148] 195. Discoidal knife. Dark grey/black flint, non-local.

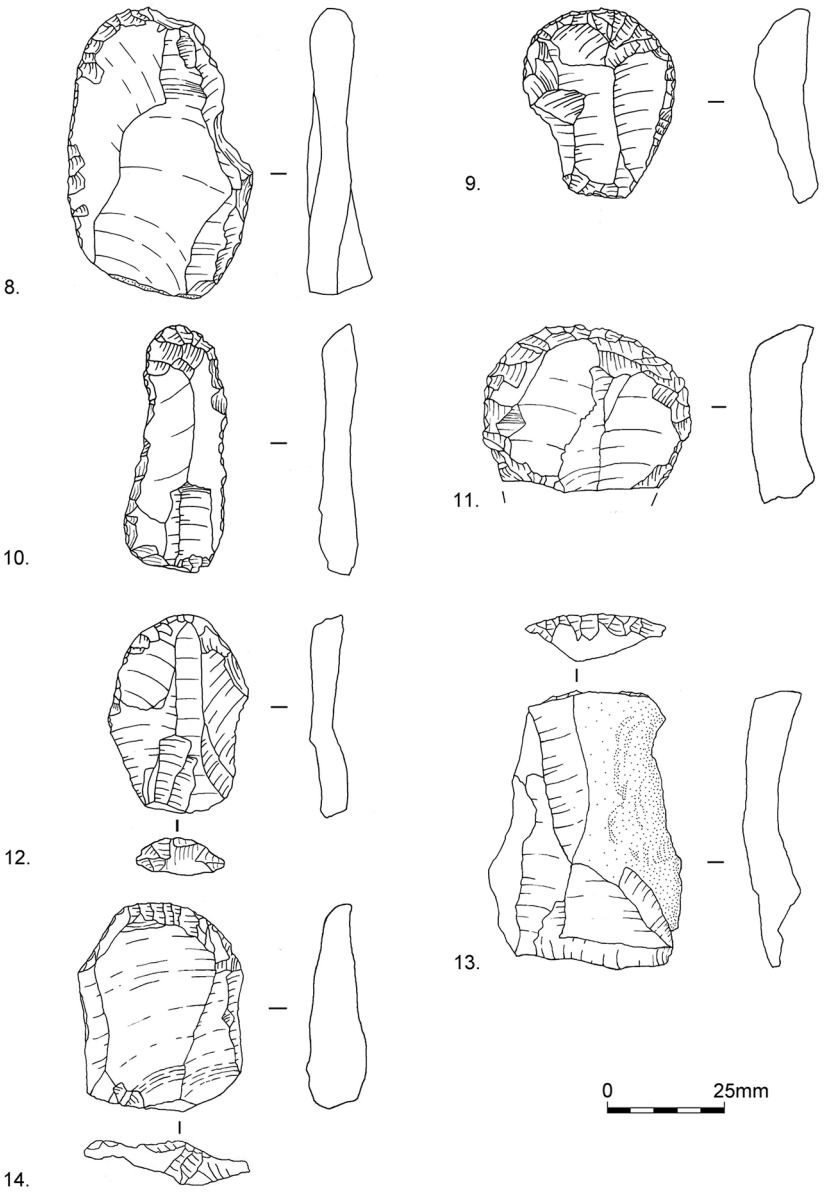

Fig. 25. Lithics.

List of illustrated objects

8. Sf3373 [180] 127. End scraper. Dark grey/black flint, non-local.
9. Sf3234 [180] 127. End and side scraper with additional lateral retouch. Grey Wolds flint.
10. Sf2756 [180] 127. End scraper. Dark grey/black flint, non-local.
11. Sf1400 [148] 122. End and side scraper, local grey brown flint.
12. Sf2403 [148] 134. End scraper, black and grey non-local flint.
13. Sf2839 [148] 179. Scraper on polished axe fragment, grey Wolds flint.
14. Sf3219 [148] 195. End scraper, grey Wolds flint.

THE PETERBOROUGH WARE AND GROOVED WARE POTTERY

Nicholas J. Cooper

Introduction

Two important assemblages of Middle and Late Neolithic pottery were recovered during the fieldwork. In Area 3, a group of at least ten Peterborough Ware bowls were recovered: seven during the evaluation and three during the excavation phase. Together, these vessels form the largest group from the county, and are dominated by the Mortlake substyle. During the excavation phase, an assemblage of Late Neolithic Grooved Ware, again the largest from the county, was recovered from pits [148], [156], [180] and [181]/[194], having initially been recognised from context (20) [54] during the evaluation phase.

Methodology

Both assemblages have been classified according to the Leicestershire Prehistoric Pottery fabric series (Table 1, drawing on Marsden 2011, 62, Table 1 with additions), with reference to the previous publication of comparable groups at Willington, Derbyshire (Peterborough Ware) (Marsden *et al*. 2009) and Rothley Temple Grange (Grooved Ware) (Cooper 2015b), and quantified by sherd count and weight. Illustrated catalogues of each ware, arranged by feature, are presented below with accompanying discussion. The distribution of the pottery and its association with the other finds from the features is discussed above (Figs 7 and 14).

Peterborough Ware

Overview by Form, Fabric and Decoration

Evaluation context (41) [47] in Trench 16 produced 26 sherds of Peterborough Ware belonging to six bowls in the Mortlake substyle (Fig. 26–27.1–10), with one rim from a Fengate substyle bowl coming from (56) (Fig. 27.7). At least three more

Fabric	Description
Quartz	
Q5 Pebble Quartz	Rare to moderate angular/sub-angular crushed pebble quartz (0.5–4mm) (and occasionally pebble flint) and rare to sparse sub-rounded to rounded quartz sand (0.25–1mm). Similar to R1, but with quartz rather than granite.
Granitic rock	
R1 Granodiorite	Rare to moderate sub-angular granodiorite (0.5–4mm) (with distinctive flakes of 'yellow' biotite mica often separated from the rock) and rare to sparse sub-rounded to rounded quartz sand (0.25–1mm).
Shell-tempered	
S1 Shell	Moderate to very common shell or plate-like voids (1–5mm)
S2 Sandy fabric with shell	As S1, but common to very common sub-rounded to rounded quartz sand (0.25–1mm).

Table 1. Summary descriptions of Leicestershire Prehistoric pottery fabrics referred to in the text (Marsden 2011, 62, Table 1).

Mortlake vessels were recovered from pits (301) [318] and (306) during excavations in Area 3 (Fig. 27.8–10), although the smoother profile of no. 9 and the flaring rim probably place it in the Ebbsfleet substyle. Where possible, Isobel Smith's rim typology has been applied to the identifications (Ard and Darvill 2015, 9, fig. 5). All of the Mortlake substyle vessels and the Ebbsfleet example are manufactured in fabrics employing opening materials of either granodiorite (Fabric R1) or angular crushed pebble quartz and occasionally flint (Fabric Q5), whilst the Fengate vessel was produced in a sandy fabric with fine shell inclusions (Fabric S2). A variety of decoration is exhibited on the vessels, including impressed bird bone motifs, finger nail impressions, whipped cord 'maggots', and, more unusually, incised herringbone lines and arcs.

Catalogue

Figure 26

1) Tr.16 (41) [47]. Fabric Q5 with occasional pebble flint. Mortlake substyle bowl reconstructed from five joining sherds from the shoulder, neck and body. The decoration comprises rows of what are best described as whipped cord maggot impressions over the external surface, with a single band on the inside of the neck. The faint fingernail impressions on the outside of the neck may be accidental whilst decorating the shoulder. Diameter over 200mm.
2) Tr.16 (41) [47]. Fabric R1. Three rim sherds from a Mortlake substyle bowl. The outer surface of the rim is decorated with two horizontal bands of diagonally incised fingernail impressions. The inside of the neck flares outwards but is undecorated. Rim Type M3a. Diameter 200mm.
3) Tr.16 (41) [47]. Fabric Q5. Single rim sherd from a Mortlake substyle bowl. The top of the rim is decorated with rows of oblique short slashes arranged in a herringbone fashion astride the bead, with a band of vertical slashes and diagonal slashes or oblique stabs below, separated by single incised horizontal lines of the same thickness. The concave external surface of the neck is decorated with herringbone slashes. The out-curving internal surface of the neck is decorated with a series of concentric arcs formed from paired incised lines. Rim Type M3a. Diameter 252mm.
4) Tr.16 (41) [47]. Fabric Q5 with occasional pebble flint. Three body sherds probably from a Mortlake bowl, decorated with rows of bird (or small mammal) bone impressions, giving the appearance of 'crochet' work, in imitation of basketry.

Figure 27

5) Tr.16 (41) [47]. Fabric Q5. Ten decorated sherds, four of which join, from a Mortlake bowl with bird bone decoration similar to vessel 4. Not illustrated.
6) Tr.16 (41) [47]. Fabric R1. A single sherd decorated in similar fashion to vessel 1. Not illustrated.
7) Tr.10 (56). Fabric S2. Rim of Fengate substyle bowl. Incised chevrons on internal rim. Oblique slashes on external rim. Rim Type F3. Diameter 167mm.
8) Sf104 (301) [318]. Fabric Q5. Angular Mortlake substyle rim and neck, decorated internally and externally with semi-circular impressions. Rim Type M3a? Diameter 172mm.
9) Sf17 (301) [318]. Fabric Q5. Small Mortlake, or probably Ebbsfleet, substyle bowl with slightly angled shoulder and flaring rim, decorated with rows of straight-edged motifs, executed obliquely from the right with the flat end of a wooden stick with grain impressions, giving a ribbed appearance similar to whipped cord 'maggots'. Rim Type E2? Diameter 120mm.
10) Sf135 (306). Fabric R1. Mortlake substyle rim, decorated externally and internally with two rows of crescentic whipped cord 'maggots'. Rim Type M2a? Diameter 200mm.

