Post-medieval Brick Kilns and Pottery Manufacture at Newfound Farm, Cringleford, Norfolk

Archaeological Excavation Report

March 2022 (updated April 2022)

Client: Barratt David Wilson Homes

Issue No: 1.1
OA East Report No: 2449
NGR: TG 18658 06864
Event No: ENF145412
OASIS No.: oxfordar3-432582
CNF No.: CNF43136

oxfordarchaeology

Client Name:	Barratt David Wilson Homes
Document Title:	Post-medieval Brick Kilns and Pottery Manufacture at Newfound Farm, Cringleford, Norfolk
Document Type:	Excavation Report
Report No.:	2449
Grid Reference:	TG 18658 06864
Planning Reference:	2013/1793 Condition 42
Site Code/HER:	ENF145412
Invoice Code:	XNFNFC18
Receiving Body:	Norwich Castle Museum
Accession No.:	NWHCM: 2019.59
Oasis No.:	oxfordar3-432582
CNF No.:	CNF43136
OA Document File Locations:	https://files.oxfordarchaeology.com/nextcloud/Projects Working Folder/OAE/XNFNFC18_Newfound Farm Cringleford/Project Reports
Issue No:	1.1
Date:	March 2022 (updated April 2022)
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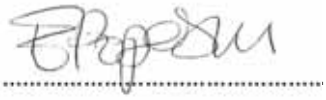
Signature:	

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Post-medieval Brick Kilns and Pottery Manufacture at Newfound Farm, Cringleford, Norfolk

Archaeological Excavation Report

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Summary

Between 29th October 2018 and 4th February 2019, Oxford Archaeology East (OA East) undertook a *c*.1.7ha excavation on land at Newfound Farm, Cringleford, Norfolk ahead of a proposed residential development. The locations of the two excavation areas were based on the results of previous stages of evaluation including geophysical survey, fieldwalking and trial trenching. Located on the fringes of Norwich, the site lies in the Yare valley which is rich in archaeological remains of all periods: earlier work had identified Newfound Farm as an area of post-medieval pottery production.

Further evidence for utilisation of the Yare valley during the later prehistoric period was provided by a scatter of pits (including numerous natural sinkholes) containing small quantities of Early Neolithic, Late Neolithic and Early Iron Age pottery, alongside worked and burnt flint.

However, the major development of the site began in the early post-medieval period, represented by five brick kilns of predominantly simple updraught design, alongside associated quarries and clay pits. These kilns are not only linked to the story of Newfound Farm and John Balleston (who purchased the land in the 16th century), but perhaps also to the history and 're-edification' of Cringleford village that was largely destroyed by a fire in the early 1570s.

After brickmaking declined here, it appears that pottery production became the dominant activity at the site during the 17th century. Balleston Newfound was so-called because of the high quality of potter's clay (fuller's earth) discovered there: a type of marl used in the production of tin-glazed earthenware in Delft, Holland. Although no *in-situ* remains of the pottery kilns were revealed by the excavation, a significant assemblage of pottery manufacturing waste, including wasters, saggars and other kiln furniture (nearly 200kg in total), was recovered; predominantly from a cluster of pits located close to Newfound Farm. When considered alongside the evidence from previous fieldwalking and geophysical surveys documented in the NHER, the site was clearly part of a much larger complex of kilns (and presumably workshops and drying sheds), clay pits and quarries known as Potters Close that stretched across many acres. By the mid-18th century, however, the site was totally disused and the land given over to farming.

The evidence for brick and pottery manufacture makes a notable addition to the study of these industries as few brick kilns have been excavated in Norfolk in particular, while only a handful of pottery production sites of this period have been identified in East Anglia so far. In addition to the redwares, slipwares and other wares produced at Cringleford, the identification of tin-glazed earthenware manufacture was wholly unexpected and provides a significant contribution to the study of post-medieval ceramics in the region.

Acknowledgements

Oxford Archaeology would like to thank RPS for commissioning this project on behalf of Barratt David Wilson Homes. OA is grateful to Steve Hickling who monitored the work on behalf of Norfolk County Council and provided advice and guidance. The project was managed for OA East by Nick Gilmour, along with Rachel Clarke (post-excavation). The fieldwork was directed by Tom Collie, who was supported by Matt Beverley, Jon Cousins, Lindsey Kemp, Tom Lucking, Eleftheria Motsiou, Ashley Pooley and Francis Pitcher. Survey and digitising were carried out by Sarita Louzolo and Katie Hutton. The illustrations were produced by Sara Alberigi, Dave Brown and Jon Cane, alongside Tom Houghton (plates), Gareth Rees (photogrammetry and cross-sections of the kilns) and Gillian Greer, who helped with the pottery and CBM illustrations produced by Jon Cane. Thanks also to the teams of OA staff that cleaned and packaged the finds under the management of Natasha Dodwell, processed the environmental remains under the supervision of Rachel Fosberry, and prepared the archive under the supervision of Katherine Hamilton. Thanks are also extended to the various specialists for their contributions.

Particular thanks are due to Peter Watkins at Norfolk County Council Historic Environment Record Service for his advice and assistance in providing the search data and other materials upon which Fig. 2 and two of the discussion figures are based. Furthermore, Séverine Bézie is thanked for photographing the clay pipe and glass bottle seals. Mick Boyle and David 'Ghost' Adams of NPS Norfolk Archaeology, in addition to Rebecca Sillwood (freelance specialist), are also thanked for their comments on the glass bottle seals and clay tobacco pipes.

1 INTRODUCTION AND BACKGROUND

1.1 Introduction

1.1.1 Between 29th October 2018 and 4th February 2019 Oxford Archaeology East (OA East) carried out an archaeological excavation in advance of a residential development on land at Newfound Farm, on the north-western edge of Cringleford parish, Norfolk (Fig. 1; TG 18658 06864). This followed a programme of desk-based research, geophysical survey, fieldwalking and trial trench evaluation in an area that had previously been identified as being associated with post-medieval pottery production. In addition to the latter, the recent work also revealed evidence of previously unknown early post-medieval brick kilns in the northern part of the proposed development area, close to Colney Lane. Two areas were investigated: Area 1 to the east (0.5ha; centred on TG 18646 06855) and Area 2 to the west (1.2ha; centred on TG 18583 06923), separated by an extant hedgerow (Plate 1).

1.1.2 The excavation, commissioned by RPS (previously CgMs) on behalf of Barratt David Wilson Homes, was undertaken in accordance with the methodology and research design outlined in the Written Scheme of Investigation (WSI; Clark 2018) and approved by the Norfolk County Council (NCC) Planning Archaeologist on behalf of South Norfolk Council. This was in compliance with Condition 42 (relating to archaeology) of Planning Permission (2013/1793) for a development for up to 650 dwellings together with a small local centre, primary school with early years facility, two new vehicular accesses off Colney Lane, associated on-site highways, pedestrian and cycle routes, public recreational open space, allotments, landscape planting and community woodland.

1.1.3 Previous phases of work undertaken on the site are described in the WSI (Clark 2018), a summary of which is provided below, with an overview in Section 1.4:

1.1.4 **Desk Based Assessment** (CgMs (Gajos 2010)). The archaeological potential of the development area was initially evaluated through a document produced in support of the initial planning application, which highlighted the potential for post-medieval industrial remains.

1.1.5 **Geophysical survey** (Cranfield University (Masters 2011); Fig. 4). A magnetic survey of *c*.53ha identified a number of kiln-like anomalies, linear and curvi-linear anomalies and tree planting pits associated with a former (unknown) orchard.

1.1.6 **Fieldwalking and metal detecting survey** (Norfolk Archaeological Unit (NAU) (Barnett 2011); Report 2585). The majority of finds were discovered at the northern half of the site and predominantly dated from the post-medieval to the modern periods. A small concentration of flint recovered close to the north-west boundary was perhaps indicative of prehistoric activity. Single sherds of Roman and Middle Saxon pottery were also found.

1.1.7 **Trial trench evaluation** (NPS Archaeology (Crawley 2013); Report 2013/1135). Seven trenches were excavated to test the results of the geophysical survey. Features relating to at least one possible 16th/17th-century brick/tile kiln were located in the northern part of the proposed development area. In addition, an 18th- to 20th-century cobbled

surface was identified on the edge of a probable large extraction pit/pond, along with undated and modern pits and undated ditches; the latter located in the northern part of the site.

1.1.8 **Post-excavation assessment and updated project design** (Collie and Clarke 2020). Submitted in April 2020 and which summarised the results of the fieldwork, outlined the research potential and made recommendations for the analysis, reporting, publication and archiving of the project.

1.1.9 This archive report has been conducted in accordance with the principles identified in Historic England's guidance documents Management of Research Projects in the Historic Environment, specifically The MoRPHE Project Manager's Guide (2015) and PPN3 Archaeological Excavation (2008). OA East currently retains the archive until formal deposition with Norfolk County Council / Museum Stores under the Site Code ENF145412 and Accession number NWHCM: 2019.59.

1.2 Location, topography and geology

1.2.1 The excavation areas were located to the north-west of Cringleford on land immediately south of Colney Lane, with Newfound Farm and residential houses located to the north-east (Plate 2) and Norfolk and Norwich University Hospital further to the north-west (Fig. 1), and farmland extending to the west and south. The development area sits within a broader arable landscape that slopes from *c*.30m OD in the north to 15m OD in the south, although the site had been left to rough pasture in recent years. The site itself (located at the northern extent of the development) is slightly undulating, lying at a maximum height of 25m OD in the northern part of Area 2, beyond which the ground drops towards the River Yare located *c*.250m away.

1.2.2 The British Geological Survey (BGS) 1:50,000 records the solid geology of the site as cretaceous chalk, overlain by superficial deposits of sand and gravel (http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html accessed 20th April 2020). Although sands and gravels were recorded across much of the proposed development area during the evaluation, some areas were identified as being more clayey sand (Crawley 2013, 3). Area 1 of the excavation (where the extraction pits and kilns were located) was dominated by firm mid yellow clay with pockets of gravel, while the higher/northern extents of Area 2 and the southern part of Area 1 were characterised by mid/pale yellow/grey sand, which became more gravelly to the south (see Plate 3 for example of geology and ground conditions). Numerous sinkholes (some active, see Plate 4) were present in Area 2.

1.3 Archaeological and historical background

1.3.1 The archaeological and historical background of the site is based on a 1km search of the Norfolk Historic Environment Record (NHER Enquiry 21_10_14), building on the Desk-based Assessment (Gajos 2010) and the WSI (Clark 2018), supplemented by information from available historic maps and other documentary evidence.

1.3.2 The following text focuses on the records that are of most relevance to the results of the excavation, namely those relating to the prehistoric and post-medieval periods, the locations of which are shown on Fig. 2.

Prehistoric

1.3.3 There are numerous NHER entries recorded in the search area that relate to prehistoric settlement and land-use flanking the River Yare, reflecting the importance of the valley during this period, not least due to the outcrops of flint-rich chalk present here. Many of these finds relate to flint scatters and artefacts found during extensive fieldwalking exercises, although more recent excavations have enhanced the dataset, notably in advance of adjacent developments associated with the Norfolk and Norwich hospital, the John Innes Centre and the Norwich Research Park. Cropmarks further augment the record of later prehistoric activity, including a number of possible ring ditches that may represent Bronze Age burial mounds. The DBA (Gajos 2010) stated that there was moderate potential for finding artefacts and features from this broad period across the whole development area.

1.3.4 A small number of worked flint finds from the Palaeolithic and Mesolithic periods have been found in the vicinity of the site, including to the north-west (NHERs 11639, 11641) and south-east (NHER 60028). The Neolithic period is particularly well-represented, with numerous flint scatters and find spots recorded on both sides of the River Yare. Several flint flakes and a Neolithic pick (NHER 63109) were recovered *c*.200m to the south-west of the site. Prehistoric worked flints were also found in the field to the immediate north-west of the site (NHER 11640), while two Neolithic axes and a Neolithic flint flake have been recorded at three locations respectively (NHERs 9328, 9330 and 25508) further to the south-west, close to the A47. Archaeological work in advance of the construction of the John Innes centre in 2000, *c*.500m to the north-west of the site, recovered 28,000 pieces of worked flint in association with a Neolithic occupation layer and a number of contemporary features (NHER 9332). These are likely to have been related to nearby surface finds of further worked flints of broadly contemporary or earlier date, including a possible flint working site (NHERs 9331 and 9342) and scatters of flints found in fields to the immediate south (NHERs 11638, 11642, 11643, 24017 and 28326) and west (NHER 44080).

1.3.5 This significant activity appears to have been relatively widespread, with further evidence of flint working identified through fieldwalking to the east of the John Innes centre, close to the river (NHER 28277). Worked flints have also been recovered from other nearby locations to the west and south-west, such as NHER 61620 (including a Neolithic knife), NHER 17457 and NHER 13411, while further Neolithic flint axes have also been found in this area, on the north bank of the river (NHER 9321 and 24993). A possible Neolithic or Bronze Age flint macehead (NHER 13215) was discovered in the vicinity of these (*c.*900m to the north-east of Newfound Farm) and a flint knife or scraper was found to the south, *c*.700m to the south-east of the current site (NHER 17112).

1.3.6 An archaeological evaluation undertaken prior to the construction of the Norfolk and Norwich hospital site, *c*.200m to the north-west of the current site, revealed a Late Neolithic/Early Bronze Age pit containing Beaker pottery, alongside undated pits and ditches, small amounts of unstratified pottery and later prehistoric worked flint (NHER 31871). Immediately to the north-west of this, a programme of archaeological work – including geophysical survey, trial trenching, excavation and watching brief – was carried between 2009 and 2020. This revealed a range of prehistoric remains, including an Early

Bronze Age cremation burial, a group of Late Bronze Age/Early Iron Age features, an undated ring-ditch that possibly represents the remains of a Bronze Age barrow, and a possible ditched trackway (NHER 55994).

1.3.7 Within the current development area, a possible linear ditch recorded as a cropmark on aerial photographs was not subsequently identified during the geophysical survey undertaken in 2011 (NHER 54407).

1.3.8 A low mound thought to represent a Bronze Age round barrow (NHER 9395) is recorded approximately 1km to the south-west of the excavation area, with a flint scraper found nearby (NHER 28021). Two possible locations for a Bronze Age barrow excavated in 1799 (NHER 9335 and NHER 9336) are recorded adjacent to the B1108 Watton Road close to the junction with Hethersett Lane, although a programme of archaeological work undertaken in this area between 2012 and 2013 found no evidence for the barrow. Cropmarks of at least one further possible Bronze Age ring ditch are located within the search area to the north (NHER 36401), while a partial semi-circular feature identified as a grass mark of a possible ring ditch within the current site (NHER 54408) appears to have lain within the area of post-medieval kilns revealed during the subsequent excavation reported on here.

1.3.9 Archaeological work at the John Innes Centre to the north-west of the site revealed a substantial curvilinear ditch that appeared to have been part of a large prehistoric monument or enclosure, of possible Early Neolithic or Bronze Age date (NHER 61924). Two Bronze Age copper-alloy axes were also found to the south-east of the site during the 1920s, in the garden of a property off Colney Lane (NHER 9358).

1.3.10 Until relatively recently, evidence for Iron Age activity in the vicinity of the site was relatively sparse, comprising occasional finds of pottery (*e.g.* NHER 40134 to the south-east) or coins (NHER 9332; at the John Innes Centre (see above)) recovered during extensive programmes of fieldwalking and subsequent metal-detecting and excavation. Early Iron Age pottery has also been found at adjacent multi-period sites (NHER 61924) next to the John Innes Centre and in fields adjacent to the Norwich Research Park (NHERs 28277 and 61925); the latter found in association with prehistoric finds and flints during an evaluation in 2012 adjacent to the B1108.

1.3.11 However, trial trenching in 2016 immediately adjacent to the current development area revealed more significant remains. This work – undertaken to the east of a multi-phased programme of archaeological investigation prior to the construction of a new link road (Round House Way) between the A11 Cringleford bypass and Colney Lane – exposed multiple groups of earlier Iron Age pits alongside undated ditches and other features (NHER 40135; MNF43167). The earlier Iron Age pottery assemblage is of particular interest as it is a relatively rare example (in this county) of a Decorated ware group of the Post-Deverel Rimbury tradition, dating to the latter part of the period. A conservative possible date range of *c*.600–350/300 BC was given, although it was noted that the presence of some vessel forms more typical of the Middle Iron Age suggest that the assemblage most likely dates to the latter part of this range (House 2016).

Romano-British

1.3.12 Roman finds and features recorded within a 1km radius of the excavation are numerous and consist of small quantities of pottery alongside coins recovered from metal detecting (see CgMs DBA: Gajos 2010). Of these, three Roman coins and a Roman finger ring (NHER 41099) were found closest to the site, being discovered *c*.200m from the northern extent of Area 2. The site itself lies approximately 5km to the north-west of the Roman town of *Venta Icenorum* in a landscape that was heavily utilised in the period. However, the emergence of the numerous finds in the area could be a result of the intense metal detecting, as opposed to intensive occupation. Features identified in the wider landscape included pits and ditches indicating an agricultural utilisation of the land during this period.

Anglo-Saxon and medieval

1.3.13 As with the preceding Roman period, finds and artefacts dating to the Anglo-Saxon period have emerged through metal detecting and fieldwalking, some presumably as a result of chance loss or the manuring of agricultural land. Several records of Anglo-Saxon finds, including pottery, brooches, strap ends and a bridle cheek piece have been located within a 1km radius of the site and are recorded under various multi-period/phase NHER records (see Gajos 2010 and below). More recently, Late Saxon charcoal burning pits have been identified to the south of the site (NHER 60815), while a possible prehistoric cremation revealed to the north-west of the Norfolk and Norwich hospital site returned a Middle Saxon radiocarbon date (NHER 55994; MNF62389). Historical documents indicate the presence of Cringleford as a settlement, with an Anglo-Saxon charter of 1043 or 1044 referencing *Cringelforð* and Domesday Book documenting the settlement as *Kringelforda*, meaning 'ford by the round hill', in 1086.

1.3.14 Fieldwalking and metal-detecting have also yielded numerous medieval finds within the search area, some of which lie within the current development area (Gajos 2010). A strap fitting, a medieval French jetton and a medieval coin were recovered approximately 200m to the south of the excavation areas (NHER 41106). To the immediate north of Area 2, a further strap end and belt buckle were also recovered (NHER 41099), with another belt buckle found nearby (NHER 28593). The site of Newfound Farm appears to have lain some distance from the medieval core of Cringleford: St Peter's Church (the nave and chancel of which date to the 11th century with 13th century additions) is located over 1.5km to the south-east.

Post-medieval to modern

1.3.15 Sites pertaining to the post-medieval period within and surrounding the current site are numerous, with several within the development area being directly related to possible pottery and brick/tile manufacture (see below). There are also several records of post-medieval finds (largely as a result of fieldwalking and archaeological investigations), alongside other monuments and buildings recorded within the 1km radius of the study area. These include the site of a windmill to the south-east (NHER 15550); Earlham Park to the north-east (NHER 33727: a historic park first mentioned in 1733 and which includes surviving traces of a medieval deer park); a cropmark of a probable post-medieval ditch in Cringleford Wood to the east (NHER 54411) and post-medieval field

boundaries identified by a geophysical survey (NHER 55993) to the west of Hethersett Lane. A possible enclosure and later linear ditch identified from aerial photography in the field to the immediate north of the development site are both undated, but the linear ditch may represent a post-medieval field boundary (NHER 25507). Post-medieval objects have been identified in the fields to the south-east of the development area (within wider NHER regions 35176–7, 36234, 37342, 40132 and 40134), including several coin weights (NHERs 33915, 33921, 33922, 33923), a coin (NHER 33918) and a scatter of jettons or tokens (NHERs 33916, 33917, 33919 and 33920).

1.3.16 No archaeological or documentary evidence for the modern period was identified across the site and no upstanding remains were identified during the site walkover in 2010.

Newfound Farm

1.3.17 Newfound Farm (NHER 9404) was named due to the discovery of a particular type of clay in the area that was suitable for the pottery industry; of such a quality that it was transported to Holland (Blomefield 1806, 39). A rough survey map that was drawn following the fire of 1572, which destroyed much of Cringleford, describes the area as "*being the baraine grounde and not built"* (NHER 9406; Gajos 2010). However, the surveyor admitted that he knew someone who would pay the equivalent price of the whole village for each acre of the land, such was the desire for the newly discovered clay resource. John Balleston of Norwich was recorded as having bought the area and he subsequently formed Balleston Newfound (now Newfound Farm). The Springhouse was built by 1584 and other buildings including a barn were constructed nearby. On 20th July 1645, Thomas Balleston mortgaged several fields here and described these as 'The Potters Close formerly Gravel Pit Close and Springhouse'. In his will of 1657, Thomas Balleston (presumably a descendant of John) mentions 'my tenements ... in Cringleford called Springehouse or Brakyhouse in the use and occupation of Robert Coleman, potter', while a later will by Edward Vincent in 1679 also mentions that he was a potter and occupier of the site (NHER 9404; SNF57685: Hawes undated).

1.3.18 Examination of maps from the 17th century onwards (see Gajos 2010) shows little developmental change on the site. A 1695 map by Robert Morden depicts the site within the Humbleyard Hundred but the scale is too small to show relevant detail. The 1797 map by William Faden shows Newfound Farm and a neighbouring orchard (Fig. 3). The 1842 Tithe map illustrates Newfound Farm but there is little difference between this and subsequent Ordnance Survey maps from 1882 onwards (see Discussion Fig. 19), apart from alterations to field boundaries and the addition of a quarry pit at the end of the track from Newfound Farm.

1.3.19 Apart from the documentary evidence, and prior to the more recent work outlined below, surface scatters and metal detected finds recorded during the 1970s further demonstrated that the site was located in a wider area of post-medieval industry. Approximately 400m to the south-west of the current excavation is a disused quarry, believed to be a possible a former clay pit (NHER 9407), with an extant pond to the east which probably performed the same function. Adjacent and to the south-west of these is a possible pottery kiln complex first identified in 1976 from surface scatters of kiln debris and lead-glazed pottery wasters, which were concentrated in the western end of the field (NHERs 9406 and 58621). This evidence was further enhanced by a geophysical

survey in the following year, which identified several kiln-like anomalies close to the field boundary. Probably forming part of this possible kiln site is another record (NHER 14272) where over 100 sherds of post-medieval pottery (mostly green-brown glazed, identified by A. Rogerson) interpreted as possible kiln debris were located by fieldwalking during the 1970s along the route of the bypass. To the north-east of this, closer to the current site, a further concentration of pottery sherds was found that may have been dumped within a disused clay pit (NHER 9403).

1.3.20 Further to the south-west, beyond the A47, a separate geophysical survey identified additional anomalies possibly indicative of a kiln and adjacent areas of ceramic debris (NHER 55995).

Multi-period and multi-phase sites and find spots

1.3.21 The search area is dominated by sites that produced multi-period finds or features, and/or represent multi-phased programmes of work. These include fieldwalking and/or metal-detecting (*e.g.* NHERs 28326, 31627, 32333, 34878, 35176-8, 36243, 49817, 51098, 54156, 54816, 55753–4 and 60745), geophysical surveys (*e.g.* ENF137569; NHER 55995), aerial photographic surveys (*e.g.* NHERs 54406, 54412, 54424), trial-trenching (*e.g.* NHERs 40130 and 61926), excavation (*e.g.* NHERs 40133 and 56758) and watching briefs (*e.g.* NHER 33913 and 40136). Where pertinent, reference has been made to these in the period- and site-specific summaries above and their locations have been included on Fig. 2.

Previous work at Newfound Farm

1.3.22 Previous work undertaken for the project included a geophysical survey of the development area in 2011 (Masters 2011), a fieldwalking and metal detecting survey (Barnett 2011) and a programme of archaeological trial trenching (Crawley 2013). A brief overview of these is given below (see also NHER 58621 and NHERs 63104–8).

Geophysical survey

1.3.23 The geophysical survey from 2011 showed several anomalies representing large burnt areas (outlined red on Fig. 4b). Particularly relevant were the results from Field H adjacent to Newfound Farm relating to excavation Area 1, and also Field G, relevant to Area 2.

1.3.24 Results from Area 1 (Field H) showed dipolar anomalies indicating kiln-like structures or areas of burning (marked 'K' on Fig. 4b). No evidence for such structures is shown on the Tithe and OS maps, indicating that they had disappeared in the 18th or early 19th century.

1.3.25 Results from Area 2 (Field G; Fig. 4a) revealed a series of uniformly spaced discrete anomalies forming neat rows. These were interpreted as the remains of tree pits collectively indicating the location of a former orchard, possibly similar to that depicted on the 1797 map by William Faden and the 1882 First Edition Ordnance Survey (see Figs 3 and 19). Orchards are also shown on the OS maps of 1907 and 1928 (Gajos 2010) but these were in the fields directly to the south of Area 2 and not within it, contrary to the geophysical survey results.

1.3.26 A number of other results from within the wider development area but outside the excavation Areas 1 and 2 are also of note (see Masters 2010). In Field F were a further three dipolar anomalies located towards the southwestern edge (marked 'K' on Fig. 4b) indicating the presence of intense burning/possible kilns. Another of these anomalies in Field I is also present suggesting another kiln lay immediately to the east of excavation Area 1. An ephemeral curvilinear anomaly was also located running north-south to the immediate south suggesting the presence of a track created by animals or people. In Field A, a further anomaly possibly indicating a kiln was identified in the north-west corner, along with a quarry pit and frequent scatters of post-medieval pottery and tile fragments visible on the surface. Strong magnetic readings were found in the north-west area of Field B and extending into Field C, forming a sub-rectangular swathe (not illustrated). This was interpreted as waste material dumped into a former clay pit and coincides with NHER 9403; a concentration of surface finds containing Staffordshire comb-ware and salt-glazed pottery sherds (see above and Fig. 2).

Fieldwalking and metal detecting

1.3.27 Investigations undertaken by NAU Archaeology (Barnett 2011; NHERs 40970 and 42812) uncovered a plethora of finds. However, while the field survey covered the area proposed for development, it did not in fact include the current areas of excavation (Areas 1 and 2 at the northwestern end of the development site). Maps included in the report show find spots in every space other than the excavation areas (see in Barnett 2011, figs 2–3). The fieldwalking and metal detecting recovered 231 finds, the majority of which dated to the post-medieval period (161 finds comprising 79% of the total, including a post-medieval coin weight). Twenty pieces of worked flint, including a barbed and tanged arrowhead were also recovered, as well as a single sherd of Roman pottery and one of Middle Saxon date. Two sherds of pottery and a fragment of ceramic building material (CBM) of medieval date were also collected. Two modern finds and fourteen artefacts of unknown date were also recorded.

1.3.28 A brief examination of the finds (see Barnett 2011, figs 2–3) showed that the majority of the prehistoric finds were located towards the middle of the development area with rare find spots of Roman and Anglo-Saxon date scattered throughout. A general overview of the post-medieval and modern finds showed that most of the pottery originated from the middle and south of the development area, with copper alloy objects being prevalent towards the north-eastern corner. Coins from this period were recovered in the north-eastern corner as well as the western edge, coincidentally around the areas where the geophysical survey indicated the possibility of kilns and/or areas of intense burning. Collectively this evidence indicated areas of human activity and industry.

Trial trench evaluation

1.3.29 Trial trenching by NPS in 2013 (Crawley 2013) comprised seven trenches of varying lengths that were targeted over the geophysical anomalies (see Fig. 4a–b), with the most relevant to the present excavations being Trench 5 (in Area 1) and Trench 6 (in Area 2).

1.3.30 Trench 5 located three extraction pits towards the northern end of the trench, along with an indication of the extant remains of a kiln to the south. These were interpreted as small kilns used by landholders to produce bricks seasonally. This activity became

prevalent in the 17th century, especially in the Norfolk area where brickyards were relatively common.

1.3.31 Trench 6 recorded the presence of two undated ditches at the northern end and three pits in the south, originally thought to be extraction features for sand and gravel. The ditches were thought to have been older field drainage/boundaries.

1.3.32 Discoveries within the trenches outside the zone of the current excavation Areas 1 and 2 are also of note (Fig. 1 and 4a). Trench 1, situated over the geophysical anomalies (possible kilns) at the western edge of the development site, located three large pits backfilled with brick debris. Trenches 2 and 3 contained refuse pits filled with early 20th century waste including broken bottles. Trench 4, targeted over one of the dipolar anomalies found in the geophysical survey and situated immediately to the east of Area 1, contained remnants of a cobbled surface located at the edge of a large clay extraction pit. Trench 7 was devoid of any archaeological remains.

2 EXCAVATION AIMS AND METHODOLOGY

2.1 Original research aims and objectives

2.1.1 A series of project research aims and objectives was outlined in the Stage 3 Written Scheme of Investigation (Clark 2018, Section 3), based upon the results of the evaluation (Crawley 2013). The main aim of the mitigation works was to record and advance understanding of the significance of any archaeological remains within the site before development. The Research Design provided a framework for the excavation and was used to inform the post-excavation assessment and updated project design (Collie and Clarke 2020). The original objectives comprised a series of generic excavation aims common to most projects (which focus on defining the date and form of evidence) and a set of more specific area/period-based research questions. These are outlined below.

General objectives

- To ascertain the nature and extent of the archaeology identified by the trial trenching.
- To determine the date, character, function and significance of any features encountered.
- To undertake a programme of post-excavation analysis assessing the potential of the remains to contribute to wider research agendas and the scope for dissemination of the project results to a wider audience.
- To produce a site archive for deposition with the Norfolk Museums and Archaeology Service and to provide information for Norfolk Historic Environment Record to ensure the long-term survival of the excavated data.

Project specific research aims and objectives

- To investigate the technological aspects of tile/brick manufacture on the site.
- To assess the range of brick and tile manufactured on the site, and to place this in its regional context.
- To investigate the chronology and function of the currently undated features within the site.
- To assess the role that the palaeoenvironmental evidence can play in enhancing our understanding of the activity undertaken on site.

2.2 Updated research aims and objectives

2.2.1 The post-excavation assessment showed that all/some of the original aims and objectives of the excavation stated above could be met through the analysis of the excavated materials.

2.2.2 The original research aims were considered, evaluated and updated as part of the assessment process (see Collie and Clarke 2020, 33–6). These were designed to

contribute to the goals of the following Regional Research Frameworks relevant to this area:

- *Research and Archaeology: A Framework for the Eastern counties: 1. Resource Assessment* (Glazebrook 1997, East Anglian Archaeology Occasional Papers 3);
- *Research and Archaeology: A Framework for the Eastern counties: 2. Research Agenda and Strategy* (Brown & Glazebrook 2000, East Anglian Archaeology Occasional Papers 8); and
- *Research and Archaeology Revisited: A Revised Framework for the East of England* (Medlycott 2011, East Anglian Archaeology Occasional Papers 24).

2.2.3 The updated research aims are outlined below.

1: To investigate the chronology and function of the currently undated features within the site

2: To investigate the chronology and nature of prehistoric activity on the site

3: To assess the role that the palaeoenvironmental evidence can play in enhancing understanding of the activity undertaken on site

4: To investigate the technological aspects of tile/brick manufacture on the site

5: To assess the range of brick and tile manufactured on the site, and to place this in its regional context

6. Can the brick kilns and pottery production be linked to Newfound Farm?

7: To assess the range and chronology of pottery being produced and place this in its regional context

2.3 Fieldwork methodology

2.3.1 The methodology followed that detailed in the WSI (Clark 2018), resulting in the soil stripping and excavation of an area totalling 1.7ha (Area 1 covering 0.5ha and Area 2 encompassing 1.2ha). The areas, targeting the results of the evaluation, were machine excavated to the level of natural geology or the archaeological horizon; whichever was encountered first.

2.3.2 Machine excavation of the topsoil and subsoil was carried out by a tracked 360 type excavator using a 2m wide flat-bladed ditching bucket under constant supervision of a suitably qualified and experienced archaeologist. A combination of machine and hand-excavation was employed to investigate the large quarry pits and elements of the kiln structures.

2.3.3 Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

2.3.4 All archaeological features and deposits were recorded using OA East's pro-forma sheets. Trench locations, plans and sections were recorded at appropriate scales. High resolution digital colour photographs were taken of all relevant features and deposits in RAW and jpg format, using a camera conforming to the requirements set out in 'Standards for development-led archaeological projects in Norfolk' (Robertson *et al.* 2018). Photogrammetry was utilised to supplement recording, notably of the kilns and larger quarry pits, with images subsequently processed using Agisoft Photoscan.

2.3.5 Numerous natural features (sinkholes and possible tree pits) were scattered across Area 2 in particular, a sample of which were investigated (Fig. 5); most of the deeper sinkholes could not be fully-excavated for health and safety-reasons. Large swathes of the natural clay in Area 1 appear to have been quarried in relation to the brick/tile/pottery production, of which the more discrete examples and those directly associated with the brick kilns were investigated. Due to their size, it was agreed with the NCC planning archaeologist that the larger/deeper sections could be excavated by machine.

2.3.6 A total of 12 bulk samples were taken from the excavated features. The bulk samples each totalled between 10–40L and were processed by flotation at OA East's environmental processing facility at Bourn, Cambridgeshire.

2.3.7 Prior to December 2018, site work progressed in fairly dry conditions, punctuated by episodes of rain. By late 2018, weather conditions deteriorated with persistent heavy showers. The stripped ground surface became saturated, and large pools of water formed in the large, excavated kilns and clay pits. Poor weather also led to the collapse of parts of the exposed kiln structures. Ground conditions remained poor especially in Area 1, a zone of site characterised by clay and silt. Even in the sandy area within Area 2, persistent rain led to the further formation of solution hollows (Plate 4), reflecting their frequency within the archaeological horizon.

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the excavation are presented below and include a stratigraphic description of the features identified (cut numbers in **bold**) supported by tabulated data where appropriate, integrated with any artefacts recovered. Details of all contexts are included in Appendix A, with full finds and environmental reports presented in Appendices B and C respectively. Where relevant, features identified by the evaluation are incorporated within the text – due to duplication of context numbers and to avoid confusion these are shown prefixed with an E. Full details of the evaluation are reported on separately (Crawley 2013).

3.1.2 A range of features was uncovered across Areas 1 and 2, including natural solution hollows/sinkholes, pits/tree holes, ditches, quarry pits and the remains of kiln structures; the latter focused in Area 1. An overview of the excavation results, including interventions, is given on Fig. 5, with overall phasing shown on Fig. 6. Figure 7 details the main area of sinkholes, natural features and pits (Periods 0 and 1.1–2) in Area 2, followed by the associated sections (Figs 8a–b and 9). A plan of Area 1 showing the kilns and associated features is on Fig. 10, followed by detailed photogrammetry/plans and sections of the kilns (Figs 11–14), Pottery Waster Pit Group 42 (Fig. 15) and associated sections (Fig. 16a–b). A selection of plates is also included to illustrate the site conditions and range of features encountered, focusing on the kilns in particular (Plates 1–54).

3.1.3 The phasing of the site is based on a combination of stratigraphy and spatial associations, with dating provided by stratified artefacts where available, alongside radiocarbon dating (see Section 3.6). A proportion of the discrete features were natural in origin and/or remain unphased (Period 0) as they produced no datable artefacts. Most of the prehistoric finds, in addition to a small amount (three sherds) of Roman pottery, are likely to represent residual artefacts/background scatters, although a small group of features that produced datable finds (pottery, worked flint) have been assigned to Period 1. For the post-medieval period, dating is based on the combined analysis of the pottery, brick/tile, clay tobacco pipe and vessel glass, underscored by documentary evidence.

3.1.4 In overview, the site witnessed intermittent and predominantly low-level activity from the Early Neolithic to the post-medieval periods, with the main focus relating to post-medieval ceramic (brick/tile and pottery) production.

3.1.5 Site Phasing: in addition to natural and undated features, two main periods of activity have been identified, both with sub-phases:

Period 0: Natural and undated features

Period 1: Prehistoric (*c*.4000BC – *c*.350BC)

Period 1.1: Neolithic to Early Bronze Age (*c*.4000BC – *c*.1600BC)

Period 1.2: Early Iron Age (*c*. 800 – 350BC)

Period 2: Post-medieval (16th to 18th century)

Period 2.1: 16th to early/mid 17th century

Period 2.2: early/mid 17th to 18th century

3.2 General soils and ground conditions

3.2.1 The natural geology of sand/gravel clay was overlain by a mid grey-brown silty sandy clay subsoil (02) with a maximum thickness of 0.3m, which in turn was overlain by topsoil with an average thickness of 0.4m. Despite the often poor ground conditions (see above) archaeological features, where present, were generally easy to identify against the underlying natural geology.

3.3 Period 0: Natural and undated features

3.3.1 Numerous features interpreted as solution hollows (sinkholes) were present across Area 2, along with a single (unexcavated) example found in Area 1, located at the southern end. A sample number of the sinkholes was excavated (Fig. 5; coloured green), most of which produced no artefacts: those which did contain prehistoric finds (flint/pottery) have been described under Period 1 (see below). A scatter of more pit-like features was also present, which may also have been the result of natural processes or alternatively may have been the remains of tree planting pits but contained similar – often sterile – fills to those within the sinkholes. As with the latter, those pits containing prehistoric finds have been described under Period 1. A grid-like array of pit-like anomalies identified by the geophysical survey (Fig. 4a) probably represent the remains of an orchard similar to those shown on historic mapping of the area, but does not appear to correspond with the more irregular arrangement of features revealed in Area 2. These more recent features presumably did not penetrate far below the subsoil.

Solution hollows/sinkholes

3.3.2 Formed through the dissolution of the underlying chalk by downward-seeping ground water, the sinkholes subsequently became infilled as the overlying sandy gravels and top/subsoils collapsed into the void created below. During the heavy rain of late 2018, a number of active sinkholes appeared (Plate 4) while voids in some of the excavated examples demonstrated that they were often still active. Eighteen of the solution hollows/sinkholes were excavated (of an estimated total in excess of 80) which produced no associated finds: these are summarised in Table 1, with sections shown on Figs 8a–b.

3.3.3 The sinkholes were predominantly circular or sub-circular/oval in plan, ranging between 0.8m and 4.38m wide with steep, almost vertical, sides which often naturally undercut the ground surface. Where investigated, these features were excavated to their base (if relatively shallow), or to a maximum depth of *c*.1m in line with the agreed excavation methodology and following Health and Safety regulations. The exception to this was sinkhole **61** (see below; Plate 5) which was in part excavated by machine, enabling more of its profile to be investigated. In general, only a single (upper) fill was identified within these features, comprising mid-dark grey- or yellowish-brown sandy silt with occasional to frequent small to medium sub-rounded and sub-angular stones.

3.3.4 Located close to the north-west corner of Area 2, the largest of the (excavated) sinkholes was sinkhole **61** (Fig. 8a, S.18), which measured 4.38 x 3.94m and in excess of 2.8m

deep, although the base was not reached. It is probable that several of the larger unexcavated features in Area 2 were sinkholes of similar character and depth to sinkhole **61**.

3.3.5 Two smaller sinkholes (**189** (Fig. 8a S.63) and **211** (Fig. 8a, S.75); Plates 6 and 7) were investigated (neither of which were fully-excavated) approximately 48m to the south-east and south of sinkhole **61** in an area of dispersed natural features bisected by a number of later (post-medieval) ditches.

3.3.6 Further to the south-east of sinkhole **211** was a cluster of similar, fairly small, circular and sub-circular sinkholes (Pit/Sinkhole Group 1 (Fig. 8a): **187** (S.62), **193** (S.65), **195** (S.66), **213** (S.76), **217** (S.77), **219**, **221** (S.79), **223** (S.80), **225** (S.82) and **227** (S.83)). Of these, a number (**187**, **213, 223** and **227**) were fully excavated to reveal concave/U-shaped profiles and depths of between 0.48 and 0.78m.

3.3.7 A further scatter of possible sinkholes was located to the south of this group (**105** (Fig. 8b, S.25; Plate 8), **107** (S.26), **161** (S.50), **171** (S.55) and **191** (S.64), in an area of other natural and/or undated features (Pit/Sinkhole Group 2, see below). Two of these (**107** and **171**) were fully-excavated and found to be quite shallow, perhaps suggesting that just the upper parts of the features were exposed, or that they were some other form of natural feature such as a tree hole.

Context	Cut	Category	Function	Length	Breadth	Depth	Profile
61	**61**	cut	sinkhole	4.38	2.94	2.8	Steep Sided U-Shape
62	**61**	fill	sinkhole	4.38	2.94	2.8	
105	**105**	cut	sinkhole	1.9	1.9	1	Not fully excavated (NFE)
106	**105**	fill	sinkhole	1.9	1.9	1	
107	**107**	cut	sinkhole/pit	1	0.95	0.36	u-shaped
108	**107**	fill	sinkhole	1	0.95	0.36	
161	**161**	cut	sinkhole	1.24	1.13	0.84	Unknown
162	**161**	fill	silting	1.24	1.13	0.84	
171	**171**	cut	sinkhole	0.8	0.8	0.16	U-Shaped
172	**171**	fill	Sinkhole	0.8	0.8	0.16	
187	**187**	cut	sinkhole	0.96	0.96	0.58	U-Shaped
188	**187**	fill	sinkhole	0.96	0.96	0.58	
189	**189**	cut	sinkhole	1.85	1.8	1	NFE
190	**189**	fill	sinkhole	1.85	1.8	1	
191	**191**	cut	sinkhole	0.73	2	0.58	NFE
192	**191**	fill	Sinkhole	0.73	2	0.58	
193	**193**	cut	sinkhole	1	1	0.78	U-Shaped
194	**193**	fill	sinkhole	1	1	0.78	
195	**195**	cut	sinkhole	0.95	0.8	0.9	NFE
196	**195**	fill	Sinkhole	0.95	0.8	0.9	
211	**211**	cut	sinkhole	1	1	0.8	unseen
212	**211**	fill	sinkhole	1	1	0.8	
213	**213**	cut	sinkhole	1.4	1.1	0.48	u-shaped
214	**213**	fill	sinkhole	1.4	1.1	0.48	
217	**217**	cut	sinkhole	1.05	1	0.6	unseen
218	**217**	fill	sinkhole	1.05	1	1	
219	**219**	cut	sinkhole	1.44	1.23	0.53	unseen
220	**219**	fill	sinkhole	1.44	1.23	0.53	
221	**221**	cut	sinkhole	0.9	0.9	0.6	unseen

Context	Cut	Category	Function	Length	Breadth	Depth	Profile
222	**221**	fill	sinkhole	0.9	0.9	0.6	
223	**223**	cut	sinkhole	1.18	1.02	0.54	u shaped
224	**223**	fill	sinkhole	1.18	1.02	0.54	
225	**225**	cut	sinkhole	1.5	1.45	0.9	unseen
226	**255**	fill	sinkhole	1.5	1.45	0.9	
227	**227**	cut	sinkhole	2	1.2	0.7	u-shaped
228	**227**	fill	sinkhole	2	1.2	0.7	

Table 1: Sinkholes

Natural and/or undated pits

3.3.8 Numerous other shallow pits/natural features/burrows were also investigated in the eastern half of Area 2 (with a single very shallow example in Area 1 (Fig. 6, **14**)), some of which may also have been sinkholes but were generally shallower, had concave or irregular profiles and occasionally contained more than one fill. Some of these were located adjacent to features which produced small quantities of prehistoric or post-medieval material (see Periods 1–2 below) and which may have been anthropogenic in origin; however, it has not been possible to assign them confidently to a specific phase, given the lack of dating evidence or any other finds. The more irregular features (*e.g.* **113**, **119**, **139** *etc*) may represent tree throw or tree planting pits, or possibly the remnants of animal burrows.