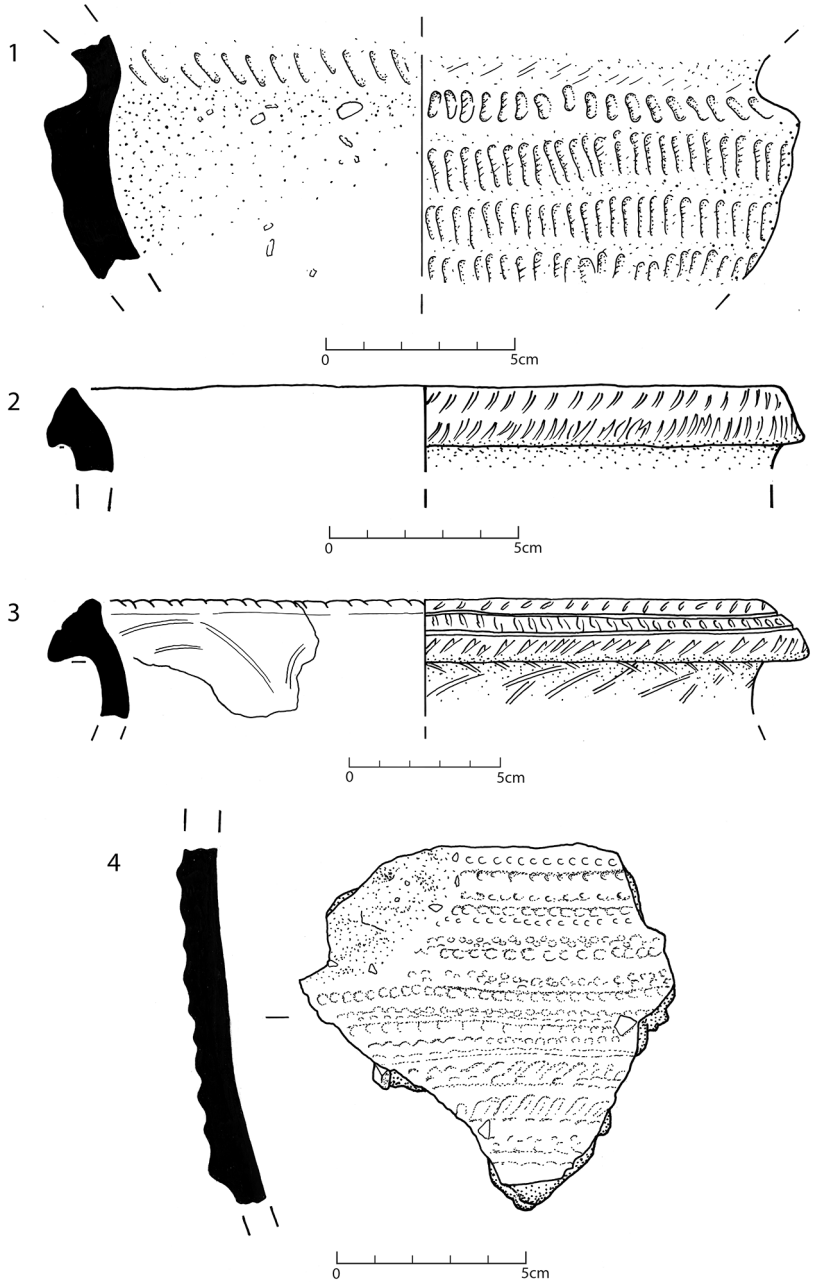

Fig. 26. 1–4 Peterborough Ware from Area 3, Pit [47] (41). Scale 1:2, except no. 3 at 2:5.

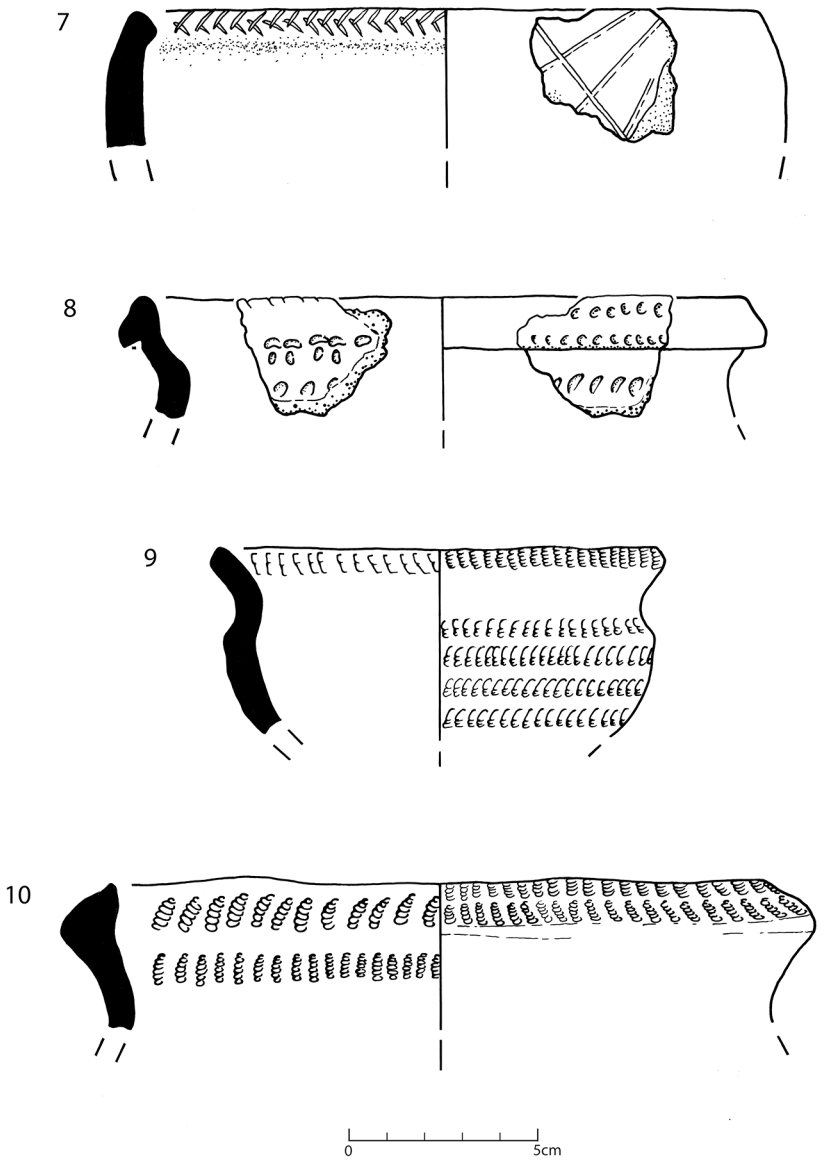

Fig. 27. 7–10 Peterborough Ware from Area 3 (56), (301) and (309). Scale 1:2.

Discussion

This assemblage of Peterborough Ware is one of the largest excavated from the county so far, and certainly the largest to be dominated by bowls in the Mortlake substyle. It joins two recently excavated groups nearby, in the Fengate substyle, from Ratcliffe on the Wreake (McSloy 2008, 5–10) and Hallam Fields, Birstall (Speed 2010, 32–5), the latter published mistakenly as Bronze Age Collared Urn (A.

Gibson pers. comm.). Previously, a small group of Peterborough Ware vessels were recovered from a pit circle at Oakham in Rutland, including up to four Mortlake substyle bowls (Gibson 1998, 318–21, fig. 20.2).

Unfortunately, attempts to obtain radiocarbon dating determinations from the carbonised deposits on the vessels from (41) [47] failed, and none of the other groups mentioned above have been dated by this method. However, the closest comparable group, from Willington in the Trent Valley, was extensively sampled for radiocarbon dating (Marsden *et al*. 2009; Marshall *et al*. 2009), and has contributed to the present understanding that the Peterborough Ware tradition dates between about 3500 and 2900 BC (Ard and Darvill 2015, 1; A. Gibson pers. comm.), sitting between the early Neolithic Carinated Bowl tradition, as seen at the nearby Rothley Temple Grange site (Cooper 2015a), and the late Neolithic Grooved Ware tradition, as seen both at Rothley Temple Grange (Cooper 2015b, 25) and here at Rothley Lodge Farm.

The choice of granitic and crushed pebble quartz opening materials in the Mortlake substyle bowls in the current group, and indeed those from Willington (Marsden *et al*. 2009, 85–8), shows a direct continuation from those used in the Carinated Bowl from Temple Grange and sites such as Aston-on-Trent (Carney 2012; Gibson 2012), whilst that used for the Fengate vessel is finer, employing quartz sand and fine shell. Similarly, the Fengate group from Ratcliffe on the Wreake is manufactured in a finer quartz sand fabric (McSloy 2008, 9), whilst that from Birstall displays a wider range of opening materials including flint, shell and grog, often within sandy fabrics (Marsden 2009, 60–4).

Trends in the local use of particular opening materials, according to substyle, therefore appear to broadly concur with that across southern Britain as a whole, supporting the contention that, across the Midlands and into Wales, the Ebbsfleet and Mortlake substyles often employ large inclusions of crushed white pebble quartz, or other rocks such as granite, in preference (or equivalent) to the flint of the southern Chalklands, whilst Fengate vessels display more diverse choices (Gibson 1995, 24; Ard and Darvill 2015, 5–7). There are exceptions, however, as a Mortlake bowl recently excavated from a site at Rothley allotments, and another from Husbands Bosworth, in south Leicestershire, are in shell-tempered fabrics, whilst moving east into Rutland, they are manufactured using quartz sand and grog opening materials (Gibson 1998, 318–21, Fabrics 1, 2 and 6).

In terms of form and decoration there are parallels to be drawn primarily from the Willington assemblage (Marsden *et al*. 2009, 99–107). The angled shoulder and out-curving rim of the probable Ebbsfleet bowl (no. 9) is paralleled by four vessels, two decorated with whipped cord 'maggots' on the inside of the rim (Marsden *et al*. 2009, 99, fig. 45.8–11). The sharply angled shoulder, and/or the cavetto neck and rim of vessels 1–3, 8 and 10, are similar to several Mortlake vessels from Willington (Marsden *et al*. 2009, 100, fig. 46.13–15 with whipped cord 'maggots', and 48.23 with fingernail impressions), whilst the use of bird bone impressions on the thick body sherds of what are assumed to be Mortlake vessels (nos 4 and 5) are paralleled at Oakham (Gibson 1998, 319, fig. 20.2 and 5). However, the incised arc decoration on the interior of Mortlake vessel no. 3 does not appear to be so easily paralleled. The use of incised chevrons on the internal rim of the Fengate bowl, and oblique

incisions on the collar, are paralleled on several vessels from Ratcliffe on the Wreake (McSloy 2008, 9, fig. 6.1, 3 and 4).

Ostensibly, the occupation represented by the Peterborough Ware appears to be chronologically and spatially discrete from that producing the Grooved Ware, with the exception of a single sherd of Peterborough Ware from one of the Grooved Ware pits and a few sherds of Grooved Ware (in the Durrington Walls style) from the dispersed pits in Area 3. The current consensus is that the three substyles of Ebbsfleet, Mortlake and Fengate ran concurrently rather than sequentially, although the Bayesian modelling of the Willington dates has suggested the possibility that the production was staggered, with Ebbsfleet emerging first and Fengate following on at around the same time as Mortlake, or perhaps slightly earlier, with all appearing to continue in use until *c.*2800 cal BC (Marsden *et al.* 2009, 96; Marshall *et al.* 2009, 81, Tables 10–12; Ard and Darvill 2015, 2). The fact that all the substyles are present here, though dominated by Mortlake, and that the dating of two of the Grooved Ware pits to *c.*2800 cal BC falls at the end of the Peterborough Ware sequence, might suggest that the two periods of occupation are chronologically close, but this must remain tentative until radiocarbon dating of the Peterborough Ware is undertaken.

The Grooved Ware

Overview by Form, Fabric and Decoration

A total of 762 sherds (3.9kg) of Grooved Ware was recovered from the four pits in Area 1, [148], [156], [180] and [181]/[194], and a further 36 sherds (120g) came from evaluation context (20). This is the largest assemblage so far excavated in Leicestershire, and 23 rims and vessel profiles have been illustrated in order to show the range of form and decoration represented (Figs 28–34). The assemblage is dated by two radiocarbon determinations of 2814–2579 and 2849–2780 cal BC (68 per cent probability SUERC-62381; 61190) which were obtained from residues on two Grooved Ware sherds from [180] and [148], and therefore place it early in the Southern British Grooved Ware sequence, currently considered to span the period *c.*2900–2300 BC (Garwood 1999, 152; A. Gibson pers. comm.). The fabrics used in vessel manufacture are consistently fine, either employing just shell, or rounded quartz sand and shell, as opening materials (Fabrics S1 or S2 respectively), and therefore similar to those used in the Grooved Ware from Rothley Temple Grange which yielded similar radiocarbon dates (Cooper 2015, 25–6).

In terms of form and decoration, the assemblage belongs within the Clacton-Woodlands style sequence of tub-shaped vessels as proposed by Garwood, who, based on the available radiocarbon dating, suggested that the Woodlands style was a development from the Clacton style (Garwood 1999, 158; Gibson 2002, 86). The dating would place the group within the Clacton style, overlapping with the earliest part of the Woodlands-style sequence (Garwood 1999, 156, illus.15.5). Certainly, the decorative traits exhibited here belong primarily to the Clacton style, notably the use of an internal step or grooves on the rim, with incised lines and chevrons with point infill externally, but there are elements more akin to the Woodlands style such as converging lines (though grooved, or in false-relief, rather than being applied)

and lug knots, and wavy-line decoration (again, in false-relief rather than applied). A few sherds also display whipped cord 'maggot' infill which is more typically a feature of the Durrington Walls style, and two have fingertip pinches which are a feature of both the Clacton and Durrington Walls style (Manby 1999, 61, Table 6.2). The affinities of the decorative styles are discussed in more detail below.

Catalogue

Pit [148] (153)/(177) below (134)/(135)

Pit [148] yielded over half of the Grooved Ware from the site (465 sherds, 2.35kg). A total of 135 sherds (780g) was recovered from lower fill (153) and 39 sherds (351g) from (177). Upper fill (134) contained 235 sherds (688g) and (135) contained 56 sherds (531g). Six Grooved Ware vessels have been reconstructed and illustrated from (153), three from (177), two from (134) and four from (135) (Figs 28–31).

Figure 28

1) Sf1036, 1037 and sf908 [148] (153) and sf1007 (152). Fabric S2. Substantially complete cup with internal rim grooves and external decoration comprising horizontal bands containing triangles, infilled with vertical tool marks, alternating with narrower bands either open or tooled in the same way. Diameter 180mm.
2) Sf920, 902 and 1000 [148] (153). Fabric S2. Straight-sided bowl with an internally bevelled rim, which is decorated with a row of vertical fingernail marks. The external surface is decorated with wavy line decoration, created by removing scallops of clay with a finger nail above and below the line in 'false relief', giving the illusion of applied decoration. The right-hand edge of the sherd has been modified after breakage by filing it to produce a bevel. Diameter 277mm.
3) Sf3099 and sf1419 [148] (153). Fabric S2. Vessel with single internal groove on the rim, and decorated with paired incised horizontally and in a zig-zag pattern below. Diameter 160mm.

Figure 29

4) Sf923, 2831 and 2832 [148] (153). Fabric S1. Four joining sherds from vessel with single internal groove on the rim and external decoration, comprising incised lines framing triangles with impressed whipped cord maggot infill. Diameter 200mm.
5) Sf1033 [148] (153). Fabric S2. Sherd with decoration comprising a horizontal band, with vertical notching and a zone of horizontal point infill. Similarly decorated vessel with internally grooved rim from (195) sf3202.
6) Sf3096 to 3098 and 3137 [148] (153). Fabric S2. Open vessel decorated with horizontal grooves. Diameter >205mm.
7) Sf899 [148] (177). Fabric S2. A near-complete vessel reconstructed from numerous abraded sherds. The tapering rim appears to be plain, but the top is missing. The decoration comprises alternating filled and unfilled vertical zig-zags, a scheme which becomes compromised at a point where the potter realises, as they are moving round the vessel, that they are filling adjacent rather than alternate zones. The infill motifs are small whipped cord maggots. Diameter 130mm.
8) Sf2524 [148] (177). Fabric S2. Vessel with applied rim decoration. The top of the rim is rolled over and a continuous strip was applied beneath it on the inside of the rim, the upper part of which was incised with notches. A notched strip was then placed vertically over the top of the rim. The external surface is decorated with a row of incised notches, below which is an obliquely incised line.

Figure 30

9) Sf3080 and 3380 [148] (177). Fabric S2. Vessel with internally ledged rim, below which a wavy line effect is created by removing scallop-shaped pieces of clay with a fingernail. The external decoration comprises columns of fingernail pinches. Diameter 190mm.

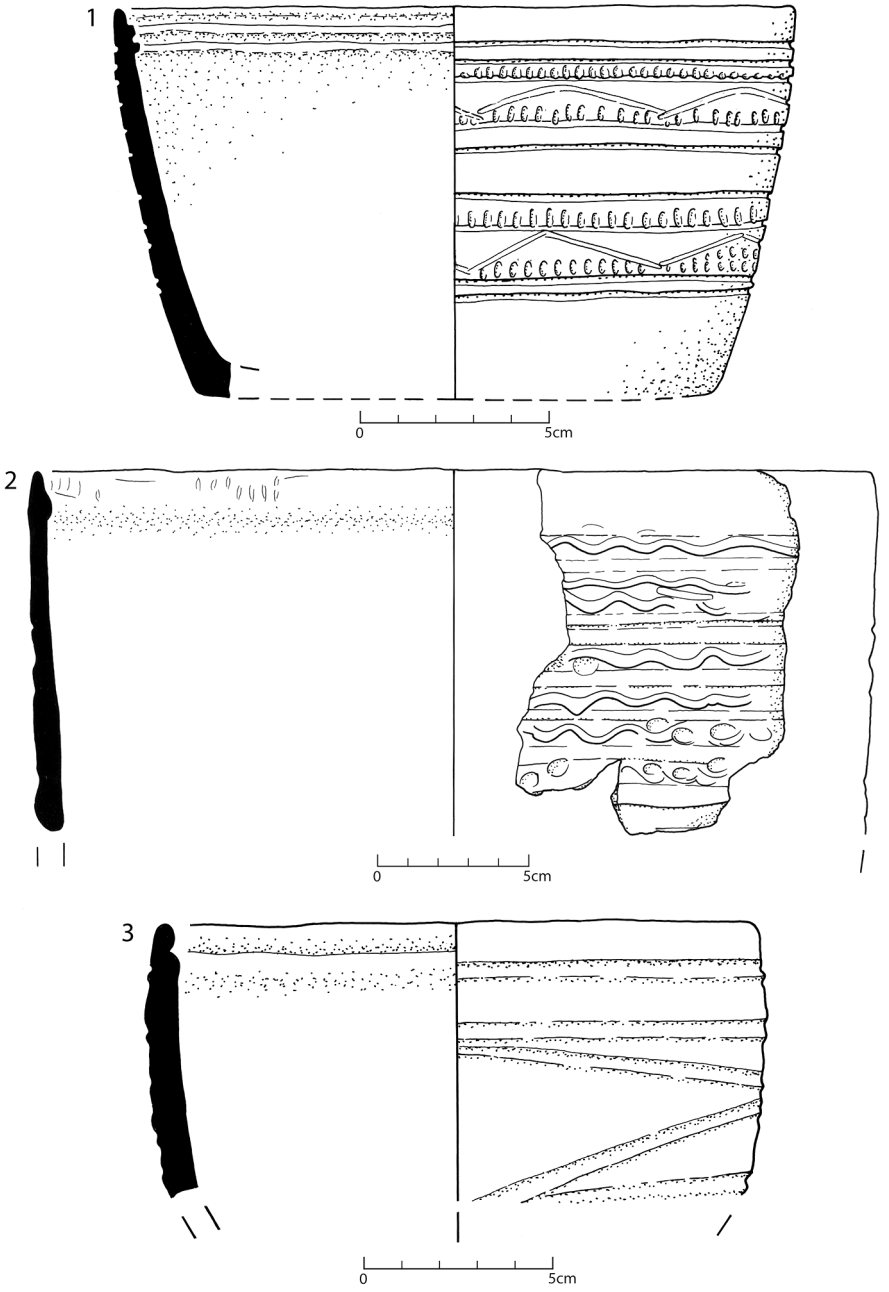

Fig. 28. 1–3 Grooved Ware from [148] (153). Scale 1:2, except no. 2 at 2:5.