3.3.9 These features were predominantly circular or sub-circular in plan or formed an elongated oval. They ranged from 0.34m (a possible posthole, **130** located within Pit/Sinkhole Group 3, see below) to 1.85m long (pit **117** adjacent to the eastern edge of Area 2) and between 0.09 and 0.64m deep with wide, shallow or irregular profiles (Table 2). Most contained single mid to dark grey silt sand or silt clay fills with occasional small flint/gravel that appear to have been naturally-derived rather than the result of deliberate infilling.

3.3.10 The exception to this was pit **173** (Fig. 8b, S.56; Plate 9) located in the southern part of Area 2, within Pit/Sinkhole Group 2. This large feature had a diameter of 2m and was the deepest of the undated features at 0.64m: it was also notable for the presence of three fills (174–176) which appear to have accumulated from east to west, suggesting deliberate infilling rather than natural processes. Although no finds were recovered, this pit was located fairly centrally within a group of other features/sinkholes which produced small quantities of worked and burnt flint, including one (**145**) which contained sherds of Late Neolithic Grooved Ware pottery (see Period 1.1 below).

3.3.11 This south-east corner of Area 2 also contained the main group of undated/natural features (Pit/Sinkhole Group 2; see above). This formed a dispersed swathe of pits interspersed with a number of sinkholes (described above) and several features assigned to Period 1 (see below) which extended from the south-east corner up to the northern edge of Area 2. These comprised: **139** (S.39), **147** (S.43), **149** (S.44), **153** (S.46), **155** (S.47), **165** (S.52), **167** (S.53), **179** (S.58), **181**, **183** (S.60) and **185** (S.61) (Figs 7 and 8b). Charcoal from the fill of pit **185** returned a possibly erroneous Middle Saxon date (see Section 3.6 below), leaving it effectively undated given the dearth of other activity of this date on the site.

3.3.12 A small group of similar elongated features located close to the south-eastern limit of excavation (**109**, **113**, **117**; Fig. 8b, S.28, 29 and 31) may have been tree throws or may possibly have been associated with the post-medieval ditches contemporary with the brickmaking (Period 2.1) in Area 1.

3.3.13 A further group of undated pits and a possible posthole (**115** (Plate 10), **119** and **130**; Fig. 8b, S.30 and 32) lay within a cluster of features/sinkholes in the north-east corner of Area 2 (Pit/Sinkhole Group 3, see below). Some features in this group produced small quantities of flint and sherds of Early Iron Age pottery (the latter from pit **123**) and are described under Period 1.2 below. It is possible that the undated features were related to this 'background' prehistoric activity, especially if feature **130** was a posthole, although a natural origin is equally feasible.

Context	Cut	Category	Function	Length	Breadth	Depth	Profile
14	**14**	cut	natural feature	0.92	0.92	0.14	U-shaped
15	**14**	fill	Silting	0.92	0.92	0.14	
109	**109**	cut	natural feature	2	0.82	0.48	U-Shaped
110	**109**	fill	Silting	2	0.82	0.48	
113	**113**	cut	Natural	1	1.18	0.61	Irregular U-Shape
114	**113**	fill	Natural	1	1.18	0.61	
115	**115**	cut	pit?	1.3	1.26	0.24	Flat Based U-Shape
116	**115**	fill	pit?	1.3	1.26	0.24	
117	**117**	cut	Tree pit?	1.85	1.02	0.16	U-Shaped
118	**117**	fill	Silting in tree pit?	1.85	1.02	0.16	
119	**119**	cut	Tree pit?	1.5	0.9	0.43	Wide U Shaped
120	**119**	fill	Tree pit?	1.5	0.9	0.43	
130	**130**	cut	Post hole?	0.34	0.34	0.33	U-Shaped
131	**130**	fill	Natural Silting	0.34	0.34	0.33	
139	**139**	cut	Tree pit?	1.8	1.2	0.39	Irregular U Shape
140	**139**	fill	Tree pit?	1.8	1.2	0.39	
147	**147**	cut	natural feature	1.5	0.65	0.22	Shallow U-Shaped
148	**147**	fill	Silting	1.5	0.65	0.22	
149	**149**	cut	natural feature	1	0.95	0.18	U-Shaped
150	**149**	fill	Silting	1	0.95	0.18	
153	**153**	cut	natural feature	0.95	0.6	0.12	Uneven U shape
154	**153**	fill	Silting	0.95	0.6	0.12	
155	**155**	cut	Natural	0.5	1.12	0.22	Uneven U Shape
156	**155**	fill	Silting	0.5	1.12	0.22	
165	**165**	cut	natural feature	1.33	0.7	0.32	Uneven U shape
166	**165**	fill		1.33	0.7	0.32	
167	**167**	cut	natural feature	0.85	0.64	0.45	U shaped
168	**167**	fill	Silting?	0.84	0.64	0.45	
173	**173**	cut	Undated feature	2	1.9	0.64	U-Shaped
174	**173**	fill		0.62	0.62	0.4	
175	**173**	fill	Undated feature	0.86	0.86	0.6	
176	**173**	fill		1.3	1.3	0.6	
179	**179**	cut	Tree pit	0.8	0.8	0.25	U-Shaped
180	**179**	fill	Silting	0.8	0.8	0.25	
181	**181**	cut	Tree pit/burrow	0.95	0.8	0.62	Unknown
182	**181**	fill	Tree pit/ Animal burrow	0.95	0.8	0.62	
183	**183**	cut	natural feature?	1.24	1	0.3	U-Shaped
184	**183**	fill	Silting	1.24	1	0.3	

Context	Cut	Category	Function	Length	Breadth	Depth	Profile
185	**185**	cut	Pit/natural feature?	0.5	0.5	0.09	Flat U shape
186	**185**	fill	Silting	0.5	0.5	0.09	

Table 2: Natural/undated features

3.4 Period 1: Prehistoric (*c*. 4000BC – *c*.350BC)

3.4.1 Most features (and their associated fills) assigned to Period 1 – predominantly located in the eastern half of Area 2 – are indistinguishable from those described under Period 0, apart from the presence of low levels of prehistoric finds. Two post-medieval features (ditch/gully **151** and pit **18**; see below) also produced residual finds of probable prehistoric date: a struck flint, an Early Neolithic pottery sherd and an undiagnostic sherd of prehistoric pottery.

3.4.2 Several discrete pits have been assigned to this phase, although some may be natural in origin, alongside a number of solution hollows/sinkholes. Finds of struck flint, burnt flint and occasional pottery sherds found in the sinkholes in particular had presumably originated from top surface scatters which had become incorporated into the fills during their gradual formation. However, some finds (notably Grooved Ware, larger burnt flint deposits and a small group of Early Iron Age pottery) may represent more deliberate deposition. This, together with the presence of the scattered material, is indicative of more general activity in this location (close to the River Yare) during the later prehistoric period. Although the flint assemblage exhibits very few chronologically-diagnostic features, the technological traits of the material suggest that the vast majority is of Neolithic to Early Bronze Age date (see App. B.2).

Period 1.1: Neolithic to Early Bronze Age (c.4000BC – c.1600BC)

3.4.3 The earliest dated find from the site is a single sherd (12g) of Early Neolithic pottery that was recovered from a post-medieval pit (**18**; Period 2.2) in Area 1 that was clearly residual in this context.

Sinkholes and pits

3.4.4 Of note, is vertically-sided sinkhole **141** (Fig. 9, S.41; Plate 11) located within a dispersed group of solution hollows and natural features (Pit/Sinkhole Group 2) in the southern part of Area 2. The single mid greyish-brown silty sand fill of this feature, which measured 1.45m wide and in excess of 1.2m deep, produced 16 sherds (42g) of Late Neolithic Grooved Ware pottery alongside 11 pieces of struck flint and 10 fragments of burnt flint (see App. B.2 and B.5). The quantities of pottery and other finds in this feature are suggestive of activity in the vicinity in this period, and potentially of deliberate deposition.

3.4.5 A number of other solution hollows in this area contained prehistoric material (generally worked and/or burnt flint), most of which was in very small quantities and are therefore likely to be incidental inclusions. Adjacent to sinkhole **141**, in the south-east corner of Area 2, sinkhole **157** (1.6m wide and in excess of 1m deep; Fig. 9, S.48) produced a single worked flint (a secondary flake) from the upper part of its fill. Positioned to the south-east of sinkhole **141**, the fill (122) of 1.9m-wide sinkhole/feature **121** (Fig. 9, S.33) contained two struck flint flakes and a single piece of burnt flint.

3.4.6 Another large feature, sinkhole **145**, was located on the north-eastern edge of this loose cluster of features and measured 1.6m-wide (Fig. 9, S.42; Plate 12). It contained a collection of worked flints (six, including an end scraper), in addition to a small amount of burnt flint (six pieces).

3.4.7 Two further probable sinkholes (**163** and **169**; Fig. 9, S.51 and 54), located to the west of sinkhole **145** (on the northern edge of Pit/Sinkhole Group 2), measured a maximum of 1.9 and 1.5m wide respectively. These both produced small quantities of flint from their single (upper) fills: sinkhole **163** contained eight struck flints and sinkhole **169** produced two pieces of burnt flint alongside two struck flints. The latter also contained three sherds of intrusive Roman pottery that are not closely datable, while the assemblage of flint from sinkhole **163** displayed somewhat more edge damage and breakage than that from other features and had a less coherent character than the other assemblages.

3.4.8 Positioned close to sinkholes **163** and **145** on the northern edge of the group was a shallower pit-like feature, **159**, that measured 0.78m wide and 0.12m deep with a shallow concave profile (Fig. 9, S. 49). Its single silt sand fill produced two struck flints and four pieces of burnt flint.

3.4.9 Further to the south-east of these was another sinkhole or pit (**98**; Fig. 9, S.22; Plate 13), lying adjacent to the edge of excavation. This measured 1.5m wide and 1.16m deep with steep sides and a concave base; it contained a series of four infills (99–102), all comprising loose deposits of silt/sand. Although no finds were recovered, a sample of hazel nutshell from secondary fill 101 submitted for radiocarbon dating returned a calibrated date range within the Late Neolithic to Early Bronze Age period (2338–2145 cal BC @95.4% confidence, SUERC-89927; see Table 5).

3.4.10 A cluster of features in the north-east corner of Area 2 included pits and sinkholes that produced a range of finds (Pit/Sinkhole Group 3). The largest of these was sinkhole **132** (Fig. 9, S.38; Plate 14), located in the north-east corner of Area 2, the upper excavated portion of which revealed two mid to dark greyish-brown silty sand fills. The lower, more compact, fill (134) produced a single small sherd of prehistoric pottery that is not closely datable alongside 12 worked flints (including a core) and a significant quantity of burnt flint (*c*. 5.5kg, App. B.2). Although charcoal was also recovered from an environmental sample from this fill, it was not of sufficient quantity to provide a reliable sample for radiocarbon dating.

3.4.11 Located adjacent to sinkhole **132** was a pit (**128**) that measured 1.3m wide and at least 1m deep (Fig. 9, S.36); this was probably another sinkhole (Plate 15). A single struck flint and a small fragment of clay pipe stem were recovered from this feature, the latter of which is considered to be intrusive.

3.4.12 An isolated pit (**48**; 0.9m wide and 0.2m deep; Fig. 9, S.14) was located close to the northern limit of excavation and produced a single worked flint.

Period 1.2: Early Iron Age (c.800 – 350BC)

3.4.13 A single pit (**123**) located to the south of sinkhole **132** in the north-west corner of Area 2 (Pit/Sinkhole Group 3) is of note as it produced a small assemblage (13 sherds) of Early Iron Age pottery (App. B.5). The pit measured just over 1m wide and 0.26m deep with steep sides and a flat base (Fig. 9, S.34; Plate 16). It contained two silt sand fills, the uppermost of which (125) produced the pottery, an environmental sample from this fill produced only charcoal (App. C.3). This suggests the possibility that the large amount of burnt flint recovered from nearby sinkhole **132** (see above) may have been related to Early Iron Age (rather than earlier) activity occurring in the vicinity of the site.

Context	Cut	Period	Feature type	Object name	Count	Weight (g)
49	**48**	1.1	pit	Flint (struck)	1	6
122	**121**	1.1	Natural feature	Flint (struck)	2	
122	**121**	1.1	Natural feature	Flint (burnt)	1	132
125	**123**	1.2	pit	Pottery (Early Iron Age)	13	55
125	**123**	1.2	pit	Flint (struck)	1	1
129	**128**	1.1	Natural feature	Flint (struck)	1	1
129	**128**	1.1	Natural feature	Tobacco pipe (intrusive)	1	11
129	**128**	1.1	Natural feature	Animal bone	1	2
134	**132**	1.1	Natural feature/ Sinkhole	Pottery (prehistoric)	1	2
134	**132**	1.1	Natural feature/ Sinkhole	Flint (struck)	12	
134	**132**	1.1	Natural feature	Flint (burnt)	235	4189 (1459)
142	**141**	1.1	natural feature	Pottery (Late Neolithic)	16	42
142	**141**	1.1	Natural feature	Flint (struck)	11	
142	**141**	1.1	Natural feature	Flint (burnt)	10	196
146	**145**	1.1	Natural feature	Flint (struck)	6	
146	**145**	1.1	Natural feature	Flint (burnt)	6	83
158	**157**	1.1	Natural feature	Flint (struck)	1	
160	**159**	1.1	pit	Flint (struck)	2	
160	**159**	1.1	pit	Flint (burnt)	4	298
164	**163**	1.1	Natural feature	Flint (struck)	8	
170	**169**	1.1	Natural feature	Flint (struck)	2	
170	**169**	1.1	Natural feature	Flint (burnt)	2	53
170	**169**	1.1	Natural feature	Pot (Roman)	3	37

Table 3: Period 1 finds overview

3.5 Period 2: Post-medieval (16th to 18th century)

3.5.1 Following a hiatus of nearly two thousand years the site next witnessed significant use in the early post-medieval period, when John Balleston acquired the land and established Balleston Newfound.

Period 2.1: 16th to early/mid 17th century

3.5.2 The remains of four brick kiln structures (Plates 1–3; 18–41; Figs 5–6 and 10), one representing a pair of kilns, along with numerous clay extraction pits that had been backfilled with ceramic building material and other debris were located in Area 1, corresponding with a change in the geology (see Section 1.2.2 above). At least one ditch system (Ditch Group 1) seems to have been associated with this phase, extending across both excavation areas. Although few artefacts could be directly associated with the

construction and use of the kilns, most of which were of simple updraught design (see Discussion), analysis of the bricks (both *in-situ* and redeposited; App. B.7) indicates that the earliest examples were probably in use during the late 15th to 16th centuries, although documentary evidence suggests that they were probably established in the late 16th century. The latest example (Kiln 21) was certainly still partially open but presumably no longer operating when pottery production was underway here in the early to mid-17th century (see Period 2.2 below).

3.5.3 Many of the excavated quarry pits appear to have been associated with specific kilns and are therefore described with them, although several clearly predated the kiln structures, with some seemingly being subsequently utilised in their subsurface construction. Large parts of Area 1 may have previously been quarried and backfilled, as was found during the evaluation (*e.g.* Trench 5, E21) and in the area cut by Ditch Group 2 (Period 2.2); a large swathe of what appears to have been redeposited natural was also identified extending around Kiln 34.

3.5.4 The four excavated kilns survived to varying degrees, represented only by the subterranean elements, with the best-preserved example being Kiln 21. There is some suggestion from the analysis of the ceramic building material (and supported to some extent by the radiocarbon dates) that two phases of brick and possibly tile manufacture may be represented, with adjacent/double Kilns 241 and 242 (Kiln Group 229) at the eastern edge of the excavation being slightly earlier than the others positioned to the north-west (App. B.7). The bricks of Kilns 34 and 52 were of similar size to the majority of those from Kiln 21, although those in Kiln 34 (including those recovered from its fill) were generally slightly shorter than the others. A full consideration of the kiln chronology is given in the Discussion (Section 4.3).

3.5.5 In the following description, the boundary/drainage ditches are described first, followed by the kilns which are described chronologically and spatially (from south-east to north-west), along with any associated quarry pits.

Ditch Group 1

3.5.6 A series of boundary or drainage ditches (Ditch Group 1) was identified extending across both Areas 1 and 2 (Figs 5 and 6) which, although generally undated, may have been contemporary with the use of this land for brick production. Ditch Group 1 was aligned on a broadly north-east to south-west axis, with the most easterly elements (**36**/**96**, **103** and possibly **111**/**151**) perhaps delineating the area occupied by Kiln 21 and associated extraction pits (see below). Where these ditches extended into Area 2, they were found to cut 'dirty' yellowish brown sandy clay deposits (40 and 41; Fig. 16a, S.12) of unknown extent; interpreted as possible colluvium, they may represent backfills within earlier extraction pits (see Crawley 2013, 27 and fig. 7). Ditch **36**/**96** (Fig. 16a, S.11 and 12) measured approximately 30m long, 0.8–1.12m wide and 0.21–0.38m deep with rounded terminals, steep sides and a rounded base (Plate 17). The single yellowish brown silty/sandy clay fill (37/97) produced no finds.

3.5.7 A possible 5m-wide gap or entrance was evident between the terminal of this ditch and that of ditch **103**, which was laid out at right angles to it in Area 2. This ditch measured a maximum of 1.2m wide and 0.3m deep with a wide concave profile (Fig. 16a, S.23).

No finds were recovered from its single fill (104). Positioned parallel to this ditch, narrow ditch/gully **111/151** was 0.38m wide and 0.02–0.11m deep with a shallow concave profile (Fig. 16a, S.27). Its single silt sand fill (112/152) produced a small (3g) sherd of undiagnostic prehistoric pottery and a struck flint that are both likely to be residual.

3.5.8 Further to the west (*c*.48m) in Area 2, a further two ditches (**201/207/209** and **50/59/205**) were identified on broadly the same alignment as ditches **103** and **111/115**. However, ditch **201/207/209** was recorded as cutting another ditch (**199/203**; Fig. 16a, S.68) which seems to be on the same orientation as ditch **4/6/16** of Ditch Group 2 (see Period 2.2 below) and it is feasible that these both belong to a later phase. Ditch **201/207/209** terminated within the excavation area, and measured a maximum of 0.84m wide and 0.21m deep with a shallow, rounded profile (Fig. 16a, S.74). Its single yellowish-grey brown silty sand fill (202/208/210) contained no finds. Positioned approximately 38m to the north-west of ditch **201/207/209**, ditch **50/59/205** was between 0.73m and 1.12m wide and 0.2–0.45m deep with a U-shaped profile (Fig. 16a, S.15, 17). No finds were recovered from its single gravelly silty sand fill (51/60/206).

Kiln Group 229

3.5.9 Kiln Group 229 (Figs 10 and 11, Plates 18–23) was located adjacent to the southeastern edge of Area 1 and comprised two adjacent and parallel kilns aligned north-east to south-west. This alignment appears to match that of an adjacent track shown on historic maps running to the immediate south-east of the kilns that previously led from Newfound Farm/Colney Lane down to a further complex of probable kilns (pottery) and clay pits to the south-west (NHER 9406 & see Discussion; Fig. 17). These adjacent kilns appear to have formed a broadly contemporary pair rather than a single double-chambered kiln, common to the Suffolk-type kiln design. No evidence of a central spine wall – a characteristic of excavated Suffolk-type kilns (*e.g.* Euston, Suffolk; Brooks 2015, fig. 8 and see Discussion) – was found between the kilns, which were spaced approximately 1m apart.

3.5.10 Both kilns were constructed within narrow steep/vertical-sided rectangular cuts with flat bases (Fig. 11). In plan, these appeared to be approximately 13m long, tapering at the south-western extents, between *c*.1.2m (**231**) and 1.6m (**230**) wide, and with an average depth of 0.55m. At the north-eastern end of the kilns there was a slight 'bulge' (4.75m wide) where the entrances and firing/raking out pit (**232**) appear to have been located. The latter was infilled with a sequence of fills (Fig. 11, S. 87; Plate 18), the earliest of which comprised an initial gritty silty clay infilling an area of uneven ground (256). This was overlain by a 0.32m-thick black deposit of burnt, trodden debris and charcoal (255) that was presumably raked out from the kiln and was similar to the earliest deposits recorded within the base of kiln cut **231** to the immediate south (Plate 19). Within cut **232**, these were sealed beneath clay and rubble fills (254–253) relating to the disuse of the kilns, from which no finds were recovered.

3.5.11 Remnants of the subterranean elements of the brick fire boxes and tunnels survived intermittently within both kilns, built one course thick hard up against the construction cut. The south-western extents of the walls (233 and 234) within Kiln 241 had been removed by a later truncation (presumably a quarry pit; Plate 20), with the surviving portions suggesting that they had originally extended for a length of at least 5.5m.

Furthermore, following heavy rain elements of the south-western ends of the structure, which were in very poor condition, collapsed and disintegrated. The heat-affected area (where no bricks had survived) in the base of Kiln 241 extended for several metres to the south-west from the stoke/firing hole, perhaps indicating that the tunnel walls were originally longer but had been removed at some point. It was noted that behind the bricks in both kilns there was what appeared to be red unfired clay that may indicate a further course of 'green' bricks laid against the construction cuts.

3.5.12 Both kilns were constructed with unfrogged brick (*c*.245 x 120 x 50–55mm) laid end to end (stretcher bond; Plates 20–23) and bonded with a friable dark grey sandy clay 'mortar'. The bricks had been fired to a dark red colour and were very brittle and often fragmentary; both inner faces of the kilns had been blackened with soot and the effects of high temperatures. The floors of the kilns do not appear to have been brick-lined and it is likely that puddled clay had been laid here. Areas of hardened red/black/grey clay with frequent charcoal and small pieces of brick survived in the bases of both kilns (237 and 238), notably towards the northern end of easternmost Kiln 242, resulting from repeated firing of the kilns. A single sherd of pottery datable to the 16th–18th century was recovered from layer 238 in Kiln 242. At the northern end of cut **231** for this kiln, a thin (4cm) layer of charcoal and ash (247) was also recorded, which overlay an initial fill (248) in the base of the cut close to the kiln entrance (Fig. 11, S. 87; Plates 18–19). A further lens/layer of mixed silt/clay and burnt debris (246) overlain by a trample layer (245) were identified above this that appear to relate to the final use/firing of the kiln.

3.5.13 The walls/lining of westernmost Kiln 241 survived to a height of 0.54m on the north-west side (233) and 0.75m on the south-east (234), represented by a maximum of eight courses of brick (Plates 20–21). At the northern end of the kiln, the tunnel narrowed slightly towards what was presumably the entrance and possibly the stoke hole, although this section may represent an earlier build or even a repair or slump. Located approximately 4m from the northern end of the kiln, the bases of a series of arch/rib 'springers' survived along wall 234, constructed from the 7th course and laid (generally) in more of a Flemish bond, two bricks wide and slightly angled (Plates 20–21). These would have supported the main kiln firing chamber above, allowing heat to circulate; more complete remains of the arches were found in Kiln 21 to the north-west (see below).

3.5.14 Similar evidence was found within the northern part of Kiln 242 (where eight brick courses also survived), with both walls 235 and 236 showing clear remains of arch spring bases along their top courses, although these were all laid parallel to the main wall below, angled at around 45 degrees (Plates 22–23). Evidence of a possible slump/repair in the brick lining walls was also present at the north-eastern end of this kiln, where the main area of burning was evident, close to the entrance (Fig. 11, Plate 23).

3.5.15 Following their disuse, both kilns (and the rake-out pit/stokehole) were backfilled with thick layers of red/brown/grey silty clay containing varying amounts of demolition rubble, comprising crushed/fragmentary broken bricks (similar to those from the construction of the kilns) and redeposited clay (Fig. 11, S. 87). No finds were recovered from these deposits, which comprised: 252, 250 and 251 in the northern part of kiln cut **230** (Kiln 241); 249, 244 and 243 within the northern part of kiln cut **231** (Kiln 242); and

257 and 258 within the brick chambers of Kilns 242 and 241 respectively. It is likely that these kilns were decommissioned at some point (during the later 16th century), presumably to be replaced by the kilns to the north-west (see below and Discussion).

Quarry pits possibly associated with Kiln Group 229

3.5.16 Adjacent to this 'dual' group of kilns was a large sub-rectangular cut (**239**) which measured 9.27m long, 2.1m wide and 0.5m deep, with steep sides and a generally flat base (Fig. 16a, S.86). This was probably a quarry pit which may also have served to help with drainage during the operation of the kilns. Although essentially undated, the presence of small quantities of brick (not retained) in the single silty sand backfill (240) combined with the position, size and alignment of the cut suggests that it was contemporary with the adjacent kilns.

3.5.17 Two more irregular and shallow pits (**302** and **271**) to the south-west may have been associated/contemporary, although both produced small quantities of pottery wasters and as such are described under Period 2.2 below. However, pit **275** was cut by pit **271** and may have been contemporary with the kilns. Its full extent is not known, although it measured at least 1.8m wide and 0.4m deep with fairly steep sides and a flat base (Fig. 16b, S.90). It contained four dark to yellowish brown clay backfills (276–8 and an unnumbered deposit), none of which produced finds.

Kiln 34

3.5.18 Positioned approximately 13m to the north-west and aligned at right angles (south-east to north-west) to Kiln Group 229 was another kiln of very similar design (Fig. 12; Plates 24–29). Kiln 34 was deeper, seemingly utilising an area of previous quarrying (possibly contemporary with Kiln Group 229), although these elements were generally recorded in plan only and are not described further.

3.5.19 The construction cut (**33**) for Kiln 34 measured 7.4m long, 1.6m wide and 0.9m deep, with vertical sides and a flat base (Fig. 12; Plate 24). Constructed within this were the subterranean elements of the kiln, including the fire box below the main chamber, comprising brick walls lining the south-west (27), north-west (215) and north-east (26) sides and a rudimentary puddled clay floor (35; Plate 25), with the entrance to the south-east. A large pit (**135**) – the full dimensions of which were not exposed – located outside of the entrance (Figs 10 and 12; Fig. 16a, S.81) may have been the remnants of a stoke-hole or rake-out pit given its position and the presence of charcoal and other burnt debris and CBM in its (undated) fill 136, although an origin as a clay quarry pit is likely.

3.5.20 The irregular construction of the walls, alongside the presence of various stubs/additions to the external face of wall 27, indicate possible flues or phases of repair, consolidation and rebuilding of the kiln over its lifetime (Fig. 12; Plates 24–29). This is also illustrated by the construction of the main side walls – the lower two to three courses of which were laid (mortared) in stretcher/English Garden wall bond but above this the courses became more irregular and 'patchy'. The bricks in walls 26 (double course thick; Plate 26) and 27 (one to two courses thick) were similar, recorded as measuring approximately 230x110x50mm. Those within end wall 215 were slightly different and measured *c*.250x110x70mm (although see App. B.7 for more detailed

measurements), suggesting a possible later rebuild, although just two courses of this wall survived. The bricks used to patch the clay floor (35; Plate 25) had been cut in half (115x110x50mm) from bricks of the same dimensions as those in the main side walls.

3.5.21 At the north-western end of the kiln the remains of a brick arch (138; Plate 27) rib or kiln bar were found that had collapsed into the kiln firebox/tunnel below. It comprised three courses with the bricks still mortared together lengthways: these appeared to have been of similar dimensions (with some variation) to those used within the rest of the kiln.

3.5.22 Evidence of multiple firings of the kiln was provided by the vitrification of many of the bricks, the brittle/reduced surfaces of which showed a distinct blue discolouration, with carbon/charcoal deposits adhering to their lower faces and along the base/floor of the kiln (35; Plate 25). Overlying the base of the kiln was a loose, 0.23m-thick layer of dark grey silty sand containing frequent charcoal (29) (Fig. 12, S.8; Plate 29). This deposit appears to have been related to the final firing/use of the kiln before it was abandoned and infilled (see Period 2.2 below) and analysis of the charcoal from a sample of this contained frequent gorse-type round wood (Sample 1; App. C.3). An area of hard/burnt clay (137) extending to the south and adjacent to kiln wall 27 (Plate 28) may indicate a further area of firing/side chamber, possibly associated with the short wall stub to the south-east. Alternatively, it could represent an earlier phase of brick production, possibly even the location of a brick clamp. Following its disuse, Kiln 34 was infilled with brick rubble (Plate 29 and see below).

Kiln 52

3.5.23 Perhaps the least well-preserved of the kilns, Kiln 52, was located approximately 22m to the south-west of Kiln 34 and was first identified within evaluation Trench 5 (possibly as Structure E25 in cut **E24** or E27 in cut **E26**; Crawley 2013, 28–29). The design of this kiln, which was aligned north-east to south-west but on a slightly different orientation to that of Kiln Group 229, differed from the other excavated examples in that it was slightly broader in plan and did not have subterranean elements. Although the construction cut (**56**) was poorly-defined, it appeared to measure a maximum of 4.7m x 3m in plan, was 0.22m deep with vertical sides and a flat base (Fig. 13; Plates 30–34).

3.5.24 Remnants of the kiln walls survived to varying degrees and had generally been built up against the cut (Fig. 13, S.16). More than one phase of construction appears to have been represented, with walls 72 and 54 possibly relating to a slightly later structure. Where dimensions were discernible, the bricks in all elements of the kiln measured approximately *c*.230x110x50mm. The earlier structural elements, forming the outer south-western edge (53) and south-eastern sides (73), survived as degraded areas of fired and reddened clay, with no bond or coursing discernible, while the north-east wall of the kiln appears not to have survived, apart from occasional burnt bricks (Plates 30–32).

3.5.25 The base of the kiln (57) comprised a hardened silty clay that had been fired to a dark reddish brown colour interspersed with patches of charcoal. A group of eight bricks (71; Plate 33) identified in the south-west corner adjacent to wall 53 appeared to be more irregular/jumbled in plan suggesting that they may have been the remains of a stack of

fired bricks that had been left *in situ* or possibly stored in this (?earlier) part of the kiln. They are described as underfired by the specialist (see App. B.7).

3.5.26 Later walls 72 and 54 formed an L-shape in plan (Fig. 13) and were constructed from heat-affected bricks laid lengthways (stretcher) in two (possibly three) courses, that may originally have been mortared. Abutting these was an area of bricks (70; Plate 34) of the same dimensions laid lengthways (stretcher), extending for 1.67m x 0.5m parallel to wall 54, with alternate 'gaps' evident between the bricks forming second row (Plate 32). These may represent part of an internal firing surface or alternatively may have been remnants of the last load of bricks to be fired in the kiln.

3.5.27 The kiln was infilled with demolition deposits that were related to its disuse, presumably in Period 2.2 (see below).

Kiln 21 and associated features

3.5.28 Kiln 21, located *c*.30m to the north of Kiln 52 and aligned almost east-west (WNW-ESE), was the best-preserved (and deepest) of the kilns identified within Area 1 (Fig. 14; Plates 35–41) and, like Kiln 34, was also initially identified within evaluation Trench 5 (possibly as Structure **E9** within cut **E8**; Crawley 2013, 28–29).

3.5.29 The subterranean elements of this kiln utilised an area of earlier inter-cutting sub-rectangular and sub-circular quarry pits presumably dug to extract clay and sand/gravel for use in this or other nearby kilns (Fig. 14, S. 21; Plate 35). The full extents of these pits were not investigated and/or had been truncated by later features, although the earliest cuts (**92** and **95** (possibly part of the same feature) measured in excess of 1m wide and 0.71m deep with moderately steep sides; their bases were not exposed. Both pits contained similar silty clay backfills (93 and 77) which produced no finds. Another undated pit (**318**) with a similar fill (319) was located to the west and measured *c*. 3.5m long and in excess of 0.2m deep. Pit **92** was cut by a wide shallow cut (**90**) that may also have been a quarry pit: it measured 3.16m wide and 0.6m deep and contained two mid brown-grey silty clay fills (91 and 76) which produced no finds.

3.5.30 This group of quarry pits was truncated by a large sub-rectangular pit (**74;** Fig. 14, S. 21; Plate 35) with moderately steep sides and a flat base, which was at least 5m wide and 1.2m deep. This cut may have been another existing quarry pit or been dug deliberately in part to house the eastern part/entrance of Kiln 21. Unlike the earlier quarries, it had been backfilled with silty clay containing what appeared to be crushed brick rubble (not retained) mixed with redeposited clay (75; Fig. 14; Plates 35, 37–39), possibly to act as insulation and support for the brick walls forming the firebox and tunnel of the kiln. The main chamber of the kiln was constructed within a narrower and more rectangular cut (Plate 36).

3.5.31 A number of elements related to the below-ground structure of Kiln 21 survived, within which there was some evidence for repair/rebuilding, notably within the main entrance located at its eastern end. In total, the brick elements of the kiln measured approximately 8m long, the main chamber at the western end was 2.8m wide, narrowing to 1.5m just over halfway along (4.5m) to form the firing tunnel/flue leading to the stoking and/or rake-out pit (Fig. 14). The main outer walls comprised: 21 (south), 78 (west), 79 (north), with the firing tunnel walls/entrance numbered 80 (north) and 81

(south). The bricks forming the main outer walls and internal elements (see below) were very similar to those within Kiln 52 and most of Kiln 34, measuring approximately *c*.230x110x50mm (see App. B7 for specific dimensions). These walls were recorded as being between 0.4m (79) and 0.8m (21) thick, representing at least double-brick thickness, and were constructed in an irregular (possibly Flemish-style) coursing and bonded with a hard reddened-clay 'mortar'. As seen in the other kilns, the internal wall faces were often vitrified or reduced as a result of the high firing temperatures (Plates 39–41).

3.5.32 The walls forming the firing tunnel (80 and 81; Plate 40) may have been repaired as they were constructed using more conventional lime mortar, although they were laid in the same rough coursing and the bricks were the same size as elsewhere in the kiln. These walls were the least well-preserved, with large sections having collapsed and no arch/superstructure surviving, although the angled bricks forming the base of the arch(es) were present.

3.5.33 One of the most significant aspects of Kiln 21 was the survival of the arches or ribs that would have supported/formed the floor of the main firing chamber in the western part of the kiln. Of the 11 extant arches (22–25; 82–88; Plates 36–41), two were incomplete and had mostly collapsed, showing patches of mortar (?repair), with a void below. The more complete arches measured 2.10m long, at least 0.42m thick and 0.23m wide and were constructed from the same bricks utilised elsewhere in the kiln. The arches were roughly-coursed (with upper courses laid lengthways or sideways over the arch), spaced approximately 0.15m apart with their sides showing discolouration due to the intense heat from the fire below. A further series of narrow ribs extended from the end wall and had been mortared into the arches for additional support (Plate 41).

A.1.1 Within the base of the kiln was a layer of soft red/purple ash (94) which was thickest at the western end (0.3m), thinning to 0.15m towards the entrance. This layer, which produced few finds (other than hand-forged nails and small lumps of brick), presumably related to the last firing of the kiln before it was abandoned. However, Sample 3 from this deposit contained charcoal and coal, possibly suggesting it originated from elsewhere. A radiocarbon date obtained from some of the charcoal also suggests it may relate to later disuse (see Table 5 and Discussion).

3.5.34 The western end of the kiln was cut by a large pit (**18**) which may have been related to the demolition of its superstructure; this is described under Period 2.2.

Quarry pits possibly associated with Kiln 21

3.5.35 A number of quarry pits (notably **9**/**259** to the immediate north; pits **300**, **308** and **311** to the north-east and **293** and **297** to the south) were located close to Kiln 21, the original cutting of which may conceivably have been broadly contemporary with its use. However, the range and date of the associated finds indicates that most of these were open/ infilled in Period 2.2 and are consequently described below. No finds were recovered from pit **321** to the north of Kiln 21, which was investigated by machine. It measured 3.4m wide and in excess of 0.5m deep and contained a similar silty clay fill to that recorded in similar pits in this area.

Period 2.2: early/mid-17th to 18th century

3.5.36 This period appears to have witnessed a change in activity on or near the site, with a shift from brick production to pottery manufacture. New boundaries were established (Ditch Group 2) and there is evidence for farming and domestic occupation presumably related to the adjacent Newfound Farm.

Ditch Group 2

3.5.37 Within Area 1, to the west of the Period 2.1 brick kilns, a ditch (**4**/**6**/**16**/**38**) was laid out on a north-north-east to south-south-west alignment, cutting across ditch **36**/**96** of Ditch Group 1 (Fig. 6). It measured between 0.7m and 1.08m wide and was a maximum of 0.22m deep with moderately steep sides and a concave base (Fig. 16a, S.1). The ditch contained a single fill (5/7/17/39) which comprised a mid yellowish/grey brown silty clay with occasional gravel and large rounded pebbles. Together, these produced quantities of ceramic building material (1.6kg) similar to that found elsewhere on the site, including fragments of post-medieval brick and roof tile, alongside two small sherds (4g) of 16th to 18th century pottery from ditch **6**. Other finds comprise a piece of coal, post-medieval glass (18g), burnt unworked stone (2.8kg), a fragmentary pair of small iron shears (SF1; App. B.1) and a small amount of animal bone, including horse (0.3kg), the latter from ditch **4**.

3.5.38 Located towards the centre of Area 2 was ditch **46**/**197**/**199**/**203** (Fig. 16a, S.68 and 71; Plate 42) that was recorded as being stratigraphically earlier than ditch **207** of Ditch Group 1 (see above), although the fills were almost indistinguishable. As the ditch followed a similar alignment to ditch **4**/**6**/**16**/**38** in Area 1, it has tentatively been assigned to this phase. The ditch, which extended for 58m from the northern edge of Area 2 before terminating, measured between 0.45m and 1.1m wide with a concave profile and was at its deepest (0.24m) at its northern extent (**203**). No finds were recovered from its single yellowish/grey brown silty clay fill (47/198/200/204).

Area 2 pits

3.5.39 Possibly contemporary with the ditches was a sub-circular pit (**44**) located to the east of ditch **46** and which measured 1.28m long, 0.68m wide and 0.2m deep with a shallow concave profile. Its single silty clay fill (45) produced just over 1kg of ceramic building material comprising a fragment of roof tile and part of a post-medieval brick. A small pit or post-hole (**177**, 0.5m wide and 0.25m deep; Fig. 16a, S.57) was located to the south-east of pit **44**, close to the northern edge of Area 2 and adjacent to a large unexcavated pit or sinkhole. This contained a single dark grey-brown silty sand fill (178) which produced a fragment of post-medieval tile (24g) and one sherd of 16th to 18th century pottery (23g).

Disuse and infilling of kilns

At some point in the 17th century the remaining – presumably derelict – kilns (21, 34 and 52) were abandoned/demolished and ultimately infilled. In contrast to the feature fills assigned to Period 2.1, the backfills in the Period 2.2 features are notable for containing a greater quantity and range of finds, much of which related to pottery

production very close to the site, although it does not appear that the brick kilns were directly related to the latter (see App. B6). In addition to kiln furniture and pottery wasters, the pit and ditch fills were also notable for the presence of waste material of a more domestic origin, including animal bone indicative of on-site breeding/husbandry, oyster shell, clay tobacco-pipes, glass bottles and occasional metal objects.

Kiln 34

3.5.40 The upper sections, including most of the furnace arches, of Kiln 34 appear to have collapsed or been demolished, and the kiln filled in (Figs 12 and 16a, S. 8 and 9; Plate 29). This was evidenced by a 0.22m-thick grey brown silty clay backfill (32) with occasional stones and lenses of clay and a 0.75m-thick dumped deposit of brick and tile rubble mixed with clay (28) in a silty clay matrix that infilled the main chamber (on top of the ash deposit 29 related to its last firing). A similar deposit that was not as thick (31; 0.2m thick) overlay backfill 32 and also extended into possible rake-out pit **135** (Fig. 16a, S.81). A final fill (30) overlying these comprised a 0.22m-thick layer of mid grey-brown silty clay that appears to have accumulated due to natural processes. Of these, main backfill deposit 28 produced 0.8kg of ceramic building material and a single sherd of pottery (34g) dated to the 16th to 18th century.

Kiln 52

3.5.41 Kiln 52 was also infilled with demolition deposits that related to its disuse, comprising layers 55 (0.17m thick) and 58 (0.22m thick) of red brown silty clay containing fragmentary brick and tile and clay lenses (Fig. 13, S.16; Plate 30). Infill layer 58 produced over 8.5kg of ceramic building material, alongside small amounts (0.3kg) of coal, shale and cinder, and 0.2kg of fired clay including five hard rounded lumps containing coal chips. In addition, 41 pottery sherds (2.4kg) including kiln wasters were recovered datable to the 16th to 18th century (but probably 17th century; see App. B6), alongside a small fragment of clay pipe stem that is not closely datable. An environmental sample (2) produced gorse-type charcoal from layer 58 overlying the floor, alongside coal and cinder (Sample 2; App. C.3).