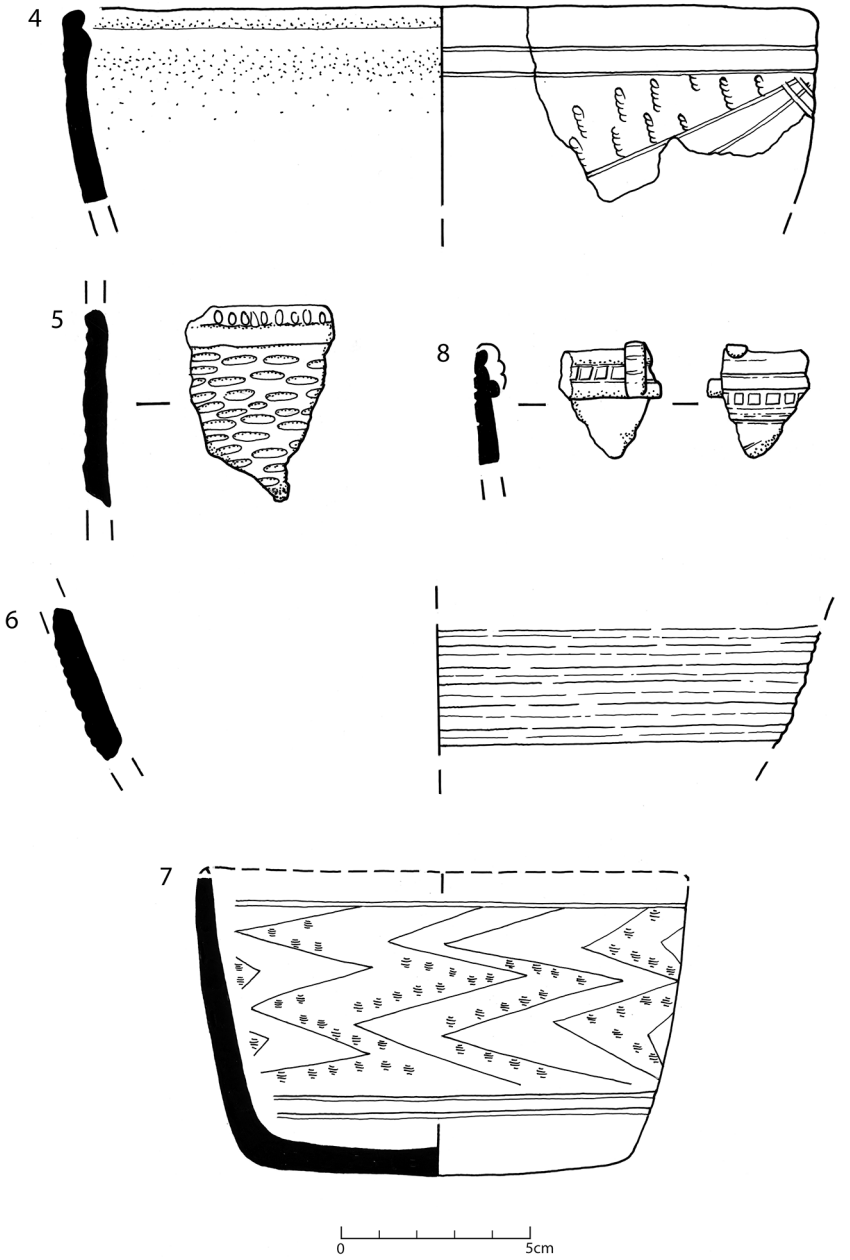

Fig. 29. 4–8 Grooved Ware from [148] (153) and (177). Scale 1:2.

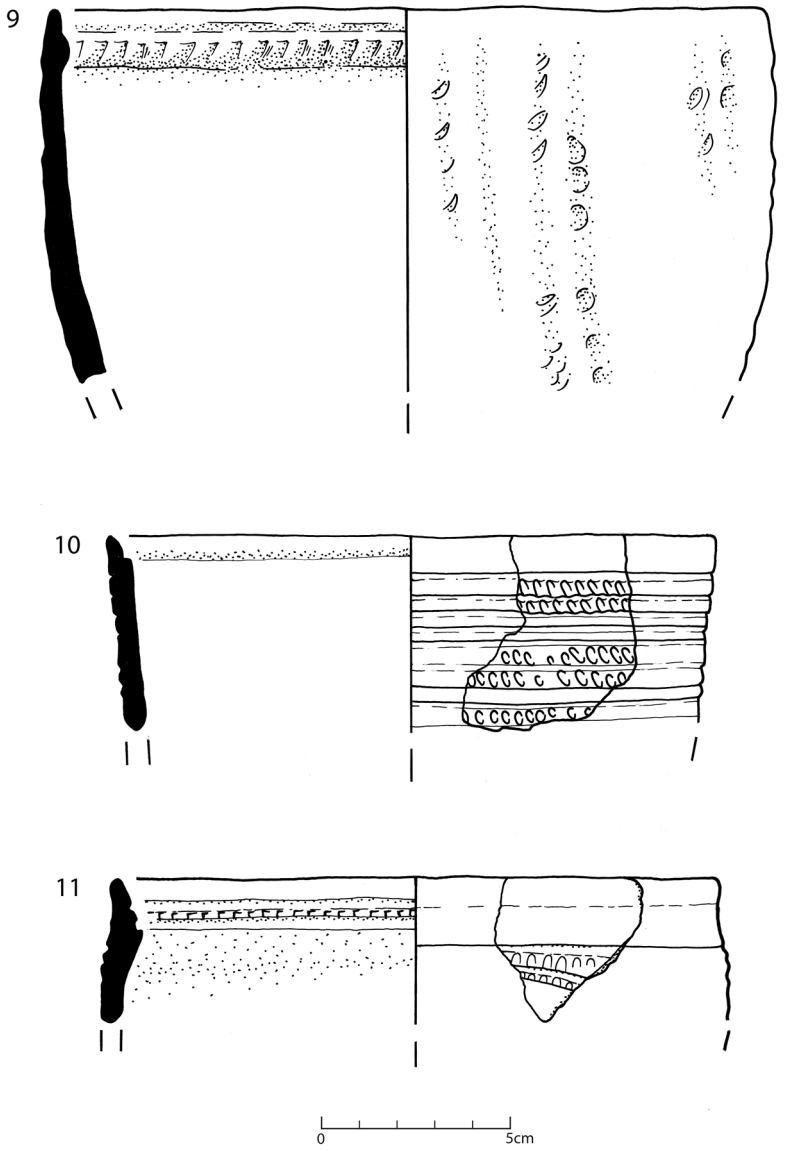

Fig. 30. 9–11 Grooved Ware from [148] (177) and (134). Scale 1:2.

10) Sf1783 [148] (134). Fabric S2. Internally grooved rim. External decoration comprises pairs of vertically notch rows, defined by horizontal grooves separated by pairs of blank rows. Diameter 160mm.
11) Sf746 [148] (134). Rim with double groove separated by a row of vertically incised notches. External decoration similar to sf1783 with pair of notched rows. Diameter 160mm.

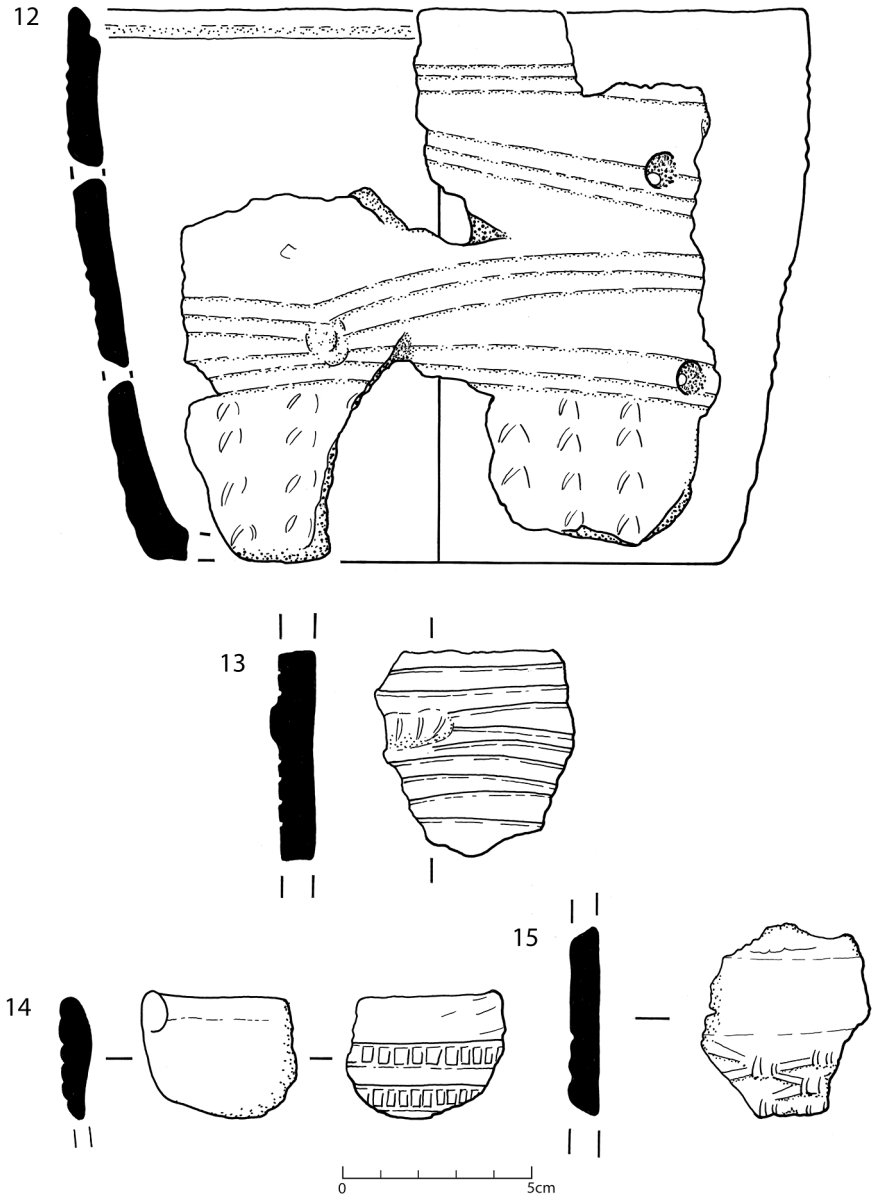

Fig. 31. 12–15 Grooved Ware from [148] (135). Scale 1:2.

Figure 31
12) Sf1224 [148] (135), sf2431 (134), sf3267 to 3269, sf3354 and sf3400 (177). Fabric S2. Tub-like vessel with internally stepped rim and external decoration, comprising converging lines and lug knots above columns of finger nail impressions. Two repair holes, drilled from the outside, along right-hand edge. Diameter 195mm.

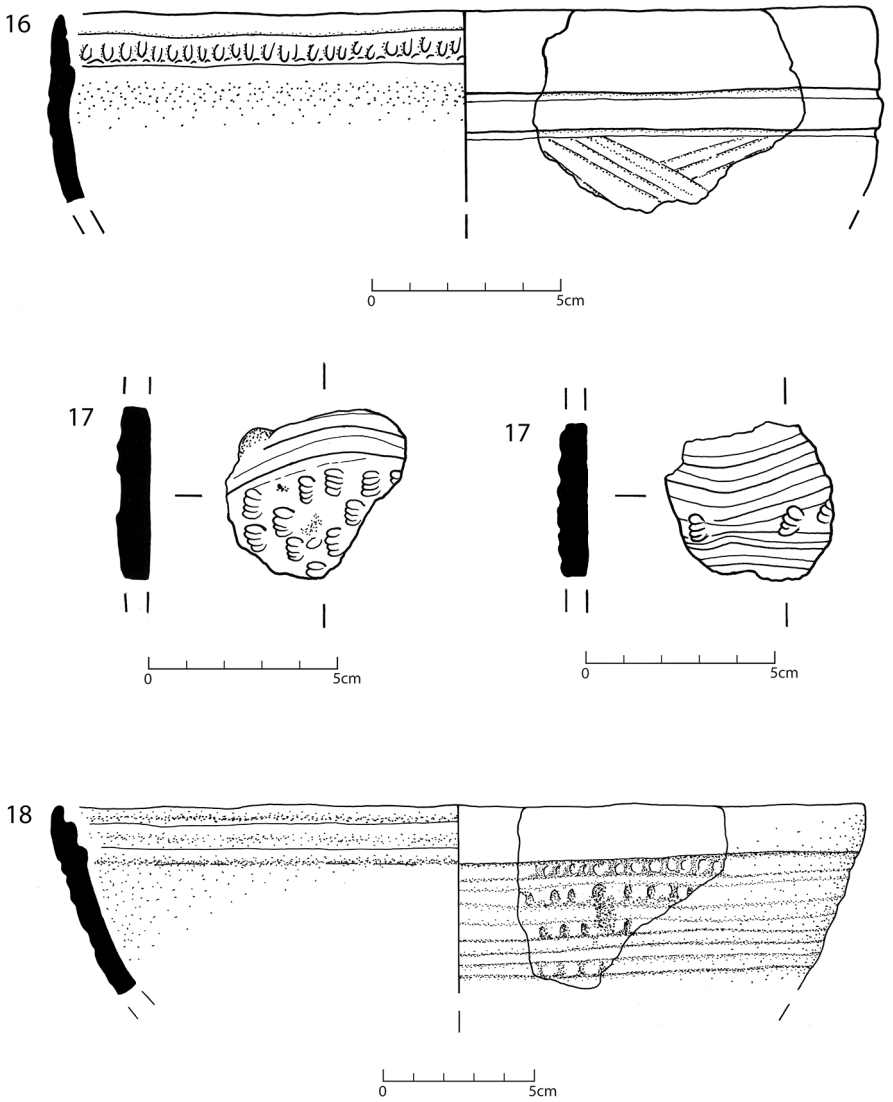

Fig. 32. 16–18 Grooved Ware from [156] (116) and [181] (127). Scale 1:2 except no. 18 at 2:5.

13) Sf788 [148] (135). Fabric S1. Body sherd decorated with converging grooves and lug knot, with vertical fingernail notches.
14) Sf601 and sf3263 [148] (135). Fabric S2. Rim with faint internal groove and a raised boss. External decoration comprising two rows of vertically incised notches between horizontal grooves.
15) Sf1427 [148] (135). Fabric S1. Sherd with converging ribs, created in 'false relief' by removing the surrounding clay. The position of the 'knots', tying the converging ribs, are defined by vertical notches.

Pit [156] (116)

Figure 32

16) Sf1142 [156] (116). Fabric S1. Internally grooved rim with row of incised notches and external decoration, comprising two horizontal grooves above bands of oblique grooves. Diameter 220mm.

17) Sf1116 and sf1121 [156] (116). Fabric S1. Sherds selected from a large, heavily abraded and fragmentary vessel, decorated with converging grooves and impressed whipped cord maggot infill.

Pit [181]/[194] (196) primary fill (127) upper fill

The partial remains of four vessels have been illustrated from [181] (127).

18) Sf2795 [181] (127). Fabric S2. Rim with two internal grooves and externally decorated with rows of incised notches. Diameter 270mm.

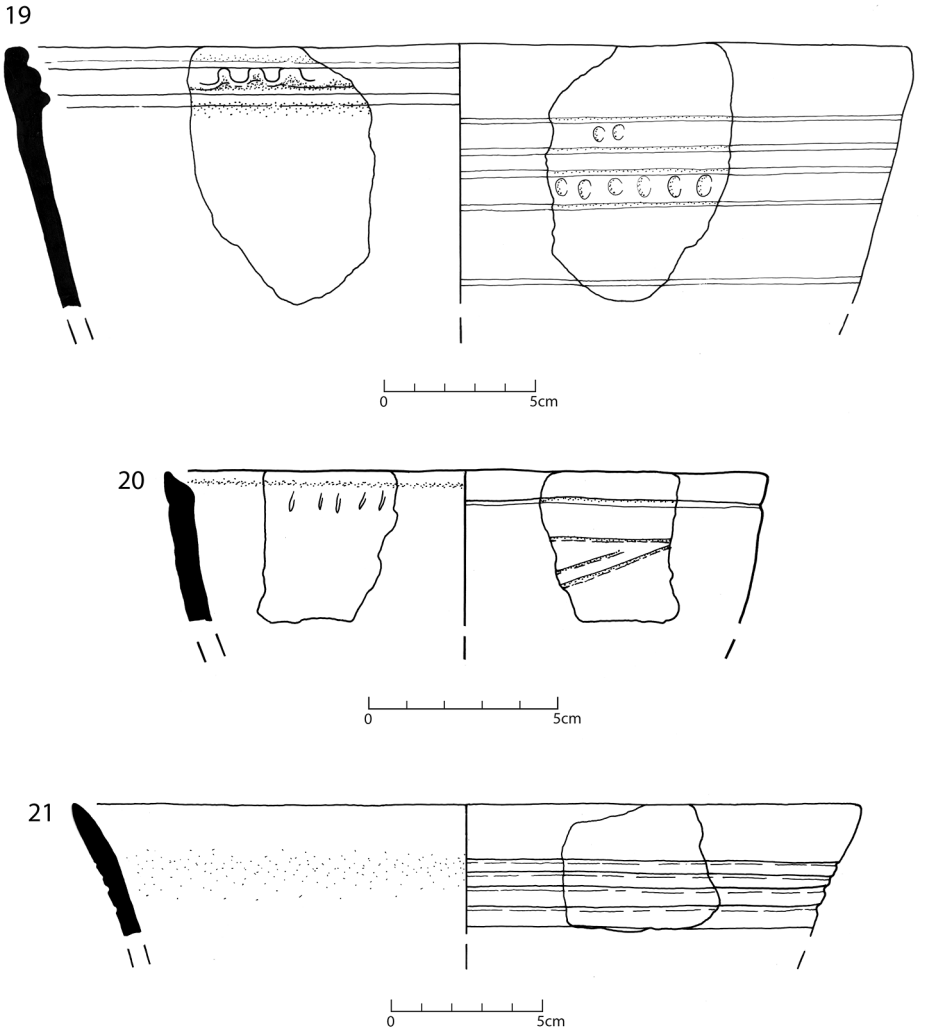

Fig. 33. 19–21 Grooved Ware from [181] (127). Scale 1:2, except no. 20 at 2:5.