Kiln 21

3.5.42 The main chamber of Period 2.1 Kiln 21 was truncated by a large pit (**18**), which possibly equates with pit **E8** revealed in Trench 5 of the evaluation (Crawley 2013, 26; fig. 7). This pit was sub-circular in plan, 4.5m wide and 0.58m deep with irregular, moderately-sloping sides (Fig. 14, S.7). It contained two backfills: the lowest (20) was a loose, reddish brown ashy silt (20) containing frequent tips/lenses of brick and tile rubble that directly (physically) overlay the ribs/arches within the kiln (Plate 43). The upper fill (19) was a mixed compact deposit of mid brownish yellow silty clay with occasional charcoal and frequent brick/tile rubble, especially towards the surface.

3.5.43 Fill 20 produced two tile fragments that had fused together and had glaze on the surface, alongside other pieces of possible kiln furniture. In addition, numerous sherds (47 weighing 1.9kg) of 16th to 18th century pottery – predominantly glazed red earthenware – were recovered. This fill also produced a moderately large group of vessel glass (28 shards weighing nearly 2kg) that largely dates to the late 17th to 18th century but includes a complete mid 18th to early 19th century bottle (App. B.4). Other finds

include three pieces of coal, a small fragment of clay pipe stem (undatable) and a sherd of residual prehistoric pottery. The partial skeletal remains of at least one neonate lamb and a piglet (0.12kg) were also recovered. Uppermost fill 19 produced fewer finds, although these included a thick pantile or part of specialist kiln furniture that had been knife-trimmed, alongside a single pottery sherd datable to the 16th to 17th century.

Extraction pits

3.5.44 As stated above, a number of large quarry or clay extraction pits located in the vicinity of the brick kilns may have been cut in Period 2.1 (or equally may have been related to pottery manufacture) but were clearly still open and being infilled in Period 2.2.

Pits in proximity to Kiln 21

3.5.45 Located a few metres to the north of Kiln 21 (and pit **18**), pit **9**/**259** formed an irregular sub-rectangle in plan, extending for *c*.9m from the edge of excavation. It was 3.8m wide and at least 1.8m deep with very steep to vertical sides and a possible stepped edge at a depth of *c*.1m (Fig. 16a, S.89; Plates 44–5). This feature was initially identified in evaluation Trench 5 as extraction pit **E3** (Crawley 2013, 26; fig. 7) and was first investigated during the excavation by a part-machine-excavated slot close to the edge of excavation (**9**) where four fills were exposed (10–13). These comprised mid grey-brown silty clay deposits between 0.4–0.8m thick with frequent small stones. Finds recovered from these fills largely comprised brick and tile fragments (2.5kg) and included four pantiles that are of 17th century or later date; a single fragment of clay tobacco pipe stem (5g) was also recovered that is not closely datable.

3.5.46 Further investigation by machine and hand excavation to the south-east (**259**) revealed a generally similar sequence of backfills (Fig. 16a, S.89; predominantly mid grey-brown sandy clay unless otherwise stated). The full depth of the cut was not reached, although again it was in excess of 1.8m; a possible recut/later pit (**262**) was also found towards the centre (see below and Plate 45). The earliest exposed fill (260) was 0.2m-thick and contained small brick and tile fragments (not retained). This was overlain by a 0.3m-thick loose, very dark grey fill (261) that was described as including coke and presumed to be fuel waste from a nearby kiln, which contained bones from a neonate lamb similar to those from nearby pit **18** (see above and App. C.1). Overlying this was a distinctive silty clay deposit (263) with occasional brick and tile fragments that had been tipped in from the north side of the cut, slumping down the side and across the partly infilled base of the pit. This was sealed by a thin (0.1m thick) deposit (264) containing more frequent fragments of brick and tile. Above this was a 0.7m-thick fill (265), from which 2.5kg of ceramic building material was retained as a sample: this included complete bricks and a partial flat tile, some clearly over-fired, as well as two fragments of vessel kiln furniture (0.12kg).

3.5.47 A possible central steep-sided recut (**262**) measuring *c*.2.6m wide and 1.2m deep contained a series of backfills (266–270; Fig. 16a, S.89; Plate 45) described as comprising alternating dumps of tile, silty clay and tile/pot wasters; from which no finds were retained as they were generally very fragmentary. The earliest and thickest (0.6m) fill 266 mostly comprised very fragmentary brick and tile wasters (*c*. 90% of the deposit). This was overlain by a 0.14m-thick sandy clay (267) with occasional small brick and tile fragments and a 0.3m-thick dump (268) of loose fragmentary brick and tile wasters

within a matrix of red brick dust. Above this was a 0.08m-thick deposit of pale grey-brown silty clay (269) with occasional tile fragments, while the uppermost fill (270) was a final dump of fragmentary brick and tile wasters similar to 268.

3.5.48 Positioned to the immediate south of Kiln 21 were two smaller, sub-circular pits (**293** and **297**; Fig. 16b, S. 94 and 96), both of which were investigated by machine. The more westerly pit (**293**) measured 1.55m wide and 0.8m deep with steep sides and a flat base. It contained a single silty sand fill (294) with coal/charcoal flecks and degraded brick fragments towards the surface (not retained; Plate 46), which produced 2.3kg of animal bone (predominantly horse).

3.5.49 The full extents of pit **297** were not revealed, although it was at least 1.7m wide and 1.2m deep with vertical sides, within which two silty clay backfills were present (Fig. 16b, S.96). Lower fill 298 (0.5m thick) was largely composed of redeposited natural mixed with occasional brick and tile fragments (0.6kg; a partial brick); it also produced the base of a glazed red earthenware vessel (0.2kg) datable to the 16th to 18th (17th) century. Upper fill 299, a reddish-brown silty clay, contained frequent fragments of ceramic building material alongside occasional large sub-rounded stones. In addition to a single brick (1.17kg), this fill produced 1.4kg of glazed red earthenware pottery.

3.5.50 Further to the east was a shallow sub-circular spread (3.7m wide x 0.2m deep/thick) of dumped pottery and kiln waste within a light grey-brown silty clay matrix with occasional charcoal flecks (8; Plate 47). Finds from this comprise two peg tile fragments (0.072kg), one of which is overfired, alongside 1.7kg (14 sherds) of glazed red earthenware pottery and a fragment of kiln furniture (pottery saggar).

3.5.51 A large extraction pit (**311**) was investigated (largely by machine) a few metres to the north-east of dump 8 and was found to measure in excess of 5m wide and 0.6m deep, although its full extents were not defined. Only part of the southern edge was revealed within a 1m-wide machine-cut section, within which five back fills were exposed (Fig. 16b, S.101). The lowest of these (316, not illustrated) was not excavated, but was recorded as being redeposited natural with brick inclusions. Above this was a 0.38m-thick dark grey-brown sandy clay (312) which produced quantities of pottery and kiln furniture (13 sherds, 1.12kg), predominantly comprising glazed red earthenware sherds and including two possible saggars and a ceramic ring stilt. Four bricks (*c*. 3kg) recovered from this fill include one which was burnt on two sides, one that was partially glazed and overfired and another specialist brick, that is also overfired and 'blown'. Other finds comprise oyster shell (0.018kg) and clay tobacco pipe, the latter datable to 1660–1680. Overlying this fill was a series of dumped deposits (313–15) of yellow brown to mid grey-brown sandy clays which probably represent redeposited natural; none of which produced finds.

3.5.52 Two smaller pits (**300** and **308**) were located to the north-east of pit **311** and may have been contemporary. Pit **300** was an elongated oval in plan, measuring 2.85m long and 1.26m wide with a concave profile (Fig. 16b, S.97). Its fill (301) comprised dumped brick fragments, from which two bricks were recovered (1.7kg), including an overfired example. Adjacent sub-circular pit **308** was 2.25m wide and 0.28m deep with a concave profile and contained two clay silt fills (309 and 310; Fig. 16b, S.100), neither of which produced finds.

Pits in proximity to Kiln Group 229 and Kiln 52

3.5.53 Two pits were investigated in the south-east corner of Area 1, between Kiln Group 229 and Kiln 52. The smallest of these (**302**) was sub-circular in plan and measured 2.5m wide and 0.24m deep with a shallow concave profile (Fig. 16b, S. 98). Its single sandy silt fill (303) contained charcoal fragments and produced glazed red earthenware pottery (10 sherds; 0.35kg) including some indicative of manufacturing waste, and ceramic building material (*c.* 3kg), comprising two chamfered bricks.

3.5.54 Large pit **271** to the south cut an earlier pit (**275**, see above; and Fig. 16b, S.90) and may have been associated with the processing of clay. Investigated by machine under poor weather conditions, this feature measured 8.45m by 3.7m and was 0.54m deep with irregular sides and a flat base. It contained a series of mixed fills (Plate 48), the earliest of which was a 0.3m-thick dark grey-brown sandy clay (272) which produced two sherds (0.049kg) of glazed red earthenware pottery, both of which appear to be wasters. Overlying this was a central 'dump' of dark grey clay (274), above which was an undulating fill (0.42m thick at its thickest point) of much paler grey clay that was very stiff in consistency. No finds were recovered from either of these upper deposits.

Pit Group 42 (pottery manufacturing waste pit group)

3.5.55 A significant group of intercutting pits (Pottery Waster Pit Group 42) was revealed in the north-east corner of Area 2, close to Newfound Farm (Figs 10, 15 and 16b; Plates 49–54). At least eight pits formed this group, which covered an area of *c.*14m x 6m, and were notable for the large quantities of pottery manufacturing waste and other finds recovered from their backfills (Table 4 and see App.B.6). It was generally not possible to identify clear stratigraphic relationships between the pits, especially due to the extensive reworking of deposits, and it is likely that several were open at the same time and backfilled concurrently. However, it appears that in broad terms the sequence may have progressed from the smaller pits in the south-east (**306**, **304** and **295**), which contained relatively few finds, to two similar pits (**317** and **42**), which at some point may have been cut on their northern edge by a large extraction pit (or series of pits) **283**. Pit **283** may have been equivalent to, or cut by, another pit (**279**) identified at the north-east edge of the group. Illustrations of the pottery and kiln furniture are included as Figs B6.1–16 and Plates B6.1–20.

3.5.56 Pit **306** was irregular/sub-rectangular in plan, 2m x 1.7m and 0.3m deep with steep sides and a concave base (Fig. 16b, S.99). Its single dark grey sand clay fill (307) produced a sherd of 16th to 18th century pottery (7g) and a small quantity of (0.048kg) post-medieval roof tile.

3.5.57 Positioned immediately to the north-east was rectangular pit **295** which measured 1.8m long, 1.6m wide and was 0.8m deep with vertical, sometimes undercutting, sides and a concave, uneven base (Fig. 16b, S.95; Plate 49). Its single sand clay backfill (296) was very mixed and contained a piece of roof tile (0.142kg) and fragment of kiln furniture (saggar; 0.031kg). An environmental sample (11) produced a moderate amount of charcoal. Adjacent to pit **295** was a narrow sub-rectangular pit (**304**) that measured 1.2m long, 0.4m wide and 0.14m deep with steep sides and a concave base (Fig. 16b, S. 95). The single dark brownish grey sandy clay fill (305) produced a small, flat piece of fired clay with a drilled 'hole' in its thin edge.

3.5.58 The north-western corner of pit **295** was cut by the easternmost of a pair of similar sub-rectangular pits (**317** and **42**; Plates 50 and 51) which appear to have been broadly contemporary and infilled (at least in part) simultaneously. Pit **317** (2m x 1.66m wide x 1.2m deep; Fig. 16a, S.19) with steep sides and a relatively flat base lay immediately adjacent to pit **42** (2.02m long, 1.9m wide and 1.2m deep), which also had steep, occasionally undercutting, sides and a slightly uneven base. Both pits were backfilled with similar fills which incorporated notable quantities of pottery manufacturing waste, much of which appears to date from the 17th century.

3.5.59 Within pit **317**, the earliest fills (291, 290 and 292) were identified during further excavation of the pits (and after section 19 had been drawn) and may be equivalent to some of the previously-recorded fills described below. Lowest fill 291 comprised a 0.48m-thick mid reddish-brown sandy silt with occasional small stones and pieces of coal. This produced a collection of kiln waste (0.88kg) comprising pottery (13 sherds of predominantly glazed red earthenware, many overfired, reduced and warped, in addition to several sherds of slipware) and kiln furniture including at least two saggars that were also overfired and warped. Secondary fill 290, a 0.2m-thick mid brownish-grey slightly stony silt sand with flecks of coal, produced a similar range of finds to the primary fill, but in larger quantities. This included numerous sherds of pottery wasters and kiln furniture (3.5kg, 64 sherds), comprising glazed red earthenwares and slipwares alongside several saggars and a complete ceramic ring stilt. In addition, this fill produced over 2kg of ceramic building material including a brick and two peg tiles – the latter fused together by glaze – and two clay tobacco-pipe stems. The next fill was a thick dumped deposit (292) of redeposited natural that appeared to have been tipped in from the south and produced no finds.

3.5.60 Overlying this was a 0.22m-thick fill (63) of mid yellowish-brown silty clay which produced 0.654kg of kiln waste/furniture including glazed red earthenwares alongside a number of saggars and a partial ceramic ring stilt. In addition, six brick fragments/partial bricks (4.4kg) were recovered including several that were overfired and/or had evidence of glaze on some of the surfaces. Above this was a mid reddish-brown silt clay with soft brick inclusions (64) which had been dumped in from the north-east side, filling much of the pit. This produced a large group (nearly 6kg; 157 fragments) of kiln waste/furniture including (predominantly) glazed red earthenwares, alongside a number of saggars and ring stilts. The stem and near complete bowl of a clay tobacco-pipe was also recovered that is datable to *c*.1660–1680.

3.5.61 The lower fills of adjacent pit **42** were similar in character to those described above (Plate 50), with the earliest (65) comprising a 0.46m-thick mid yellowish-brown silty clay with occasional charcoal flecks that produced 2.8kg of ceramic building material/kiln waste. This included two partial bricks, one with glaze on its surfaces, and two tiles that had fused together with evidence of glaze and kiln scars surviving. A much thinner fill (67; 0.08m) overlay this which comprised a dark brownish-grey 'ashy' clay that contained frequent charcoal and occasional chalk flecks. Although no pottery was recovered, this fill produced a piece of animal bone (3g) and 14 fragments (0.098kg) of clay tobacco pipe including one complete, one near complete and two partial bowls, which are datable to *c*.1660–1680. Above this was a 0.46m-thick mid reddish-brown silt clay (66), from which no finds were recovered.

3.5.62 Once the two pits had been partially infilled, a final series of fills was dumped into them, seemingly extending across both cuts (and possibly representing a later intrusion) (Fig. 16a, S.19; Plate 50). The main fill (43) comprised a *c.*1.2m-thick silty clay backfill containing large quantities of kiln waste (pottery (*c.*40kg) and kiln furniture including numerous saggars and occasional ring stilts (*c.*43.8kg) alongside animal bone (0.3kg), fuel residues (cinder/coal/shale (*c.*1.3kg)), metal working debris/fuel ash (0.05kg), an iron nail, part of an iron vessel or drain pipe (SF8) and several fragments of clay tobacco pipe including some partial or near-complete bowls (0.13kg; SF2), datable to *c.*1660–1680. Although the kiln waste and discarded pottery largely comprised glazed red earthenware alongside several examples of post-medieval slipware (see Fig. B6.5), other pottery fabrics were also present (in smaller quantities) in this fill that were not present in the earlier deposits, including iron glazed blackware and speckle glazed ware (see Plate B6.6 and B6.8). Most notable, however, is the presence of tin-glazed earthenware (TGE) wasters, providing important evidence for manufacture of TGE at the site, probably during the mid-late 17th century.

3.5.63 The final two fills (68 and 69) comprised mid grey brown silty clays that may represent discarded material prepared for use in pottery production. Fill 68 produced further evidence of discarded pottery and kiln waste (*c.*0.5kg) including glazed red earthenware sherds and a sherd of iron glazed blackware, in addition to a partial roof tile with multiple kiln scars (0.38kg). Other finds comprise a near complete tobacco pipe bowl that is blackened (datable to *c.*1660–1680) and a collection of cattle bones (0.6kg). Uppermost fill 69 produced 0.6kg of pottery including part of a slipware dish (Fig. B6.5, No. 44) and a warped, reduced roof tile with a kiln scar (0.326kg). Other finds comprise single fragments of clay tobacco pipe and animal bone.

3.5.64 Positioned to the immediate north of, and possibly cutting pits **42** and **317**, was a large area of intercutting possible quarry pits investigated in two sections. Pit **283** was a fairly amorphous sub-circular shape in plan, measuring at least 3.8m wide and 1.3m deep with moderately steep sides and a concave base (Fig. 16b, S.92; Plates 52–3). It contained a series of four sandy clay fills (284–7) that all appear to be deliberate dumps of pottery manufacturing and domestic waste, the latter notably including broken glass bottles. Several (pottery) cross fits were noted between the fills.

3.5.65 The basal fill (287) was 0.6m thick with a slight yellowish green colour and contained a large group of pottery and kiln furniture (474/25.9kg) largely comprising glazed red earthenware, alongside iron glazed blackware and speckle glazed ware. Many/most of these are clearly wasters: the iron glazed blackware includes examples of completely warped mugs and tankards inside their saggars (Plates B6.12–13). Other finds comprise a complete clay tobacco pipe bowl (*c.*1660–1680) and an incomplete iron fitting (SF9). An environmental sample (10) produced low quantities of charcoal.

3.5.66 Pit **283** may have been left partially open for a while as a small pit (**288**), 0.6m wide and 0.3m deep, was cut into its southern edge (Fig. 16b, S.92; Plates 52–3). The single sandy clay fill (289) produced a small amount (six sherds, 0.1kg) of pottery/kiln waste similar to that from the other fills. Overlying this was a 0.3m-thick mid to dark brown fill (286) extending across the length of the pit which produced a significant assemblage of kiln waste (954 sherds; 38.5kg) including pottery (and kiln furniture including saggars) in glazed red earthenware, post-medieval slipware, iron glazed blackware, tin glazed

earthenware and speckle glazed ware (App. B.6). Several examples of bricks and tiles (*c*.10.6kg) were also recovered that showed evidence that they had been used within a kiln. Other finds include several partial clay tobacco pipe bowls (*c*.1660–1680) and broken glass bottles (0.2kg) including a bottle seal (SF4; Fig. B4.1). The glass suggests a deposition date in the mid 17th to 18th century, possibly as late as the early–mid 18th century. A moderately large assemblage of animal bone was also recovered (1.7kg), including horse, cattle and bird bone.

3.5.67 Tertiary yellowish brown fill 285 was 0.2m thick and also contained notable quantities of pottery wasters and kiln furniture (202; 6kg), with a similar range of fabrics seen elsewhere in this group, but including a slightly higher proportion of tin-glazed earthenware. A further 20.6kg of tile and brick, much presumably used within a kiln, was also recovered from this fill, alongside 0.2kg of animal bone (cattle and sheep/goat), 1.1kg of glass (early–mid 18th century) and clay tobacco-pipe (post-1660, possibly c.1680–1710), including one partial heel with the initials IM (JM; Fig. B8.1).

3.5.68 The uppermost brownish yellow fill (284) was 0.23m-thick and produced 1.9kg of brick and tile, some overfired/with kiln scars and including pan tiles indicative of a date no earlier than the 17th century. Indeed, the presence of two sherds of Westerwald stoneware, an undecorated body sherd and a flat base fragment, also found in this fill suggests a late 17th-century or later date for this fill. This fill also produced 2.5kg (114) of pottery wasters/kiln furniture in a similar range to that within the fill below, including several sherds of tin-glazed earthenware. Other finds comprise post-medieval glass (0.13kg) and animal bone (0.09kg), the latter identified as sheep.

3.5.69 Pit **279** formed the northern edge of this pit group and was sub-circular with gradually sloping sides and an undulating to flat base, *c*. 3.9m wide and 1.3m deep (Fig. 16a, S.91; Plates 53–4). It contained three silty sand and silty clay backfills (280–2), all of which produced pottery manufacturing waste. Dark grey primary fill 280 was 0.56m-thick with occasional very large sub-rounded flint nodules from which 5.6kg (157 fragments) of pottery wasters/kiln furniture in a similar range to that from the upper fills of pit **283** were recovered, in addition to brick and tile (1.4kg), some of which was reduced or glazed. Other finds comprise post-medieval glass (*c*. 1kg) datable to the late 17th to early 18th century, including a bottle seal (SF5; Fig. B4.2), several fragments (0.028kg) of clay tobacco-pipe including a complete bowl dating from c.1680–1710, and a small quantity of cattle and sheep bone (0.11kg).

3.5.70 Overlying this was a loose, light yellowish-brown fill (281), which was 0.51m thick and contained frequent brick and mortar fragments and occasional large sub-rounded flints. This fill is particularly notable as it also produced kiln furniture (including saggars and a kiln prop) and pottery/wasters (*c*.5kg in total), almost all of which is tin-glazed earthenware. Several sherds of an ?English stoneware jug (unglazed) were also found in this fill (with further sherds found in fill 282 and in the fills of pit **283** described above). Several roof tiles (including a pan tile) that also appear to have been used in a kiln (*c*.1.4kg/5 fragments) were also recovered.

3.5.71 The uppermost 0.5m-thick fill (282) was a loose yellowish-brown silty sand with frequent brick and mortar fragments. Several of the brick and tile (ridge and pan tile) fragments recovered (*c*.11kg) showed evidence of vitrification or soot patches, while

two large curved V-shaped tiles may have been part of the kiln structure (App. B.6; Fig. B6.1–15). The pottery and kiln furniture (1.1kg) from this fill includes a mix of glazed red earthenware and tin-glazed earthenware in addition to a sherd of the ?English stoneware jug also found in fill 281. Other finds include two clay pipe stems (8g) that are not closely datable, an iron nail (SF7) and *c*.0.4kg of cattle and horse bone.

Pit	Object Name	Sum of weight in kg	Other
42	CBM	10.41	
	Kiln furniture	3.019	
	Kiln furniture/ CBM	1.411	
	Tobacco pipe	0.247	
	Pottery	47.996	
	Vessel-Kiln furniture	35.031	Fe object
	Animal bone	0.936	
279	CBM	13.464	
	Kiln furniture	0.036	
	Kiln furniture-CBM	1.405	
	Tobacco pipe	0.035	
	Pottery	2.111	
	Vessel-Kiln furniture	8.507	
	Fe Nail	0	
	Glass vessel	1.063	
	Animal bone	0.509	
283	CBM	35.464	
	Kiln furniture	0.232	
	Kiln furniture- CBM	0.54	
	Tobacco pipe	0.192	
	Pottery	65.241	
	Vessel-Kiln furniture	17.025	Fe object
	Coal	0.176	
	Glass vessel	1.471	
	Animal bone	2.097	
288	Kiln furniture	0.027	
	Vessel	0.107	
295	CBM	0.173	
	Vessel-Kiln furniture	0.031	
304	Fired clay	0.007	
306	CBM	0.048	
	Vessel	0.004	
317	CBM	5.954	
	Kiln furniture	0.248	
	Kiln furniture-Ceramic Building Material	0.83	
	Tobacco pipe	0.032	
	Pottery	0.067	
	Vessel-Kiln furniture	10.67	

Table 4: Period 2.2 Pottery Waster Pit Group 42 bulk finds overview

3.6 Finds and environmental summaries

3.6.1 Full reports on the artefacts and ecofacts is given in Appendices B and C, with summaries provided below.

Metalwork (App. B.1)

3.6.2 A small assemblage of 15 fragments of iron artefacts, probably representing 14 objects, was recovered, most of which are in poor condition and are not closely datable. Other than nails, the only recognisable object of note is a small pair of shears (SF1), now broken at the bow.

Lithics (App. B.2)

3.6.3 A total of 49 worked flints and almost 5kg of unworked burnt flint were hand-collected during the excavation, with a further 1459g of unworked burnt flint recovered from the residues of a bulk sample taken from Period 1.1 sinkhole feature 132. This adds to the 19 pieces of worked flint recovered during the fieldwalking, most of which were undiagnostic flakes, although a single Bronze Age barbed and tanged arrowhead was present. The excavated assemblage is chronologically mixed but largely dates to the Neolithic and/or Early Bronze Age periods.

Burnt stone and fuel residues (App. B.3)

3.6.4 A small assemblage of coal and burnt fuel (coal cinders and shale: 226g, six pieces) and a large burnt stone (2.85kg) were recovered from contexts associated with the post-medieval (Period 2.2) brick kilns in Area 1.

Glass (App. B.4)

3.6.5 A total of 97 shards, weighing 4.449kg of vessel glass was recovered from Period 2.2 features, the majority of which are utility bottles, many of them dark olive green (natural black) glass bottles, including a number of pharmaceutical bottles or phials and two bottle seals (Figs B4.1–2). The assemblage dates from the 17th to early to mid 19th century, with most bottles falling into the period from the late 17th to early 18th century.

Pottery (App. B.5)

3.6.6 The excavation yielded 34 sherds of prehistoric pottery (114g) that dates from the Early Neolithic, Late Neolithic and Early Iron Age. It includes a small assemblage of Grooved Ware, along with a small number of feature sherds characteristic of Early Iron Age ceramics. Three sherds (37g) of greyware pottery were also recovered from deposit 170, within natural sinkhole feature **169.** These sherds are wheel-made and their fabric suggests a Roman date.

Post-medieval pottery and kiln waste (App. B.6)

3.6.7 A total of 5139 sherds of pottery and kiln furniture (198.498kg) was recovered from 32 contexts: predominantly from the fills of four large pits: **42**, **279**, **283** and **317**. This significant assemblage has provided evidence for 17th-century redware production, in addition to manufacture of slipwares and latterly tin-glazed earthenware (Figs B6.1–17; Plates B.6.1–20).

Ceramic building material and fired clay (App. B.7)

3.6.8 Fragmentary and complete bricks and tiles totalling 235 pieces (131,857g) were recovered from 39 contexts, the majority as samples from the brick kilns in Area 1, in addition to 29 fragments (870g) of fired clay. Brick sizes and types in Kiln Group 229 (Kilns 241 and 242) were similar, with all bricks in this group measuring over 240mm in length and are comparable with those from later 15th- and 16th-century structures in the region. It appears that there were at least two phases of tile and brickmaking at the site, with brick sizes providing tentative evidence for Kilns 241 and 242 being slightly earlier than the other kilns, followed by Kiln 34; a sequence that it is broadly supported by the radiocarbon dating (see below).

Clay tobacco pipe (App. B.8)

3.6.9 Archaeological works produced an assemblage of 71 fragments of white ball clay tobacco pipe (0.543kg) comprising fragments of undecorated stem and 19 complete, partial or fragmentary bowls (Fig. B8.2–2). The earliest pipe is an Oswald type 5 (Oswald 1975) bowl from c.1640–1660, although the majority date to *c*.1660–1680.

Animal bone (App. C.1)

3.6.10 The animal bone assemblage (6.36kg) incorporates 100 identifiable fragments retrieved via hand-collection that are predominantly from Period 2.2 pits. Sheep/goat remains make up the highest percentage of the NISP, followed by horse and cattle. The assemblage includes two partial skeletons of neonate lambs and a partial skeleton of a neonate piglet.

Environmental samples (App. C.2)

3.6.11 Twelve samples were taken from a range of undated and dated features spanning the prehistoric to post-medieval periods. These mainly produced wood charcoal, frequently in abundance. The only other plant remains preserved are a few fragments of charred hazelnut shell from Period 1.1 pit **98** and untransformed elderberry seeds recovered from the basal fill of Period 1.2 pit **123**.

Charcoal and fuel residues (App. C.3)

3.6.12 Charcoal from eight deposits taken from several post-medieval (Period 2.1) brick kilns, and pits associated with 17th century (Period 2.2) pottery manufacture, was rapidly assessed and four samples selected for further analysis, with two further assessed for comparative data. This suggests that the primary fuel being used to fire both the brick kilns, and the later pottery kilns, was gorse round wood, although coal and other remains were present in Kiln 21.

Marine mollusca (App. C.4)

3.6.13 A single oyster shell was recovered from the fill of Period 2.2 pit **311**.

Radiocarbon dates

3.6.14 A series of radiocarbon dates were obtained from samples spanning Periods 1.1 and 2.1. Table 5 provides a summary of the results (see App. D for certificates and detailed calibrated dates).

Sample No./type	Area	Cxt	Cut	Feature type	Group	Period	Radiocarbon Age BP	Calibrated Date range	Certificate
Sample 4: Charred nut shell fragment *Corylus avellana*	2	101	**98**	Sinkhole or pit		1.1	3808 ± 24	2338-2145 cal BC 2286-2205 cal BC	SUERC-89927 (GU52906) 95.4% probability 68.2% probability
Sample 7: Charcoal *Quercus* sp.	2	186	**185**	Natural feature		0	1216 ± 24	712-888 cal AD 770-869 cal AD	SUERC-89928 (GU52907) 95.4% probability 68.2% probability
Sample 1: Charcoal-round wood, 6 growth rings, bark absent Leguminosae	1	29	**33**	Charcoal-rich deposit in base of kiln	Brick kiln 34	2.1	282 ± 24	1516-1590 cal AD (55.5%) 1620-1662 cal AD (39.5%) 1789 1791 cal AD (0.5%) 1525 1558 cal AD (37.1%) 1631 1655 cal AD (31.2%)	SUERC-100806 (GU59302) 95.4% probability 68.3% probability
Sample 3: Charred culm base *Cerealia*	1	94	-	Burnt deposit in base of Brick kiln	Brick kiln 21	2.1	216 ± 21	1644- 1684 cal AD (37.8%) 1736 1803 cal AD (53.7%) 1651-1673 cal AD (30.8%) 1777-1799 cal AD (35.5%)	SUERC-100807 (GU59303) 95.4% probability 68.3% probability
Sample 8: charcoal-round wood, 2 growth rings, with bark Leguminosae	1	238	**231**	Brick kiln 242 floor deposit	Brick kiln 229	2.1	342 ± 24	1476-1532 cal AD (34.2%) 1537-1637 cal AD (61.3%) 1494-1524calAD (23%) 1560-1603 cal AD (29.4%) 1609-1631 cal AS (15.8%)	SUERC-100808 (GU59304) 95.4% probability 68.3% probability

Table 5: Radiocarbon dates

4 DISCUSSION

4.1 Introduction

4.1.2 This investigation, comprising the results of geophysical survey, fieldwalking, trenching evaluation and excavation, has revealed part of a wider landscape that was predominantly utilised during the later prehistoric and earlier post-medieval periods. It has successfully met the project's research aims and objectives and provides important new evidence for the development of Cringleford parish. In particular this work highlights how the rich source of clay at Newfound Farm led to the establishment of brick and subsequently pottery production here.

4.1.3 The chronology and technology of the kilns (and subsequent pottery manufacture) is discussed, drawing together the stratigraphic evidence with the analysis of the bricks, pottery wasters, kiln furniture, fuel residues and radiocarbon dating, and compared with the results from similar sites. The story of Newfound Farm is further enhanced by the documentary and cartographic sources, linking it to John Balleston who may have taken advantage of the aftermath of a fire that devasted the village in the early 1570s. The area surrounding the site has been extensively investigated since the 1980s (see Section 1.3 and Fig. 2), meaning that the results from Newfound Farm can be better placed within their wider archaeological context. Furthermore, targeted searches commissioned from the NHER have enabled the evidence for the 16th to 17th century brick and pottery manufacture at Cringleford to be set against the backdrop of known post-medieval production sites across the county.

4.2 Further evidence for prehistoric activity in the Yare valley

4.2.1 The small assemblage of worked and burnt flint recovered from the site adds to the rich record of prehistoric activity within this part of the Yare valley, as outlined in Section 1.3 above and by Lawrence Billington in App. C.2 below. Extensive programmes of fieldwalking and more intrusive investigations within the vicinity of the site have demonstrated that this area was heavily utilised, especially during the Neolithic period (see Fig. 2). This notably includes evidence of flint production and an associated occupation layer at the John Innes Centre in Colney (NHER 9332), in addition to the discovery of several flint axes and a pick nearby (*e.g.* NHERs 9328 and 9330). The flake-based flint assemblage found at Newfound Farm suggests some activity occurred on the site during the Neolithic and/or Early Bronze Age periods, with no clear evidence of any true blade-based material of Mesolithic/earlier Neolithic date being present.

4.2.2 In terms of the quantity and nature of deposition of the lithic material at Newfound Farm, these are more indicative of low-level and intermittent activity, with any focus of contemporary settlement and related activity probably being located closer to the River Yare to the north. Some of this material was found within several of the natural sinkholes that peppered Area 2 and presumably originated from surface scatters. This picture is echoed by the small quantities of Early Neolithic and Late Neolithic pottery (including examples of Grooved Ware) recovered from the site. These probably represent 'background scatters' rather than settlement during these periods – a picture that is consistent with the evidence from nearby sites, including work undertaken in advance of the construction of the Norwich and Norfolk hospital to the north-west (NHER

31871). By the Bronze Age period a number of possible burial mounds appear to have been constructed in this area (*e.g.* NHER 9395) and although no features of this date were identified at Newfound Farm, a single barbed and tanged flint arrowhead was recovered during the fieldwalking stage (Barnett 2011, 12).

4.2.3 The discovery of a pit containing Early Iron Age pottery may have been unusual in this area up until a few years ago but now fits well with the evidence from the adjacent site investigated by trial trenching in 2016 (NHER 40135). Here, the pottery comprised a Decorated ware group of the Post-Deverel Rimbury tradition, dating to the latter part of the earlier Iron Age period (*c*.600–350/300 BC) (House 2016). It seems likely that the focus of Early Iron Age settlement lay close to this site, with the pit identified at Newfound Farm representing some form of peripheral, low-level activity.

4.3 Post-medieval brick kilns and production

The fire of Cringleford and rebuilding the village

4.3.1 Although the presence of kilns at Newfound Farm had long been suspected, the 2018 excavation represents the first in-depth investigation of the physical remains of one of the groups of kilns previously identified by geophysical survey here (Fig. 17). Prior to the establishment of Newfound Farm (originally Balleston Newfound), this area of Cringleford, adjacent to the north-western parish boundary with Colney, was presumably open heath or pasture, in what was a predominantly agricultural community. Indeed, the land subsequently occupied by Newfound Farm was described as barren and unbuilt (see Section 1.3.17) on a map dated 1572 and drawn by John Goodwin, Surveyor to the City of Norwich, following a fire that almost totally consumed Cringleford (Blomefield 1806, 39). At this time (and until recently) the village core was focused on the church, watermill, river crossing and buildings ranged either side of the Newmarket Road, located over a kilometre to the south-east of Newfound Farm.

4.3.2 Following a second attempt, a private Act of Parliament was passed in the 23rd year of Queen Elizabeth I's reign to finance the 're-edifying' of Cringleford in the aftermath of the fire and to settle lands there as copyholds held of the manor, of which the corporation of Norwich was the lord (Elton 1989, 318; Blomefield 1806, 39). This allowed the Great Hospital to acquire the land in Cringleford as freehold in 1580, which was subsequently sold to four Norwich businessmen (Balleston, Bate and two Layer brothers) who divided the village between them and gradually disposed of their shares as the rebuilding progressed (South Norfolk Council: *Cringleford Conservation Area Character Appraisal and Management Plan*, 4).

4.3.3 Although the rebuilding was largely concentrated in the village core, including the watermill and Ford End house, it is clear from the Cringleford manor court roll for 1584 (NRO 22.6.1584; NHER9406; Hawes undated) that the Springhouse (measuring 25 feet by 14 feet) and a barn (measuring 32 feet by 17 feet, to be converted into a dwelling) had been constructed at Balleston Newfound by that year. In his research undertaken following the discovery of the kiln debris in 'Potters Field' at Newfound Farm during the 1970s (see Section 1.3.17 and Fig. 17), Mr Hawes indicated that the Springhouse had seemingly been built on the site of a kiln, although the evidence for this is not clear.

However, it is probable that John Balleston established brick kilns on his land early in the 1580s (if not before) in order to build the Springhouse and possibly the barns (construction of a new much larger barn is also mentioned in the court rolls for the same year, to measure 48 feet by 19 feet). It is also likely that Balleston, as a consummate businessman, created the brick kiln(s) to supply construction materials needed for the rebuilding of some of the houses and other buildings within the village.

Brick (and tile) manufacture at Newfound Farm

Kiln design and technology

4.3.4 The earliest of the kilns identified by the excavation at Newfound Farm (parallel kilns in Kiln Group 229) could conceivably date to the late 16th century and may therefore relate to this early period of construction (of the Springhouse and other buildings) and perhaps the rebuilding of the village in the 1580s, although it is possible that earlier kilns existed elsewhere on the site (or parish). It is feasible that a clamp kiln was used to fire the bricks used in the construction of the earliest kilns identified on the site, although 'green' or raw (unfired) bricks were also occasionally used in the first firing (Woodforde 1976, 59).

4.3.5 After being left to dry in 'hacks' often covered in straw to protect from adverse weather, the bricks would be fired in stacks called clamps. 'Clamp burning consisted of an open stack of unfired or 'green' bricks built up in layers with air spaces on top of a bed of fuel. When set alight they became self-burning. The bricks were encased with turf and clay and left to burn until all the fuel was consumed' (Quelch 2006, 1–2). By the end of the 16th century permanent brickyards were appearing, where brick kilns would be used instead of the clamp system to meet the increased demand (Quelch 2006, 2). As brickmaking was a seasonal activity, its schedule fitted well with the farming calendar, meaning that many farmers or landowners also became brickmakers, and this was probably the case at Newfound Farm.

4.3.6 Further discussion of the proposed chronology of the kilns is included below and by Anderson in App. B.7.

Updraught kilns

4.3.7 In terms of design, Kiln Group 229 appears to be a variation on the 'Suffolk kiln', of which a number of 16th to 18th century examples have been excavated across East Anglia. These include examples in Suffolk (including at Euston (Brooks 2015a); Clare (Brooks 2015b); Gedding (Anderson and Tester 2003)) and Essex (Danbury (Drury 1975); Beaulieu (Billington 2020); Great Horkesley (Clarke and Haskins 2021)) in particular, with seemingly fewer instances known from Norfolk (*e.g.* Kilverstone (Garrow *et al* 2006)).

4.3.8 This type of updraught kiln was used widely across much of East Anglia throughout the late medieval period and well into the post-medieval period. Suffolk kilns had their lower walls and firebox chambers fully built into the ground, with twin partially-subterranean stoke holes at one end (Brooks 2015a, 14–15). Generally, only the subterranean elements of the kilns survive archaeologically, and these essentially comprise a rectangular brick box with an entrance at one end. The box was sub-divided by a central low spine wall running the length of the kiln that created two separate, parallel

chambers. These were spanned by a series of kiln bars or ribs (consisting of double brick-built arches) that ran widthways across the kiln, with the narrow spaces between acting as flues and allowing the heat to be drawn from the fire box/tunnel and circulate upwards. Above ground a rectangular structure would have been constructed to house the unfired but air-dried 'green' bricks and/or tiles that were placed on the firing chamber floor formed by the arches. The surrounding walls would have supported a roof, although more temporary structures of mud walls and turf roofs may have also been used (Brooks 2015a, 12–13).

4.3.9 Once the bricks (or tiles) were stacked, the open end of the kiln firing chamber would have been blocked to keep the structure as insulated as possible, and fires set in the fireboxes. The kiln firings would have taken place over several days, requiring constant supervision by experienced brickmakers. Depending on its size and design, a kiln could vary in terms of capacity, holding between 8,000 to 30,000 open stacked bricks which would be fired at temperatures ranging between 750° to 950°C, somewhat lower than modern brickworks (1,000°) (Lynch 2007, 9). Between each firing, the kiln had to be raked out and left to cool before the fired products could be retrieved and graded, which meant that, unlike some of the later types of kiln, they could not be fired continuously. However, their main advantage lay in their efficiency, which was greater than that of some other contemporary examples including clamp kilns (Brooks 2015a, 13).

Kiln Group 229

4.3.10 Kiln Group 229 (Fig. 11; Plates 18–23) differed somewhat from the standard design evidenced at the various excavated examples of Suffolk kilns. At Cringleford, it appears that the two parallel but probably contemporary kilns were constructed within narrow rectangular cuts (possibly former stank quarries, see below) adjacent to each other, rather than being built as a wide rectangular structure that was then sub-divided by a spine wall. Nevertheless, the combined area of their firing chambers (*c*.4m wide and possibly 4m in length, not including the stoking pits) would have been comparable to (if not exceeded) that of the more traditional designs, which generally fell between *c*.2.2–3.2m in width and *c*.2.5–4m in length (Clarke and Haskins 2021, 19). The surviving 'springer' bases of the brick arches that supported the firing chamber in Kiln Group 229 demonstrate that the kilns were of a similar updraught design, with the firebox below/supporting the firing chamber and firing tunnels leading to a stoke/rake-out pit(s) located at the open, north-east ends of the kilns.

4.3.11 Even within the more standard Suffolk kiln design there is some variation, with technological advances being evident between the earlier kiln excavated at Euston, Suffolk and a later (17th/18th century) kiln found at the same site, the latter being more robust and of larger construction (Brooks 2015a, 70). Further afield, in Essex, there appears to have been a range of designs evident in the excavated examples, including a rectangular 17th-century brick-built kiln at West Bergholt. Here, the firing chamber/body of the kiln measured 4m x 3m, with the remains of nine transverse flue arch walls surviving, and was fed by two opposing flues extending from its northern and southern ends, although these may have related to different phases of use (Holbert 1978, 9–12). A 17th to 18th-century Suffolk-type updraught kiln excavated at Olivers,

Stanway was subsequently adapted to create a narrower and shorter kiln with a single flue/tunnel (Fawn 1984; 1985).