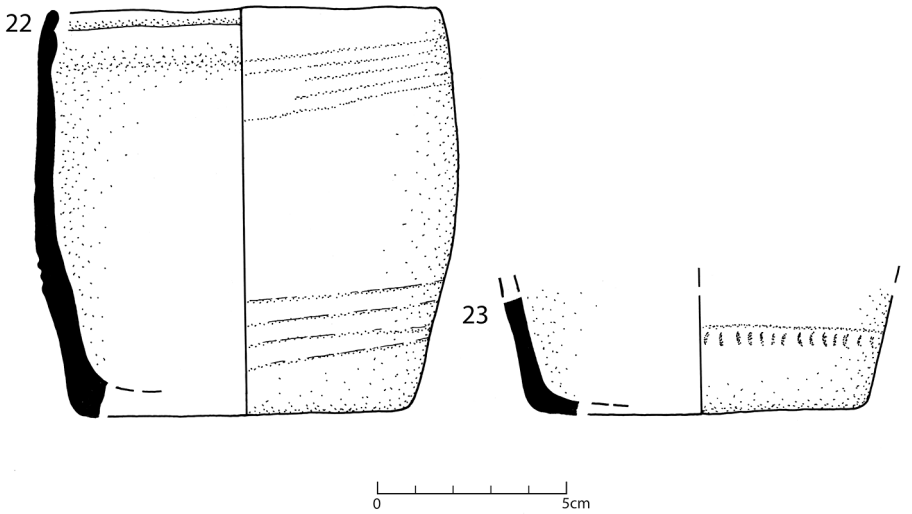

Fig. 34. 22–23 Grooved Ware from [55] (20). Scale 1:2.

Figure 33
19) Sf2050 [181] (127). Fabric S2. Bevelled rim with rib below incised with finger nails. Externally decorated with incised horizontal and oblique lines. Diameter 160mm.
20) Sf2793 [181] (127). Fabric S1. Rim with two internal grooves separated by a crenelated rib, formed by removing scallops of clay to produce a wavy line. Externally decorated with alternate rows of fingernail impressions. Diameter 300mm.
21) Sf3290 [181] (127). Fabric S1. Plain, flaring rim, decorated externally with incised horizontal grooves. Diameter 260mm.

Figure 34
22) [55] (20). Fabric S1 with ferruginous pellets. Straight-sided vessel with internally grooved rim and external decoration, comprising bands of obliquely angled grooves. Very abraded. Diameter 105mm.
23) [55] (20). Fabric S1. Base of straight-sided vessel decorated with vertical fingernail impression beneath a single groove. Very abraded.

Discussion

The wide variety of vessel form and decoration exhibited within the assemblage can, in many cases, be paralleled locally or further afield, and defined within the expected repertoire of the three styles as summarised by Manby (1999, 61, Table 6.2), or as illustrated within the evolutionary horizons defined by Brindley (1999, 138, illus. 14.2–14.4). All the vessel profiles are open with straight, tapering or curving sides (tub, bucket or bowl-like), and, in terms of size, of the 16 vessels with measurable rims, only two fit into Manby's (1999, 60) 'tub' category (with diameters of 100–150mm; nos 7 and 22, with diameters of 130 and 105mm). The majority, ten, belong to the 'small jar or bowl' category (with diameters of 150–250mm), with four clustering around 160mm (nos 3, 10, 11 and 19). The remaining four vessels (nos 2, 18, 20 and 21) have diameters of 270 to 300mm and would be classified as 'medium jars', with no examples of 'large jars' being present.

In terms of decoration, a number of distinctive features are worth discussing in order to highlight the fact that affinities to a particular Grooved Ware style are not often clear cut, and in the case of the Clacton and Woodlands style might be interchangeable or become hybridised. The use of horizontal and oblique grooves with or without infill is a common feature on vessels such as nos 3, 4, 6, 7, 16 and 19, and is comparable with the group from Temple Grange Rothley and others attributed to the Clacton style (Cooper 2015, 26, fig. 19). The use of vertical notching along horizontal bands or, in one case (no. 1), filling triangles is another distinctive feature, often attributed to the Woodlands style (Manby 1999, 61, Table 6.2), and seen on Vessels 1, 10, 11 and 14. The tub-like Vessel 1 is similar in many ways to the Clacton-style vessel from Elmsthorpe Rise, Braunstone, which has paired wavy lines infilled with impressed dots, and arranged to create alternate blank lozenges and triangles between (Allen 2001, fig. 1; Beamish 2004, 37, fig. 6). The notched lines on Vessels 10 and 11 find parallels in those from Horizons 2 and 3 (Brindley 1999, illus. 14.3 no. 3 and illus. 14.4 no. 7, respectively). Both vessels were retrieved from fills (134) of Pit [148] and sit alongside those from (135), which also exhibit Woodlands-style decoration such as converging lines with lug knots imitating basketry (figs 6.12, 13 and 15). Significantly though, the decoration is not applied, as would be more typical of Woodlands style, and as seen locally on the cup from Eye Kettleby (Gibson 2011, 18–20, fig. 16.2), but is instead created in false relief by removing the surrounding clay. This mimicry of the Woodlands style has also been recognised at Hunstanton (Cleal 1999, 2) and was used to create the wavy line decoration on the outside of Vessel 2, and similarly on the internal rims of Vessels 9 and 20. The only occasions where applied decoration has been used is on the rims of Vessels 8 and 14, the former having an elaborate strip applied around the inside of the rim and a further strip vertically over the rim, whilst the latter has the partial remains of small raised boss.

The Rothley Lodge Farm assemblage makes a major contribution to the corpus of Grooved Ware from the county, being by far the largest excavated so far. It joins two other assemblages of Grooved Ware in the Clacton style: first, 102 sherds from the nearby site of Rothley Temple Grange (Cooper 2015); and second, 98 sherds from Elmsthorpe Rise, Braunstone (Albone 1999; Allen 2001, figs 1–3). Additionally, a single rim sherd in the Clacton style had previously been recovered from Thurmaston gravel quarry (Longworth and Cleal 1999, 190; Manby 1999, 60, fig. 6.3.7), alongside a small group of 11 sherds in Durrington Walls style from Kirby Muxloe (Longworth and Cleal 1999, 190) and a Woodlands-style cup from Eye Kettleby, mentioned above (Gibson 2011, 18–20, fig. 16.2). In the discussion of this vessel, Gibson also listed a number of other recent finds, mainly in the Durrington Walls style, from Leicestershire sites including Syston, Wanlip, Castle Donington, Queniborough and Husbands Bosworth (Gibson 2011, 20).

THE CALCINED BONE

Jennifer Browning

Poor bone preservation is a particular issue for archaeological sites in this area, predominantly due to the nature of the geology, which varies from sand and gravel

to Mercia Mudstone group clay and boulder clay. At Rothley Temple Grange only unidentifiable fragments of calcined bone were present (Browning 2011, 45), while a large Iron Age settlement at nearby Birstall again produced a poorly preserved and fragmentary assemblage with few diagnostic bones (Browning 2009). Usually, tooth enamel and burnt bones are the most durable. Calcined bones have been affected by temperatures above 700°C, which destroys the organic content of the bone and consolidates the mineral component (Gilchrist and Mytum 1986, 30). This is far beyond what would be expected during normal cooking. The hottest parts of a domestic fire could produce these changes in the bone, but equally these could indicate a cremation pyre. Roe deer and cattle were positively identified in the assemblage and the number of medium mammal-sized shaft fragments hints at the presence of sheep. From the Neolithic onwards, cattle, sheep and pigs were the most common food animals in Britain (Serjeantson 2011, 14), and would be expected to be most plentiful. Roe deer consistently appear on European Neolithic sites but are less common than red deer, occurring primarily in areas that were still wooded or on the margins of woodland (Boyle 2006, 14). In British Neolithic sites they are the second most common wild mammal after red deer, although numbers are still low (Serjeantson 2011, 42). The array of other finds from the site points strongly towards special deposition. While it is not possible to be conclusive in this case, the teeth from a pit [180] tentatively suggest that a cattle head, or parts of a head, were deposited. Skulls are often associated with placed deposits and, in southern Britain, are nearly always from cattle (Serjeantson 2011, 70). In pit [156], the only confident identifications were roe deer metapodials and tarsals, which represent more than one animal. The interpretation from the range of elements is problematic. It could be concluded that they represent skins or waste from primary butchery. However, the possible presence of other elements makes this interpretation uncertain. Roe deer appear to be relatively rare in ritual contexts; a roe deer skeleton was recovered from Whitehawk causewayed enclosure (Serjeantson 2011, 74). Cremated animal bone has been found associated with human burials; for example, at Mockbeggar Lane barrow (Serjeantson 2011, 74).

THE CHARRED PLANT REMAINS
Rachel Small

In total, 49 samples were taken from Neolithic pit fills for the recovery of charred plant remains during the evaluation and excavation phases. One part of each sample, approximately 10 litres, was studied. The samples were wet-sieved in a York tank using a 0.5mm mesh with flotation into a 0.3mm mesh sieve, and were left to air dry. The residue fraction over 4mm was sorted for all finds, whilst the fraction below 4mm was only sorted if remains were present in the flotation fraction (flot). Flots were sorted under a ×10–40 stereo microscope, and plant remains and charcoal were extracted. Identification was made by comparison to modern reference material and names followed Stace (1991). Complete grains and fragments which included the embryo were counted as one. Following Van der Veen (1992, 25), each fragment of weed seed and hazelnut shell was counted as one.

Results

A sample from Area 1 Pit [54] (20) contained a large number of grains, 182 in total (*c.*18.2 items per litre). The assemblage appeared to be exclusively barley (*Hordeum vulgare* L.); 74 were positively identified as the species and 59 were probable (49 were classed as indeterminate). The grains were very puffed and this made determination of the variety of barley difficult. However, there was an example of a twisted grain and this is indicative of six-row. Also, three grains had fragments of the lemma and palea still attached, and this is characteristic of hulled barley. The only other plant remain present was a large grass (Poaceae) seed.

Six of the samples from Pit [148] contained charred plant remains, a single item in each. The specimens included cereal grains, unidentifiable to species due to their poor preservation, a possible fragment of large grass (Poaceae) seed and fragments of hazelnut shell (*Corylus avellana* L.). Fragments of oak (*Quercus* spp.), ash (*Fraxinus excelsior* L.) and hazel/alder (*Corylus avellana* L. or *Alnus* spp.) charcoal were abundant in (134). Hawthorn (*Crataegus monogyna* L.), popular (*Populus* spp.), rowan type (*Sorbus* spp.) and field maple (*Acer campestre* L.) charcoal were also present in smaller numbers.

A barley grain, indeterminate cereal grain and fragment of hazelnut shell were present in a sample from Pit [180] (126). Oak, rowan type and hazel/alder charcoal was also present in [181] (195).

A charred elder seed (*Sambucus nigra* L.) and fragment of hazelnut shell was recovered from Pit [47] (41) in Area 3.

Discussion

In the East Midlands, Neolithic charred plant remains have been recovered from many sites, but generally in low numbers and from pits (Monckton 2006, 265). At the nearby early and late Neolithic settlement at Rothley Temple Grange features were sampled, but few plant remains were recovered (less than ten items from each sample). Specimens included emmer grains, barley grains, chaff, crab apple (*Malus sylvestris* L.) and hazelnut shell (Speed 2015, 19 and 27).

Hazelnut shell tends to be more common than cereal grains on Neolithic sites (Robinson 2000). This does not necessarily reflect a greater importance placed on wild foods, but is more likely to represent a bias caused by preservation, as nut shells are more likely to be burnt as a waste product and may survive charring better than grains (Jones and Rowley-Conwy 2007, 400).

High densities of remains have been found at two early Neolithic settlements in Derbyshire. At Aston-on-Trent, samples from a hearth and a gully produced large numbers of emmer grains (*Triticum dicoccum* L.), *c.*550 per litre with a few pieces of chaff present, and this was interpreted as grain burnt accidentally during food preparation (Monckton and Alvey 2012). At Lismore Fields, the western end of Building 1 contained high numbers of chaff fragments and this was interpreted as evidence for cereal processing, whilst the eastern end contained many emmer grains thought to represent the remnants of storage. The greatest number of remains at this site was *c.*200 items per litre (Jones and Rowley-Conwy 2007, 405). It has been

suggested that, because cereal processing occurred at both sites, cultivation would have taken place locally, thus implying permanency of occupation for at least some of the population (Monckton and Alvey 2012, 107).

Most of the samples from Rothley Lodge Farm can be classed as low-density deposits typical of the Neolithic period. However, the late Neolithic deposit from [54] (20) with a greater number of cereal grains is different, although it is not great enough to suggest a burnt storage area such as at Lismore Fields (*c.*18.2 items per litre compared to *c.*200 items per litre). Rather, the deposit probably represents a handful of grains that became burnt and it is plausible this was an accident that occurred during cooking.

Emmer, bread wheat (*Triticum aestivum* L.) and barley – six-row, two-row, hulled and naked forms – were cultivated in the British Neolithic (Rowley-Conwy and Legge 2015, 440). The difference between barley being the dominant cereal at Rothley Lodge Farm, and emmer at Lismore Fields and Aston-on-Trent, may be of significance. It could relate to the date of deposits, as barley is believed to become more common in the late Neolithic, different activities undertaken, a 'special deposit' or possibly to differing environments, where barley is more suited than wheat to growth in cool wet conditions (Rowley-Conwy and Legge 2015, 440). While there is no evidence for cereal processing at Rothley Lodge Farm, differing to Aston-on-Trent and Lismore Fields, the lack of barley chaff may be due to poor preservation or its utilisation as animal fodder (Van der Veen 1999).

The dominance of oak, ash and alder/hazel charcoal in the assemblage probably reflects their availability and burning qualities, as these species provide good fuel of high thermal capacity. It was possible to obtain ageing data from specimens, and round and mature woods were both present. Round wood provides an intense short-lived heat which is good for starting a fire (Pelling 2012).

THE RADIOCARBON DATING

Matthew Beamish

Sherd residue dating was used to establish absolute chronology, with the objective of dating the usage of the pottery types and decreasing the potential for dates from residual material. Residues were identified on two sherds of Peterborough ware and three of Grooved Ware, and submitted for dating to Scottish Universities Environmental Research Centre, University of Glasgow (SUERC). Two dates from Grooved Ware sherds 2793 [181] (127) and 979 [148] (135) were successful.

Lab no.	Context	Find no.	Feature type/ material	Radiocarbon age BP	$d^{13}C$	Calibrated date 95.4% probability
SUERC-61190	135	979	Carbonised residue on pottery	4159 ± 30	–27.5	2880–2670 cal BC
SUERC-62381	127	2793	Carbonised residue on pottery	4100 ± 30	–27.4	2840–2580 cal BC

Table 2. Radiocarbon results.

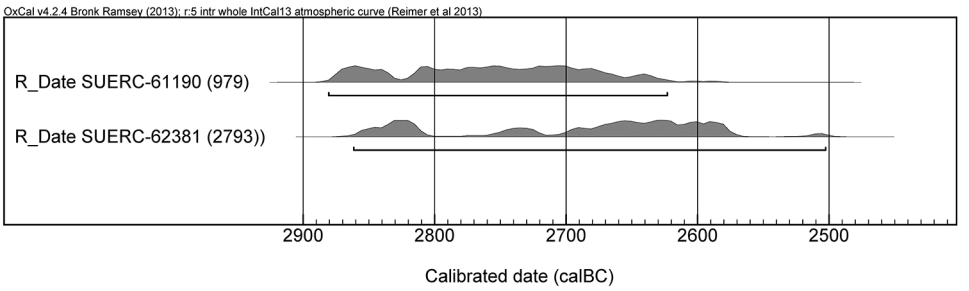

Fig. 35. Radiocarbon dating.

The results are shown in Table 2, and are quoted in accordance with the international standard known as the Trondheim convention (Stuiver and Kra 1986). They are conventional radiocarbon ages following Stuiver and Polach (1977). All have been calculated using the calibration curve of Reimer *et al.* (2009) and the computer program OxCal (v4.2) (Bronk Ramsey 1995; 1998; 2001; 2009; 2013). They are quoted in the form recommended by Mook (1986), with the end points rounded outward to ten years on the basis of the error terms.

The ranges quoted in plain type in Table 2 and shown on Fig. 35 have been calculated according to the maximum intercept method (Stuiver and Reimer 1986). The two dates are statistically consistent (T' = 1.9; v = 1; T'(5%) = 3.8) and could therefore be of the same actual age.

DISCUSSION

Chronology and Dating

On the basis that Peterborough Ware is now recognised as dating *c.*3500–2900 BC, predating Grooved Ware (Ard and Darvill 2015), the earliest activity was located in Area 3 to the east, close to the River Soar. Here, two pits within the dispersed group in Area 3 were located, containing Peterborough Ware and some worked lithics. The main centre of activity (Area 1) appears to date from the late Neolithic and is associated with Grooved Ware pottery. C14 dates from residue on two of the Grooved Ware sherds from [148] (135) and [180] (127) has provided a date range of 2880–2670 cal BC (above Table 2).

As it is so rare to find evidence of Neolithic occupation and special deposition in the region, it is remarkable that two locations within 2km of each other have both provided such evidence. Both sites show evidence of settlement with clear structures at Rothley Temple Grange, and more ephemeral structural evidence at Rothley Lodge Farm, numerous finds and charred plant remains indicating arable cultivation. The chronological separation and/or overlap between the two sites at Rothley may be of significance. The earliest activity takes place at the Rothley Temple Grange site, where C14 dates between 3500 and 3340 cal BC were obtained from a pit associated with early Neolithic flint and Carinated Bowls. A Late Neolithic circular post-hole structure provided three C14 dates between 2880 and 2480 cal BC,

and Grooved Ware of Clacton-style was present at this site. Carinated bowls were absent for the Rothley Lodge Farm site and the earliest activity appears to have been during the Middle Neolithic in Area 3, nearest to the River Soar, on the basis of the presence of Peterborough Ware (above p. 37). This pottery was absent from Rothley Temple Grange, although it was present at a site recently examined in 2015–16 immediately to the south (G. Speed pers. comm.). It would appear that during the Late Neolithic both sites were occupied at the same time, perhaps seasonally. However, this time frame may equally cover periods of short-lived occupation with cycles of establishment, abandonment and movement (Pollard 2001, 323).

The Later Neolithic pits

Feature [148], with its remarkable collection of material, is difficult to interpret. Although having an irregular form, it has some affinities with Neolithic sunken featured buildings (Tipper 2004, 4); for example, its size, flat base, well-defined south-western and north-eastern corners consistent with a rectangular structure (Clay 2015). However, the primary silting might suggest waterlogging, which would not be ideal for occupation. It does appear to have been through several phases of modification and may have originally been located in a natural hollow (Figs 4–8). The deliberate placing of artefacts can be interpreted from the primary deposit, whereas much of the other material in the upper deposit, including debitage, is more likely to have been introduced when the feature was backfilled.

At Rothley Temple Grange, a shallow pit 3m long, containing modified Carinated Bowl and worked lithics, has also been interpreted as a possible sunken-pit structure of early Neolithic date (Structure 1; Speed 2015, 3, fig. 4). Parallels for Grooved Ware pit features are known from Aleck Low in Derbyshire (Garton 1991), Eye Kettleby (Finn 1998) and Braunstone in Leicestershire (Albone 1999). Possible Late Neolithic sunken-featured buildings are also known at Marden Henge, Wiltshire (Leary and Field 2010) and Stanton on the Wolds, Nottinghamshire (Bird and Bird 1972). However, the sunken-featured building at Marden Henge is very different in character from [148], being far more regular. On balance it is more likely that the feature [148] is a pit perhaps originally placed in a natural depression or tree throw feature, and deliberately used for the deposition of artefacts for at least part of its life.

A group of post-holes to the east of [148] may indicate structures, although no coherent patterns are discernible (Fig. 4). The presence of barley grains, associated with Grooved Ware from pit [54] in Area 1, does suggest occupation and arable farming in the vicinity. This may be of significance in view of the ongoing debate over the success or otherwise of Late Neolithic farming (Stevens and Fuller 2012; Bishop 2015).