4.3.12 Analysis of the bricks from the kiln chambers of Kiln Group 229 suggests that they were both of similar date with brick sizes (measuring over 240mm in length) being comparable with those from later 15th- and 16th-century structures in the region (see Anderson, App. B.7). It is also of note that the backfills of these kilns did not contain any pottery manufacturing waste, suggesting that they pre-dated this activity which appears to have commenced by the mid-17th century (see below).

Kilns 34, 52 and 21

4.3.13 The other kilns excavated at Cringleford also displayed variations in terms of size and design. Kiln 34 (Fig. 12; Plates 24–9) appears to have slightly post-dated Kiln Group 229 based on the analysis of the bricks, and comprised a single narrow (and deeper) brick-lined chamber or firebox, with tunnel, entrance and stoke-pit to the south-east. The slightly wider firing chamber retained remnants of the angled brick arch 'springer' bases and one collapsed arch at its north-western end, suggesting that it was a similar, simple updraught design to Kiln 21 (see below), and also showed evidence of possible repairs and alterations. Kiln 52 (Fig. 13; Plates 30–4) was poorly-preserved but appeared wider in plan and did not have any subterranean elements or evidence of arches or a stoke hole, suggesting that it may have been some form of more temporary clamp-type kiln.

4.3.14 Kiln 21 was the latest and most well-preserved of the kilns (Fig. 14; Plates 35–41) investigated and retained most if not all of its brick arches or kiln bars (11), of which some had partially collapsed or slumped into the firebox/void below. Although this was the most substantial of the excavated kilns, with the firing chamber measuring 4.5m by 2.8m, it comprised a single firebox/chamber and tunnel and not the double chamber typical of Suffolk kilns. The closest parallels are two single-chamber, rectangular updraught kilns excavated in Essex: at Great Horkesley and on the bank of Roman River near Colchester. At the latter site (which was excavated in the late 1950s) the ground plan of the main kiln chamber was almost identical in size, with maximum dimensions of approximately 15ft by 7½ft (4.5m long and 2.8m wide) including the flue arch, with a stoke hole extending to the north. A further clear similarity was the survival of a series of kiln arches or fire bars very similar to those in Kiln 21 (in this case 10 in total), which 'had been subjected to such intense heat that they had become covered with a hard glaze, green in colour' (Hall 1959, 11). The brick-lined stoke hole or fire tunnel included 12 surviving courses of bricks forming the walls, and the floor was also in brick. The bricks forming the kiln structure were described as measuring 9½ – 10" X 10" X 4½" X 2" (Hall 1959, 11; http://caguk.net/wp-content/uploads/2013/01/Bulletin-02.pdf accessed 14/01/22).

4.3.15 Although the date of the Roman River kiln is not known, documentary evidence indicates that it was in operation from 1638 and had disappeared by 1838 (Hall 1959, 12). A similar kiln dated to the 17th century was also excavated at West Bergholt (Holbert 1978, 9–12; see above) which retained flue arch walls and a few courses of the upper kiln wall above. At Great Horkesley the kiln, which appears to date to the 16th to 17th centuries, had a rectangular chamber that probably measured 3.5m long by 1.6m wide; however, it was very truncated and its form could not be clearly identified (Clarke

and Haskins 2021). The West Bergholt kiln appears to have been used for brick and tile manufacture, while the example excavated at Roman River was primarily used for the production of roof tiles (Holbert 1978). It is possible that tiles were also fired within the brick kilns at Cringleford as a few possible wasters were recovered, although this does not seem to have been a regular occurrence as more associated debris might have been expected (see Anderson App. B.7).

4.3.16 Most of the Cringleford kilns showed evidence of multiple firings and repairs, with the flue entrance in Kiln 21 having been rebuilt in places with bricks bonded with lime mortar. The bases of the kilns generally seem to have been unsurfaced, utilising either puddled clay (as was found at the kiln excavated at Euston, Suffolk), or the natural clay geology. Some areas of patching or repair using bricks cut in half was found in Kiln 34.

Chronology

4.3.17 During the mid to later 15th century, brick was being utilised in chimneys and fireplaces by the more affluent yeomen farmers and some larger houses were being constructed entirely of brick, usually manufactured on site (Quelch 2006, 1).

4.3.18 As mentioned above, analysis of the brick sizes and comparison with contemporary kilns and structures (see Anderson, App. B.7) indicates that the sequence of kilns at Newfound Farm probably originated in the late 15th to 16th centuries and appears to have ceased production by the mid-17th century. Documentary evidence suggests that the earliest kilns, Kiln Group 229 and Kiln 34, may have been established at some point soon after the land was acquired by Balleston in the early 1580s (see Section 4.3.3 above), presumably for construction of buildings on the site and elsewhere in the village. It is certainly of note that the Springhouse was also known as 'Brakyhouse', which no doubt was a reference to it being one of the first brick-built houses in the area. It may be the fairly grand building shown on Fadens' map of 1797 (Figs 3 and 19a). Very little of the early fabric of these buildings seems to have survived and it is probable that much of Newfound Farm was rebuilt in the 19th century. Indeed, a note in the Norfolk Annals records violent thunderstorms in August 1858 that led to the 'barn and other buildings at Newfoundland Farm [sic]', occupied by Mr Drane, being destroyed by fire, with the loss of 340 coombs of barley (Mackie 2020, 94).

4.3.19 Samples of charred material from three of the kilns were submitted for radiocarbon dating in the hope that they could help to refine this chronology. It should be noted, as was outlined in the Post-Excavation Assessment (Clarke and Collie 2020, 27), that the likely period of operation (16th to 18th century) of the kilns may have fallen within a period of increased levels of atmospheric carbon during the industrial age, which can affect the accuracy of radiocarbon dating. Any radiocarbon dates falling after the middle of the 17th century are likely to provide a very broad calibrated date range from roughly 1650 to the modern period (up to 1950), called the Suess effect after the Austrian chemist Hans Suess (Source: https://en.wikipedia.org/wiki/Suess_effect).

4.3.20 The calibrated radiocarbon dates for the three sampled kilns (Kilns 21, 34 and 242) are indeed quite diffuse and broad and consequently details of the ranges and their probabilities are included in Table 5 above (and see App. D). However, the results tend

to broadly support the chronology suggested by Anderson (App. B.7) for the sequence of kiln use and construction.

4.3.21 Kiln 242 of Kiln Group 229 appears to be the earliest (342 ± 24 BP; SUERC-100808 (GU59304)) with perhaps the most likely date ranges falling between 1537–1637 cal AD (@ 95.4%) or 1560–1603 cal AD (@ 68.3% probability). Kiln 34 returned a radiocarbon age of 282 ± 24 BP (SUERC-100806 (GU59302)), with calibrated dates spanning the early 16th to 18th centuries (Table 5) but perhaps centred on the late 16th or early 17th centuries (@ 95.4% probability). The best-preserved kiln, Kiln 21, returned a radiocarbon age of 216 ± 21 BP (SUERC-100807 (GU59303) which fits with the interpretation of this being the latest in the sequence and possibly still open at the time that pottery production was underway at Newfound Farm (see App. B6 and B.7). The calibrated radiocarbon dates, which span the mid 17th to late 18th centuries (Table 5), probably reflect the disturbed nature of the deposits associated with this kiln (and/or the Suess effect outlined above). Although the sampled deposit from Kiln 21 was thought to represent *in-situ* firing waste it may in fact have been contaminated by subsequent backfills deposited some time after the kiln had become disused. However, the possibility remains that Kiln 21 remained in use longer than suspected, although this is likely to have been during the early part of the 17th rather than into the 18th century based on the evidence outlined above. This is underscored by the position of hack (pressure) marks on the bricks from Kilns 21, 34 and 52, all of which are diagonal and indicate that the kilns were probably built before the mid 18th century (Anderson, App. B.7). Kiln 21 is similar to kilns of probable 17th century date excavated in Essex (see above), although it is likely that this simple rectangular updraught design had its origins in the 16th, if not 15th, century.

4.3.22 The radiocarbon results are broadly in keeping with a similar array obtained for three kilns excavated recently at Great Horkesley near Colchester in Essex. Here the kilns (predominantly of Suffolk-type apart from one of similar design to Kiln 21, see above) returned radiocarbon dates between the late 15th and 17th centuries, with one likely to be of 16th century date (Clarke and Haskins 2021, 19). Together these dates, combined with the results from the current site, demonstrate the potential for radiocarbon assay to help refine intra-site chronologies, especially with regard to early kiln construction (15th to early 17th century). This in turn can inform wider studies into the development and diversity of this rural industry within East Anglia and the country as a whole (Medlycott 2011, 78).

Evidence of fuel and associated activities

4.3.23 In addition to establishing chronological and typological frameworks, investigation of the fuel sources utilised by the early post-medieval brick makers is also an important element to understanding the early development of this industry and the impact it had on the surrounding landscape.

4.3.24 Analysis of the charcoal evidence suggests that the primary fuel being used to fire the brick kilns, and the later (unlocated) pottery kilns, was not coal but gorse round wood, presumably gathered from nearby heathland (see Druce, App. C.3). Although it is possible that the material was first converted into charcoal, perhaps in heathland clamps, the identification of possible green wood, and the presence of uncharred fine

stems and spines/leaves, suggests it may have been used shortly after being collected. Coal was also evident is some deposits, notably fill 94 in latest Kiln 21, which appears to have originated from elsewhere (possibly a domestic hearth) rather than representing *in-situ* firing waste and this may explain the rather late radiocarbon date achieved for a sample from this context (see above). Warde and Williamson (2014) state that gorse, broom, and heather were the preferred fuel for firing brick kilns, rather than coppiced wood or coal, and the results from Cringleford support this interpretation. Indeed, the heathlands around Norwich were well-utilised for brickmaking and iron working and historical sources suggest that measures were taken to control the over-exploitation of gorse heathland, and to encourage its regrowth after harvesting. Furthermore, in addition to common land, gorse was often cultivated in specific enclosures within areas of private heath, moor and other rough ground, where it would be protected from grazing animals (Warde and Williamson 2014, 65). As more kilns are excavated in the region, the opportunity to analyse the associated charcoal should enable the availability and range of fuel sources for rural brick (and pottery) production to be studied more widely.

4.3.25 In addition to the exploitation of the surrounding heath or commons for fuel, the process of brick and later pottery manufacture would also have had a significant impact on the immediate landscape. 'Clay/brick earth was dug in the autumn and left in a heap to overwinter – the wind, rain and frost making it easier to handle when brickmaking began in the spring. When the danger of frost had passed, moulding began and the bricks were then left to dry in the open air. Kiln burning took place from mid-summer onwards until the first frosts' (Quelch 2006, 2). Large areas of land were required not only for the brickearth (see 4.4.1 below) extraction but also for weathering and processing the clay, preparing and stacking the bricks, and building the kilns. Much of the work could be undertaken by unskilled labour, with the skills of the brickmaker being needed for relatively short periods of time at the crucial stages of production, when the bricks were moulded and then fired (Broadway 2003, 234).

4.3.26 Numerous extraction pits were present across Area 2 and within the wider development area; the latter identified by geophysical survey and evaluation trenching. Most appear to have been backfilled with unwanted material alongside some waste products and other debris from the brick and pottery kilns (see below), while others survived as hollows or ponds, notably in the south-western part of the area (*e.g.* NHER 9407, believed to be a former clay pit) and close to Area 2 adjacent to Newfound Farm itself. Elsewhere, former clay pits appear to have been repurposed, for example as ornamental ponds as was found at Great Horkesley, Essex (Clarke and Haskins 2021). It is possible that the two kiln chambers making up Kiln Group 229 re-used former 'stank' quarries: linear rectangular channels that represented approximately the amount of clay dug out each season, typically by a single worker. The cuts were dug as separate channels to discourage flooding of the stank currently being dug with any water that had gathered in the previous year's pit. Several examples of these were identified in association with kilns excavated at Wash Pits Field, Euston in Suffolk (Minter in Brooks 2015a, 48–9). The steep-sided and flat-based rectangular pit **239** positioned adjacent to Kiln Group 229 may have been a quarry, or a small settling pond, where clay was over-wintered. The larger pond to the south-east of Area 2 (investigated in Trench 4 of the evaluation) was

found to have an associated cobbled surface extending to the south and may have been a wash pit used in the clay preparation process, although associated finds indicated a more recent (19th century) origin (Crawley 2013, 47; Brooks 2014, 68).

4.3.27 At Cringleford, a track led from the clay pits (possibly linked to pottery manufacture, see below) located further to the south-west, running along a dry valley to Newfound Farm (Fig. 17). The geophysical survey indicated that other possible kilns were seemingly located on either side of the track (Fig. 4b; Fig. 17, shown in blue), although subsequent evaluation of three of these demonstrated that these were in fact large extraction pits infilled with heat-affected reddened sand; a by-product of brick making (Crawley 2013, 46). The latter group was located within a large swathe of quarrying identified by the geophysical survey that may relate to an outcrop of brickearth for brickmaking, or perhaps fuller's earth for pottery (see below).

4.3.28 The brick kilns excavated on the current site were positioned close to the track and to the buildings at Newfound Farm, presumably to facilitate transport of raw materials around the site and distribute the finished products. Once the construction of the Springhouse and Balleston Newfound was complete, the nearby Colney Lane would have allowed easy movement of bricks and ceramics (see below) into the village and, in terms of the pottery, on to Norwich, as well as for the importing of fuel collected from the nearby commons and heaths.

4.4 Distribution of brick kilns and associated sites in Norfolk

4.4.1 During the 15th and 16th centuries Norfolk and Suffolk were the most prosperous industrial counties in Britain and, along with Essex, are notable for the early introduction of brick in the post-Roman period. East Anglia lacks building stone (other than flint) but is rich in brickearth deposits; a loam used for making bricks. Brickearth is a superficial sedimentary deposit, usually less than 20,000 years old, related to the loess of western and central Europe and occurs in the Pleistocene of the Thames Valley and Eastern England. It was used largely unadulterated in the production of medieval bricks, but from about 1700 was mixed with combustible material to make Stock Bricks (Smalley 1987, 9). The proximity to the continent no doubt facilitated the development of brickmaking technology in these counties, with some early bricks (and then brickmakers and associated craftsmen) possibly being imported, notably from the region of Flanders in the south of the Netherlands (Lynch 2007, 13; http://www.pevsnersuffolk.co.uk/Bricks; accessed 19/01/22; White 1972, 13). The influx of Dutch and Flemish craftsmen during the 15th century (from *c*.1410 to the late 1480s) led to a much higher standard of brickwork as the desire for brick construction by wealthy merchants and other landowners increased (Lynch 2007, 9).

4.4.2 A targeted search of the NHER demonstrates that there are numerous brick kilns, brick fields, brick yards, brickearth pits, clay pits and possible tile kilns/works recorded across Norfolk in both rural and more urban settings, many of which have since been lost or destroyed by modern development (Fig. 18). It should be noted that research into more recent brickmaking sites and brickmakers, including the memoirs of a Norfolk brickmaker, has been undertaken by members of the Norfolk Industrial Archaeology Society (http://www.norfolkia.org.uk/assets/nias-journal-index-.pdf).

4.4.3 Of the many possible and probable kiln and brickwork sites identified (*c*.360), approximately 125 are of 19th century or later date and these often relate to sites shown on early maps of the county (Bryant 1826; Ordnance Survey maps; Tithe maps *etc.*) or those mapped from mid-20th century aerial photographs. Brickmaking continued to be an important industry in East Anglia and, according to mid 19th-century records, Norfolk was ranked fourth amongst the 36 English counties, with 114 brickyards (Lucas 2005, 162); many of these being located on Mousehold Heath on the north-east edge of Norwich. The remaining records predominantly refer to kilns and related sites broadly dated to the post-medieval period (*c*.16th to 18th century) that are shown on earlier maps such as Faden's map of 1797, or which are referenced in documentary sources. Within this group the earliest examples include a few of probable 17th-century date, with the remains of a kiln found in an orchard at Tunstead in the 1960s possibly being of 16th or 17th century date (NHER 7670; No.1 on Fig. 18). A brickworks with surviving buildings located at Great and Little Plumstead is known to have had its origins in the late 16th century as its location was marked on a map of 1585 as 'Brickyll and Potters Pits' (NHER 8497; No.2 on Fig. 18), suggesting that it may have been broadly contemporary with the kilns at Newfound Farm.

4.4.4 A number of these kilns can be related to the construction or augmentation of specific, often high status, residences. Examples include Earlham Hall, where a 17th century kiln associated with the Jacobean phase of the hall was identified in 1948 (NHER 9387; No.3 on Fig. 18), or Carlingford where the remains of a ploughed-up brick kiln are thought to have been related to the brick elements in the Old Hall, dated to the late 17th century (NHER 24194; No.4 on Fig. 18). A small number of brick clamps have also been recorded, including one that was excavated in Shotesham (south Norfolk) in the late 1960s that was believed to be 18th to 19th century in date, although several 16th to 17th century brick fragments were found in the ploughsoil nearby (NHER 17385; No.5 on Fig. 18). Another brick clamp was identified by geophysical survey and subsequently excavated at Mulbarton, and broadly dated to the 17th to 19th century (NHER 60744; No.6 on Fig. 18).

4.4.5 Over recent decades, developer-led and research-based projects that have included fieldwalking, geophysical surveys and more intrusive archaeological investigations have also helped to augment the dataset. However, perhaps in contrast to the neighbouring counties of Suffolk and Essex, relatively few of these kilns and related sites appear to have been excavated (or at least reported on in detail), with the Suffolk-type kiln investigated at Kilverstone being a rare example (Garrow *et al*. 2006; see above). In addition to this, a 17th to 18th century kiln was also investigated along the Witton to North Walsham Anglian Water Pipeline (NHER 52899; No.7 on Fig. 18); a post-medieval kiln was partially revealed in a service trench at University Drive, Norwich (NHER 64685; No.8 on Fig. 18); a 17th-century kiln was excavated in 1968 at Rougham (NHER 3670; No.9 on Fig. 18) and an 18th- or 19th-century kiln associated with Quebec Hall was investigated during a watching brief in Dereham (NHER 13442; No.10 on Fig. 18). The kilns excavated at Cringleford therefore appear to form a fairly rare site in the county, especially given their early date, and add to the growing number of excavated examples in the wider East Anglian region.

4.5 Pottery manufacture at Newfound Farm

4.5.1 A full discussion of this important assemblage, its chronology and manufacturing techniques and the range of wares produced at Newfound Farm, compared with the Norwich corpus and set within the wider context of 17th-century pottery production in the region, is given by Anderson in App. B.6. Selected illustrations of the pottery and associated kiln furniture are included as Figs B.6.1–17 and Plates B6.1–20.

4.5.2 As has been highlighted elsewhere in this report, Newfound Farm was named due to the discovery of high-quality clay (marl) in this part of Cringleford that was initially transported to Holland for the production of Delft ware. However, it seems that following a ban on the export of 'English earth' (or fuller's earth), imposed by James I in 1624 (Van Dam 1999, 31), the potters of Cringleford began manufacturing tin-glazed earthenwares themselves in addition to the redwares, slipwares and other wares present within the assemblage. Cringleford was evidently a fairly prolific if not long-lived production site with the 17th-century redwares in particular being exported to markets in Norwich and beyond. Analysis has also shown that the so-called 'Metropolitan' slipwares that have been found in the city were not made in Harlow as previously thought, but were actually produced at Cringleford.

4.5.3 Although the kilns associated with the pottery production have not been investigated, it seems likely that at least some of them were located in the fields to the south-west of Newfound Farm, in the area known as Potters Close. This land parcel (numbered 26 on the 1842 Tithe map, when the owner/occupier was a Richard Hanbury Gurney Esq.), actually appears to fall just outside the development area but was presumably part of Newfound Farm when the Ballestons owned it. By the time of the Tithe map the area within the current development had been parcelled up and the fields unhelpfully named '11 acres', '40 acres' *etc.* with most being under arable cultivation. The Tithe apportionment identifies the farmer/occupier as John Culling and the landowner as Edward William Trafford Esq. at this time. Clearly these fields were also once part of Potters Close and were directly associated with pottery manufacture given the presence of several former clay pits, some infilled with wasters, in addition to surface scatters of pottery, brick and tile recorded here. Furthermore, the sites of several kilns have been indicated by geophysical survey during the 1970s and more recently in 2011, when a possible L-shaped section of wall was also identified (Fig. 17; NHER 9406; Masters 2011 and see above).

4.5.4 Newfound Farm was linked to Potters Close and its surroundings by a trackway (identified as a Driftway in the Tithe apportionment; Fig. 17) that would have enabled easy transportation of goods to Colney Lane and then on to Norwich. A swathe of probable extraction pits extends across this area from north-west to south-east, and this alongside the various extant pits and ponds in this area no doubt related to extensive quarrying of the valuable fuller's earth. Brickearth and clay would also have been targeted for the (earlier) brick production and other pottery wares manufactured at Cringleford. Probable kilns have been identified along a field boundary to the south-west that may also have been related to pottery production, while another possible kiln site has been revealed by geophysical survey on the other side of the Norwich Southern Bypass to the south-west (NHER 55995). The latter falls within the land parcel latterly

identified as Potters Close on the Tithe map. Together, this indicates that the brick, tile and in particular pottery, manufacturing works extended over many acres during the later 16th to late 17th centuries (Fig. 17).

4.5.5 It is documented that on 20th July 1645 Thomas Balleston mortgaged several fields here and described these as 'The Potters Close formerly Gravel Pit Close and Springhouse' (Manor Court Roll 7.1.1647/7 NRO). In his will of 1657, Thomas Balleston mentions his tenement in Cringleford ('called Springehouse or Brakyhouse') as being in the use and occupation of potter Robert Coleman, while a later will by Edward Vincent in 1679 mentions that he was a potter and occupier of the site (NHER 9404; SNF57685: Hawes undated; see Anderson App. B.6). The range of ceramic forms identified in the assemblage is quite broad, leading to the suggestion that several potters were employed at any one time. It certainly seems likely that both Robert Coleman and Edward Vincent were in residence at the same time as they are both mentioned in the Hearth Tax of 1668 in relation to separate residences, although the former recorded five hearths and the latter just two. Presumably there were two separate dwellings on the site (Springhouse being one), one larger than the other: historic maps (Fig. 19b–c) clearly show two building ranges located on either side of the track leading from Colney Lane. Two glass bottle seals with one bearing the initials I[J]H and the other embossed FOOR[D] were recovered from the main pottery waster pit group (App. B.4; Figs B.4.1–2). Although these may relate to possible landowners, occupiers, or other prominent individuals, neither could be linked to the known potters or inhabitants living or working at Newfound Farm. Despite the extensive industry evident at Newfound Farm, production had seemingly ceased altogether by the early 18th century based on Blomefield's account written in 1736 (Blomefield 1806, v, 39).

4.6 Cringleford and the wider context of East Anglian pottery manufacture

4.6.1 As Anderson has outlined in App. B.6.90, very few post-medieval pottery manufacturing sites have been excavated in Norfolk, or indeed across East Anglia. Although the assemblage from Newfound Farm has not been directly associated with the remains of a kiln (or kilns) it clearly forms part of a significant industry based in Cringleford that extended across much of the current development site and beyond. Its extents (alongside that of the brick manufacturing) are indicated on Fig. 17 which utilises data from the NHER, fieldwalking, geophysical survey, historic maps and intrusive archaeological investigation.

4.6.2 Building on the discussion of possibly contemporary sites that have been published or otherwise reported on (App. B.6; largely based on the presence of pottery wasters), a targeted search of the NHER was commissioned. This shows the distribution of known and suspected post-medieval (and medieval) pottery production sites in Norfolk, which identified a total of 22 records relating to kilns and/or pottery works/workshops (Fig. 20, Nos 1–22; see Table 6 for NHER references). Numerous claypits and quarries that could potentially be related to brick or pottery production are also recorded and are shown on the figure. The following includes an overview of the evidence, supported by a tabulated summary, which serves to highlight how few sites have been investigated in

any detail, and the potential of this archaeological resource for understanding post-medieval industry, transport and trade in Norfolk and beyond. The absence of excavated examples of the pottery kilns themselves is also of note.

4.6.3 The pottery production sites shown on Fig. 20 include the current and adjacent sites (NHERs 9406, 63104 and 14272; Fig. 20, Nos 1–3) in addition to the probable tin-glazed earthenware kiln site nearby at Ber Street in Norwich (NHER 8; NHER 39789; Fig. 20, Nos 4–5; Goffin 2012 and see App. B.6).

No. on Fig. 20	NHER	Summary description **	Type of evidence *
1	9406	Potters Close: 17th c. pottery production (SW area), probable kilns, clay pits etc, part of Newfound Farm	D, G, FW, ?K, W
2	14272	Associated with above (wasters), site possibly extends to W of A47 as NHER 55995	D, G, FW, W
3	63104	Part of above (current excavation) Newfound Farm. Brick kilns. Significant assemblage of 17th century pottery manufacturing waste (Redwares including GRE, slipwares, TGE)	D, G, FW, Ex, (K), W
4	8	Ber Street: Possible TGE kiln site	Ex, W
5	39789	Ber Street: 16th century TGE kiln site (pottery published)	Ex, ?K, W
6	17054	17th-century green GRE pottery sherds	FW, ?K
7	51396	Medieval to post-medieval pottery sherds and probable production debris	FW/MD; W?
8	31238	2000 + medieval to post-medieval pottery sherds inc. ?wasters. Latest is 16th century lead-glazed wares	FW; W
9	10237	Wasters inc. 16th/17th century brown-glazed oxidised earthenware. 'Pot Kiln 12 Acres'	FW; W; C
10	23409	Large quantities of lead glazed earthenware sherds, ?kiln waste	FW, W
11	13174	Waster sherds (inc late medieval/transitional)	(Ex) W
12	12459	Surface scatter inc. saggars: late 16th to early 17th century green-glazed ware production	FW, W
13	19812	16th to 17th century GRE & RRE pottery fragments and kiln furniture	FW, W
14	12948	Earthwork mound/site of kiln and clay pit. 16th to 17th century.	Ex, W, K
15	11268	Surface scatter of handmade brick, clinker and 17th to 18th-century pottery sherds	FW, K?
16	51315	'Pottersgatefurlonge' (1626), near to an enclosure called 'Pottergateclose'	C, D
17	1016	Medieval kiln site at Pott Row, Grimston (1100-1500)	Ex, K
18	1105	16th and 17th-century earthenware wasters (published)	Ex, W
19	3219	Pottery kiln (late) associated with a brickworks (demolished 1960a)	S
20	19570	Dump of 18th century pottery wasters inc at least 2 saggars	W
21	6395	? 13th- and 17th-century pottery kilns (probably brickworks)	K, S
22	16693	Post-medieval salt-glazing kiln or lime kiln	K, S

* D = Documentary; C = Cartographic; Ex = Excavation; G = Geophysics; FW = Fieldwalking/surface scatter; MD: metal detecting; E = Earthworks; S = standing remains; K= Kiln; W = wasters/kiln debris

** GRE = green glazed red earthenware; RRE = red glazed earthenware; TGE = Tin-glazed earthenware

Table 6: Summary of pottery production sites listed in the NHER

4.6.4 Several pottery production sites appear to have circled the eastern periphery of Norwich, extending into the area of the Broads; some of which seem to have been broadly contemporary with the Cringleford pottery works.

4.6.5 In the 1980s a dense concentration of probable 17th-century green glazed red earthenware pottery sherds was recorded from a field to the south of Broad House,

Wroxham (NHER 17054; Fig. 20, No. 6). An area roughly 40m^2 of soil discolouration was noted that probably denotes the site of buildings and possibly at least one kiln. A map of 1819 shows the site as an area of pasture, suggesting that the kiln had fallen out of use by that time. To the south-east of this, at Woodbastwick, metal-detecting and fieldwalking in 2008/2009 and between 2016 and 2019 recovered a range of finds including medieval to post-medieval pottery sherds and probable production debris (NHER 51396; Fig. 20, No.7). It is noted in this record that similar pottery production debris has been recovered directly to the west of this site at NHER 8495 and other possible pottery production sites have been identified to the south, at NHER 1076 and NHER 8479 (not illustrated).

4.6.6 Systematic fieldwalking surveys undertaken in fields at Hemblington during the 1990s recovered over 2000 medieval to post-medieval pottery sherds (the majority unglazed medieval wares). Many of the oxidised and glazed medieval sherds were probably pottery production rejects: an activity that may account for several patches of discoloured soil that were noted during one of the surveys. The ceramic evidence suggests that pottery manufacture at this site continued into the 16th century, when it appears that lead-glazed vessels were being produced (NHER 31238; Fig. 20, No. 8).

4.6.7 Further to the south, pottery waster fragments – including 16th/17th century brown-glazed oxidised earthenware – were found in 1961 and 1980 during works at Brundall, close to a field called 'Pot Kiln 12 Acres' on the 1846 Tithe map (NHER 10237; Fig. 20, No. 9). Large quantities of post-medieval lead glazed earthenware pottery fragments and some possible post-medieval kiln waste were also recovered during fieldwalking in fields to the south of Hellington Church in 1986 (NHER 23409; No. 10). Various works at Church Hill, Saxlingham Nethergate to the south of Norwich have revealed a number of finds that include post-medieval (including late medieval Transitional sherds) waster sherds indictive of a kiln in the vicinity (NHER 13174; Fig. 20, No. 11).

4.6.8 A number of broadly contemporary probable pottery production sites have been identified further afield, to the west of Cringleford and Norwich. A spread of pottery within a ploughed field at Lyng in Breckland may denote the site of a kiln. Although few obvious wasters were recovered from this concentration (and subsequent metal detecting), the presence of saggars and evidence of very variable firing, colour and glazes suggest it may have been a production site for green-glazed wares, possibly during the late 16th to early 17th centuries (NHER 12459; Fig. 20, No. 12). A probable 16th to 17th century production site for green and red-glazed earthenware was also identified at Yaxham, to the south-east of Dereham, where fieldwalking from 1983 to 1985 recovered post-medieval pottery fragments and kiln furniture (NHER 19812; Fig. 20, No. 13). Also near Dereham, a field on the east side of the Scarning river valley contains the remains of a kiln which survives as a mound (12m-diameter and 0.30m high) with burnt red clay and bricks on the surface and a large partly-filled in pit to the north-east (NHER 12948; Fig. 20, No. 14). Ploughing on the site in the 1970s recovered fragments of kiln debris including pottery sherds that appeared to date to the 16th to 17th centuries.

4.6.9 Further to the west, towards Downham Market, are two further post-medieval sites. A possible post-medieval kiln was indicated by a surface scatter of handmade brick, clinker

and 17th to 18th-century pottery sherds at Shouldham, although none of the sherds appear to be wasters (NHER 11268; Fig. 20, No. 15). Although not investigated, there is documentary evidence for a pottery production site at Wimbotsham in an area identified as 'Pottersgatefurlonge' on William Hayward's map of 1626, near to an enclosure called 'Pottergateclose' (NHER 51315; Fig. 20, No. 16). A medieval kiln site is also known at Pott Row, Grimston, to the east of King's Lynn (NHER 1016; Fig. 20, No. 17).

4.6.10 The next loose cluster of sites is located around Fakenham to the north-west of Norwich. Two groups of 16th and 17th-century earthenware wasters were excavated in 1974 at Fulmodeston, although the kiln was not located (NHER 1105; Fig. 20, No. 18; Wade-Martins 1983). A much later pottery kiln associated with a brickworks at Swanton Novers to the east of this is known to have continued in operation into the early 20th century but was destroyed in the late 1960s (NHER 3219; Fig. 20, No. 19). Also in this area, medieval and post-medieval pottery fragments and over-fired pottery wasters including at least two saggars were found during and after earthmoving for the creation of a lake for Fakenham Anglers Club (NHER 19570; Fig. 20, No. 20). Although this may be a pottery works, its location in the Wensum floodplain suggests that this was probably an area where broken pottery was dumped from an 18th century kiln located elsewhere.

4.6.11 The site of potential 13th- and 17th-century pottery kilns was identified in 1938 at East Runton pit, on the north Norfolk coast, although later re-evaluated as being structures related to the brickworks (NHER 6395; Fig. 20, No. 21). The final record relates to a brick structure tentatively interpreted as a post-medieval salt-glazing kiln that is preserved in the garden of The Rookery at Smallburgh to the north-east of Norwich. However, no detailed investigation has taken place and it is also suggested to be a possible lime kiln (NHER 16693; Fig. 20, No. 22).

4.7 Newfound Farm

4.7.1 The kiln manufacturing waste found associated with Pottery Waster Group 42 appears to have been discarded in at least two different episodes (before and after the production of tin-glazed wares) and may represent clearance of pottery heaps/middens some time after production had ceased here in the late 17th to early 18th century. It is unlikely that the material was transported from the putative kilns located in Potters Close as discard would have been more logical within the many adjacent former quarries and clay pits. This suggests that other pottery kilns may have been sited near to the excavation in the area closer to Newfound Farm and Colney Lane, the location of which remains unknown. The tight distribution of pottery kiln waste in a group of pits against the north-east corner of the field (a small enclosure and building is shown here on the first Edition Ordnance Survey map of 1882; Fig. 19c) suggests deliberate disposal from somewhere nearby. Other finds, including shards of predominantly 17th to 18th century glass utility vessels (including pharmaceutical bottles or phials) and a complete mid-18th to early-19th century bottle found within a pit cutting infilled Kiln 21, clay tobacco-pipes (dating to 1660–1710, with most being 1660–1680; see Fletcher App. B.8), oyster shell, animal bone and coal were also found in the backfills of some of the pits in this group. Their presence also hints at episodes of clearance and seems to suggest a more

domestic origin for some of the waste, although clearly some elements may also have been associated with the workers employed in the pottery works.

4.7.2 Analysis of the animal bone from the site identified the presence of sheep/goat, with lesser quantities of horse, cattle, pig and horse, while a single bone from a dog may have been from a pet or working animal (see App. C.1). Of particular note are the two partial skeletons of neonate lambs and the partial skeleton of a piglet, which indicates that both sheep and pig breeding were occurring on site. Presumably once the pottery industry ended here during the late 17th or early 18th century (the site being described by Blomefield as totally disused by 1736, see above), Newfound Farm focused on agriculture: both pasture and arable land is recorded here in the 19th century, alongside orchards and gardens closer to Colney Lane.

4.8 Significance

4.8.1 In addition to providing further evidence for the widespread utilisation of the Yare valley during the later prehistoric period, the excavations at Newfound Farm have illuminated the early post-medieval industrial use of this rural site. Norfolk is well-known as a brickmaking county, with hundreds of sites recorded in the NHER, and yet despite this very few kilns – particularly of this date (16th to early 17th century) – have been investigated. As such, the Cringleford examples are all the more important in terms of understanding kiln technology and design, development, fuel use and the impact of this industry on the local landscape. The establishment of the kilns and Newfound Farm can be linked to a Norwich businessman, John Balleston, who may also have played a key part in the rebuilding of Cringleford following the disastrous fire in the early 1570s.

4.8.2 Newfound Farm was also known for the high quality earth that was initially sold to the continent for the manufacture of tin-glazed earthenware in Delft. Analysis of the large assemblage of pottery manufacturing waste has shown that during the 17th century Newfound Farm predominantly produced redwares, including all the main types which are commonly found on consumer sites in Norwich and elsewhere in Norfolk. It has also shown that the so-called 'Metropolitan' slipwares from the city were not made in Harlow as previously thought, but were actually produced at Cringleford. Furthermore, the identification of tin-glazed earthenware manufacture is a significant addition to the study of post-medieval ceramics in East Anglia and beyond. Elements of this assemblage will be made available for study by other specialists and interested parties working in the area, and a sample has been retained for the forthcoming Norfolk post-Roman pottery fabric series.

5 PUBLICATION AND ARCHIVING

5.1 Publication

5.1.1 It is intended that a synthetic article will be published in *Norfolk Archaeology* focusing on the brick kilns and evidence of pottery production, with a note in the Medieval and Later Pottery Research Group newsletter signposting to the main article. A copy of the publication(s) will be lodged with the NHER.

5.1.2 This report both supplements the published article and is superseded by any new data and interpretations presented within it.

5.2 Archiving, Retention and Dispersal

5.2.1 All artefactual material recovered will be held in storage by OA East and ownership of all such archaeological finds will be given over to the relevant authority to facilitate future study and ensure proper preservation of all artefacts. The archive will be prepared in accordance with current OA East guidelines, which are based on current national guidelines.

5.2.2 Excavated material and records will be deposited with, and curated by, Norfolk County Council Museum Stores under the Site Code ENF145412 and Accession number NWHCM: 2019.59. A digital archive will be deposited with OA Library/ADS. Norfolk County Council requires transfer of ownership prior to deposition.

5.2.3 The following recommendations for retention and dispersal of the archive have been made by the various specialists (see App. B and C) and agreed with Alan West of Norwich Castle Museum.