As is the case with other similar sites in Eastern England, the pits are close together but with no clear patterning (Garrow 2006, 81). Their association with disparate post-holes is a juxta-position noted at other sites; for example, Storeys Bar and Redgate Hill (*ibid*, 87). There is no clear evidence of how the features were used prior to the deposition of artefacts and this may have been the primary purpose of the deposits. The densest assemblages are often found in smaller pits (*ibid*, 113) as

is the case with Pit [156], which also showed evidence of not just specially selected artefacts, but also, in the case of the fertility symbol, their deliberate arrangement (*ibid*, 113; see below). Pits with regular circular or oval plans and symmetrical profiles is a phenomenon identified in other Late Neolithic contexts (Pollard 2001, 325). With the exception of the large amorphous atypical pit [148], this is the pattern present on this site (e.g. [156] Fig. 9 and [181] Fig. 12).

The Special Deposits

Assemblages showing evidence of having been deliberately placed were located in pits [148], [156] and [181], and probably in two smaller pits [155] and [54]. Most of the material was associated with highly decorated Grooved Ware and some other unusual items of material culture. There appear to be clear episodes of structured deposition, and variations between practices in different features (Garrow 2012). Artefacts such as the stone rubber, the ceramic spheres and the stone plaque appear to be unique in this context.

Speed (2015, 21) discusses structured deposition in the context of the 'placed deposits' found at the nearby Rothley Temple Grange site. Here, it is suggested that the pits (and their deposits) showed different histories of use, perhaps starting as 'working hollows', and later received special deposits symbolising a formal closure of the activity or occupation (Pollard 2001; Thomas 2010, 9). The acts of deposition at Rothley Lodge Farm also appear to have been structured, and included elements of intentional destruction with the breakage of the plaque and pottery, the burning of flint artefacts and animal bone, and the flaking of the axes. Larsson has described the intentional destruction of flint axes and other artefacts by fire as a Middle Neolithic phenomenon in Sweden. He suggests that the colour change to white may have been appropriate to certain rites of passage. At both Rothley sites, the final act of deposition may be seen as such a rite, perhaps as an act of closure to the site habitation. Burnt flint axe fragments and closely associated calcined roe deer bone from [156] may suggest that they were both burnt in the same pyre. The significance of highly burnt roe deer bones is uncertain, but the juxta-position with the fertility symbol is curious and may hint at the deer being perceived as having aphrodisiac properties. Roe deer bones are known from other sites as part of placed deposits; for example, at Coneybury, where a discrete group of roe deer ribs had been placed on the base of an early Neolithic pit in a separate group from pottery sherds and flint (Richards 1990; Pollard 2001, 323), while a pit from Over, Cambridgeshire contained a roe deer antler beneath part of a human skull (Pollard 2001, 327). The cache of burnt barley grains, associated with Grooved Ware pottery from [54], may also have been part of a structured deposit and may be possible evidence for brewing (Dineley and Dineley 2000).

Cochrane and Jones (2012, 4) argue that visual art of this period had a more dynamic role than merely representation, in that it was closely related to how people relate to their inhabitation and engagement with the environment. The Neolithic art depicted on the stone plaque can also be interpreted as a symbol of transformation, in that the material on which it is engraved becomes transformed into an object with meaning. Perhaps all the special deposits can be interpreted in a similar way.

We are also seeing transformation of axes through fire, the transformation of the stone rubber as a phallic symbol and the transformation of pottery vessels, perhaps through their deliberate breaking. The actions to create these transformed items, some involving high temperature fires, would be significant events in themselves, perhaps followed to reinforce the memory of individuals and place (Harris 2009). The symbolism may be of the transformation between life and death, or some significant change in the life of individuals or the community in general. The burial of altered materials may symbolise renewal and regeneration (Thomas 1999; Pollard 2001, 323; Whittle *et al.* 2011).

There is evidence of deliberate selection and, in the case of the fertility symbol, arrangement of artefacts (Garrow 2006, 113), while the axes, pottery and plaque also exhibit evidence of deliberate breaking and fragmentation. The fragments may then have been divided between individuals to mark their formal relationships (Chapman 2000; Pollard 2004). Pollard (2001, 325) suggests that pit deposits may also have been chosen for their visual and tactile qualities, including Grooved Ware rims and decorated body sherds (Barclay 1999, 14). The distribution of decorated Grooved Ware sherds in [148] shows some dispersal (Fig. 7, Vessels 3 and 12), but the close grouping of other individual vessel sherds may indicate that they were originally complete when placed at the base of the pit. Both Clacton and Woodland styles were present associated with other artefacts, while Durrington Walls style was present in Area 3. In her study of Grooved Ware sites in the Upper Thames Valley, Botfield (2012, 56) noted that all deposits containing Woodlands style were also associated with worked flint including tools, blades and flakes, and it has been suggested that Woodlands style may have been used for different purposes (Thomas 1991, 120; Botfield 2012). Thomas (2010, 11) suggests that Grooved Ware has taken a set of symbols from passage tomb art as a way of dramatising and emphasising the transactions of everyday life.

Rothley Lodge Farm is located close to the confluence of the Soar and Wreake, where lithic scatters and ceremonial areas have already been identified (Fig. 36; Thomas 2008). It is consistent with other similar sites from Eastern England which are mainly on low but locally elevated positions, just above the floodplains of the nearest river (Garrow 2006, 81). Confluences are recognised as significant places in the landscape (e.g. Buteux and Chapman 2009), and Neolithic 'sacred landscapes' often occupy such locations; for example, Dorchester on Thames cursus complex close to the confluence of the Thame and Thames. Loveday (2015) identifies such areas as possible places of pilgrimage.

The silting in the base of [148] suggests that the pit was open, at least initially, for the artefacts to be visible to, and appreciated by, onlookers before being finally buried, and it may be assumed that other features (e.g. [156] and [180]), may also have been open for such an event. The selection of different materials may have been based on their connection with people's lives, and would have been placed as a mark of respect and renewal. Some of the artefacts would have been linked with particular powers and symbolise the transmission of potency, perhaps exemplified by the fertility symbol. This would have been a 'set-piece event' laid out by those with an understanding of the symbolic order of the artefacts, and viewed by the community and perhaps visitors from further afield whereby changes are acknowledged through

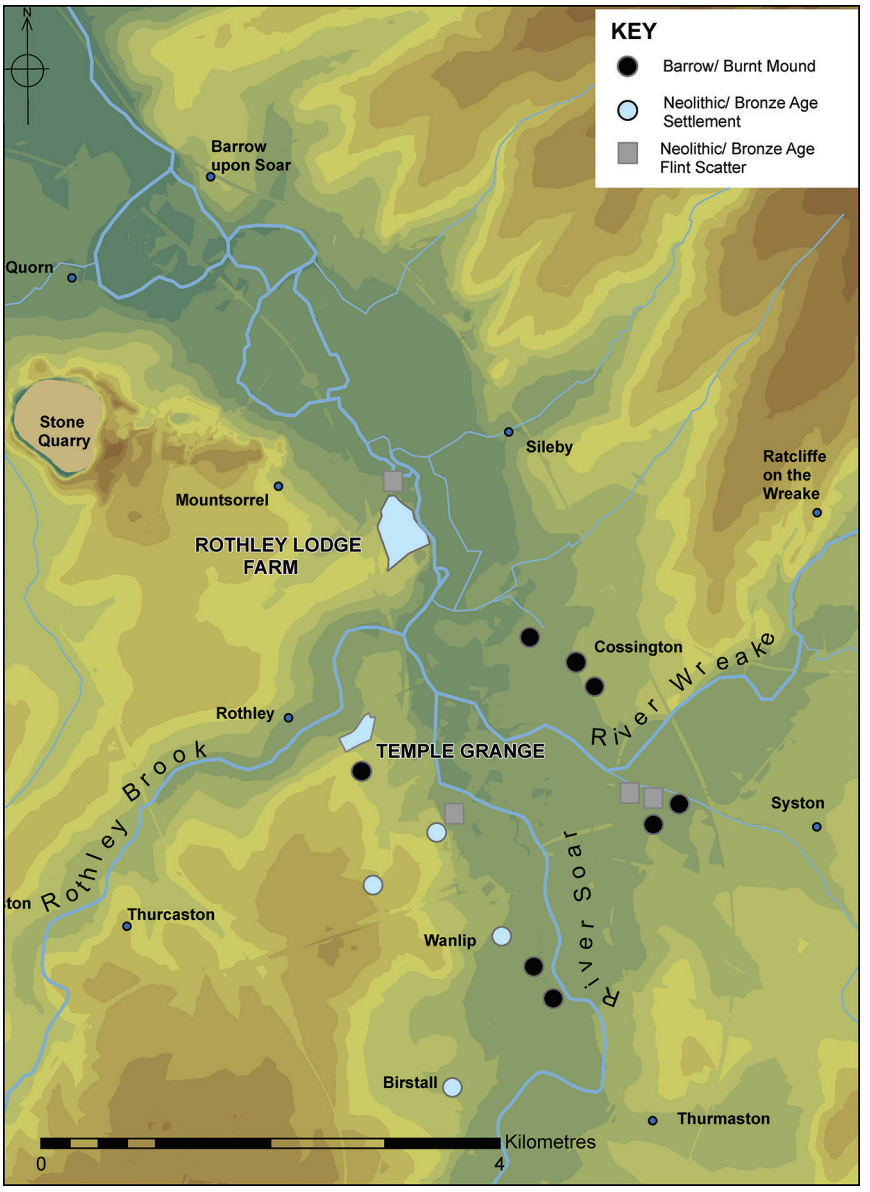

Fig. 36. The Rothley Lodge Farm and Rothley Temple Grange sites in relation to other Neolithic-Bronze Age sites, recorded on the Leicestershire Historic Environment Record.

careful and respectful burial (Pollard 2001, 330). These changes may have been the formalised act of closure and abandonment of an occupation site, with the transformed materials symbolising renewal and regeneration. They would have been a sign of respect to the land that had served them and that could not be left without a recognition of the significance of its past relationship with the community.

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