Material	Number/ Weight	Notes	Recommendations
Metalwork	15	Mostly iron in poor condition, has been x-rayed	Dispersal
Lithics	49	Chronologically mixed; largely dates to the Neolithic and/or Early Bronze Age	Retain
Burnt flint	6.45kg		Dispersal
Burnt stone, coal, coal cinders and shale	1 (2.85kg) 6 (226g)	Post-medieval	Dispersal
Glass	97 (4.45kg)	17th to 19th century: complete bottle and two bottle seals to be retained	Partial dispersal
Prehistoric Pottery	34 (114g)	Early Neolithic, Late Neolithic and Early Iron Age and undiagnostic	Retain
Roman pottery	2		Dispersal
Post-medieval pottery and kiln furniture	5139 (198.5kg) **Retained**: 2470 (115.5kg) (c.52.8%)	Representative samples of kiln furniture, structural waste and pottery have been retained, including examples of all forms, fabrics, over- and under-fired material, and component parts. Discard concentrated on the largest three contexts (43, 286, 287) and is recorded in the site database. Samples of pottery will be offered to other specialists working in the area and to the National Reference Collection of Post-Medieval Pottery, and a sample has been retained for the forthcoming Norfolk post-Roman pottery fabric series.	Partial dispersal
CBM (total including from Pottery waster pits)	325 (201.64kg)	Recommendations for retention/discard are included in the database, but generally samples of all structures have been retained, together with examples from kiln	Partial dispersal

Material	Number/ Weight	Notes	Recommendations
	Retained: 148 (106.537kg) (52.8%)	fills and other features, all tile waste relating to pottery production on the site, and all unusual forms	
Clay tobacco pipe	71 (0.543kg)	Plain undecorated stems (x 46) will be discarded, retain complete pipe bowls	Partial dispersal
Animal bone	6.36kg	Includes neonate lambs and piglet (partial skeletons), all post-medieval	Retain
Environmental samples	12	Very poor results: sub-samples for radiocarbon dating and charcoal analysis have been extracted	Disperse
Shell	1 (18g)	Oyster	Disperse

Table 7: Archive retention and dispersal overview

APPENDIX A CONTEXT INVENTORY

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
1	0		0	layer	topsoil	topsoil	0	0	0					dark brown	clay silt	
2	0		0	layer	subsoil	sub soil	0	0	0					mid grey brown	silty sandy clay	occasional small angular flint
3	0		0	layer	natural geology	natural geology	0	0	0					mid yellow brown	firm	clay
4	4	1	2.2	cut	ditch	boundary	4	DG2	2	0.8	0.18	linear	u-shape			
5	4	1	2.2	fill	ditch fill	disuse	4	DG2	2	0.8	0.18			mid brown grey	silty clay	occasional large rounded pebbles; frequent small brick frags
6	6	1	2.2	cut	ditch	boundary	4	DG2	2	0.76	0.22	linear	u shaped			
7	6	1	2.2	fill	ditch fill	disuse	4	DG2	2	0.76	0.22			light yellow brown	silty sand	frequent small flint gravels
8	8	1	2.2	layer	dumped deposit	discarded kiln debris	0	0	3.7	3.22	0.2			light grey brown	silty clay	occasional small charcoal flecks; abundant small to large tile wasters
9	9	1	2.2	cut	pit	rubbish pit	9	0	1	3.6	0.8	sub-circular	unseen			
10	9	1	2.2	fill	pit	dumped waste	9	0	1	2.2	0.78			mid grey brown	silty sand	frequent small sub rounded stone and occasional small brick frags
11	9	1	2.2	fill	pit	Backfill/ Waste deposit	9	0	1	0.8	0.3			mid greyish brown	silt sand	frequent small sub rounded stones, brick and tile
12	9	1	2.2	fill	pit	Backfill/Waste Disposal	9	0	1	2.1	0.5			mid grey brown	silt sand	frequent small sub rounded stones
13	9	1	2.2	fill	pit	Backfill/ Waste Disposal	9	0	1	3.4	0.4			mid grey brown	silt sand	frequent small sub rounded stones, brick and tile
14	14	1	0	cut	natural	natural feature	0	0	0.92	0.92	0.14	circular	u-shaped			

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
15	14	1	0	fill	natural	Silting	0	0	0.92	0.92	0.14			mid grey brown	silt sand	frequent medium sub rounded stones
16	16	1	2.2	cut	ditch	Boundary	4	DG2	1	1.08	0.18	linear	U-Shaped			
17	16	1	2.2	fill	ditch	silting/disuse	4	DG2	1	1.08	0.18			mid grey brown	silt sand	medium to large sub rounded stones
18	18	1	2.2	cut	pit	demolition	21	0	1	4.52	0.58	sub-oval	Poss flat based V-Shape			
19	18	1	2.2	fill	pit	Backfill	21	0	1	4.52	0.64			mid brown yellow	silt clay	occasional charcoal flecks
20	18	1	2.2	fill	pit	Demolition/ rubble/ backfill	21	0	1	2.5	0.42			mid brown red	ashy silt	abundant brick, tile and rubble and occasional charcoal
21	74	1	2.1	masonry	kiln	Kiln Brick	21	0	8.8	1.59	0.8			red brick	irregular mortar bonding Flemish	brick
22	74	1	2.1	masonry	kiln	kiln	21	0	2.1	0.42	0.23			red	irregular English mortar	brick
23	74	1	2.1	masonry	kiln	Kiln	21	0	2.1	0.42	0.23			red	English mortar	brick
24	74	1	2.1	masonry	kiln	Brick Kiln	21	0	2.1	0.42	0.23			red	irregular mainly header mortar	brick
25	74	1	2.1	masonry	kiln	Kiln	21	0	2.1	0.33	0.23			red	English bond mortar	brick
26	33	1	2.1	masonry	kiln	Wall/Kiln	34	0	7.16	0.23	0.86			layer of blue overlay staining bricks blue	English garden mortar	brick
27	33	1	2.1	masonry	kiln	Kiln	34	0	7.16	0.23	0.86			blue	English garden mortar	brick
28	33	1	2.2	fill	backfill	Backfill	34	0	1	1	0.75			pale yellow brown	silt sand	frequent brick and tile, occasional small sub-rounded stones
29	33	1	2.1	fill	kiln	Firing Ash	34	0	1	0.9	0.23			dark grey	silt sand	frequent charcoal
30	33	1	2.2	fill	disuse	Natural Silting/Backfill	34	0	1	2.14	0.22			mid grey brown	silt sand	rare medium sub rounded stones

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
31	33	1	2.2	fill	backfill	Backfill	34	0	1	2.14	0.2			dark grey brown	silt sand	medium sub rounded stones
32	33	1	2.2	fill	kiln	backfill	34	0	1	1.7	0.22			mid grey brown	silt sand with clay lenses	medium sub rounded stones
33	33	1	2.1	cut	kiln	Kiln Construction	34	0	1	2.1	0.9	linear	Flat Based U Shaped			
34	0	1	2.1	Group	kiln	Structure	34	0	7.42	1.57	0.98					
35	33	1	2.1	masonry	surface (internal)	Kiln Floor	34	0	7.16	0.82	0.05				irregular bond half broken brick and clay	brick
36	36	1	2.1	cut	ditch	boundary/drainage	36	DG1	1.05	0.8	0.38	linear	Wide U-Shaped			
37	36	1	2.1	fill	ditch	disuse	36	DG1	1.05	0.8	0.38			mid yellow brown	sand clay	occasional rounded small flint
38	38	1	2.2	cut	ditch	boundary/drainage	4	DG2	0.68	0.7	0.17	linear	Wide U Shaped			
39	38	1	2.2	fill	ditch	disuse	4	DG2	0.68	0.7	0.17			mid to dark grey brown	sand clay	occasional small sub rounded flint
40		1	2.1	layer	colluvium		0	0	1	1.06	0.42			dirty brown yellow	sand clay	occasional small rounded flint
41		1	2.1	layer	colluvium	Quarry	0	0	2	1.06	0.1			mid to dark grey brown	sand clay	occasional small rounded flint and charcoal flecks
42	42	1	2.2	cut	pit	Extraction	42	Pottery Waster Group	2.02	1.9	1.2	indeterminate	Uncertain			
43	42	1	2.2	fill	pit	Backfill	42	Pottery Waster Group	1	3.3	1.2			mid grey brown	silt clay	rare charcoal flecks
44	44	2	2.2	cut	pit	Uncertain	0	0	1.28	0.68	0.2	sub-circular	U-Shaped			
45	44	2	2.2	fill	pit	Silting	0	0	1.28	0.68	0.2			mid grey brown	silt sand	rare small gravel
46	46	2	2.2	cut	ditch	Boundary	46	DG2	1	0.8	0.14	linear	Flat Based V-Shape			

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
47	46	2	2.2	fill	ditch	Boundary	46	DG2	1	0.8	0.14			mid brown grey	silt sand	occasional sub rounded stones and occasional charcoal
48	48	2	1.1	cut	pit	Uncertain	0	0	0.92	0.92	0.2	sub-circular	U-Shaped			
49	48	2	1.1	fill	Pit	Silting	0	0	0.92	0.92	0.2			mid brown	silt sand	occasional small sub rounded stones
50	50	2	2.1	cut	ditch	Boundary	50	DG1	1.46	0.73	0.2	linear	U-Shaped			
51	50	2	2.1	fill	ditch	Natural Silting	50	DG1	1.46	0.73	0.2			mid brown grey	silt sand	frequent small sub rounded stones
52	0	1	2.1	masonry	kiln	Kiln Group	52	0	4.71	3.06	0.22					
53	56	1	2.1	masonry	kiln	Kiln wall	52	0	2.6	0.11	0.21			red	clay and mortar	stretcher brick
54	56	1	2.1	masonry	kiln	kiln wall	52	0	2.7	0.11	0.19				mortar	stretcher brick
55	56	1	2.2	fill	kiln	Backfill/ demolition layer	52	0	2.98	0.7	0.17			pale red brown	silt sand	demolition brick and clay lenses
56	56	1	2.1	cut	kiln	Construction	52	0	4.3	2.98	0.22	square	Flat U-Shaped			
57	56	1	2.1	layer	surface (internal)	Kiln Floor	52	0	3.2	2.6	0.05			dark reddish brown	silt clay	occasional small sub-rounded stones
58	56	1	2.2	fill	kiln	Demolition Layer/ backfill	52	0	2.74	0.7	0.22			pale red brown	silt sand	demolition brick, tile, small sub angular stones with clay lenses
59	59	2	2.1	cut	ditch	Field Boundary	50	DG1	1	1.12	0.44	curvilinear	Wide Shallow U-Shaped			
60	59	2	2.1	fill	ditch	Natural Infilling/ Silting	50	DG1	1	1.12	0.45			mid grey brown	silt sand	occasional- moderate small sub rounded flint and rare charcoal flecks
61	61	2	0	cut	natural	sinkhole	0	0	4.38	2.94	2.8	sub-circular	Steep Sided U-Shape			
62	61	2	0	fill	natural	sinkhole	0	0	4.38	2.94	2.8			light to mid grey brown	silt sand	occasional small sub rounded flint and rare large sub rounded flint

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
63	317	1	2.2	fill	pit	Backfill	42	Pottery Waster Group	1	1.33	0.22			mid yellow brown	silt clay	rare charcoal flecks
64	317	1	2.2	fill	pit	Backfill	42	Pottery Waster Group	1	1.47	0.87			mid red brown	silt clay	rare charcoal flecks and occasional chalk
65	42	1	2.2	fill	pit	Backfill	42	Pottery Waster Group	1	1.44	0.46			mid yellow brown	silt clay	occasional charcoal and small sub rounded stones
66	42	1	2.2	fill	pit	Backfill	42	Pottery Waster Group	1	2.08	0.66			mid red brown	silt clay	rare small sub rounded stones
67	42	1	2.2	fill	pit	Backfill	42	Pottery Waster Group	1	1.02	0.08			dark brown grey	ashy clay	frequent charcoal and rare chalk
68	42	1	2.2	fill	pit	Backfill	42	Pottery Waster Group	1	1.6	0.46			mid grey brown	silt clay	rare charcoal and occasional small sub rounded stones
69	42	1	2.2	fill	pit	backfill	42	Pottery Waster Group	1	0.7	0.2			mid grey brown	silt clay	rare charcoal
70	56	1	2.1	masonry	surface (internal)	Kiln firing chamber Floor	52	0	1.67	0.5	0.11				clay	partial stretcher brick
71	56	1	2.1	masonry	kiln	use	52	0	0.68	0.25	0.22					header brick
72	56	1	2.1	masonry	kiln	Kiln Wall	52	0	3.03	0.11	0.18				mortar	stretcher bond brick
73	56	1	2.1	masonry	kiln	Kiln Wall	52	0	3.2	0.25	0.05			dark red	clay	brick
74	74	1	2.1	cut	pit	Kiln	21	0	1	4.22	1.2	sub-rectangular	Flat Based V-Shape			
75	74	1	2.1	fill	pit	backfill	21	0	1	4.22	0.8			dark grey	silt clay	rare small stones, brick and tile
76	90	1	2.1	fill	pit	Extraction	21	21	1	2.58	0.78			dark brown grey	silt clay	rare small stones
77	95	1	2.1	fill	pit	Extraction	21	21	1	1.4	0.98			mid brown grey	silt clay	rare small stones
78	74	1	2.1	masonry	kiln	Kiln West outer Wall	21	0	2.2	1.75	0.4			red	mortar	flemish brick

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
79	74	1	2.1	masonry	kiln	Kiln North Outer Wall	21	0	5	1.5	0.8			red	mortar	flemish brick
80	74	1	2.1	masonry	kiln	Kiln North Wall of Entrance	21	0	2.8	1.3	0.3			red	mortar	flemish brick
81	74	1	2.1	masonry	kiln	Kiln South Wall of Entrance	21	0	2.8	1.3	0.3			red	mortar	flemish brick
82	74	1	2.1	masonry	kiln	Kiln Furnace Arch	21	0	2.1	0.23	0.4			red	mortar	english brick
83	74	1	2.1	masonry	kiln	Kiln Furnace Arch	21	0	2.1	0.23	0.42			red	mortar	english with header brick
84	74	1	2.1	masonry	kiln	Kiln Furnace Arch	21	0	2.1	0.23	0.42			red	mortar	irregular with vertical stretcher arch brick
85	74	1	2.1	masonry	kiln	Kiln Furnace Arch	21	0	2.1	0.23	0.42			red	mortar	english with header arch brick
86	74	1	2.1	masonry	kiln	Kiln Furnace Arch	21	0	2.1	0.23	0.4			red	mortar	english collapsed brick
87	74	1	2.1	masonry	kiln	Kiln Furnace Arch	21	0	2.1	0.23	0.42			red	mortar	header brick
88	74	1	2.1	masonry	kiln	Kiln Furnace Arch	21	0	2.1	0.23	0.42			red	mortar	english with header bricks
89	0		0	void			0	0	0							
90	90	1	2.1	cut	pit	extraction		21	3.16	1.68	0.61	indeterminate	Unknown NFE			
91	90	1	2.1	fill	pit	Extraction Backfill	0	21	1	1.01	0.49			mid brown grey	silt clay	rare small sub rounded stones
92	92	1	2.1	cut	pit	Extraction	0	21	1	0.81	0.35	indeterminate	Unknown NFE			
93	92	1	2.1	fill	pit	Backfill	0	21	1	1.11	0.43			mid grey brown	silt clay	rare medium sub rounded stones
94	21	1	2.1	fill	kiln	Firing Waste	21	0	8.14	1	0.3			mid red purple	ash	frequent charcoal flecks
95	95	1	2.1	cut	pit	Extraction	0	21	1	0.91	0.71	indeterminate	NFE			
96	96	2	2.1	cut	ditch	Boundary	36	DG1	1	1.12	0.21	linear	U-Shaped			
97	96	2	2.1	fill	ditch	Silting	36	DG1	1	1.12	0.21			mid brown grey	silt sand	occasional small gravel
98	98	2	1.1	cut	pit	sinkhole	0	0	1.5	1.5	1.16	circular	V-Shape			
99	98	2	1.1	fill	Pit		0	0	1.5	1.5	0.92			mid brown	sand silt	occasional flint
100	98	2	1.1	fill	pit		0	0	0.62	0.62	0.36			light brown grey	silt sand	
101	98	2	1.1	fill	pit		0	0	0.86	0.86	0.2			dark grey	sand silt	

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
102	98	2	1.1	fill	pit	Disuse	0	0	0.98	0.98	0.14			light grey brown	silt sand	
103	103	2	2.1	cut	ditch	Boundary	103	DG1	1	1.2	0.3	linear	Wide U-Shape			
104	103	2	2.1	fill	ditch	Natural Infilling	103	DG1	1	1.2	0.3			yellow grey brown	silt sand	occasional small sub rounded flint
105	105	2	0	cut	natural	sinkhole	0	0	1.9	1.9	1	circular	NFE			
106	105	2	0	fill	natural	sinkhole	0	0	1.9	1.9	1			mid brown grey	silt sand	frequent sub rounded stones
107	107	2	0	cut	natural	sinkhole/pit	0	0	1	0.95	0.36	circular	u-shaped			
108	107	2	0	fill	natural	sinkhole	0	0	1	0.95	0.36			mid yellow brown	sand silt	occasional small angular flint
109	109	2	0	cut	pit	natural feature	0	0	2	0.82	0.48	curvilinear	U-Shaped			
110	109	2	0	fill	pit	Silting	0	0	2	0.82	0.48			mid brown grey	silt sand	occasional small to medium sub rounded stones
111	111	2	2.1	cut	ditch	boundary	111	DG1	1	0.3	0.02	linear	Shallow Wide U-Shaped			
112	111	2	2.1	fill	ditch	Natural Infilling	111	DG1	1	0.3	0.02			mid grey brown	silt sand	occasional small sub rounded flint
113	113	2	0	cut	pit	natural	0	0	1	1.18	0.61	curvilinear	Irregular U-Shape			
114	113	2	0	fill	pit	Natural	0	0	1	1.18	0.61			mid grey brown	silt clay	frequent small sub rounded stones
115	115	2	0	cut	natural	Tree pit	0	0	1.3	1.26	0.24	sub-circular	Flat Based U-Shape			
116	115	2	0	fill	natural	Tree pit	0	0	1.3	1.26	0.24			mid brown grey	silt sand	frequent sub rounded stones and medium flint
117	117	2	0	cut	natural	Tree pit	0	0	1.85	1.02	0.16	sub-circular	U-Shaped			
118	117	2	0	fill	natural	Silting	0	0	1.85	1.02	0.16			mid yellow brown	silt sand	occasional small gravel
119	119	2	0	cut	natural	Tree pit	0	0	1.5	0.9	0.43	sub-circular	Wide U Shaped			
120	119	2	0	fill	natural	Tree pit	0	0	1.5	0.9	0.43			mid yellow grey brown	silt sand	occasional small sub rounded flint

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
121	121	2	1.1	cut	natural		0	0	1.9	1.6	1	sub-circular	NFE			
122	121	2	1.1	fill	natural		0	0	1.9	1.6	1			mid brown	silt sand	common angular small flint
123	123	2	1.2	cut	pit	Possible Post Pad	0	0	1.04	1	0.26	sub-circular	Flat Based U Shape			
124	123	2	1.2	fill	pit	Silting	0	0	1.04	1	0.26			mid grey brown	silt sand	occasional small gravel
125	123	2	1.2	fill	pit	Backfill	0	0	1.04	0.74	0.14			mid grey brown	silt sand	frequent medium to large flint cobbles occasional chalk and charcoal
128	128	2	1.1	cut	natural	sinkhole	0	0	1.35	1.3	1	sub-circular	NFE			
129	128	2	1.1	fill	natural	Sinkhole	0	0	1.35	1.3	1			mid grey brown	silt sand	occasional to moderate sub rounded flint
130	130	2	0	cut	post hole	Structural	0	0	0.34	0.34	0.33	circular	U-Shaped			
131	130	2	0	fill	post hole	Natural Silting	0	0	0.34	0.34	0.33			mid grey brown	silt sand	rare stones
132	132	2	1.1	cut	natural	Sinkhole	0	0	2.05	2.1	1.35	circular	NFE			
133	132	2	1.1	fill	natural	Sinkhole	0	0	2.05	2.1	0.75			mid grey brown	silt sand	occasional sub rounded stones
134	132	2	1.1	fill	natural	Sinkhole	0	0	2.05	2.1	1.35			dark brown grey	silt sand	sub rounded medium stones and frequent flint
135	135	1	2.1	cut	pit	Extraction then Dump	0	34	1	1.88	0.42	sub-circular				
136	135	1	2.1	fill	pit	Dump	0	34	1	1.88	0.42			mid grey brown	sand clay	frequent brick and tile fragments
137		1	2.1	masonry	surface (external)	Floor	34	0	4.04	0.86				dark grey brown	hard fired clay	
138	33	1	2.1	masonry	kiln	Kiln Arch	34	0	0.83	0.29	0.36				mortar	header bond brick
139	139	2	0	cut	natural	Tree pit	0	0	1.8	1.2	0.39	amorphous	Irregular U Shape			
140	139	2	0	fill	natural	Tree pit	0	0	1.8	1.2	0.39			dark brown	silt sand	occasional small flint
141	141	2	1.1	cut	natural	Sink Hole	0	0	1.45	1.34	1.2	sub-circular	NFE			
142	141	2	1.1	fill	natural	Silting	0	0	1.45	1.34	1.2			mid grey brown	silt sand	occasional small to medium sub rounded stones

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
145	145	2	1.1	cut	natural	Sinkhole	0	0	2.64	2.5	1.2	sub-circular	NFE			
146	145	2	1.1	fill	natural	sinkhole	0	0	2.64	2.5	1.2			light mid grey brown	silt sand	occasional small sub rounded flint and rare charcoal
147	147	2	0	cut	pit	natural feature	0	0	1.5	0.65	0.22	sub-circular	Shallow U-Shaped			
148	147	2	0	fill	pit		0	0	1.5	0.65	0.22			mid grey brown	silt sand	occasional small sub rounded flint
149	149	2	0	cut	pit	natural feature	0	0	1	0.95	0.18	sub-circular	U-Shaped			
150	149	2	0	fill	pit	Silting	0	0	1	0.95	0.18			mid grey brown	silt sand	occasional small to medium sub rounded stones
151	151	2	2.1	cut	ditch	Boundary	111	DG1	2	0.38	0.11	linear	U-Shaped			
152	151	2	2.1	fill	ditch	Natural Silting	111	DG1	3	0.38	0.11			mid grey brown	silt sand	rare small sub rounded stone
153	153	2	0	cut	pit	natural feature	0	0	0.95	0.6	0.12	sub-circular	Uneven U shape			
154	153	2	0	fill	pit		0	0	0.95	0.6	0.12			mid grey brown	silt sand	occasional small sub rounded flint
155	155	2	0	cut	pit	natural	0	0	0.5	1.12	0.22	sub-circular	Uneven U Shape			
156	155	2	0	fill	pit		0	0	0.5	1.12	0.22			mid grey brown	silt sand	occasional small sub rounded flint
157	157	2	1.1	cut	natural	sinkhole	0	0	1.6	1.6	1.1	circular	NFE			
158	157	2	1.1	fill	natural	Sinkhole	0	0	1.6	1.6	1.1			dark brown	silt sand	occasional small flint
159	159	2	1.1	cut	pit		0	0	0.78	0.6	0.12	sub-circular	Shallow U Shape			
160	159	2	1.1	fill	pit	Silting	0	0	0.78	0.6	0.12			mid grey brown	silt sand	occasional small to medium sub rounded stone
161	161	2	0	cut	natural	sinkhole	0	0	1.24	1.13	0.84	sub-circular	NFE			
162	161	2	0	fill	natural	Silting	0	0	1.24	1.13	0.84			mid grey brown	silt sand	occasional small to medium sub rounded stones

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
163	163	2	1.1	cut	natural	Sinkhole	0	0	1.8	1.95	1	sub-circular	NFE			
164	163	2	1.1	fill	natural	Sinkhole	0	0	1.8	1.95	1			mid grey brown	silt sand	frequent small sub rounded stones and flint
165	165	2	0	cut	pit	natural feature	0	0	1.33	0.7	0.32	sub-circular	Uneven U shape			
166	165	2	0	fill	pit		0	0	1.33	0.7	0.32			light to medium grey brown	silt sand	occasional to moderate small sub rounded flint
167	167	2	0	cut	pit	natural feature	0	0	0.85	0.64	0.45	sub-circular	U shaped			
168	167	2	0	fill	pit		0	0	0.84	0.64	0.45			mid grey brown	silt sand	occasional small sub rounded flint and rare charcoal flecks
169	169	2	1.1	cut	natural	Sinkhole	0	0	1.4	0.86	0.76	sub-circular	NFE			
170	169	2	1.1	fill	natural	Silting	0	0	1.4	0.86	0.76			mid grey brown	silt clay	occasional small to medium sub rounded stones
171	171	2	0	cut	natural	sinkhole	0	0	0.8	0.8	0.16	circular	U-Shaped			
172	171	2	0	fill	natural	Sinkhole	0	0	0.8	0.8	0.16			mid grey brown	silt clay	common flint pebble and root
173	173	2	0	cut	pit	undated feature	0	0	2	1.9	0.64	sub-circular	U-Shaped			
174	173	2	0	fill	pit		0	0	0.62	0.62	0.4			mid brown	silt sand	
175	173	2	0	fill	pit		0	0	0.86	0.86	0.6			light grey brown	silt sand	occasional small flint and gravel
176	173	2	0	fill	pit		0	0	1.3	1.3	0.6			mid brown	silt sand	occasional small flint and gravel
177	177	2	2.2	cut	post hole		0		0.5	0.4	0.25	sub-circular	U-Shaped			
178	177	2	2.2	fill	post hole		0		0.5	0.4	0.25			dark grey brown	silt sand	occasional small flint and pebbles
179	179	2	0	cut	natural	Tree pit	0	0	0.8	0.8	0.25	circular	U-Shaped			
180	179	2	0	fill	natural	Silting	0	0	0.8	0.8	0.25			mid grey brown	silt sand	occasional sub rounded stones
181	181	2	0	cut	natural	Tree pit/burrow	0	0	0.95	0.8	0.62	sub-circular	Unknown			
182	181	2	0	fill	natural	Tree pit/ Animal burrow	0	0	0.95	0.8	0.62			mid grey brown	silt sand	occasional to moderate small sub rounded flint
183	183	2	0	cut	pit	natural feature	0	0	1.24	1	0.3	sub-circular	U-Shaped			

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
184	183	2	0	fill	pit	silting	0	0	1.24	1	0.3			mid grey brown	silt sand	occasional small to medium sub rounded stones
185	185	2	0	cut	pit		0	0	0.5	0.5	0.09	circular	Flat U shape			
186	185	2	0	fill	pit		0	0	0.5	0.5	0.09			dark grey	silt sand	occasional small flint and common charcoal flecks
187	187	2	0	cut	natural	sinkhole	0	0	0.96	0.96	0.58	circular	U-Shaped			
188	187	2	0	fill	natural	sinkhole	0	0	0.96	0.96	0.58			dark brown	silt sand	occasional small flint gravel
189	189	2	0	cut	natural	sinkhole	0	0	1.85	1.8	1.1	sub-circular	NFE			
190	189	2	0	fill	natural	sinkhole	0	0	1.85	1.8	1.1			mid grey brown	silt sand	moderate small sub rounded flint
191	191	2	0	cut	natural	sinkhole	0	0	0.73	2	0.58	sub-circular	NFE			
192	191	2	0	fill	natural	Sinkhole	0	0	0.73	2	0.58			mid brown grey	silt sand	frequent medium sized stones and flint
193	193	2	0	cut	natural	sinkhole	0	0	1	1	0.78	circular	U-Shaped			
194	193	2	0	fill	natural	sinkhole	0	0	1	1	0.78			dark brown	silt sand	occasional small angular flint and gravel
195	195	2	0	cut	natural	sinkhole	0	0	0.95	0.8	0.9	sub-circular	NFE			
196	195	2	0	fill	natural	Sinkhole	0	0	0.95	0.8	0.9			dark brown	silt sand	occasional small angular flint and gravel
197	197	2	2.2	cut	ditch	Terminus/Boundary	46	DG2	2.59	1.1	0.21	linear	U-Shaped			
198	197	2	2.2	fill	ditch	Natural Silting	46	DG2	2.59	1.1	0.21			mid grey brown	silt sand	occasional sub rounded stones
199	199	2	2.2	cut	ditch	drainage/boundary	46	DG2	2	0.45	0.11	linear	U-shaped			
200	199	2	2.2	fill	ditch fill	disuse	46	DG2	2	0.45	0.11			mid yellow brown	silty sand	occasional small gravels
201	201	2	2.1	cut	ditch	drainage/boundary	201	DG1	2	0.67	0.18	linear	U-shaped			
202	201	2	2.1	fill	ditch fill	disuse	201	DG1	2	0.67	0.18			mid grey brown	silty sand	occasional small gravels
203	203	2	2.2	cut	ditch	field boundary/drainage	46	DG2	1	0.65	0.24	linear	u-shaped			
204	203	2	2.2	fill	ditch fill	disuse/silting	46	DG2	1	0.65	0.24			mid grey brown	silty sand	moderately small sub rounded flint gravels
205	205	2	2.1	fill	ditch	drainage/boundary	50	DG1	2	1.05	0.4	linear	U shaped			

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
206	205	2	2.1	fill	ditch fill	disuse	50	DG1	2	1.05	0.4			mid grey brown	silty sand	common small sub ang flint gravels
207	207	2	2.1	cut	ditch	boundary/drainage	201	DG1	1	0.84	0.21	linear	U shaped			
208	207	2	2.1	fill	ditch fill	natural silting	201	DG1	1	0.84	0.21			mid yellow brown	silty sand	medium sub rounded sub ang gravels
209	209	2	2.1	cut	ditch	drainage/boundary	201	DG1	1	0.43	0.1	linear	U shaped			
210	209	2	2.1	fill	ditch fill	drainage	201	DG1	1	0.43	0.1			mid grey brown	silty sand	frequent small sub rounded flint gravels
211	211	2	0	cut	natural	sinkhole	0	0	1	1	0.8	sub-circular	unseen			
212	211	2	0	fill	natural	sinkhole	0	0	1	1	0.8			mid grey brown	silty sand	occasional small sub rounded flint
213	213	2	0	cut	natural	sinkhole	0	0	1.4	1.1	0.48	sub-circular	u-shaped			
214	213	2	0	fill	natural	sinkhole	0	0	1.4	1.1	0.48			dark brown	silty sand	
215	33	1	2.1	masonry	kiln	brick/tile production	34	0	0.88	0.35	0.15					
216		2	0	void			0	0								
217	217	2	0	cut	natural	sinkhole	0	0	1.05	1	0.6	sub-circular	unseen			
218	217	2	0	fill	natural	sinkhole	0	0	1.05	1	1			mid grey brown	silty sand	medium sub rounded flint stone
219	219	2	0	cut	natural	sinkhole	0	0	1.44	1.23	0.53	sub-circular	unseen			
220	219	2	0	fill	natural	sinkhole	0	0	1.44	1.23	0.53			mid grey brown	silty sand	small and medium sub rounded stone
221	221	2	0	cut	natural	sinkhole	0	0	0.9	0.9	0.6	circular	unseen			
222	221	2	0	fill	natural	sinkhole	0	0	0.9	0.9	0.6			mid grey brown	silty sand	small and medium sub rounded stones
223	223	2	0	cut	natural	sinkhole	0	0	1.18	1.02	0.54	circular	u shaped			
224	223	2	0	fill	natural	sinkhole	0	0	1.18	1.02	0.54			mid yellow brown	silty sand	frequent small sub angular stone
225	225	2	0	cut	natural	sinkhole	0	0	1.5	1.45	0.9	sub-circular	unseen			
226	255	2	0	fill	natural	sinkhole	0	0	1.5	1.45	0.9			mid grey brown	silty sand	occasional small sub rounded flint
227	227	2	0	cut	natural	sinkhole	0	0	2	1.2	0.7	sub-oval	u-shaped			
228	227	2	0	fill	natural	sinkhole	0	0	2	1.2	0.7			mid grey brown	silty sand	occasional small sub rounded flint

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
229		1	2.1	masonry	kiln	group number for kiln	229	229	11.85	3.71	0.75					
230	230	1	2.1	cut	kiln	cut for brick kiln	241	229	12.99	1.2	0.55	sub-rectangular	flat based square cut			
231	231	1	2.1	cut	kiln	kiln construction cut	242	229	13.9	1.64	0.56	sub-rectangular	flat based square			
232	232	1	2.1	cut	pit	rake out/waste pit at the end of kin group 229	229	229	4.78	4.36	0.54	sub-circular	irregular u shaped			
233	230	1	2.1	masonry	kiln	kiln wall	241	229	5.35	0.12	0.54					
234	230	1	2.1	masonry	kiln	kiln wall	241	229	6.7	0.12	0.75					
235	231	1	2.1	masonry	kiln	kiln wall	242	229	6.8	0.15	0.56					
236	231	1	2.1	masonry	kiln	kiln wall	242	229	6.95	0.14	0.6					
237	230	1	2.1	layer	kiln	floor of kiln	241	229	5.4	0.9	0.05			mid grey red	silty clay	common small charcoal frags
238	231	1	2.1	fill	kiln	kiln floor remnant	242	229	6.9	0.9	0.05			mid grey red	silty clay	common charcoal fragments
239	239	1	2.1	cut	pit	extraction quarry pit	0	229	9.27	2.1	0.5	rectangular	flat based square			
240	239	1	2.1	fill	pit	backfill	0	229	9.27	2.1	0.5			mid grey brown	silty sand	occasional small subrounded stone
241	230	1	2.1	masonry	kiln	industrial	241	229	13.05	1.18	0.75					
242	231	1	2.1	masonry	kiln	industrial	242	229	13.62	1.77	0.6					
243	231	1	2.1	fill	backfill	disuse	242	229	1	1.54	0.3			mid red grey	silty clay	common small brick frags
244	231	1	2.1	fill	kiln fill	disuse	242	229	1	1.32	0.38			mid orange yellow	silty clay	
245	231	1	2.1	fill	kiln	use	242	229	1	1.54	0.03			dark brown grey	silty clay	
246	231	1	2.1	fill	kiln	use	242	229	1	1.52	0.12			mid grey yellow	silty clay	
247	231	1	2.1	fill	kiln	use	242	229	1	1.52	0.04			dark grey black	silty clay	
248	231	1	2.1	fill	kiln	use	242	229	1	1.52	0.03			mid grey yellow	silty clay	
249	231	1	2.1	fill	kiln	disuse	242	229	1	1.74	0.03			mid brown grey	silty clay	
250	230	1	2.1	fill	kiln	disuse	241	229	0.5	2.1	0.3			mid brown yellow	silty clay	
251	230	1	2.1	fill	kiln	disuse	241	229	0.5	1.16	0.32			mid brown red	silty clay	abundant small brick frags

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
252	230	1	2.1	fill	kiln	disuse	241	229	0.5	1.08	0.3			mid grey brown	silty clay	common small brick frags
253	232	1	2.1	fill	pit	disuse	229	229	1	2.84	0.2			mid brown red	silty clay	
254	232	1	2.1	fill	pit	disuse	229	229	1	2.56	0.32			light grey	silty clay	occasional small brick fragment
255	232	1	2.1	fill	pit	use	229	229	0.5	3.4	0.1			dark grey black	silty clay	common charcoal flecks
256	232	1	2.1	fill	pit	use	229	229	0.2	0.97	0.1			dark brown grey	silty clay	
257	231	1	2.1	fill	kiln	disuse	242	229	13.62	0.9	0.55			mid red brown	silty clay	abundant brick and tile and small charcoal flecks
258	241	1	2.1	fill	kiln	disuse	241	229	13.05	0.9	0.55			mid red brown	silty clay	abundant brick and tile with occasional charcoal frags
259	259	1	2.2	cut	pit	extraction/quarry	9	0	9.11	5.26	1.8	sub-circular	unseen			
260	259	1	2.2	fill	pit	backfill	9	0	2	1.5	0.2			mid grey brown	sandy clay	occasional small brick and tile frags
261	259	1	2.2	fill	pit	backfill	9	0	2	2.15	0.3			dark grey black	coke	
262	262	1	2.2	cut	pit	rubbish	9	0	0	2.6	1.2					
263	259	1	2.2	fill	pit	backfill	9	0	12	5.02	1.52			mid grey brown	sandy clay	occasional brick and tile fragments
264	259	1	2.2	fill	pit	backfill	9	0	2	1.5	0.1			mid grey brown	sandy clay	moderate brick and tile frags
265	259	1	2.2	fill	pit fill	backfill	9	9	2	3.7	0.7			light brown grey	sandy clay	occasional brick and tile frags; occasional small subrounded flint
266	262	1	2.2	fill	pit fill	backfill	9	0	2	2.8	0.6			mid red	brick dust	over 90% broken brick and tile wasters
267	262	1	2.2	fill	pit fill	backfill	9	0	2	1.5	0.14			light brown grey	sandy clay	occasional brick and tile frags
268	262	1	2.2	fill	pit fill	backfill	9	0	2	2.3	0.3			mid red	brick dust	over 90% broken tile wasters
269	262	1	2.2	fill	pit fill	backfill	9	0	2	0.7	0.08			light grey brown	sandy clay	occasional tile frags
270	262	1	2.2	fill	pit fill	backfill	9	0	2	1.4	0.3			mid red	brick dust	over 90% tile wasters
271	271	1	2.2	cut	pit	Extraction	271	0	8.45	3.7	0.54	Indeterminate				

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
272	271	1	2.2	fill	pit fill		271	0	8.45	3.4	0.3			dark grey brown	sandy clay	occasional rounded stone to more concentrated to bottom of context
273	271	1	2.2	fill	pit fill		271	0	8.45	3.7	0.42			light grey brown	clay	
274	271	1	2.2	fill	pit fill		271	0	1.8	0.76	0.32			dark grey	clay	
275	275	1	2.1	cut	pit	industrial	0	0	1.8	1.3	0.4	irregular	flat bottomed U shape			
276	275	1	2.1	fill	pit	disuse	0	0	1.8	1.32	0.26			dark brown grey	clay	occasional small stone
277	275	1	2.1	fill	pit	disuse	0	0	1.8	1.16	0.05			mid yellow brown	clay	
278	275	1	2.1	fill	pit	disuse	0	0	1.8	1.2	0.16			dark brown grey	clay	
279	279	1	2.2	cut	pit	quarry	42	Pottery Waster Group	2	3.9	0.98	sub-circular	flat based u shape			
280	279	1	2.2	fill	pit fill	rubbish tip layer	42	Pottery Waster Group	2	3.9	0.56			dark grey	silty clay	occasional very large sub rounded flint nodules
281	279	1	2.2	fill	pit fill	refuse layer	42	Pottery Waster Group	2	1.4	0.51			light yellowish brown	silty sand	frequent brick and mortar; occasional large sub rounded flint
282	279	1	2.2	fill	pit fill	waster/refuse dump	42	Pottery Waster Group	2	2.8	0.5			mid yellow brown	silty sand	frequent brick and mortar frags
283	283	1	2.2	cut	pit	extraction	42	Pottery Waster Group	3.8	1.3	1.3	sub-oval	full extent not seen - probably u-shaped			
284	283	1	2.2	fill	pit fill	dump layer	42	Pottery Waster Group	3.8	1.3	0.23			mid brown yellow	sandy clay	frequent brick; occasional small rounded flint
285	283	1	2.2	fill	pit fill	Dump	42	Pottery Waster Group	3.8	1.3	0.2			mid to dark yellow brown	sand clay	frequent brick wasters and occasional charcoal

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
286	283	1	2.2	fill	pit fill	Dump	42	Pottery Waster Group	3.8	1.3	0.3			mid dark brown	sand clay	occasional -moderate small sub rounded flint and occasional charcoal moderate pot and brick wasters
287	283	1	2.2	fill	pit fill	dump	42	Pottery Waster Group	3.8	1.3	0.6			mid yellow green	sand clay	occasional charcoal; and small to moderate sub rounded flint moderate brick and frequent pot
288	288	1	2.2	cut	pit	Extraction pit/ waster dump	42	Pottery Waster Group	0.3	0.6	0.3	sub-circular	U-Shape			
289	288	1	2.2	fill	pit fill	dump	42	Pottery Waster Group	0.3	0.6	0.3			mid yellow brown	sand clay	occasional small sub rounded flint
290	317	1	2.2	fill	pit fill	Backfill	42	Pottery Waster Group	1.2	0.8	0.2			mid brown grey	silt sand	occasional coal flecks small to medium stones
291	317	1	2.2	fill	pit fill	backfill	42	Pottery Waster Group	0	1.58	0.48			mid red brown	sand silt	occasional coal and stones
292	317	1	2.2	fill	pit fill	Backfill	42	Pottery Waster Group	0	1.62	1.09			mid yellow brown	sand silt	occasional small to medium gravel
293	293	1	2.2	cut	pit	Extraction	0	0	1.55	1.2	0.8	sub-circular	flat based u shape			
294	293	1	2.2	fill	pit	backfill	0	0	1.55	1.2	0.8			mid grey brown	silt sand	occasional small gravel, rare charcoal flecks
295	295	1	2.2	cut	pit	Extraction	42	Pottery Waster Group	1.8	1.6	0.8	rectangular	U-Shape			
296	295	1	2.2	fill	pit fill	Backfill	42	Pottery Waster Group	1.8	1.6	0.8			mid grey	sandy clay	occasional rounded stone
297	297	1	2.2	cut	pit	Extraction	0	0	1.7	1.5	1.2	sub-circular	NFE			

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
298	297	1	2.2	fill	pit fill	Backfill	0	0	1.7	1.5	0.5			mid grey brown	silt clay	occasional sub rounded stones frequent redeposited natural
299	297	1	2.2	fill	pit fill	Backfill	0	0	1.7	1.5	0.7			mid yellow brown	silt clay	frequent brick and tile occasional large rounded flint and stone
300	300	1	2.2	cut	pit	waste pit	0	0	2.85	1.26	0.24	irregular	u shaped			
301	300	1	2.2	fill	pit	waste dump	0	0	2.85	1.26	0.24			mid red	clay	abundant small and medium brick frags
302	302	1	2.2	cut	pit	extraction	271	0	2.5	2.1	0.24	sub-circular	u shape			
303	302	1	2.2	fill	pit fill	disuse	271	0	2.5	2.1	0.24			mid brown grey	sandy silt	occasional charcoal fleck; occasional small gravels
304	304	1	2.2	cut	pit	extraction	42	Pottery Waster Group	1.2	0.4	0.14	sub-rectangular	asymmetric U shape			
305	304	1	2.2	fill	pit fill	disuse	42	Pottery Waster Group	1.2	0.4	0.14			dark brown grey	sandy clay	
306	306	1	2.2	cut	pit	extraction	42	Pottery Waster Group	2	1.7	0.3	irregular	irregular			
307	306	1	2.2	fill	pit fill	disuse	42	Pottery Waster Group	2	1.7	0.3			dark grey	silty clay	occasional rounded stone 0.2m max
308	308	1	2.2	cut	pit	disuse	0	0	2.15	1.36	0.28	sub-circular	u shaped			
309	308	1	2.2	fill	pit	DISUSE	0	0	1.06	1.06	0.16			mid grey brown	silty clay	
310	308	1	2.2	fill	pit	disuse	0	0	2.15	1.36	0.14			light grey yellow	clay silt	occasional small angular flint gravels
311	311	1	2.2	cut	pit	extraction	0	0	5.18	4.21	0.5	amorphous	unseen			
312	311	1	2.2	fill	pit fill	backfill	0	0	5.18	4.21	0.38			dark grey brown	sandy clay	occasional rounded flint to 0.2m
313	311	1	2.2	fill	pit fill	disuse	0	0	0.5	2.7	0.3			mid yellow brown	sandy clay	occasional rounded stone to 0.2

Context	Cut	Area	Period	Category	Type	Function	Master Number	Group	Length	Breadth	Depth	Shape in Plan	Profile	Colour	Fine component	Coarse component
314	311	1	2.2	fill	pit fill	backfill	0	0	0.5	0.9	0.25			mid yellow brown	sandy clay	occasional rounded stone to 0.2m
315	311	1	2.2	fill	pit fill	backfill	0	0	0.5	3.5	0.2			mid grey	sandy clay	occasional rounded stone to 0.2m
316	311	1	2.2	fill	pit fill	backfill	0	0	0.5	3.6	0.1			dark yellow brown	clay	occasional rounded stone
317	317	1	2.2	cut	pit	extraction	42	Pottery Waster Group	2	1.66	1.04	sub-rectangular	flat based u shape			
318	318	1	2.1	cut	pit	extraction	0	21	3.52	1.51	0.2	sub-rectangular	unseen			
319	318	1	2.1	fill	pit	disuse	0	21	3.52	1.51	0.2			mid grey brown	silty clay	occasional small brick frags and flint
320	321	1	2.1	fill	pit	disuse	0	0	3.4	3.3	0.5	sub-circular	unseen	mid grey brown	silty clay	
321	321	1	2.1	cut	pit	extraction	0	0	3.4	3.3	0.5					
99999	0		0	unstrat			0	0	0							

APPENDIX B FINDS REPORTS

B.1 Metal objects

By Denis Sami and Chris Howard-Davis

Introduction

B.1.1 A small assemblage of 15 fragments of iron artefacts, probably representing 14 objects, was recovered from the excavation and submitted for assessment, following current guidelines and best practise with regard to ferrous objects (Sami 2021). After the recommendations made in that report had been carried out, including x-ray, the assemblage was reviewed and the report revised.

B.1.2 The ferrous metalwork recovered is all in poor condition and items are largely undiagnostic. In view of this, any dating suggested can only be based on associated ceramic groups, which indicate a probable post-medieval or more recent date.

B.1.3 During the evaluation 47 pieces of iron (including nails, bolts and screws) were recovered, alongside two small fragments of copper alloy. All of the objects came from a modern humic layer in Trench 4 and appear to have been the remains of a recent (mid-20th-century) bonfire and have been discarded (Sillwood 2013, 44).

Assemblage

B.1.4 The excavated assemblage is too small to discuss in functional groups, and objects are thus presented in broadly chronological order.

Period 2.1

B.1.5 Eight small nails (all *c*.35mm in length) with small diameter heads (*c*.6mm) and one larger example (*c*.90mm long), again with a small flat head (*c*.8mm diameter) were recovered from the fill (94) of Kiln 21. All are slightly bent, suggesting that they could have been deposited attached to timbers, rather than being extracted for recycling.

Period 2.2

B.1.6 Other than nails, there are only two other recognisable objects associated with this phase. SF1, from the fill (17) of ditch **16**, is a small pair of shears, now broken at the bow. Shears are, like many wrought iron artefacts, a long-lived type, probably invented in the Iron Age (Cowgill *et al.* 1987, 58) and are relatively well-known as medieval and post-medieval items, with some types persisting in use to the present day. Used for a wide range of activities from sheep-shearing or textile production (for instance fullers shearing the nap of some cloth) to needlework and hairdressing. The size of this pair suggests needlework or something similarly delicate, which would probably make them a fairly common household item. It seems that the continuous flexing of shears made them extremely likely to break across the bow (*op cit*, 60), which seems to have happened in this case. Goodall (1993) illustrates a number of 16th and 17th century examples from Norwich excavations, but only one pair is as small as this example from Cringleford.

B.1.7 The other object (SF8) is more ambiguous in form, but appears to be from a cast iron cylinder, most likely to be a drain pipe. A slight curve suggests it to be from a bend, or elbow joint, and its place of deposition, within pit **42** (fill 23) suggests the discard of relatively recent demolition debris, possibly intrusive.

B.1.8 There are two nails from this period (SF6, SF7) both probably hand-forged, and both likely to be casual losses in ditch **6** and quarry/pit **279** respectively. One final object (SF9), again from a quarry pit (283, fill **287**), is clearly not a nail, and seems from the x-ray, to have a large perforation at one end. The item is not, however, large enough to identify as to function, although window furniture is a possibility.

Retention, dispersal and display

B.1.9 There is nothing amongst this small group which has any intrinsic interest either in terms of the site, or artefact studies more generally, and in consequence discard would seem appropriate and acceptable. The shears might be considered for retention if there was a particular interest from any local museum, but their condition is sufficiently poor that they are unlikely to be regarded as a displayable item without substantial restoration, and they are not a sufficiently uncommon artefact to justify this option.

Catalogue of the iron objects

B.1.10 This catalogue is organised by chronologically, in phase order, and thereafter in context number order. Measurements were taken on unconserved objects and must thus remain approximate. All objects can be cross-referenced to x-radiograph K21/94 (Plate B1.1) where they are identified by SF number.

B.1.11 NB: of the nine incomplete nails from the fill (94) of Kiln 21, only the average thickness of the shaft is recorded.

Nine incomplete hand-forged nails, all have tapering shafts with a rectilinear cross-section, and flat circular heads. Xr K21/94
Average Th: 4.8mm
Period 2.1, fill 94 (Kiln 21), SF3

Incomplete hand-forged nail (head missing), tapering shaft has a sub-square cross-section.
L: 46.8mm; W: 8.1mm; Th: -
Period 2.2, fill 7 (ditch **6**), SF6

Small pair of shears, now broken at the loop. The blades have a straight back and slightly curved cutting edge.
L: 92.4mm; W: 13.2mm; Th: 3.3mm
Period 2.2, fill 17 (ditch **16**) SF1

Large fragment of cast iron, probably originally cylindrical but now with a U-shaped section. A casting seam is visible. Probably a drainpipe, possibly a bend, or elbow-joint.
L: 188.4mm; W: 81.6mm; Th: 6.8mm
Period 2.2, Fill 43 (pottery waster pit **42**), SF8

Incomplete hand-forged nail (point missing), tapering shaft with a sub-square cross-section, and a flat, damaged, but probably originally lozenge-shaped head.
L: 70.1mm; Th: 6.2mm; Diam head: 18.1mm

Period 2.2, Fill 282 (pottery waster pit **279**), SF7

Incomplete fitting with a tapering rectangular cross-sectioned shaft. X-ray shows a large perforation, c 5mm in diameter, at the wide end.
L: 45.8mm; W; 19.8mm; Th: 7.2mm
Period 2.2, Fill 287 (pottery waster pit **283**) SF9.

Plate B1.1: X-ray K21/94

B.2 Lithics

By Lawrence Billington

Introduction

B.2.1 A total of 49 worked flints and almost 5kg of unworked burnt flint were hand-collected during the excavation, with a further 1459g of unworked burnt flint recovered from the residues of a bulk sample taken from Period 1.1 sinkhole feature **132**. A further 19 pieces of worked flint were recovered during the fieldwalking, mostly found in the northern part of the development area. The majority of these were undiagnostic flakes, although a single Bronze Age barbed and tanged arrowhead was present: one of the barbs was missing and it showed evidence of having been retouched (Barnett 2011, 12). Just two worked flints were recovered from the subsequent evaluation and comprise a primary debitage flake and a tertiary flake that are not closely datable (Silwood 2013, 44). This report deals solely with the material from the excavation.

B.2.2 The hand-collected flint assemblage from the excavation is quantified by type and context in Table B2.1, whilst the burnt flint derived from the sampling of feature **132** is quantified separately, by weight alone, in Table B2.2.

B.2.3 The flint assemblage derives exclusively from the fills of features, mostly from a series of natural sinkhole features and from discrete pits, with a single flint also coming from the fill of a ditch. Most are phased to Period 1, although two are post-medieval features: ditch **151** and pit **295**, phased to Periods 2.1 and 2.2 respectively.

Context type	**Pit**				**Sinkhole**								**Ditch**	**Totals**
Cut	**48**	**123**	**159**	**295**	**121**	**128**	**132**	**141**	**145**	**157**	**163**	**169**	**151**	
Context	49	125	160	296	122	129	134	142	146	158	164	170	152	
Period	1.1	1.2	1.1	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.1	
Irregular waste	-	-	-	-	-	-	-	1	-	-	-	1	-	2
Secondary flake	-	1	1	1	2	1	10	7	4	1	5	-	1	34
Tertiary flake	-	-	-	-	-	-	1	2	1	-	1	1	-	6
Secondary blade-like flake	-	-	1	-	-	-	-	1	-	-	1	-	-	3
Tertiary blade-like flake	1	-	-	-	-	-	-	-	-	-	1	-	-	2
Core	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Scraper	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Total worked	**1**	**1**	**2**	**1**	**2**	**1**	**12**	**11**	**6**	**1**	**8**	**2**	**1**	**49**
Unworked burnt count	-	-	4	-	1	-	235	10	6	-	-	2	-	258
Unworked burnt weight (g)	-	-	298	-	132	-	4189	196	83	-	-	53	-	4951

Table B2.1: Quantification of worked and hand-collected unworked burnt flint by context

Cut	**132**		
Context	134		
Sample	<6>		
Fraction size	>5mm	<5mm	Total
Unworked burnt flint weight (g)	1073	386	1459

Table B2.2: Quantification (by weight) of unworked burnt flint recovered from bulk sampling of fill of sinkhole **132**

Sinkhole features

B.2.4 Eight of the sinkholes/natural features investigated during the excavation produced flint assemblages; all of these yielded small quantities of worked flint (between one and 12 pieces per feature) and in three cases (features **141**, **145** and **169**) this worked flint was accompanied by small quantities of heavily burnt flint. Feature **132** was exceptional in producing a much larger assemblage of unworked burnt flint – with nearly 5kg recovered during hand-collection and almost 1.5kg more deriving from wet sieving of a bulk sample of its fill (Tables B2.1-2).

B.2.5 The worked flint from these features (total 43) was overwhelmingly dominated by unretouched flakes, with only one retouched piece identified and a single core. The flint was generally in good, fresh condition – unrecorticated and with little edge damage or rounding. There was, however, a degree of variability in the condition of the assemblages from individual features – most notably in the case of the flintwork from sinkhole **163**, which displayed somewhat more edge damage and breakage and which had a less coherent character to the other assemblages.

B.2.6 Judging by the character and morphology of surviving cortical surfaces, all of the flint appears to derive from sub-rounded fluvial flint cobbles/nodules which would have been readily available in the extensive glacio-fluvial gravels of the local area. There was no evidence for the exploitation of flint derived directly from (or from sources closely related to) the parent chalk – which does outcrop at some points on the side of the Yare valley a short distance to the north.

B.2.7 Most of the flint appears to be the product of a relatively simple flake-based technology employing direct hard-hammer percussion to remove flakes from unspecialised single or multiple platform cores. Although simple, the majority of the removals are well-struck and include some pieces with regular dorsal scar patterns and/or blade-like morphologies. Amongst the unretouched removals is one possible axe-thinning/finishing flake (a fine tertiary removal possibly removed during the latter stages of axehead production, from sinkhole **169**), and the proximal end of a regular tertiary flake which may have been deliberately broken (sinkhole **141**). The only core recovered is a minimally worked piece with some a mixture of flake and narrow flake/blade-like scars (sinkhole **132**). The only obviously retouched or utilised piece is an end scraper, made on a regular, relatively narrow flake with minimal abrupt retouch on its the hinged distal end (sinkhole **145**).

B.2.8 None of the worked flint is strongly diagnostic and the assemblage as a whole is likely to be chronologically mixed, but the presence of relatively systematically produced flake-based material suggests that it largely dates to the Neolithic and/or Early Bronze Age, whilst the possible axe-thinning flake is likely to be of Neolithic date. There is no clear evidence for any true blade-based material of Mesolithic/earlier Neolithic date,

nor is there any clear evidence for the kind of expediently/crudely worked material associated with Middle/Late Bronze Age and Iron Age flintworking.

B.2.9 The burnt flint is made up of heavily fractured and crazed fragments of flint which seems to derive from the same kind of flint cobbles/nodules as the worked flint. This material was highly fragmented, with few pieces measuring in excess of 50mm in maximum dimension and the sieved sample from sinkhole **134** yielding many very small fragments and spalls.

Other features

B.2.10 Four pits phased to Periods 1.1, 1.2 and 2.2 produced small quantities of flint; one or two pieces of worked flint were recovered from each of these features, with two also producing small quantities of unworked burnt flint (Table B2.1). In terms of raw material and condition the worked flint is closely comparable to the material derived from the sinkholes, although one flake from Period 2.2 pit **295** is heavily worn and edge-damaged. The flint from these features consists entirely of unretouched flakes/blade-like flakes and is very similar to the material from the sinkholes.

B.2.11 A single secondary flake was recovered from Period 2.1 ditch **151**.

Discussion

B.2.12 The small assemblage of worked flint from the excavations is made up almost exclusively of unretouched flake-based material and exhibits very few chronologically diagnostic features. Nonetheless, the technological traits of the material suggest that the vast majority is of Neolithic to Early Bronze Age date. The flint was fairly thinly distributed, recovered largely from the fills of natural features and pits, and the precise circumstances of its deposition remain unclear. In the case of the sinkholes, it seems possible that these natural features could simply have acted as 'traps' for flintwork originally deposited in surface scatters across the site – although in some cases flintwork may have been deliberately deposited into these features – as seems to be the case for the large assemblage of burnt flint from sinkhole **132** (see below). In the case of the pits, whilst some of the flintwork may be broadly contemporary with the features from which it derived, it occurred in very low densities and is likely to largely represent residual material incidentally caught up in the fills of later cut features.

B.2.13 The small quantities of burnt flint recovered from several of the pits and sinkholes also seems likely to represent residual material, and at least some of this flint may represent pieces accidentally caught up in fire settings rather than having been deliberately heated. The large assemblage from sinkhole **132**, however, appears to represent a deliberate deposit of a relatively large accumulation of burnt flint that can only have derived from the deliberate heating of flint. Similar burnt flint assemblages are a persistent feature of most periods of prehistory in the region, with deposits containing large accumulations of unworked burnt flint and stone known from many Neolithic, Bronze Age and Iron Age sites. The large-scale use and deposition of heated flint is not, however, restricted to prehistory and there are a growing number of sites in the region where pits containing large quantities of burnt flint have been dated to the Early Saxon period (*e.g.* Garrow *et al.* 2006; Andrews 1995; Caruth and Goffin

2012). There are many potential uses for deliberately heated flint and stone, including in cooking, brewing, textile/hide processing and bathing (see Hodder and Barfield 1991), but it is rarely possible to determine the precise function of the burnt flint assemblages from individual sites.

B.2.14 The flint assemblage from the excavations should be seen in the context of the very rich record of prehistoric activity along this part of the Yare valley, which includes a very high density of ploughsoil lithic scatters of Mesolithic to Early Bronze Age date and major lithic assemblages derived from excavations of Neolithic to Early Bronze Age sites such as those at Eaton Heath (Wainwright 1973), the John Innes Centre (Whitmore 2004) and the Harford Park and Ride (Trimble 2004; Bishop 2012, 146–52).

Retention, dispersal, and display

B.2.15 The small group of worked flints should be retained with the archive, while the unworked burnt flint can be dispersed.

B.3 Burnt stone and fuel residues

By Simon Timberlake

Introduction and methodology

B.3.1 A small assemblage of coal and burnt fuel (coal cinders and shale) (226g, six pieces) and a large burnt stone (2.85kg) were recovered from contexts associated with the post-medieval (Period 2.2) brick kilns in Area 1.

B.3.2 All the stone was identified visually using an illuminated x10 magnifying lens and compared where necessary with an archaeological stone reference collection. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcite.

Context no.	Cut	Feature type	No pieces	Size (mm)	Wt. (g)	Geology	Source	Notes
5	4	fill of boundary ditch	1	170x170x45	2857	dolerite	glacial erratic	lightly burnt + cracked
7	6	ditch	1	30	9	coal (anthracite?)	imported Carboniferous from coalfield	unburnt
20	18	pit with demolition rubble incl kiln brick	3	30 + 55 + 65	31	coal	imported Carboniferous from coalfield	fully burnt cinders
39	38	plough scar (gully)	1	32	9	coal shale	imported Carboniferous from coalfield	accomp coal + burnt with fuel
287	283	pit assoc with extraction pit dump	1	75x60x55	177	coal (anthracite?)	imported Carboniferous from coalfield	unburnt – only slightly worn

Table B3.1: Catalogue of stone and fuel residues (all from Period 2.2 features)

Discussion

B.3.3 There is little that can be said about this very small assemblage. It seems likely that the burnt slab-like glacial boulder of far-travelled dolerite is quite unrelated to the probable post-medieval use of fossil fuel which is most likely associated with the firing of the kilns, but instead that it relates to an earlier prehistoric presence, possibly Iron Age.

B.3.4 Perhaps the most likely explanation for the presence of coal is that this was brought in as a higher calorific fuel suitable for the efficient running of the kilns, although a more domestic use is also possible (see Discussion, Section 4.3). The high-ranking grade of coal suggests that this fuel may have come into the ports of Kings Lynn, Cromer or Yarmouth by boat, perhaps from mines in the North of England (Tyneside), the nearest other coalfield accessible by the land route being in Nottinghamshire, although this was barely developed at the time. Turner (1921, 2) in referring to the 17th-century coal trade mentions that this business was chiefly being carried on from Hull, Yarmouth and 'Larpool' in Lancashire – almost all of it being brought in from the Tyneside (Newcastle) and Durham coalfields (see Commons Journal I, 685 for 1637). Coal from Newcastle was being used in London in 1662 to make bricks (Pepys 1662), whilst by 1696 Norfolk 'officials' had declared that the fuel of their county was then 'almost entirely of coal' (Commons Journal XI, 421). Whilst the latter seems to be an exaggeration, considering the very high dependence still upon peat, it does at least suggest that coal would have been the fuel chosen for any sort of industrial activity at the time (potteries, brickworks and iron smelting), and that the source for this would probably still exclusively have been the Newcastle and Durham mines.

Retention, dispersal and display

B.3.5 There is nothing amongst this small group which has any intrinsic interest and it does not warrant retention within the archive.

B.4 Glass

By Carole Fletcher

Introduction

B.4.1 Archaeological works produced a moderate assemblage of glass, 97 shards, weighing 4.449kg. The assemblage is entirely vessel glass, with a minimum number of vessels (MNV) of 34, the majority of which are utility bottles, many of them dark olive green (natural black) glass bottles. A number of pharmaceutical bottles or phials were also recovered.

Methodology

B.4.2 The glass was scanned and catalogued, weighed and recorded, as individual vessels where possible. The glass that is not closely datable may be dated by association with the pottery and other material with which it was often found. All dates given for the

phase are those assigned by the excavator. The terminology used in the report and the catalogue, for the various glass forms, is taken from *Glass Through The Ages* (Barrington Haynes 1969), *Antique Glass Bottles Their History and Evolution (1500–1850)* (Van den Bossche 2001), *A Guide to Artifacts of Colonial America* (Hume 1969), *The Parks Canada Glass Glossary* (Jones and Sullivan et al 1989) and *Early post-medieval vessel glass in England c.1500–1670* (Willmott 2002). The glass is catalogued in Table B4.1.

Assemblage

B.4.3 The excavations produced a moderate assemblage of glass, 97 shards weighing 4.449kg. The vessel glass was recovered mainly from a small number of post-medieval clay extraction pits in Area 1 (Period 2.2 Pottery Waster Group 42) and a single post-hole in Area 2. By weight, pit **18** produced the largest assemblage (1.897kg of glass), including a complete mid 18th- to early 19th-century bottle. Pit **283**, which also produced a large assemblage of post-medieval pottery, contained 1.470kg of glass, 32 shards, representing a minimum of 21 vessels. Pit **279** produced 1.061kg, 35 shards, representing a minimum number of seven vessels.

B.4.4 The bulk of the assemblage from all features is mostly dark olive green utility bottles, most probably for wine, dating from the 17th to early to mid 19th century, with most bottles falling into the period from the late 17th to early 18th century.

B.4.5 Pits **279** and **283** each produced a bottle seal (Figs B4.1 and B4.2). From pit **283**, a complete oval bottle seal (SF4) of pale olive green glass (now completely opaque) was recovered. Embossed I (crossed) H, either side of an ornate 4 or key with trefoil loops at the base (or top); the initials represent JH (J was written as I). The heavy patination suggests an early bottle, however, not enough of the glass bottle itself survives to suggest a form. The bottle seal (SF5) recovered from pit **279** is incomplete, formed from pale olive green glass, which is heavily iridised and flaking, with resultant surface loss. The circular seal is impressed onto a slightly sub-circular blob on the bottle. The upper right quadrant of the seal is mostly absent, it is embossed FOOR[D], below which is a six-pointed star (made up of lines); the curvature of the surviving glass suggests the bottle may not have been cylindrical.

Period	Area	Cut	Glass Type	Shard Count	MNV	Weight (kg)	% of Total Assemblage
2.2	1	Ditch **4**	Utility bottle	1	1	0.019	0.4
2.2		Pit **18**	Utility bottle	27	3	1.884	42.3
2.2			Utility bottle or pharmaceutical bottle (Short-necked bottle or phial)	1	1	0.013	0.3
2.2		Pit **279**	Utility bottle	35	7	1.061	23.8
2.2		Pit **283**	Utility bottle	31	20	1.457	37.2
2.2			Utility bottle or pharmaceutical bottle (Short-necked bottle or phial)	1	1	0.013	0.3
2.2	2	Post-hole **177**	Utility bottle	1	1	0.002	<0.1
Total				**97**	**34**	**4.449**	**100**

Table B4.1: Glass assemblage by Period and Area

Discussion

B.4.6 The majority of the material was recovered from pits and the assemblage is fragmented, the exception being the complete mid 18th- to early-19th century bottle recovered from pit **18**, which may have been one of the latest deposits into the feature.

B.4.7 Some of the glass may be redeposited, for example in post-hole **177** and ditch **4**, and thus may not accurately represent the glass usage on site. However, the bulk of the glass assemblage dating fits with the pottery recovered from the site (see Anderson App. B.6) and also with the clay tobacco pipe dating (see Fletcher App. B.9). The presence of the 17th to 18th century glass utility vessels may relate to the drinking habits of the potters or the brickmakers who subsequently used the clay extraction pits for deposition of ceramic materials and small amounts of domestic rubbish, possibly the remains of meals eaten at the site. It is possible that the pits were used for rubbish deposition by the occupants of Newfound Farm in the later part of the 18th century, although if this was the case, larger amounts of domestic rubbish might have been expected.

B.4.8 Consumption is the main focus of the glass assemblage. The mostly dark olive green (natural black) or green glass utility (wine) bottles are the most common form recovered. Although no parallels for the two bottle seals (Figs B4.1–2) have been found, photographs of them were viewed by Mick Boyle (NPS Archaeology) who suggested the following:

B.4.9 It is likely that the two bottle seals are 'early' examples but without the form of the bottle it is hard provide a more precise date due to the variation [within early bottle manufacture]. The position of the seal on the bottle is also a factor in dating but again this is not really discernible: the first confidently dated seal is from 1652 but they are generally rare until later. Many of the early bottles (*c.*1680) had a small cushion of glass (see SF5) laid on the bottle before the seal was applied. A fair percentage of 1670–85 bottles have this feature as they were set on the pronounced shoulder angle current at this period. By 1690 the seal was applied without the cushion. The character of seals varies tremendously. Most frequent on earlier bottles are solitary names, sets of initials, emblems, and coats of arms, as in the examples from Cringleford. Dates are not common. As to the identity of the owners, these are likely to have been fairly prominent figures/businesses as adding this information would have represented a considerable additional expense (Mick Boyle pers. comm.).

B.4.10 The name Foord may have continental origins (possibly Dutch), while the design on SF4 replicates privy or guild marks found on many post-medieval lead alnage or cloth seals (Rebecca Sillwood pers. comm.; Egan 1994, 78; 181, Nos 213 and 214). The central elongated symbol resembles that of a modern figure 4 but in fact is much earlier and has nothing to do with the numeral: it is suggested that it might represent 'the path the hand takes when making the sign of the cross' (Elton 2017, 249).

Retention, dispersal, and display

B.4.11 The complete bottle and the bottle seals should be retained. The remainder of the glass may be deselected prior to archive deposition.

B.5 Prehistoric pottery

By Nick Gilmour

Introduction

B.5.1 The excavation yielded 34 sherds of prehistoric pottery (114g) with a mean sherd weight (MSW) of 3.6g. The pottery was recovered from five contexts relating to pits, a ditch and natural features (Table B5.1).

B.5.2 The pottery dates from the Early Neolithic, Late Neolithic and Early Iron Age. It includes a small assemblage of Grooved Ware, along with a small number of feature sherds characteristic of Early Iron Age ceramics, together with fabrics typically associated with these ceramic traditions in the region. A few sherds could not be assigned to a specific period.

B.5.3 The pottery is in moderate to poor condition. Most of the sherds are small and abraded, while the Early Iron Age pottery is generally in better condition.

Context	Cut	Period	No sherds	Wt (g)	Feature Type	Spot Date
19	**18**	2.2	1	12	pit	ENEO
125	**123**	1.2	13	55	pit	EIA
134	**133**	1.1	1	2	sinkhole	prehistoric
134	**133**	1.1	2	7	sinkhole	?later prehistoric
141	**142**	1.1	16	42	sinkhole	LNEO
152	**151**	2.1	1	3	ditch	prehistoric
Total			**34**	**114**		

Table B5.1: Quantification of prehistoric pottery

Methodology

B.5.4 All the pottery has been fully recorded following the recommendations laid out by the Prehistoric Ceramic Research Group (2011). After a full inspection of the assemblage, fabric groups were devised on the basis of dominant inclusion types, their density and modal size. Sherds from all contexts were counted, weighed (to the nearest whole gram) and assigned to a fabric group. Sherd type was recorded, along with evidence for surface treatment, decoration, and the presence of soot and/or residue. Rim and base forms were described using a codified system recorded in the catalogue and were assigned vessel numbers. Where possible, rim and base diameters were measured, and surviving percentages noted. In cases where a sherd or groups of refitting sherds retained portions of the rim, shoulder and/or other diagnostic features, the vessel was categorised by ceramic tradition (Grooved Ware, Collared Urn *etc*.)

B.5.5 All pottery was subject to sherd size analysis. Sherds less than 4cm in diameter were classified as 'small' (31 sherds); sherds measuring 4–8cm were classified as 'medium' (three sherds), any sherds over 8cm in diameter would have been classified as 'large', but none were present. The quantified data is presented in an Excel data sheet held with the site archive.

Assemblage

B.5.6 Four different fabrics were identified within the pottery assemblage and some diagnostic feature sherds are also present. This allows the majority of the pottery to be assigned a date. However, four small sherds (12g) could not be closely dated.

Prehistoric pottery fabrics

B.5.7 The four fabrics identified are listed below and the quantification of the pottery by fabric is given in Table B5.2.

F1: frequent medium flint, slightly sandy matrix

F2: moderate fine flint

F3: sparse fine flint

G1: frequent medium grog

Fabric	No sherds	Weight (g)	Date
F1	1	3	Prehistoric
F1	1	12	ENEO
F2	12	52	EIA
F3	1	2	Prehistoric
F3	1	3	EIA
G1	16	42	LNEO

Table B5.2: Quantification of prehistoric pottery by fabric

Early Neolithic pottery

5.2.4 A single sherd (12g) of Early Neolithic pottery was recovered from deposit 19, within post-medieval (Period 2.2) pit **18**. This sherd is in fabric F1 and is from the rim of a vessel. The rim is a diagnostic Early Neolithic form; rounded and slightly thickened externally, with the clay having been folded back on itself. The fabric this sherd is in is also typical of pottery from the Early Neolithic in this region. The sherd does not preserve enough of the profile for the form to be reliably defined. However, there is no evidence of a shoulder and this sherd is therefore likely to be from a simple rounded bowl. This sherd was recovered from a feature containing post-medieval material and is likely to be residual.

Late Neolithic pottery

5.2.5 A total of 16 sherds (42g) of Late Neolithic pottery was recovered. All of this was found within natural (Period 1.1) feature **141**. All the Late Neolithic sheds are body sherds and in the same fabric; G1 (frequent medium grog). Three of the sherds are decorated externally with incised lines, which are typical of Grooved Ware pottery.

5.2.6 None of the decorated sherds are large enough to allow for any conclusion to be drawn about the overall decorative scheme of the vessel they came from. However, on two sherds more than one parallel groove is present. One sherd is decorated with three quite narrow grooves, suggesting it may be from a different vessel than the other two decorated sherds. The small number of sherds, together with a lack of any rim fragments, makes it impossible to attribute this material to any of the sub-styles of the Grooved Ware ceramic tradition (Longworth 1971).

Early Iron Age pottery

5.2.7 A total of 13 sherds (55g) of pottery is of Early Iron Age date. All of this pottery was recovered from fill 125, within Period 1.2 pit **123**. Most of the Early Iron Age pottery (12 sherds, 52g) is in fabric F2, with a single sherd (3g) in fabric F3. All of the fragments are body sherds. A single sherd (10g) is decorated with a deep finger-tip impression. Decoration of this type is typical on Late Bronze Age and Early Iron Age ceramics from this region. The single sherd in fabric F3 (3g) is burnished on the exterior surface. This surface treatment, along with the fabric it is made in, are typical of Early Iron Age finewares across this region. Two small sherds (7g) from sinkhole 132 may be Iron Age but could not be closely dated (Sue Anderson pers. comm).

Discussion

5.2.8 This is too small an assemblage to draw any but the broadest conclusions. However, it does show that activity was happening in this area during the Neolithic and Early Iron Age periods. As such, it does add to wider knowledge of the Yare valley in these periods.

Retention, dispersal, and display

5.2.9 This small assemblage should be retained with the archive.

B.6 Post-medieval pottery and kiln waste

By Sue Anderson

Introduction

B.6.1 A total of 5139 sherds of pottery and kiln furniture (198.498kg) was recovered from 32 contexts. A further *c*.110kg (including some CBM) was discarded on site (C. Fletcher pers. comm.). Most finds were recovered from the fills of four large pits in Pottery Waster Pit Group 42: **42**, **279**, **283** and **317**. Although no pottery kilns were uncovered during the excavation, the assemblage as a whole represents waste material discarded by potters working somewhere in the vicinity.

Sampling and retention policy

B.6.2 The pottery was sampled on site prior to recording, carried out by Carole Fletcher and based on a strategy agreed between the present author, the OA East project manager (Nick Gilmour) and a Norfolk County Council archaeologist (Steve Hickling). The retained material from this initial sort included all sherds larger than *c*.2–3cm, all slip-decorated sherds, and most of the kiln props. The presence of tin glazed earthenware wasters and kiln furniture was not recognised until late in the excavation, and as the quantity is small all sherds of this material have consequently been retained.

B.6.3 All material remaining after the initial sort was submitted for full cataloguing, and a strategy for further discard of some of the assemblage prior to archiving was proposed (Anderson 2019). Following Historic England guidelines (HE 2014), representative samples of kiln furniture, structural waste and pottery have been retained, including

examples of all forms, fabrics, over- and under-fired material, and component parts (rims, handles, bases, etc.). Discard concentrated on the largest three contexts (43, 286, 287), with smaller contexts being retained in their entirety. The pottery assemblage is very similar throughout the contexts but approximately 58% by weight has been retained for potential future study, with the majority of discarded material being body sherds, some bases and a few abraded or small rim sherds. The overall weight of the discarded material, which was carried out some time after the pottery was recorded, has been recorded by context (82.758kg) and notes made in the main quantification database. The kiln furniture groups are extremely uniform, and much less of this material has been retained. Samples of pottery will be offered to other specialists working in the area and to the National Reference Collection of Post-Medieval Pottery, and a sample has been retained for the forthcoming Norfolk post-Roman pottery fabric series.

Pottery

Methodology

B.6.4 The assemblage has been fully catalogued following MPRG guidelines (MPRG 2001) and terminology (MPRG 1998). Quantification was carried out using sherd count, weight and estimated vessel equivalent (eve). The minimum number of vessels (MNV) within each context was also recorded, but cross-fitting was not attempted unless particularly distinctive vessels were observed in more than one context. Presence of kiln scars and glaze were noted. All fabrics were identified based on the Norwich post-Roman fabric series (Jennings 1981). The results were input directly onto an MS Access database, which forms the archive catalogue, a summary of which is included as an appendix to this report.

Quantities by fabric group

B.6.5 Table B6.1 shows the quantities of pottery by fabric group.

Description	Fabric	Date range	No	Wt/g	eve	MNV
Glazed red earthenware	GRE	16th-18th c.	3259	128406	104.33	2534
Iron glazed blackware	IGBW	16th-18th c.	200	8591	3.65	146
Post-medieval redware	PMRW	16th-18th c.	1	124	0.15	1
Post-medieval slipware	PMSW	17th c.	154	5363	5.38	80
Speckle glazed ware	SPEC	17th-18th c.	88	2663	1.02	62
Tin glazed earthenware	TGE	17th-18th c.	86	1035	1.67	68
Frechen stoneware	FREC	16th-17th c.	2	26		2
?English stoneware: London	ESW	17th-18th c.?	15	779	0.90	2
North Italian marbled slipware	NIMS	17th c.	4	43	0.11	1
Westerwald stoneware	WEST	L.17th-19th c.	2	26		2
Late slipped red earthenware	LSRW	L.18th-19th c.	14	308	0.58	2
Totals			*3825*	*147364*	*117.79*	*2900*

Table B6.1: Pottery quantification by fabric

B.6.6 The greater part of this assemblage comprises material from a pottery manufacturing waste dump. The pottery itself is largely glazed red earthenware with some iron-glazed blackware, slipware, speckle glazed ware and tin glazed earthenware. One stoneware vessel may also be a waster, but there is no evidence for stoneware manufacture on the site so far.

Redwares

Overview

B.6.7 Redware kiln products are represented by the fabrics GRE, IGBW, PMSW and SPEC. The fabric of the normally-fired pots in the assemblage was remarkably consistent, meaning that the group has only been separated into these general categories, following Jennings (1981). It is possible that more of the assemblage was IGBW/SPEC than the totals suggest, because all overfired and reduced sherds were recorded as GRE. Many of these had very dark brown glaze but they were also heavily reduced, and in most cases the glaze was only on the inner surface. Sherds recorded as IGBW had the typical red fabric (occasionally reduced to medium grey or overfired to dark red) and noticeably thicker dark brown, dark green or black glaze on both surfaces, which is more typical of this fabric group.

B.6.8 The redware fabric has a very fine matrix and normally-fired sherds were fairly uniform in colour, ranging from pale orange to red, throughout (Plate B6.1), although some sherds contain narrow streaks of cream-coloured clay. Surfaces had been wiped and are smooth where unglazed. The main inclusions are abundant very fine white and clear quartz sand (up to 0.1mm with rare sub-angular grains up to 0.2mm), sparse soft to hard ferrous oxide or rounded red clay pellets (usually up to 0.5mm, but occasionally up to 4mm) and sparse to moderate very fine mica. Rare shell occurs in some sherds, occurring as either flat slivers or very small gastropods.

B.6.9 The redwares include a variety of forms which can be paralleled in the Norwich corpus (Jennings 1981). Bowls, handled bowls/porringers, jars, large storage vessels, platters, dishes, pipkins and chamber pots are the most frequent types, but other forms such as dripping pans, chafing dishes, colanders, jugs, lids, mugs, pancheons and skillets were also found. In total, 1095 vessel forms could be identified in the redware group. Most were glazed, although a few unglazed fragments may provide evidence for biscuit-firing. A large unglazed vessel (recorded as PMRW) may be a horticultural pot. Colours of glaze vary from pale yellowish orange, through orange, reddish-brown, darker brown and black. Occasional examples are olive green in colour, usually due to underlying reduction, but a very small quantity of sherds with deliberate copper-toned green glaze were also found (Plate B6.2). It is not clear whether these represent residual late medieval and transitional wares, or whether they were a minor product of the Cringleford GRE industry. Decoration, other than glazing, is rare, a few vessels having incised wavy lines or thumbing of rims or lug handles, with a few applied thumbed strips at the necks of large storage vessels.

B.6.10 The most common blackware vessels are mugs (including both tall and short cylindrical types and large globular types), tygs and tankards, with a few jugs and jars also identified (Plate B6.5). Speckle glazed wares are also dominated by drinking vessels but also included jars, a jug and at least two puzzle jugs (Plates B6.6 and B6.8).

B.6.11 A high proportion of the redware sherds are over- or under-fired, the former reduced and hard with their glaze largely burnt off, and the latter oxidised, soft and with unfused glaze in the form of a white deposit. Many sherds are cracked, had glaze on the broken edges, or are warped and deformed.

Open forms (Fig. B6.1 Nos 1–13, and Fig. B6.4 No. 37)

B.6.12 An estimated 446 vessels were identified as open forms based on rims or other diagnostic sherds. Table B6.2 shows the distribution of forms and rims by MNV.

Type	Form	BL	PN	BLH	PL	DS	DD	COL	CD	LD	Uncertain*	Total
Beaded	BD	79	1	17		2	6					105
	FTBD	33			1		1					35
	SQBD	6		1							1	8
	TAPBD	6	1	2								9
	TRBD	3										3
	UPBD			5								5
	LSBD	2					5					7
Simple	EV	8	1		2		1					11
everted	FLAR	3		2								5
	CAV	1										1
	PL									8		8
Complex	EVBD	3	2		70	11					1	87
everted	THEV	3	4		33	9		1			1	51
	HOOK				11	6						17
	COMP	3		2								5
	FTEV	14		1							1	16
	LSCOLL						2					2
Upright	UPPL					1	3					4
	no rim	16		16	7	2	2	3	2	3	15	66
	Total	*181*	*9*	*46*	*124*	*31*	*20*	*4*	*2*	*11*	*19*	*446*

Table B6.2: Open forms by rim type (MNV)

Rim type: BD – round beaded; FTBD – flat-topped bead; SQBD – square bead; TAPBD – tapered/elongated bead; TRBD -triangular bead; UPBD – upright beaded; LSBD – beaded with internal lid-seating; EV – everted; FLAR – flaring; CAV – cavetto; PL – plain; EVBD – everted beaded; THEV – thickened everted; HOOK – hooked; COMP – complex everted; FTEV – flat-topped everted; LSCOLL – collared with lid-seating; UPPL – upright plain.

Forms: BL – bowl; PN – pancheon; PL – plate/platter; BLH – handled bowl; DD – dripping dish/pan; DS – dish; COL – colander; CD – chafing dish; LD – lid; * uncertain = dish/bowl, dish/plate, bowl/skillet, bowl/plate, bowl/jar, bowl/saggar?.

B.6.13 Of these, all but one are GRE, the exception being a flaring bowl rim of IGBW (Fig. B6.4 No. 37), an unusual form for this fabric. The majority of open forms (181 vessels) were classified as bowls, and most of the bowls have beaded or flat-topped beaded rims, with everted and flat-topped everted types also fairly common. Handled bowls were most likely to have a bead rim (20 out of 46 examples). Platters/plates make up another large proportion of the group (123 vessels), with the majority having everted beaded or thickened everted rims. Table B6.3 lists these forms with their corresponding numbers in the Norwich corpus (Jennings 1981, figs 65–69, 76, 78–79) – note that these are based more on rim types than on the illustrated complete profiles.

Type	Form	EAA13 no. occurring in Cringleford assemblage
Beaded	BD	1145, 1182, 1187, 1188, 1189
	FTBD	1178, 1186, 1190
	SQBD	1172, 1183, 1212
	TAPBD	1143, 1184, 1210
	TRBD	1150, 1181, 1191, 1195
	UPBD	1201
	LSBD	1288
Simple	EV	1147, 1152, 1154, 1155, 1158, 1161, 1163, 1164, 1165, 1167, 1203
everted	FLAR	1200
	CAV	-
	PL	1322

Type	Form	EAA13 no. occurring in Cringleford assemblage
Complex	EVBD	1104, 1113, 1114, 1116, 1117, 1128, 1130, 1134, 1205, 1206
everted	THEV	1107, 1115, 1118, 1120, 1122, 1124, 1125, 1127, 1129, 1132, 1133, 1204, 1207, 1209, 1214, 1304
	HOOK	1108, 1110, 1119, 1121
	COMP	1193
	FTEV	1146, 1170, 1196
	LSCOLL	1168-9
Upright	UPPL	1286

Table B6.3: Open forms from Cringleford with parallels in the Norwich corpus

Bold = more than 5 examples

B.6.14 The most frequently occurring types are plates 1117, 1121, 1133 and 1134 (7, 11, 9 and 15 examples respectively), small bowls 1163 and 1165 (8 and 10 examples respectively), large bowls 1178 and 1182 (21 and 10 examples respectively), and handled bowl 1189 (57 examples). All other corpus forms are represented by between 1 and 5 examples.

B.6.15 All bowls, plates, dishes, pancheons, colanders (Plate B6.3) and dripping pans have flat bases, most of which show signs of knife-trimming at the angle, apart from the small bowls and handled bowls which sometimes have footstand (splayed) bases. Chafing dishes have hollow pedestal bases, but no rims were identified. Some of the small bowls have strap or rod handles, with the majority of rod handles being horizontal side handles. None of the dripping pan fragments have surviving handles, and there are no detached handles in the assemblage which appeared to belong to vessels of this type. One lid has a large hollowed knob (40mm diameter) and another has an upright knob.

B.6.16 Almost all of these vessels are glazed on the inside only, although occasional spots of glaze were noted externally on many. Most have uncoloured 'orange', yellowish orange or orange-brown glaze. A few of the smaller dishes/bowls are glazed on both surfaces. Decoration other than glaze is rare, comprising mainly single or double incised lines or occasionally wavy lines on the rims of some dishes and platters (*e.g.* Fig. B6.1 No. 5). One pancheon and one platter have thumbed rims. One platter with unfused glaze had been stamped on the rim (Fig. B6.1 No. 4), and another has two lines of roughly incised arches (Fig. B6.1 No.3). Four dripping pans have thumbed rims and three have applied thumbed strips on the rim or lip externally. One bowl also has an applied thumbed strip below the rim.

B.6.17 Rim diameters for the main flatware forms are shown in Chart B6.1. Bowls range between 120–560mm, with two main peaks around 150–170mm and 280mm, and pancheons are between 350–460mm in diameter. Those with a smaller diameter correspond with small bowls and handled bowls (Jennings 1981, figs 66 and 68), but bowls were only included in the handled bowl group if there was evidence of a handle on the rim/body. This group ranges in diameter between 120–280mm, although the majority were around 150–160mm. The plates/dishes have a broad distribution (120–440mm), with a small peak around 220mm and a larger cluster at 340–350mm. Small dishes (<180mm) are rare in this assemblage. The single colander rim measures 340mm in diameter. Eight lid rims measure between 130–150mm.

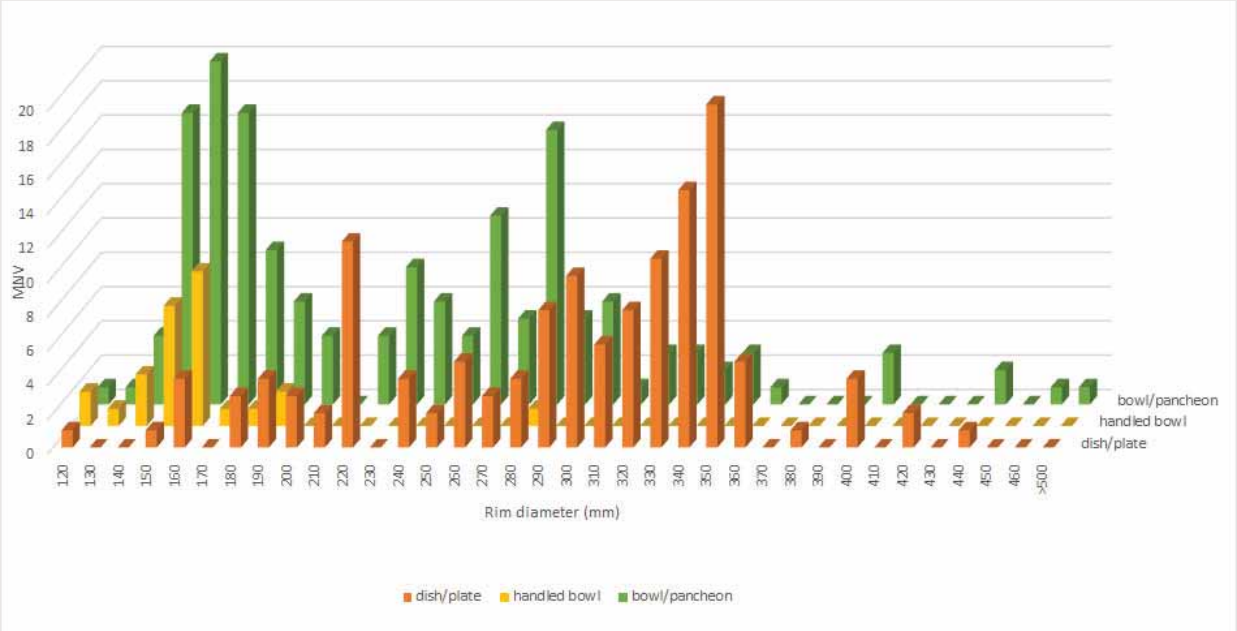


Chart B6.1: Distribution of rim diameters of major open forms

Closed forms (Figs B6.1–3 Nos 14–36, and Fig. B6.4 Nos 38–41)

B.6.18 An estimated 646 vessels were identified as closed forms based on rims or other diagnostic sherds, of which 548 are GRE, 69 IGBW, 1 PMRW and 28 SPEC. However, the majority of sherds which remain unidentified in terms of form were probably from hollow wares; they just could not be identified to a specific form.

B.6.19 Table B6.4 shows the distribution of GRE forms and rims by MNV.

Type	Form	JR	LSV	JRH	CH	JG	PK	SK	MG	PP	Uncertain*	Total
Beaded	BD	84	3	1		3		6			9	106
	FTBD		1	1	50						7	59
	SQBD	32	9		4	1	1				4	52
	TAPBD	1				2						3
	TRBD	4										3
	LSBD		2				2					4
Simple	FLAR	1	4	1		2		1				9
everted	CAV							5				5
	LSEV	1					2	1				4
Complex	EVBD	1				1						2
everted	THEV				1		4					5
	COMP		2				3					5
	FTEV			2	32	1					2	37
	LSCOLL	1	5				11	1			1	19
Upright	UPPL					2						2
	UPFTTH	1										1
	COLL	36	17	2		2	21	1			19	98
	FLAN		1									1
	no rim	16	56		7	4	43	4	2	1		133
	Total	*178*	*100*	*7*	*94*	*18*	*87*	*19*	*2*	*1*	*42*	*548*

Table B6.4: GRE closed forms by rim type (MNV)

Rim type: BD – round beaded; FTBD – flat-topped bead; SQBD – square bead; TAPBD – tapered/elongated bead; TRBD -triangular bead; LSBD – beaded with internal lid-seating; FLAR – flaring; CAV – cavetto; LSEV – lid-seated everted; EVBD – everted beaded; THEV – thickened

everted; COMP – complex everted; FTEV – flat-topped everted; LSCOLL – collared with lid-seating; UPPL – upright plain; UPFTTH – upright flat-topped thickened; COLL – collared; FLAN - flanged.

Forms: JR – jar; LSV – large storage vessel; JRH – handled jar; CH – chamber pot; JG – jug; PK – pipkin; SK – skillet; MG – mug; PP – plantpot; * uncertain = JR/CH, JR/JG, JR/PK, JR/SAG?

B.6.20 The GRE hollow wares are dominated by jars, large storage vessels, chamber pots and pipkins. Jars were most likely to have beaded, square-beaded or collared rims, while larger jars (LSVs) were most likely to be collared, perhaps due to the additional strength that this type of rim would bring to the vessel. Pipkin rims were also frequently collared types, but only half of the pipkins were identified from rims, with many identified based on pan handles or tripod bases. Smaller round-bodied skillets (*i.e.* small pipkins) are rare but the most common rim is a cavetto type (cf Jennings 1981, no. 1217). Chamber pots tended to have flat rims, either everted or beaded (Plate B6.4). One possible plantpot was identified from a pierced base, although there is a possibility that this was from a non-typical saggar (see below). Table B6.5 lists these forms with their corresponding numbers in the Norwich corpus (Jennings 1981, figs 70–75, 80).

Type	Form	EAA13 no. occurring in Cringleford assemblage
Beaded	BD	1218, **1242**, **1243**, 1245, 1275, 1277
	FTBD	1257, **1269**
	SQBD	1239, **1248**/**1249**, 1250, 1252, **1254**, 1274
	TAPBD	1277
	TRBD	1247
	LSBD	1253
Simple	FLAR	1258, 1276
everted	CAV	1217
	LSEV	1222, 1229, 1238
Complex	EVBD	-
everted	THEV	1221, 1227, 1348
	COMP	1226
	FTEV	**1265**, 1280
	LSCOLL	**1228**, 1230, 1231, 1232, 1259, 1260, 1270
Upright	UPPL	-
	UPFTTH	-
	COLL	1224, 1236, **1237**, **1251**, **1255**, 1261, 1264, **1272**, 1279
	FLAN	1262

Table B6.5: Closed forms from Cringleford with parallels in the Norwich corpus.

Bold *= more than 5 examples*

B.6.21 The most frequently occurring types are pipkins 1228 and 1237 (8 and 15 examples respectively; note that 1237 rim was paralleled, but not the hollow handle), jars 1242, 1243, 1248/1249 and 1251 (53, 28, 15 and 20 examples respectively), large storage vessels 1255 and 1254 (7 and 5 examples respectively), chamber pots 1265 and 1269 (29 and 48 examples respectively), and rim type 1272 (15 examples on jars, a handled jar and large storage vessels).

B.6.22 Bases in the closed forms are generally simple flat types with knife-trimmed angles, or footstands. Pipkins and skillets typically have tripod feet. Several GRE hollow ware vessels have handles. Jugs tend to have strap or wide strap handles, generally oval in profile and thumbed at the base attachment. The upper end is usually attached to the neck of the vessel, rather than the rim. Handled jars have similar handles, always springing from the rim, and similar to chamber pots, although one vessel in this category has a lug handle. No definite two-handled jars are present, but some vessels are too big to have been used as chamber pots and may have been examples of these.

Large storage vessels typically have shallow horizontal lug handles which are attached to the neck of the vessel and decorated with thumbing. Pipkins and skillets have straight, strap-type, tapering pan handles, with no hollow handles present.

B.6.23 Like the flatwares, the majority of hollow wares are only glazed fully on the inside. Most have spots externally, particularly under the rim and sometimes on the base. The main exceptions, with glaze on both surfaces, are jugs and large storage vessels, alongside a few chamber pots, pipkins and jars. Colours of the hollow wares are more frequently orange-brown or brown, in contrast with the paler colours used for some of the bowls, particularly the handled varieties. Many GRE handles are unglazed, the exceptions being a few of the jugs and chamber pots. Apart from combed horizontal lines, no decoration was noted on the bodies of these vessels.

B.6.24 Rim diameters vary with form. Jugs are generally between 80–130mm. Jars and handled jars range between 90–280mm, although most fall between 160–200mm. Chamber pots are between 140–230mm. Large storage vessels are between 160–340mm, with the majority between 240–290mm. Pipkin rims range between 130–220mm, and skillets between 100–170mm.

B.6.25 Table B6.6 shows the distribution of IGBW forms and rims by MNV, and Table B6.7 shows the forms in SPEC.

Type	Form	JR	LSV	JG	TY	MG	DV	Total
Beaded	BD	1		1				2
	FTBD	1						1
	LSBD	1						1
Complex	LSCOLL	1						1
Upright	UPPL			1		12	5	18
	no rim		1	5	1	16	23	46
	Total	*4*	*1*	*7*	*1*	*28*	*28*	*69*

Table B6.6: IGBW closed forms by rim type (MNV)

Rim type: see Table B6.4.

Forms: see Table B6.4, plus TY – tyg; DV – drinking vessel of uncertain form (tyg/tankard/mug).

Type	Form	JR	LSV	LSV/JR	CH	JG	PK	MG	PZJG	Total
Beaded	FTBD				1					1
	SQBD						1			1
Upright	UPPL	1						2		3
	COLL		1							1
	no rim	1	5	4	1	1		8	2	22
	Total	*2*	*6*	*4*	*2*	*1*	*1*	*10*	*2*	*28*

Table B6.7. SPEC closed forms by rim type (MNV)

Rim type: see Table B6.4.

Forms: see Table B6.4, plus PZJG – puzzle jug.

B.6.26 The majority of vessels in both these fabrics are drinking vessels, most of which are mugs (Plates B6.5–6). These are in both tall straight-sided and short rounded forms, the latter technically 'cups'. These generally have plain upright or very slightly flaring rims. Drinking vessels generally have thin rod handles with a pointed ridge centrally, and on some vessels there are two handles, set close to each other but angled away to the outer edge. Sherds are generally glazed on both surfaces. One complete, but very warped, example of an IGBW globular jug with a vertical neck and rim, and a

pedestal base, was found (Plate B6.7) in pit fill 287 (pit **283**). A few of the drinking vessels were still attached to saggars, and these are discussed below. Fragments of SPEC puzzle jugs were also recovered, from fills 43 and 284 in pits **42** and **283** (Plate B6.8).

B.6.27 Two SPEC body sherds (Fig. B6.4 No. 40) are from a vessel with incised decoration or possibly lettering ('WP' or 'WR'?); the putative 'W' is similar to a 'W' on a speckle-glazed ware jug in Norwich Castle Museum which is dated 1679 and inscribed for John Wayman (Acc. No. NWHCM 1845.88); however, the jug rim and handle of this vessel have no parallels in the Cringleford assemblage.

B.6.28 IGBW and SPEC mugs have rims between 70–130mm in diameter, the majority less than 100mm. The IGBW jug has a rim diameter of 45mm. Four jar rims are between 100–190mm, and the SPEC large storage vessel has a diameter of 230mm. The SPEC ?chamber pot appears to be small, at only 160mm diameter. The SPEC pipkin has a rim diameter of 210mm.

Manufacturing evidence and wasters

B.6.29 Many of the redware sherds in this assemblage are reduced, some are overfired and vitrified, some show signs of warping, and some have kiln scars or chips of shattered pots adhering to the surfaces. Many have broken edges onto which glaze has run, showing that they had cracked during firing. Most of the vitrified sherds have lost all traces of glaze, presumably burnt off, although sometimes the glaze inside had turned into a metallic dark brown to black layer. Glaze was unfused on many of the oxidised sherds, leaving a white residue on one or both surfaces. Manufacturing evidence is discussed in more detail below.

Illustrations

Glazed red earthenwares (Figs B6.1–3)

1. Plate with thickened everted rim and flat base. 240mm diam. Orange glaze internally. Pit fill 43, Period 2.2 pit **42**.
2. Plate with hooked rim and flat base. 330mm diam. ?Orange glaze internally. Pit fill 43, Period 2.2 pit **42**.
3. Plate with hooked rim. 440mm diam. Unfused glaze internally, and two lines of roughly incised arches. Pit fill 287, Period 2.2 pit **283**.
4. Plate with thickened everted rim. 330mm diam. Unfused glaze internally, stamped decoration on rim. Pit fill 64, Period 2.2 pit **317**.
5. Plate with thickened everted rim. 280mm diam. Orange-yellow glaze internally, incised wavy line and thumbed edge to rim. Pit fill 43, Period 2.2 pit **42**.
6. Dish with beaded rim. 320mm diam. Orange glaze internally. Pit fill 43, Period 2.2 pit **42**.
7. Dish with upright plain knife-trimmed 'rim' and flat base. 190mm diam. Green glaze internally and spots externally. Pit fill 280.
8. Bowl with flat-topped beaded rim. 260mm diam. Orange glaze internally. Pit fill 43, Period 2.2 pit **42**.
9. Bowl with beaded rim. 340mm diam. Brown glaze on both surfaces. Pit fill 285, Period 2.2 pit **283**.
10. Bowl with beaded rim. 250mm diam. Orange glaze internally. Pit fill 286, Period 2.2 pit **283**.

11. Handled bowl with flaring rim and strap handle. 160mm diam. Orange glaze internally and spots externally. Pit fill 43, Period 2.2 pit **42**.
12. Handled bowl with bead rim, strap handle and footstand base. 160mm diam. Orange glaze internally. Pit fill 43, Period 2.2 pit **42**.
13. ?Handled bowl with tapered beaded rim. 150mm diam. Orange glaze internally and spots externally. Pit fill 68, Period 2.2 pit **42**.
14. Skillet with beaded rim. 100mm diam. Orange glaze internally. Pit fill 43, Period 2.2 pit **42**.
15. Skillet with beaded rim, pan handle and tripod base. 100mm diam. Orange glaze internally and spots externally. Pit fill 286, Period 2.2 pit **283**.
16. Pipkin/skillet with collared rim. 140mm diam. Orange/greenish glaze on both surfaces. Pit fill 43, Period 2.2 pit **42**.
17. ?Pipkin pan handle, grooved. Spots of orange glaze. . Pit fill 43, Period 2.2 pit **42**.
18. Jar/pipkin with collared rim. 170mm diam. Dark brown glaze internally (reduced sherd). Pit fill 43, Period 2.2 pit **42**.
19. Jar with beaded rim. 180mm diam. Brown glaze on both surfaces, combed horizontal lines. Pit fill 43, Period 2.2 pit **42**.
20. Jar with beaded rim. 240mm diam. Orange glaze on both surfaces, combed horizontal lines. Pit fill 64. Pit fill 43, Period 2.2 pit **317**.
21. Straight-sided jar with beaded rim. 180mm diam. Spots of orange glaze on both surfaces, combed horizontal lines. Pit fill 287, Period 2.2 pit **283**.
22. Straight-sided jar with tapered beaded rim and flat base. 110mm diam. Orange glaze on both surfaces, combed horizontal lines at neck. Pit fill 43, Period 2.2 pit **42**.
23. Jar/jug with beaded rim. 100mm diam. Orange glaze on both surfaces, combed horizontal lines. Pit fill 43, Period 2.2 pit **42**.
24. Handled jar with collared rim and ?lug handle. 270mm diam. Olive glaze externally, brown internally, incised horizontal lines. Pit fill 43, Period 2.2 pit **42**.
25. Jar/large storage vessel with collared rim. 220mm diam. Orange-brown glaze on both surfaces. Pit fill 287, Period 2.2 pit **283**.
26. Jar/large storage vessel with beaded rim. 260mm diam. Orange-brown glaze internally, spots externally. Pit fill 43, Period 2.2 pit **42**.
27. Large storage vessel with lid-seated collared rim and lug handle. 280mm diam. Orange-brown glaze internally, spots externally. Thumbed handle and applied thumbed strip at neck. Pit fill 43, Period 2.2 pit **42**.
28. Large storage vessel horizontal strap handle. Orange glaze on both surfaces. Pit fill 280, Period 2.2 pit **279**.
29. Chamber pot with flat-topped beaded rim, strap handle and footstand base. 170mm diam. Orange-brown glaze on both surfaces, fine combed horizontal lines. Pit fill 286, Period 2.2 pit **283**.
30. Chamber pot with flat-topped beaded rim, strap handle and footstand base. 170mm diam. Brown glaze on both surfaces, combed horizontal lines. Pit fill 287, Period 2.2 pit **283**.
31. Jug with collared rim and cordon at neck, strap handle. 110mm diam. Pale orange-yellow glaze on both surfaces, combed horizontal lines. Underfired, abraded. Pit fill 287, Period 2.2 pit **283**.
32. Dripping pan with lid-seated collared rim and flat base. Orange glaze internally, thumbing around lip externally. Pit fills 43 and 68 in Period 2.2 pit **42**.

33. Dripping pan with upright plain rim and flat base. Orange glaze internally, thumb impressions in top of rim. Pit fill 43, Period 2.2 pit **42**.

34. ?Chafing dish pedestal. Spots of orange glaze on both surfaces, thumbing of base. Pit fill 286, Period 2.2 pit **283**.

35. Lid with plain rim and upright knob. 150mm diam. Possibly unglazed or thin unfused glaze. Soft, abraded, underfired. Pit fill 43, Period 2.2 pit **42**.

36. Base of ?plantpot or possibly saggar, pierced. Spots of brown glaze. Pit fill 43, Period 2.2 pit **42**.

Blackwares (Fig. B6.4)

37. Bowl with flaring rim. 200mm diam. Black glaze internally and greenish lead glaze externally. Pit fill 280, Period 2.2 pit **279**.

38. ?Mug with upright plain rim. 130mm diam. Black glaze on both surfaces. Shallow ?stab marks in line below rim. Pit fill 43, Period 2.2 pit **42**.

Speckle-glazed wares (Fig. B6.4)

39. Pipkin with square beaded rim. 210mm diam. Light brown glaze on both surfaces, combed horizontal lines. Pit fill 280, Period 2.2 pit **279**.

40. Two joining body sherds with incised decoration/writing externally, possibly letters 'WP' or 'WR'. Dark brown glaze on both surfaces. Pit fill 43, Period 2.2 pit **42**.

41. Puzzle jug body sherds and hollow handle with knob. Dark brown glazed on both surfaces. Pit fill 43, Period 2.2 pit **42**.

Slipwares

B.6.30 Slipwares were generally plates or dishes, but two possible mugs and another hollow ware body sherd were also present. Fifty-nine vessel forms were identified, as shown in Table B6.8.

Rim	plate	dish	dish/plate	mug	Totals
CAV	1				1
COMP	1				1
EV		1			1
EVBD	19	3			22
EVTAP	1				1
HOOK	1				1
THEV	11	6			17
UPPL				2	2
no rim	11	1	1		13
Totals	*45*	*11*	*1*	*2*	*59*

Table B6.8: PMSW forms by rim type (MNV)

B.6.31 Like the GRE, thickened everted and everted beaded forms are most common amongst the flatwares. All surviving base fragments are flat and no handles were found. Glaze is generally orange or orange-brown, but a few green examples were also present and at least one of these (Fig. B6.5 No. 44) appears to be deliberate rather than due to underlying reduction of the clay body.

B.6.32 The range of decoration on the slipwares is comparable with the group published by Jennings as Metropolitan slipwares. Only a few of those were confirmed as products of the Harlow kilns by Davey (Jennings 1981, 97), comprising three candlesticks, two dishes and a mug. Based on the finds in the Cringleford assemblage, it is almost certain that the Norwich examples were made here, not at Harlow, and are therefore local

rather than 'Metropolitan' slipware. However, the designs are variable and although they contain similar elements to those illustrated in the corpus, there are some additional patterns in the waster assemblage. Those which were paralleled included three examples similar to no. 646 (dashes at rim, semi-circles below, spirals on wall), two as no. 647 (wavy lines on rim) and one like no. 654 (spirals on rim). Unfortunately most of the fragments are too small to determine the decorative scheme, with many simply having wavy, curving or straight lines, either singly or in groups, and dots and/or dashes singly or in groups. Those with more complete designs have been illustrated, together with a selection of the smaller fragments. Unusual types include examples with pointed oval (eye-shaped) designs, possible fleur-de-lys, and a branch.

B.6.33 Wasters in this group are typically underfired with unfused glaze, and there are occasional sherds with glaze on the broken edges. No overfired or warped sherds are present.

Illustrations (Figs B6.5–9)

42. Dish with thickened everted rim. 190mm diam. Orange glaze internally. Dashes on rim, spots on body. Pit fill 69, Period 2.2 pit **42**.

43. Dish with thickened everted rim. 200mm diam. Orange glaze internally. Dashes and short dots on rim. Pit fill 43, Period 2.2 pit **42**.

44. Dish with thickened everted rim. 210mm diam. Green glaze internally. Double wavy line border on rim. Pit fill 43, Period 2.2 pit **42**.

45. Dish base. Orange glaze internally. Spiral on base. Pit fill 280 Period 2.2 pit **279**.

46. Dish/plate body sherd. Orange glaze internally. 'Jewelled' curving lines. Pit fill 280.

47. Plate with thickened everted rim. 240mm diam. Orange glaze internally. Spirals on rim, central cross, groups of dots. Pit fill 69, Period 2.2 pit **42**.

48. Plate with thickened everted rim. 260mm diam. Orange glaze internally. Dashes, curving lines on rim, dots on body. Underfired, slip poorly applied. Pit fill 280 Period 2.2 pit **279**.

49. Plate with hooked rim. 300mm diam. No glaze internally. Looped line. Pit fill 43, Period 2.2 pit **42**.

50. Plate with cavetto rim. 300mm diam. Orange-brown glaze internally. Looped line. Pit fill 43, Period 2.2 pit **42**.

51. Plate with everted beaded rim. 340mm diam. Orange glaze internally. Looped line. Pit fill 286, Period 2.2 pit **283**.

52. Plate with everted beaded rim. 320mm diam. Orange glaze internally. Branch. Pit fill 43, Period 2.2 pit **42**.

53. Plate with everted beaded rim. 330mm diam. Orange glaze internally. Spiral, line of dots, wavy line. Pit fill 290, Period 2.2 pit **317**.

54. Plate with everted beaded rim. 330mm diam. Orange glaze internally. Dashes and curving lines on rim, dots on body. Pit fill 43, Period 2.2 pit **42**.

55. Plate with everted beaded rim. 340mm diam. Orange glaze internally. Large spiral, vertical line of horizontal dashes. Pit fill 43, Period 2.2 pit **42**.

56. Plate with everted beaded rim. 340mm diam. Orange glaze internally. Diamond, large fleur-de-lys in quarters, dots in between. Pit fills 43 and 290, Period 2.2 pits **42** and **317**.

57. Plate with everted beaded rim. 340mm diam. Orange glaze internally. Spiral, 7 dots group. Pit fill 43, Period 2.2 pit **42**.

58. Plate with thickened everted rim. 340mm diam. Orange glaze internally. Wavy lines from rim edge onto body. Pit fill 43, Period 2.2 pit **42**.

59. Plate with thickened everted rim. 350mm diam. Orange glaze internally. Curving concentric lines on rim. Pit fill 290, Period 2.2 pit **317**.

60. Plate base. Orange glaze internally. Pointed-oval lines and dots either side of a band across the base with circle, cross, wavy lines, dots. Pit fill 286, Period 2.2 pit **283**.

61. Base fragment. Orange glaze internally. Central cross and wavy line. Pit fill 284, Period 2.2 pit **283**.

62. ?Mug with upright plain rim. 170mm diameter. Orange glaze on both surfaces. Curving lines externally, dashes internally on rim. Pit fill 43, Period 2.2 pit **42**.

63. Hollow ware body sherd, small globular vessel. Orange glaze on both surfaces, combed horizontal lines. Lines and dots externally. Pit fill 43, Period 2.2 pit **42**.

Tin-glazed earthenwares

B.6.34 Only 86 sherds of 68 vessels in TGE were recovered, of which only 16 forms were identifiable, including drug jars, plates, jugs, jars, a dish, a mug and a porringer. Table B6.9 shows the quantities of these by form and rim type.

Rim	plate	dish	porringer	jar	drug jar	jug	mug	Totals
CAV						2		2
EV	2							2
FLAR		1		1	2			4
SQBD				1				1
THEV					1			1
UPPL							1	1
no rim	2		1		2			5
Totals	*4*	*1*	*1*	*2*	*5*	*2*	*1*	*16*

Table B6.9: TGE forms by rim type (MNV)

B.6.35 The TGE fabric comprises a white, cream or pinkish fine matrix containing abundant silt-sized clear/white and some pink quartz sand, with sparse coarser quartz sand up to 0.2–0.3mm (*i.e.* similar sand to the redwares), and occasional fine soft ferrous oxide or red clay pellets (Plate B6.1). The whiteware saggars are broadly the same but the fabric contains common fine sand up to 0.5mm.

B.6.36 The two jugs both have wide strap handles, and another strap handle is also present. The porringer is represented by a pierced lug handle with a curvilinear edge (Plate B6.9). Base fragments include flat, footring and footstand types.

B.6.37 Where glaze is present, most vessels have white glaze on both surfaces, only one having a clear lead glaze externally. Many fragments had only reached the biscuit-firing stage, however, and some of those with decoration appear not to have been re-fired or had not reached a high enough temperature for the glaze to fuse. Only thirteen vessels have painted decoration, either in blue or black and blue, but most fragments are too small to determine the decorative scheme. All have been illustrated (Plate B6.9). Only one could be paralleled in the Norwich corpus, a rim fragment of a drug jar which was similar to Jennings' no. 1451.

B.6.38 As well as examples of biscuit-firing and sherds with unfused glaze, there were drips on broken edges and warped fragments, all providing evidence for manufacture of TGE at the site.

Illustrations (Fig. B6.10)

64. Drug jar with thickened everted rim. 160mm diam. White glaze on both surfaces, not fully fused. Painted brown horizontal lines and group of concentric blue curving lines. Pit fill 286, Period 2.2 pit **283**.

65. Small drug jar pedestal base. White glaze on both surfaces. Pit fill 285, Period 2.2 pit **283**.

66. Jar with flaring rim. 140mm diam. No glaze – biscuit-fired. Pit fill 281, Period 2.2 pit **279**.

67. Jug (or chamber pot?) with cavetto rim and wide strap handle, slight cordon at base of neck. 290mm diam. No glaze – biscuit-fired. Pit fills 281 and 282, Period 2.2 pit **279**.

Other slipwares

B.6.39 Four fragments of a North Italian marbled slipware bowl with a cavetto rim were found in pit fill 43 in pit **42** (Fig. B6.11 No. 68). This fabric occurs occasionally in Norwich but is rare on rural sites in the county.

B.6.40 A late slipped redware plate (Plate B6.10) was recovered from two contexts in adjacent features. Ten sherds came from fill 285 (pit **283**) and one from fill 280 (pit **279**). The plate was largely plain and glazed dark brown, but there were concentric white slip lines running around the rim. Three fragments of a late slipped redware bowl came from fill 284 (pit **283**).

Illustrations (Fig. B6.11)

68. North Italian marbled slipware bowl with cavetto rim. 290mm diam. Orange glaze on both surfaces, marbled white slip mixed into red body. Pit fill 43, Period 2.2 pit **42**.

Stonewares

B.6.41 Two body sherds of Frechen stoneware were recovered, one from pit fill 43 (pit **42**) in association with a large group of wasters, and one from pit fill 19 (pit **18**) associated with brick Kiln 21. Five fragments were from a Bellarmine-type bottle with a partial face mask (Fig. B6.11 No. 69), found in fill 286 (pit **283**). The sherds are in a cream fabric which was not fully fused into stoneware, so they have been categorised as an English type as they are not typical of Frechen. The partial face mask comprises the eyes, eyebrows and part of the nose, so the mouth shape is unknown, but the design appears comparable with an example from Woolwich (Blockley 1984, fig.10.33) and falls into Holmes' type VIII category, also an English type (Holmes 1951). The Woolwich bellarmines were covered with an external iron slip under the salt glaze, but the example from Norwich is a 'tiger ware' type. In addition, the mask is carved in higher relief than appears to be typical of London examples. Therefore, the possibility of a German origin cannot be discounted.

B.6.42 There are ten sherds of another stoneware vessel, recovered from fills 281 and 282 of pit **279**, and fills 284 and 285 of pit **283**. The sherds are in a grey fabric, fully fused, but without any trace of glaze (Fig. B6.11 No. 70). There is an applied vertical strip, which appears to have split into two wavy lines, apparently formed at the base of the handle attachment (which is not present). The letters 'I P' are incised either side of the vertical band. The vessel is partly blown internally which, together with the lack of glaze, may suggest that it was a waster. There is no other evidence for stoneware manufacture at the site, but the vessel has not been paralleled at either English or Rhenish production sites, so there is a possibility that this was a trial piece made in Cringleford.

B.6.43 Two sherds of Westerwald stoneware, an undecorated body sherd and a flat base fragment, were found in pit fill 284 (pit **283**), suggesting a late 17th-century or later date for this fill.

Illustrations (Fig. B6.11)

69. ?Woolwich stoneware bottle, collared rim, rod-shaped handle. 55mm diam. Part of bellarmine face mask. Pale brownish 'tiger ware' glaze externally. Pit fill 286 Period 2.2 pit **283**.

70. ?English stoneware jug body fragments. Applied vertical strip from handle attachment, possibly splitting into wavy lines. No glaze. Incised letters 'I P' either side of applied strip. Pit fills 281, 282, 284 and 285, Period 2.2 pits **279** and **283**.

Manufacturing waste

B.6.44 The kiln furniture includes specially-made saggars, props and spacers, as well as peg tiles which were used as expedient spacers. Some re-purposed sherds may have been used as tools for pottery manufacture. A few bricks also have traces of glaze, suggesting that they had been used in the pottery kilns, rather than in the brick kilns found on the site.

Fabric	Form	Code	No	Wt/g	Min no.
redware	Saggar	SAG	281	16923	170
		SAG?	581	22514	342
	Jar/saggar	JR/SAG?	19	834	17
	Ring stilt	RING	306	3520	-
	Tool	TOOL?	2	53	2
whiteware	Saggar	SAG	118	7112	91
		SAG?	2	33	2
	Triangular prop	PROP	2	16	2
	Tool	TOOL?	2	47	2
redware CBM	Kiln structure	KILN	4	9582	3
	Terracotta plinth	TERR	1	9520	1
	Later brick	LB	29	40497	29
	Post-medieval roof tile	RTP	29	8379	31
	Tile	TILE	3	5691	3
	Pantile	PAN	7	1665	6
	Quarry floor tile/paviour	QFT	1	2129	1
	Ridge tile	RID	1	285	1
	Unidentified	UN	1	117	1
whiteware CBM	Tile	TILE	13	1582	11
Totals			*1402*	*130499*	*715*

Table B6.10: Kiln furniture quantities (including associated CBM from the pottery waste pits)

Saggars, spacers, props and tools

Redwares

B.6.45 Two main characteristics enabled the identification of redware saggars, these being untrimmed flat bases and the presence of an angled 'corner' (appearing like a large lip at the rim and continuing down to the base). The rim forms themselves are not specific to saggars, being mainly beaded or flat-beaded types which were also found on jars and large storage vessels. Body sherds were separated on the basis of overfiring and warping; these thin-walled sherds were recorded as possible saggars only when they were not completely glazed internally, but it is likely that some overfired sherds have been wrongly ascribed. Only two saggars are complete and full-height in profile (Fig.

B6.12 Nos 71–72), although a few very warped examples with iron-glazed blackware or speckle-glazed mugs still inside were also recovered (Plates B6.11–13). Some body and rim sherds have straight knife cuts, apparently randomly placed, to provide cut-outs for air flow (Plate B6.14). A few examples of bases have three large pulled 'stilts' internally. Many of the saggar bases, and a few vessel bases too, contained thick deposits of sandy mortar-like material. One base has a central hole, and one wall has a partial cut-out vent hole.

B.6.46 There are 306 fragmentary or complete ring stilts in red-firing clay, all between *c*.45–80mm in diameter, although the majority are around 55–60mm (Plate B6.15). These were made of a rod of clay looped to form a roughly circular ring, and pinched to form small 'prongs' in three equidistant points on both sides with those on one side being in between pairs on the other side. The rings thus provided six small areas of support. They were used within saggars, but also inside larger jars and sometimes tripod-based pipkins to support smaller vessels, which were protected by the larger vessels instead of saggars. Traces of these occurred inside several large vessel bases, either as a complete or partial ring (Plate B6.16) or ring scar, or in the form of three small stilt scars in the shape of an equilateral triangle.

B.6.47 Occasionally, simple spacers known as 'bobs' (small balls of clay) had been used in the place of ring stilts, and these left scars on the bases of a few GRE and IGBW vessels.

B.6.48 Two overfired sherds of GRE had been deliberately smoothed at the edges (Plate B6.17). One was roughly oval in shape and the other had a partly rounded edge. These may have been used as potter's ribs. Both were found in fill 43 in pit **42**.

Whitewares

B.6.49 Much of the evidence for TGE production at this site is in the form of saggars. These comprise two main types. One form is short (93–98mm high) with a flat base, thin walls, thickened flat-topped rim and 'corner' lip similar to the redware saggars. The other is taller with thicker walls, flat base, a knife-cut flat-topped rim, and is less well-finished with a rough outer surface and striations internally. Both types have triangular cut-outs in the walls, probably for triangular clay props used to support flatwares. At least three saggar bases have central circular holes to allow air-flow.

B.6.50 Two examples of triangular props were found (Plate B6.18). Both are in a fine pinkish-white fabric and measured 45+mm long, with base triangles of *c*.17 x 17mm. One was in fill 281 and the other was unstratified. Some saggar walls have impressions of these props surviving internally (Plate B6.19).

B.6.51 Two other possible potter's ribs were found in pit fills 281 and 282 (pit **279**). These were made of white earthenware. The former appears to be part of a disc with a rubbed edge and has spots of blue glaze on one surface. The other has two straight edges forming a right-angle, and a rather abraded rounded edge (Plate B6.20).

Illustrations (Fig. B6.12)

71. Redware saggar with beaded rim and flat base. Spots of brown glaze internally. Only used once? Two or three 'stilts' in base, partial 'angle'. Pit fill 43, Period 2.2 pit **42**.

72. Redware saggar with beaded rim and flat base. c.170mm diam, but broadly oval. Pit fill 287, Period 2.2 pit **283**.

73. Whiteware small, thick-walled saggar with flat-topped rim and flat base. 100mm diam. One cut edge. Pit fill 286 Period 2.2 pit **283**.

74. Whiteware large, thick-walled saggar with upright flat-topped rim. 280mm diam. Triangular cut-outs for props. Pit fill 285 Period 2.2 pit **283**.

75. Whiteware large, thick-walled saggar with upright flat-topped rim and flat base. Part of 'angle' similar to redware saggars. Pit fill 281 Period 2.2 pit **279**.

Ceramic building material (CBM)

B.6.52 For the purposes of this report, all CBM and fired clay retained from the main pottery waster pits has been included in this section, a total of 90 fragments (69,769g). See the CBM report for details of methodology and retention policy (App. B.7). Table B6.11 shows the quantities by fabric and form. A few other pieces included with the main CBM assemblage may have been used in the pottery kilns, and these are noted in the CBM report.

Fabric	Code	RTP	TILE	KILN	TERR	LB	QFT	PAN	RID	UN	FC
fine sandy	fs	6						3			1
fas with clay pellets	fscp	2									
fs with ferrous oxide	fsfe	5	2			2		4			
medium sandy	ms	9									
ms with flint	msf					10					
ms with ferrous oxide	msfe	2				1					
msfe with flint	msffe	7	1	4		10	1		1		
msfe with grog	msgfe				1	4					
unidentified	un					1					
GRE fabric?	GRE?									1	
white-firing fine sandy	wfs		12								

Table B6.11: CBM quantities by broad fabric group

Key: RTP – plain roof tile; TILE – misc tile; KILN – kiln furniture; TERR – terracotta; LB – post-medieval brick; QFT – quarry floor tile; PAN – pantile; RID – ridge tile; UN – unidentified; FC – fired clay.

B.6.53 These context groups include fragments of peg tile which had been used in the pottery kiln(s) as spacers, probably on several occasions as most have a number of kiln scars and glaze deposits on both surfaces, sometimes with glaze covering earlier kiln scars or kiln scars which intercut each other (Figs B6.13–14). Seven roof tiles are complete in two dimensions, and these measured between 164–170mm wide and 11–13mm thick.

B.6.54 A few white-firing flat tiles may have been made deliberately as tin glazed earthenware kiln furniture. Fragments are between 12–37mm thick. One is sooted and has a knife-trimmed edge. Three other flat tiles are in red-firing fabrics. One of these was complete and measured 235 x 225 x 45mm, with knife-trimmed edges and one corner roughly cut off diagonally. Two others appear to be partial floor brick/tiles, and one of these has unfused glaze on the surface.

B.6.55 Some bricks from these contexts also have spots of glaze on the surfaces, and several have reduced or vitrified surfaces, headers or stretchers, suggesting that they may have been part of a kiln structure. Three complete bricks are present, measuring 220–222 x 109–115 x 50–52mm. Twenty-one half-bricks were collected, and these are generally between 100–127mm wide and 43–63mm thick, although only two are thicker than 50mm. There are two outliers which may have been specialist bricks made

for use in a kiln. These measured 87 x 52mm and 98 x 68mm respectively, and the latter was overfired to a dark purple colour with a vitrified stretcher.

B.6.56 Fragments of two or three thick, V-section tiles were found in pits **279** and **283**; these appear to be fragments of arches from a kiln (Figs B6.15–16 Nos 5–8). One is 130mm long and another stood *c*.110mm high, with all measuring *c*.48mm thick. A large terracotta plinth was also recovered, the top damaged but the base square with a rough circular hollow to aid firing (Fig. B6.17, No. 10). It measures 302 x 262 x 130+mm. The object had been made in a sanded form, and the sand remained on the upper surface. White lime mortar patches were present on the base. Again, this may have been made specifically for use in a kiln structure.

B.6.57 A few fragments of pantile were recovered from pits **279** and **283**, suggesting a date no earlier than the 17th century for the fills (281, 282, 284, 285). A ridge tile fragment from fill 282 was probably of similar date. A large piece of a worn quarry floor tile in 285 (227mm wide, 42+mm thick) would be relatively unusual before the later 17th century in this area.

B.6.58 A fragment of a glazed red earthenware solid sphere, with brown glaze on the remaining surface, may have been part of a finial or similar (Fig. B6.14 No. 4). It was found in pit fill 280 in pit **279**.

B.6.59 A small piece of orange fine sandy fired clay with a flattish surface appears to have a drilled hole at one edge; its function is unknown, but it may be related to pottery manufacture.

Illustrations (Figs B6.13–17)

1. Roof tile showing glaze on both surfaces, with kiln scars. Pit fill 43, Period 2.2 pit **42**.
2. Roof tile with kiln scar of jug rim (90mm diameter). Pit fill 43, Period 2.2 pit **42**.
3. Roof tile with dark greenish brown glaze all over, ?saggar rim stuck to one side. Pit fill 43, Period 2.2 pit **42**.
4. Part of glazed sphere. Pit fill 280, Period 2.2 pit **279**.
5. Large curved V-shaped tiles, c.110mm high, cut horizontal ends, possibly part of kiln structure. Pit fill 282, Period 2.2 pit **283**.
6. Large curved V-shaped tiles, c.110mm high, cut horizontal ends, possibly part of kiln structure. Pit fill 282, Period 2.2 pit **283**.
7. Large curved V-shaped tiles. Pit fill 285, Period 2.2 pit **283**.
8. Large curved V-shaped tiles. Pit fill 285, Period 2.2 pit **283**.
9. Roof tile with dark brown glaze, small ring stilt adhering (37mm diameter). Pit fill 285, Period 2.2 pit **283**.
10. Square plinth, roughly hollowed base, surface mostly lost (remaining areas sanded from mould). Pit fill 285, Period 2.2 pit **283**.

Distribution on site

B.6.60 Apart from eight sherds of TGE and a fragment of TGE kiln furniture which were unstratified, and a single sherd of GRE from Phase 2 kiln 229, all pottery was recovered

from features assigned to Period 2.2, the majority in Area 1. Most pottery in Period 2.2 came from the pottery waster Pit Group 42, but sherds were also collected from other features as described below.

Period 2.1

Kiln 229: A single small sherd of GRE (or possibly Dutch-type redware?) came from kiln floor 2 38.

Period 2.2

B.6.61 Period 2.2 quarry pit backfills and dumped deposit

Pit **259**: A GRE handle and a large base fragment from a saggar were collected from this pit.
Pit **271**: Two GRE rim sherds, a bowl and a ?dish, were found in fill 272, and fill 303 contained ten sherds of GRE including two large storage vessels and a pipkin came from fill 303. Several sherds were recorded as wasters.
Pit **297**: Ten fragments of four GRE vessels were found in fill 299, including pieces of two large storage vessels. None were recorded as wasters.
Pit **311**: Thirty-three sherds were recovered, the majority GRE but also one IGBW and one TGE. There are also three sherds of overfired jars/saggars and a piece of ring stilt. The vessels include pipkins/jars with collared rims, a ?chamber pot and two plates. Several sherds are overfired and distorted.
Dump 8: Four sherds of GRE and a saggar fragment were recovered from this layer.

B.6.62 Brick kiln backfills

Pit **18**: There are 41 sherds of GRE in fill 20, which also contained four pieces of saggars and two ring stilts. A number of jar rims, all of the same square-beaded type, and some lugged large storage vessels are the main identifiable forms, although one bowl was also present. One sherd of Frechen stoneware came from fill 19.
Kiln 34: One green-glazed sherd of GRE was found in backfill 28.
Kiln 52: Demolition layer 58 contained one IGBW mug sherd, and 40 sherds of GRE including fragments of three bowls, a jar and a large storage vessel. Several warped and overfired sherds are present.

B.6.63 Ditch Group 2

Ditch 6: Two small body sherds of GRE were collected from fill 7, one with incised horizontal lines internally.

B.6.64 Area 2 Isolated feature

Post-hole **177**: A base fragment of GRE was recovered from this feature, and shows signs of use, suggesting that it was unrelated to the manufacturing waste from Area 1.

B.6.65 Waster Pit Group 42

B.6.66 The pits are presented in approximate early to late order, based on stratigraphic relationships. The vessel types and rim forms from these features will be discussed further below.

Pit **304**: A small fragment of orange fired clay with a flattish surface and a drilled hole in the thin edge was found in this feature.
Pit **306**: A single small sherd of IGBW was recovered from this pit, together with two fragments of plain roof tile.
Pit **295**: One fragment of a saggar was found in this pit, and there was one fragment of plain roof tile.

Pit **42**: This large pit contained 1377 sherds of GRE, 58 of IGBW, 34 SPEC, 103 PMSW and 869 fragments of kiln furniture. In addition to the locally made material, there are four sherds of a North Italian marbled slipware vessel, a fragment of unglazed redware and a sherd of Frechen stoneware. The non-local sherds suggest a 17th-century date for the fill. In addition, there are 18 pieces of plain roof tile, two brick/floor tile fragments and four half-bricks, most of which show evidence for use in a pottery kiln.

Pit **317**: This pit produced 190 sherds of GRE, one each of IGBW and SPEC, 9 PMSW and 70 fragments of kiln furniture. The CBM assemblage comprises eight bricks and a roof tile fragment, most of which have evidence for kiln use.

Pit **283**: The largest quantity of pottery was found in this pit, with 1422 sherds of GRE, 199 IGBW, 50 SPEC, 30 PMSW, 43 TGE, 223 kiln furniture and 46 TGE kiln furniture. There were also fragments of Westerwald stoneware, LSRW and ESW scattered in the top three fills, which may indicate 18th/19th-century disturbance. Thirty-three fragments of CBM were recovered, including pieces of presumed kiln structure, plain roof tiles, pantiles, a floor tile and white-firing kiln tiles.

Pit **279**: Local wares comprise 120 GRE, 19 IGBW, 4 SPEC, 12 PMSW, 34 TGE, 12 kiln furniture and 78 TGE kiln furniture. There are eight late 18th/19th century sherds, one LSRW and seven ESW (one vessel), which were probably intrusive or represent disturbance and redeposition, particularly as the LSRW sherd was found in the lowest fill and was part of a plate found in the top fill of pit 283. The CBM assemblage of 18 fragments included pieces of white-firing kiln tiles, two large kiln tiles, plain roof tile and pantile, and a few brick fragments.

Pit **288**: Six pieces of GRE and two fragments of kiln furniture were found.

Discussion

B.6.67 Pottery wasters have been identified previously at Newfound Farm (Anderson 2013), and in a field to the south-west of the present site (site NHER 9406; Cherry 1977, 98), where fieldwalking in 1976 produced a scatter of post-medieval pottery wasters and kiln furniture, and a geophysical survey in 1977 indicated the presence of three possible kilns. None of the pottery from the fieldwalked area has been studied in detail.

B.6.68 There is documentary evidence for at least two potters in Cringleford in the second half of the 17th century. An undated report on some of this evidence is included in the NHER for site 9406, compiled by T.L.M. Hawes (undated). In 1645, several fields in the area including 'The Potters Close' were mortgaged by Thomas Balleston, whose will (dated 1657) mentions 'my tenements…in Cringleford called Springhouse or Brakyhouse in the use and occupation of Robert Colman potter…'. The Springhouse is said by Hawes to be on the site of the kilns (*i.e*. NHER 9406) based on a survey map held by the NRO (see main Discussion). Robert Colman was included in the Hearth Tax returns for 1668 and 1672/3, rated at five hearths. Edward Vincent of Cringleford was rated at two hearths in the 1668 Hearth Tax and is recorded as 'pottmaker' in his will of 20th October 1679. In addition to Hawes' notes, the parish records include a burial for Robert Colman in Cringleford in 1672. Edward Vincent married Mary Salter in Cringleford in 1664, but there is no record of his burial (the parish register is partly illegible, however).

B.6.69 By the time Blomefield was writing (in 1736) the area was no longer in use as a pottery. He wrote '…within this town, stands the farm-house called Newfound, from a remarkable sort of earth *newly found* there, which was lately transported to *Holland* for the *potters* use, but now totally disused' (Blomefield 1806, v, 39). This would have

been a type of marl, which was added to the clay mixture used to make tin-glazed earthenware in Delft. A ban on the export of 'English earth' (*Engelsche Aerde*, or fuller's earth), which would have included marl from the Norwich area, was imposed by James I in 1624 (Van Dam 1999, 31). This ban may have provided an impetus for the potters of Cringleford to start manufacturing tin-glazed earthenwares themselves, if the earth could no longer be sold overseas. Marl was again being exported to Holland by 1731, however, as there is documentary evidence for 'a gentleman of this county' sending 'a fine clay' to Holland for making earthenware (Woodward 1833, 15), which Woodward linked to a large clay extraction pit next to Yelverton Common.

Dating and chronology

B.6.70 Currently, all GRE from Norwich is given a broad date-range of early/mid 16th–18th century, following Jennings' work which suggested that it was in use in the city from soon after the fire of 1507, based on finds from the fire deposits at Pottergate site 149N (Jennings 1981, 157). However, all GRE illustrated in the corpus was either unstratified or from deposits which can be dated to the 17th century (a few colanders and bowls appear to be from an 18th-century well on site 149N, but may be residual). Evans suggested that GRE was not present on the Pottergate site until perhaps the last quarter of the 16th century, as it did not occur in the fill of the earliest post-fire cesspit on the site, which he dated 1550–1590 (Evans and Carter 1985, 42). All redware from the pit was recorded as Dutch-type, although that does not preclude some of it being locally made. Nevertheless, the forms of the illustrated vessels from the cesspit (Evans and Carter 1985, figs 26–27) are different to the GRE illustrated by Jennings and that found at Cringleford. The same is true of the IGBW, dated early 16th to late 17th/18th-century by Jennings (1981, 150), but apparently dated only to the 17th century or unstratified, based on the published examples. Speckle-glazed wares are dated to the later 17th and 18th centuries (Jennings 1981, 155), but again there are few examples from dated contexts in the corpus and some occurred in the same 17th-century contexts as the GRE. The 'Metropolitan' slipwares published by Jennings, most of which can now be attributed to Cringleford, were all dated to the 17th century. Overall this group of redwares appears to be broadly contemporary and the presence of all four at Cringleford would appear to confirm this.

B.6.71 Taken together, all the evidence from Cringleford appears to indicate a 17th-century date for the manufacturing waste assemblage. This includes the documentary evidence noted above, the use of saggars and ring stilts (the latter are dated to the 17th century at Brill, Bucks, and Ash, Surrey; Cocroft 1985, 78), and the presence of a North Italian marbled slipware vessel in one context. Dates from the associated clay tobacco pipe assemblage appear to concur (Fletcher, App. B.8).

Range of wares

B.6.72 Comparison of the Cringleford assemblage with the Norwich corpus (Jennings 1981) suggests that certain forms were not made here, perhaps indicating either a date or a source difference.

Glazed red earthenwares

B.6.73 Most of the plate rim forms illustrated by Jennings (1981, fig. 65) are present in the Cringleford assemblage, but the range of bowls is more limited, with carinated forms

in the corpus (e.g. *ibid*, fig. 66, nos 1136–1140) not occurring at Cringleford except as handled types (e.g. *ibid*, fig. 68, nos 1199–1201) and then only infrequently. Those bowls which do occur, were most likely to have simple beaded rims and curving or flared profiles. The rounded bowls are generally smaller or handled types, whilst the flaring-sided types tend to be larger. The larger bowls and pancheons are rare at Cringleford, but there is at least one example of each of those shown on Jennings' fig. 69, the exceptions being 1211 and 1213.

B.6.74 The small skillets illustrated in the corpus (Jennings 1981, fig. 70) generally have beaded or thickened rims, and these are the main types at Cringleford. The thin everted rims with attached handles of nos 1219 and 1223 are not paralleled in the Cringleford assemblage. The pipkins are generally similar to those illustrated on figs 70–71 in terms of rims and tripod feet, but as noted above, no hollow handles are present at Cringleford.

B.6.75 The beaded and square-beaded rims of the jars (Jennings 1981, fig. 72) are relatively common in the Cringleford assemblage, as are the footstand bases and the presence of combed horizontal lines. Examples not found at Cringleford include the collared rim of 1240 (although the more pronounced collar on 1251 is very common), the split bead of 1241 and the flaring rim of 1246 (which may well be a pipkin rather than a jar). Of the large storage vessels in fig. 73, the only ones not represented at Cringleford are 1256 and 1263; the former had a lug handle at the shoulder rather than the neck, and the latter was straight-sided. Handled jars (fig. 74) of types 1270 and 1272 are present, the latter fairly common. However, of the range of chamber pots, most are comparable with 1265 and 1269, the flaring forms 1268, 1271 and 1273 being absent.

B.6.76 Jugs were not commonly identified in the Cringleford assemblage, but GRE jugs are generally quite a rare find in Norwich and elsewhere in the region. Most at Cringleford have beaded or upright plain rims, and again the flaring types, such as no. 1281, were not found here.

B.6.77 Only two types of dripping pan rim were identified at Cringleford, comparable with Jennings' nos 1286 and 1288 on fig. 76. Those with flat-topped everted rims are not present. The remainder of vessel types illustrated by Jennings are rare in the Cringleford assemblage. A few fragments of chafing dish bases occur but no rims were identified. Colanders are rare and mainly identified from base fragments, although one rim is comparable with Jennings' no. 1304. A near-complete lid is almost identical to Jennings' no. 1322, and there are rim fragments of a few others. There are no Dutch ovens, lamps, costrels, small jars, cisterns or any other miscellaneous vessels.

Iron-glazed blackwares and speckle-glazed wares

B.6.78 One bowl appears to be an iron-glazed ware (at least on the inner surface), and there are a few small fragments of jars in both fabrics, and a pipkin in speckle-glazed ware. However, typically these fabric groups comprise largely drinking vessels, and other table wares such as at least two puzzle jugs. The mugs and tankards/tygs are similar to those recovered from Norwich, but the other forms are rare in the city.

Slipwares

B.6.79 Almost all slipwares are plates or dishes, with only one mug rim and one other hollow ware body sherd identified. Rims and decorative schemes were comparable with the so-called Metropolitan slipwares from Norwich. The 'local slipwares' (Jennings 1981, 103) were not made in Cringleford.

Tin-glazed wares

B.6.80 A limited range of vessels was identified in this group, with drug jars and plates being the most common forms. Decoration appears to have been relatively finely applied, but only small sherds were recovered and patterns were not identifiable. Although it is likely that these wares were made primarily for the Norwich market, unfortunately they are similar to TGE made elsewhere and parallels have not been identified in the corpus.

Distribution of fabrics and forms in Period 2.2 Pit Group 42

B.6.81 There are some differences in the assemblages from the pits in this group. Of the four which contained the largest quantities, the two earlier pits (**42** and **317**) did not produce any TGE or associated kiln waste, with all of the latter being found in the stratigraphically later pits **283** and **279**.

B.6.82 Table B6.12 shows the distributions of the main identified forms in the four pits. Less certain identifications have been excluded, and only the GRE was present in sufficient quantities for analysis.

	Pit 42		Pit 317		Pit 283		Pit 279	
Form	**MNV**	**%**	**MNV**	**%**	**MNV**	**%**	**MNV**	**%**
Bowl	107	23.4	5	7.7	55	15.2	5	19.2
Handled bowl	27	5.9	3	4.6	15	4.2	1	3.8
Dish	18	3.9	3	4.6	7	1.9	2	7.7
Dish/plate	9	2.0						
Plate	70	15.3	13	20.0	35	9.7	3	11.5
Pancheon	6	1.3	1	1.5	2	0.6		
Colander	2	0.4	1	1.5	1	0.3		
Dripping pan	8	1.8	2	3.1	7	1.9	2	7.7
Chafing dish	1	0.2			1	0.3		
Jar	86	18.8	15	23.1	57	15.8	4	15.4
Large storage vessel	7	1.5	3	4.6	76	21.1	2	7.7
Handled jar	6	1.3			1	0.3		
Jar/pipkin	10	2.2	2	3.1				
Pipkin	42	9.2	5	7.7	35	9.7	3	11.5
Skillet	12	2.6			7	1.9		
Chamber pot	27	5.9	12	18.5	51	14.1	3	11.5
Jug	9	2.0			8	2.2		
Mug?	2	0.4						
Lid	7	1.5			3	0.8	1	3.8
Plantpot?	1	0.2						
Totals	*457*		*65*		*361*		*26*	

Table B6.12: Identifiable GRE vessels in the four main pits of Pit Group 42

B.6.83 Bowls and jars are generally the most frequent forms in all of the pits, although bowls were significantly less frequent in pit **317** than the others. There appears to have been a slight increase in chamber pots, with very few present in the earliest pit **42**, but

proportionately more in the later pits. Pipkins are present in similar proportions throughout. Most other forms are only present in small quantities.

B.6.84 Table B6.13 shows the rim types of GRE jars and pipkins in the four main pits. The earlier pits appear to contain more rounded bead (BD) forms than the later ones, with square beads (SQBD) apparently becoming more common in the later pits. There is perhaps also a decrease in collared types through time, although lid-seated collared types appear to be more frequent later. Everted forms, though never common, are more frequent in pit **283** than in the earlier pits. This may indicate that there were some changes through time, possibly relating to different generations of potters.

		Pit 42		Pit 317		Pit 283		Pit 279	
Type	**Rim**	**MNV**	**%**	**MNV**	**%**	**MNV**	**%**	**MNV**	**%**
Beaded	BD	63	46.3	7	36.8	24	30.0		
	SQBD	7	5.1	1	5.3	14	17.5	3	42.9
	FTBD	7	5.1						
	TRBD	2	1.5	1	5.3	1	1.3		
	TAPBD	2	1.5						
	LSBD	1	0.7			2	2.5		
Collared	COLL	45	33.1	9	47.4	19	23.8	1	14.3
	LSCOLL	3	2.2	1	5.3	9	11.3	1	14.3
Everted	COMP	1	0.7			1	1.3	1	14.3
	EVBD					1	1.3		
	FLAR	1	0.7			1	1.3	1	14.3
	FTEV	2	1.5			1	1.3		
	LSEV	2	1.5			1	1.3		
	THEV					4	5.0		
Upright	UPFTTH					1	1.3		
	UPPL					1	1.3		
Totals		*136*		*19*		*80*		*7*	

Table B6.13: GRE jar and pipkin rim types in the four main pits of group 42

B.6.85 Table B6.14 shows the rim types of bowls in the four main pits. Rounded bead forms appear to be fairly common throughout the pit fills, but there may be a slight decrease in the use of flat-topped beads (FTBD). There is, however, a marked increase in the flat-topped everted form from the earliest to the latest deposits.

		Pit 42		Pit 317		Pit 283		Pit 279	
Type	**Rim**	**MNV**	**%**	**MNV**	**%**	**MNV**	**%**	**MNV**	**%**
Beaded	BD	58	49.6	6	75.0	29	47.5	1	14.3
	UPBD	2	1.7	1	12.5	2	3.3		
	SQBD	5	4.3			2	3.3	1	14.3
	FTBD	25	21.4			8	13.1		
	TRBD	2	1.7			1	1.6		
	TAPBD	8	6.8						
	LSBD	1	0.9			1	1.6		
Everted	CAV	2	1.7						
	COMP			1	12.5	4	6.6		
	EV	7	6.0			1	1.6		
	EVBD					2	3.3	1	14.3
	FLAR	3	2.6			1	1.6	1	14.3
	FTEV	3	2.6			9	14.8	3	42.9
	THEV	1	0.9			1	1.6		
Totals		*117*		*8*		*61*		*7*	

Table B6.14: GRE bowl rim types in the four main pits of Pit Group 42

B.6.86 Table B6.15 shows the rim types of plates and dishes in the four main pits. Everted beaded (EVBD) forms are the most common types throughout the period of

deposition, perhaps with a slight increase in the later pits, but there appears to be a slight decline in the proportions of the second most common type, the thickened everted rim (THEV) and the related hooked form (HOOK).

		Pit 42		Pit 317		Pit 283		Pit 279	
Type	**Rim**	**MNV**	**%**	**MNV**	**%**	**MNV**	**%**	**MNV**	**%**
Beaded	BD	1	0.9	1	5.6				
	FTBD	1	0.9						
Everted	CAV	1	0.9						
	COMP					1	1.9		
	EV	2	1.7	1	5.6	2	3.8	1	14.3
	EVBD	52	44.8	9	50.0	38	73.1	3	42.9
	EVTAP	1	0.9						
	FLAR					1	1.9		
	HOOK	13	11.2	2	11.1	3	5.8		
	THEV	45	38.8	5	27.8	7	13.5	2	28.6
Upright	UPPL							1	14.3
Totals		*116*		*18*		*52*		*7*	

Table B6.15: GRE plate and dish rim types in the four main pits of Pit Group 42

B.6.87 There is therefore some evidence for changes in the rims of the main forms through time, which may prove of value in providing tighter dates for post-medieval contexts in Norwich. Nevertheless, the most common rim forms occur throughout, even if there is some evidence for a rise or decline in their popularity, so this will only be of use for dating large context groups with a range of rims, based on proportions.

Manufacture

B.6.88 All vessels were wheelmade with the possible exception of the dripping pans, although methods of making oval vessels on a wheel are described by Brears (1971, 107). The range of forms in this assemblage is quite broad, with a variety of rim types identified. This may suggest that several potters were employed at any one time.

B.6.89 Methods of attaching handles, lugs and feet were not complex. These components were simply luted to the rim or body of the pot. There is no evidence for peg attachment, and the bases of strap and rod handles were merely smoothed onto the body of the pot, sometimes with a large thumbed pad finishing them off. Straight handles were similarly attached. Pouring lips on jugs and pipkins were simply pulled using a finger.

B.6.90 In general, pots appear to have been well-glazed, with the glaze covering most of the inside of the vessel up to the inner edge of the rim. It is unlikely that this was achieved using a powdered glaze, and the use of a liquid glaze made with a slip flux seems more likely. Brears suggests that these were not in common use before *c*.1650 (Brears 1971, 125). Most of the pots were glazed with an uncoloured lead glaze which varied with the underlying clay colour, orange and brown being most frequent on oxidised vessels and dark brown on the reduced and overfired sherds, and perhaps sometimes due to the presence of iron in the underlying clay (Brears 1971, 128). Occasional vessels had copper flecks added to their glaze, which is more typical of late medieval and transitional wares in this region but does occur in so-called West Norfolk bichrome, which is broadly contemporary with GRE. However, deliberate green glaze is not common in the assemblage.

B.6.91 It is unlikely that the brick kilns on the site would have been used to fire pottery, but there is little evidence for the type of kiln used. A few bricks with glaze drips are likely to have been used and perhaps formed the floor of such a structure, and bricks with vitrification on header or stretcher surfaces could have formed the walls. Most other production sites of this period in the region have been identified by the presence of wasters and kiln furniture only, so the shape and construction of 17th-century kilns in the area is unknown. The closest examples of this period are in Buckinghamshire and Northamptonshire, and they include a circular brick-built example at Chesham (Cauvin and Cauvin 1992, fig. 5) and two at Potterspury (Mayes 1968, fig. 22), one of which had a double flue. Tin-glazed earthenware kilns of this date have been excavated in London, for example, and these may be either rectangular or circular (*e.g*. Bloice 1971; Tyler *et al.* 1999).

B.6.92 The redware saggars in this assemblage are mainly thin-walled and most appear not to have been circular. There were many examples of 'corner' pieces, forming an angle or shaft down the side of the saggar and appearing as a wide lip at the rim. A few of the larger whiteware saggars also had this trait. The saggars used at Fulmodeston, the only other published site of this date in Norfolk, all appear to have had thicker walls and all were circular (Wade Martins 1983, fig. 32). Indeed, the majority of 17th-century potteries seem to have used the same general form (thick-walled, circular), with illustrated examples from Stock, Essex (Cunningham 1985, fig. 52), Ely, Cambs (Cessford *et al*. 2006, fig. 51), Brill, Bucks (Farley 1979, fig. 9), Wrenthorpe, Yorkshire (Moorhouse and Roberts 1992, fig 76–77), for example. The origin of the lipped type identified amongst both the redware and tin-glazed earthenware waste at Cringleford therefore remains a mystery, and the purpose of the lip is equally uncertain. However, the small saggars, saggars with triangular wall holes and triangular-section props in the tin-glazed earthenware kiln furniture group are all paralleled in London delftware production assemblages (*e.g*. Bloice 1971, fig. 52; Tyler *et al*. 1999, fig. 10.1–2).

B.6.93 The use of roof tiles as separators for stacking is common in the region from the late medieval period onwards, with similar examples occurring at late medieval and transitional ware production sites. Ring stilts are also relatively common finds in early post-medieval kiln waste assemblages. At Cringleford and elsewhere, smaller vessels were sometimes placed inside larger ones with ring-stilts in between. The same use of combinations of tiles and ring stilts is noted in Essex at Stock (Cunningham 1985, 87) and Harlow (Davey and Walker 2009, fig. 77).

B.6.94 Methods of kiln stacking appear to have varied considerably (see Brears 1971, 130–6; Draper and Copland-Griffiths 2002, 97; Davey and Walker 2009, 155–7). Sometimes evidence for the position of a vessel in the kiln is present in the form of glaze runs, but so few complete vessels are present in this assemblage that it is not possible to generalise.

B.6.95 Forms showed a few differences between the pits, suggesting that the waste material was deposited, or more likely redeposited, in at least two events, one of which appears to have taken place before the production of delftware started on the site. Discard on the surface would explain the abrasion seen on some of the sherds, and also explains the lack of substantially complete vessels in this assemblage. Evidence from country

potteries which survived into more recent centuries suggests that waste pottery generally accumulated in heaps. At Verwood, photographs of the kilns in the early 20th century show huge waste tips surrounding them, and old broken pots and pieces of tile were used there to form a temporary roof to the cylindrical kiln as it was fired (Brears 1971, 148; Draper and Copland-Griffiths 2002, 95). Quantities of wasters have been found to the south of the present site at Newfound Farm, which may suggest either that waste was barrowed out and tipped on the land, or that some of the material in that area had been disturbed from underlying quarry pit fills and scattered during ploughing. It seems unlikely that rubble would be barrowed across the site from the area of the Springhouse to fill the pits at the northern end of the site, when there would have been plenty of rubble from the nearby brick kilns which could have been used as hardcore. It seems, therefore, that there may have been kilns located closer to the road frontage, beyond the limits of the excavation.

The site in context

B.6.96 Few pottery production sites of this period have been identified in East Anglia so far. In Norfolk, wasters are known from Norfolk Street, Kings Lynn (Clarke and Carter 1977, 238-40), Wroxham (Jennings 1981, blackwares) and Fulmodeston (Wade Martins 1983). There are also two overfired and warped 'semi-wasters' from 21 Gentleman's Walk (Site 63N) in the corpus (Jennings 1981, nos 1189 and 1266), although it is unlikely that pottery would have been made in the centre of the city, and these must simply represent the sale of 'seconds'.

B.6.97 In Suffolk, kiln waste has been identified in the north of the county, particularly at Mendham and around Wattisfield, in the east at Hacheston (Owles and Smedley 1968, 77), to the south-east at Sutton (Anderson 2003) and centrally at Lawshall (Martin et al. 1990) and Stowmarket (Anderson 2015). Redwares, blackwares and slipwares were made in Ely (Cessford et al. 2006), and this may also be the source (or one source) of so-called 'West Norfolk bichrome' ware. Most of the East Anglian examples were in Essex (Cotter 2000, fig. 129), where at least 27 sites are recorded from documentary and/or archaeological evidence, including excavated sites at Stock (Cunningham 1985) and Harlow (mainly slipwares and blackwares; Davey and Walker 2009). This large number is likely, in part, to be due to the county's proximity to London, but undoubtedly there were more such sites elsewhere in the region than have been identified to date.

B.6.98 Tin-glazed earthenware production sites are also rare in the region. Norwich has the distinction of being the first town in England to have such a centre, based on documentary evidence which dates the original production to 1567, although this appears to have been short-lived (Goffin 2012). The documentary evidence does not provide a location for the 16th-century kiln, but it has been tied to waste found in Ber Street (*ibid*, 74). Further study of the evidence for Ber Street production (which may also include redwares) in comparison with this site is needed, and it would be worth comparing samples from Ber Street with the Cringleford redwares and TGE to see if the fabrics are chemically distinct, but this is beyond the scope of the present work.

Conclusions

B.6.99 A large sample of pottery kiln waste was recovered from the Cringleford site. This is not the first evidence for pottery production at Newfound Farm, but it is the most fully excavated and studied assemblage from the site to date. It has provided evidence for 17th-century redware production, including all the main types which are commonly found on consumer sites in Norwich and elsewhere in Norfolk. It has also shown that the so-called 'Metropolitan' slipwares from the city were not made in Harlow as previously thought, but were actually produced here. Tin-glazed earthenware manufacture in Norwich, following the departure of the earliest potters for better sites in London, was wholly unexpected and is a significant addition to current knowledge of post-medieval pottery in Norfolk.

Pottery appendix list by context

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
7	6	ditch fill	DG2	4	1	2.2	GRE	2	4	2			16th-18th c.
8		Dump			1	2.2	GRE	4	65	3			16th-18th c.
8		Dump			1	2.2	KF	1	17	1	SAG		
19	18	pit		21	1	2.2	FREC	1	9	1			16th-17th c.
20	18	pit		21	1	2.2	GRE	13	470	12			16th-18th c.
20	18	pit		21	1	2.2	GRE	1	57	1	BL	BD	16th-18th c.
20	18	pit		21	1	2.2	GRE	19	642	13	JR	SQBD	16th-18th c.
20	18	pit		21	1	2.2	GRE	8	667	5	LSV	SQBD	16th-18th c.
20	18	pit		21	1	2.2	KF	2	15	2	RING		
20	18	pit		21	1	2.2	KF	4	123	3	SAG?		
28	33	Kiln backfill		34	1	2.2	GRE	1	34	1			16th-18th c.
43	42	pit	PWG	42	1	2.2	FREC	1	17	1			16th-17th c.
43	42	pit	PWG	42	1	2.2	GRE	3	120	2	COL		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	4	334		JG		16th-17th c.
43	42	pit	PWG	42	1	2.2	GRE	1	85	1	PP?		16th-18th c.
43	42	pit	PWG	42	1	2.2	KF	3	88	2	SAG?		
43	42	pit	PWG	42	1	2.2	KF	1	80	1	SAG?	BD	
43	42	pit	PWG	42	1	2.2	KF	2	53	2	TOOL?		
43	42	pit	PWG	42	1	2.2	SPEC	1	21	1	PZJG		17th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	12	548	11			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	474	3	BLH?		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	11	1036	8	JR?		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	56	1		FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	276	4	BL	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	29	1047	13	BL	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	7	1	BL?	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	176	1	DD	LSBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	7	522	3	DS	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	18	1	DS	HOOK	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	4	78	3	DS	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	10	508	9	PL	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	37	2	PL	HOOK	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	10	621	10	PL	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	133	1	PN	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	204	2	PN	THEV	16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
43	42	pit	PWG	42	1	2.2	GRE	133	3440	129			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	97	5	BL		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	8	223	7	BL	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	56	3	BL	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	36	1	CH?	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	73	1	DD	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	22	2	DS	HOOK	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	4	79	4	JR	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	24	1	JRH?	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	4	77	3	PK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	40	1	PK	LSEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	17	1	PK	SQBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	14	1	PL		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	44	2	PL	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	21	1	PL	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	31	1	PL?	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	17	1	PL?	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	14	1	PL?	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	86	2	SK	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	26	1	SK	CAV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	15	1	SK?	CAV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	20	380	20			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	79	3	BLH	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	39	1	BLH	TAPBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	69	1	JRH	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	74	1	JRH	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	51	1	JRH	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	50	1	JRH?	FLAR	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	9	2	MG?		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	11	778	11	PK		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	6	231	6	PK?		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	23	1	SK?		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	40	1614	36			16th-18th c.
43	42	pit	PWG	42	1	2.2	KF	1	12	1	SAG?		
43	42	pit	PWG	42	1	2.2	GRE	4	130	4			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	4	129	4	JR/SAG?	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	56	1	JR/SAG?	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	85	2	JR/SAG?	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	102	2	JR/SAG?	SQBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	57	2	JR?	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	KF	82	3138	80	SAG?		
43	42	pit	PWG	42	1	2.2	KF	1	27	1	SAG?	FTEV	
43	42	pit	PWG	42	1	2.2	GRE	1	19	1	?	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	14	1	?	UPEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	3	1	?	UPPL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	20	393	14	BL	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	24	2	BL	EV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	8	1	BL	FLAR	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	17	1	BL	FTBD	16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
43	42	pit	PWG	42	1	2.2	GRE	1	29	1	BL	LSBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	258	3	BL	SQBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	73	3	BL	TAPBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	6	1	BL/DS	SQBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	17	1	BL?	EV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	10	313	4	CH	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	10	320	7	CH	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	109		DD	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	9	1	JG	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	6	1	JG	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	10	2	JG	UPPL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	26	926	16	JR	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	239	5	JR	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	23	1	JR	TAPBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	34	1	JR?	TRBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	101	1	JRH	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	187	1	LSV	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	68	3	PK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	24	1	PK/JR	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	70	1	PK/SK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	4	71	1	PK?	LSBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	23	1	SK	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	4	42	1	SK?	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	38	1			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	48	2	BLH		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	221	2	PK		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	42	1	PK/SK		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	31	1	BL	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	31	1	PL	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	42	1	PL	HOOK	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	124	2	PL	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	143	2592	133			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	90	3	DS/PL		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	70	2	BL	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	348	1	BLH	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	82	1	BLH	FLAR	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	14	1	JG	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	238	5	LD	PL	16th-18th c.
43	42	pit	PWG	42	1	2.2	PMSW	31	1131	3	PL	EVBD	17thc
43	42	pit	PWG	42	1	2.2	NIMS	4	43	1	BL	CAV	17thc
43	42	pit	PWG	42	1	2.2	PMSW	7	95	7			17thc
43	42	pit	PWG	42	1	2.2	PMSW	1	9	1	DS	EV	17thc
43	42	pit	PWG	42	1	2.2	PMSW	4	93	3	DS	THEV	17thc
43	42	pit	PWG	42	1	2.2	PMSW	1	17	1	DS?	THEV	17thc
43	42	pit	PWG	42	1	2.2	PMSW	2	13	2	MG?	UPPL	17thc
43	42	pit	PWG	42	1	2.2	PMSW	1	79	1	PL	CAV	17thc
43	42	pit	PWG	42	1	2.2	PMSW	15	484	6	PL	EVBD	17thc
43	42	pit	PWG	42	1	2.2	PMSW	1	101	1	PL	HOOK	17thc
43	42	pit	PWG	42	1	2.2	PMSW	4	80	3	PL	THEV	17thc
43	42	pit	PWG	42	1	2.2	PMSW	13	469	8	PL		17thc
43	42	pit	PWG	42	1	2.2	PMSW	5	350	3	PL	EVBD	17thc

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
43	42	pit	PWG	42	1	2.2	PMSW	1	40	1	PL	EVTAP	17thc
43	42	pit	PWG	42	1	2.2	PMSW	11	344	5	PL	THEV	17thc
43	42	pit	PWG	42	1	2.2	GRE	104	3058	98			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	45	1		BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	29	1		BD?	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	17	1	?	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	17	395	13	BL	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	30	2	BL	EV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	79	2	BL	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	20	1	BL	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	30	2	BL	TAPBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	94	2	BL?		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	21	1	BL?	CAV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	52	3	BLH		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	176	5	BLH	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	9	1	BLH?	FLAR	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	18	2	BLH?	UPBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	23	1	CD		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	4	176	3	CH	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	44	2	CH/JR	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	16	1	CH/JR	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	60	1	DD	UPPL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	14	1	DS		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	27	2	DS	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	160	5	DS/PL		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	24	1	DS?	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	18	1	DS?	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	23	1	JG		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	7	1	JG	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	13	447	10	JR	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	101	3	JR	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	61	1	JR	SQBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	13	1	JR/JG?	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	24	1	JR/PK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	28	1	JR/SAG?	SQBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	621	2	LSV		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	36	1	PK		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	128	4	PK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	74	2	PK	LSCOLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	62	2	PL	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	19	1	PL	HOOK	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	41	1	PL	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	24	1	PL?	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	28	1	PN?	EV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	11	1	SK/BLH?	FLAR	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	5	1	SK?	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	45	1	SK?	CAV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	546	1	DD	LSCOLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	246	1	PL	HOOK	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	98	1	PL	THEV	16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
43	42	pit	PWG	42	1	2.2	GRE	3	386	2	JR		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	12	584	12			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	172	3	BL	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	16	1	BL	EV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	224	3	BL	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	156	1	BL	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	32	1	BL	TRBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	66	1	BLH	SQBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	56	1	DD	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	373	1	DD	UPPL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	66	1	DS	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	12	1	DS	HOOK	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	20	1	PL		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	8	506	6	PL	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	6	351	5	PL	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	PMRW	1	124	1	HORT?	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	17	690	17			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	115	2	BL	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	238	1	DD	LSBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	17	1	DS/PL	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	50	1	PL	EV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	17	1114	10	PL	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	148	2	PL	HOOK	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	87	2	PL	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	65	1	PN	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	37	1	PN	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	KF	281	2975		RING		
43	42	pit	PWG	42	1	2.2	KF	59	3182	58	SAG?		
43	42	pit	PWG	42	1	2.2	KF	14	546	12	SAG?	BD	
43	42	pit	PWG	42	1	2.2	GRE	7	751	6			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	162	1	BLH		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	110	1	DD		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	694	2	LSV?		16th-18th c.
43	42	pit	PWG	42	1	2.2	KF	1	64	1	JR/SAG?	BD	
43	42	pit	PWG	42	1	2.2	KF	2	198	1	JR/SAG?	FTBD	
43	42	pit	PWG	42	1	2.2	KF	36	2552	35	SAG?		
43	42	pit	PWG	42	1	2.2	KF	11	528	7	SAG?	BD	
43	42	pit	PWG	42	1	2.2	KF	2	229	2	SAG?	FTBD	
43	42	pit	PWG	42	1	2.2	GRE	10	489	9			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	17	1	?	FTBD?	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	30	1	?	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	37	1	BL	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	76	1	BL	TRBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	183	2	CH?	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	22	1	CH?	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	104	3	JR	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	33	1	JR	TRBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	125	2	JR?	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	21	1	JR?	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	161	2533	122			16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
43	42	pit	PWG	42	1	2.2	GRE	2	23	2	BL	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	12	1	BL	EV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	37	1	BL	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	12	1	BL	TAPBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	7	1	BL?		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	14	1	BLH		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	17	1	BLH	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	62	1	DS	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	9	1	DS	HOOK	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	8	1	JG	FLAR	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	6	159	6	JR	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	24	2	JR	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	81	1	JR/PK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	45	1	LD		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	7	1	LD	PL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	33	1	PK		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	43	1	PL	EVBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	14	1	PL	THEV?	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	24	1	PL/BL?	EVBD?	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	29	1	PL?	THEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	KF	30	2373	20	SAG		
43	42	pit	PWG	42	1	2.2	KF	2	23	2	SAG?		
43	42	pit	PWG	42	1	2.2	KF	19	860	16	SAG?	BD	
43	42	pit	PWG	42	1	2.2	KF	9	379	7	SAG?	FTBD	
43	42	pit	PWG	42	1	2.2	KF	1	102	1	SAG?	TAPBD	
43	42	pit	PWG	42	1	2.2	GRE	1	94	1	BL/SAG?		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	53	1	CH/JR	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	6	1	JG?	TAPBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	3	62	3	JR	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	70	4	JR	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	31	1	JR	SQBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	35	1	JR/SAG	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	66	1	JR/SAG?	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	15	1	JR?	TAPBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	9	1	SK?	CAV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	56	1	CH	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	KF	9	612	3	SAG		
43	42	pit	PWG	42	1	2.2	KF	7	262	7	SAG	BD	
43	42	pit	PWG	42	1	2.2	KF	18	852		SAG		
43	42	pit	PWG	42	1	2.2	KF	121	3631		SAG?		
43	42	pit	PWG	42	1	2.2	GRE	17	438	15			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	29	1	CH	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	23	1	JR/PK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	23	1	JR/SAG?	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	KF	11	1046	11	SAG		
43	42	pit	PWG	42	1	2.2	KF	1	169	1	SAG	SQBD	
43	42	pit	PWG	42	1	2.2	KF	2	76	2	SAG?	BD	
43	42	pit	PWG	42	1	2.2	KF	11	1174	1	SAG	BD	
43	42	pit	PWG	42	1	2.2	GRE	68	2226	65			16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
43	42	pit	PWG	42	1	2.2	GRE	1	15	1	BL	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	6	264	2	CH	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	18	1	CH	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	6	139	5	JR	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	30	1	JR	LSEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	29	1	JR	SQBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	6	192	6	JR/PK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	74	2	PK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	65	1	PK	COMP	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	40	1	PK	LSCOLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	19	1	PK?	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	30	1	PL?		16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	13	1	SK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	9	1	SK	LSCOLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	KF	2	52	2	JR/SAG?	BD	
43	42	pit	PWG	42	1	2.2	KF	1	43	1	JR/SAG?	COLL	
43	42	pit	PWG	42	1	2.2	KF	10	674		SAG		
43	42	pit	PWG	42	1	2.2	KF	5	296	3	SAG	BD	
43	42	pit	PWG	42	1	2.2	KF	1	48	1	SAG	FTBD	
43	42	pit	PWG	42	1	2.2	KF	3	206	3	SAG	FTEV	
43	42	pit	PWG	42	1	2.2	KF	15	344		SAG?		
43	42	pit	PWG	42	1	2.2	GRE	6	1837	2	LSV	LSCOLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	10	338	10			16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	5	212	4	CH	FTEV	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	2	87	2	JR	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	42	1	JR/PK	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	16	1	PK?	COLL	16th-18th c.
43	42	pit	PWG	42	1	2.2	KF	16	867	11	SAG		
43	42	pit	PWG	42	1	2.2	KF	17	582	16	SAG	BD	
43	42	pit	PWG	42	1	2.2	KF	1	36	1	SAG	FTBD	
43	42	pit	PWG	42	1	2.2	KF	2	129	2	SAG	FTEV	
43	42	pit	PWG	42	1	2.2	KF	54	1739		SAG?		
43	42	pit	PWG	42	1	2.2	KF	1	31	1	SAG?	BD	
43	42	pit	PWG	42	1	2.2	KF	3	125	3	SAG?	FTEV	
43	42	pit	PWG	42	1	2.2	IGBW	9	99	9			16th-18th c.
43	42	pit	PWG	42	1	2.2	IGBW	1	31	1	JG	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	IGBW	2	79	2	JG?		16th-18th c.
43	42	pit	PWG	42	1	2.2	IGBW	1	36	1	JR	BD	16th-18th c.
43	42	pit	PWG	42	1	2.2	IGBW	1	32	1	JR	FTBD	16th-18th c.
43	42	pit	PWG	42	1	2.2	IGBW	2	37	1	MG		16th-18th c.
43	42	pit	PWG	42	1	2.2	IGBW	37	805	16	MG/TY		16th-18th c.
43	42	pit	PWG	42	1	2.2	IGBW	3	20	3	MG/TY	UPPL	16th-18th c.
43	42	pit	PWG	42	1	2.2	IGBW	1	4	1	MG?	UPPL	16th-18th c.
43	42	pit	PWG	42	1	2.2	SPEC	8	71	5			17th-18th c.
43	42	pit	PWG	42	1	2.2	SPEC	1	83	1	CH?		17th-18th c.
43	42	pit	PWG	42	1	2.2	SPEC	3	155	1	JR?		17th-18th c.
43	42	pit	PWG	42	1	2.2	SPEC	6	158	6	MG		17th-18th c.
43	42	pit	PWG	42	1	2.2	SPEC	11	217	2	MG	UPPL	17th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
43	42	pit	PWG	42	1	2.2	SPEC	4	56	1	PZJG		17th-18th c.
43	42	pit	PWG	42	1	2.2	GRE	1	126	1			16th-18th c.
58	56	kiln		52	1	2.2	GRE	16	695	7			16th-18th c.
58	56	kiln		52	1	2.2	GRE	5	173	1	BL		16th-18th c.
58	56	kiln		52	1	2.2	GRE	1	53	1	BL	FTEV	16th-18th c.
58	56	kiln		52	1	2.2	GRE	1	79	1	BL?	THEV	16th-18th c.
58	56	kiln		52	1	2.2	GRE	1	82	1	JR	BD	16th-18th c.
58	56	kiln		52	1	2.2	GRE	16	1312	1	LSV		16th-18th c.
58	56	kiln		52	1	2.2	IGBW	1	9	1	MG	UPPL	16th-18th c.
63	317	pit	PWG	42	1	2.2	GRE	3	91	3			16th-18th c.
63	317	pit	PWG	42	1	2.2	GRE	1	19	1	BL/DS		16th-18th c.
63	317	pit	PWG	42	1	2.2	GRE	1	19	1	BLH	COMP	16th-18th c.
63	317	pit	PWG	42	1	2.2	GRE	2	11	1	BLH	UPBD	16th-18th c.
63	317	pit	PWG	42	1	2.2	GRE	1	72		DD		16th-18th c.
63	317	pit	PWG	42	1	2.2	GRE	1	205	1	PK		16th-18th c.
63	317	pit	PWG	42	1	2.2	KF	2	16	2	RING		
63	317	pit	PWG	42	1	2.2	KF	3	104	3	SAG		
63	317	pit	PWG	42	1	2.2	KF	1	29	1	SAG	BD	
63	317	pit	PWG	42	1	2.2	KF	3	88	3	SAG?		
64	317	pit	PWG	42	1	2.2	GRE	58	1584	51			16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	3	62	3	BL	BD	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	1	21	1	BLH	BD	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	3	116	2	CH	FTBD	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	2	56	2	CH	FTEV	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	2	54	1	CH?	FTBD	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	1	99	1	COL	THEV	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	4	305	1	DD	UPPL	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	1	72	1	DD?	BD	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	1	41	1	DS	BD	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	1	14	1	DS	HOOK	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	15	812	6	JR	BD	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	5	166	5	JR	COLL	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	1	55	1	JR	SQBD	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	1	21	1	JR	TRBD	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	1	79	1	PK		16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	1	37	1	PK	LSCOLL	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	10	593	4	PL	EVBD	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	4	152	2	PL	THEV	16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	2	262	1	PL?		16th-18th c.
64	317	pit	PWG	42	1	2.2	GRE	1	119	1	PN?	THEV	16th-18th c.
64	317	pit	PWG	42	1	2.2	IGBW	1	3	1			16th-18th c.
64	317	pit	PWG	42	1	2.2	KF	7	220	7	JR/SAG?		
64	317	pit	PWG	42	1	2.2	KF	5	204	5	RING		
64	317	pit	PWG	42	1	2.2	KF	2	64	2	SAG		
64	317	pit	PWG	42	1	2.2	KF	4	135	3	SAG	BD	
64	317	pit	PWG	42	1	2.2	KF	1	28	1	SAG	FTEV	
64	317	pit	PWG	42	1	2.2	KF	11	279	11	SAG?		
64	317	pit	PWG	42	1	2.2	KF	4	159	4	SAG?	BD	
64	317	pit	PWG	42	1	2.2	KF	1	23	1	SAG?	FTEV	
64	317	pit	PWG	42	1	2.2	KF	1	45	1	SAG?	SQBD	
64	317	pit	PWG	42	1	2.2	PMSW	1	13	1			17th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
64	317	pit	PWG	42	1	2.2	SPEC	1	9	1	MG		17th-18th c.
68	42	pit	PWG	42	1	2.2	GRE	2	295	1			16th-18th c.
68	42	pit	PWG	42	1	2.2	GRE	1	38	1	BL		16th-18th c.
68	42	pit	PWG	42	1	2.2	GRE	1	57	1	BLH?	TAPBD	16th-18th c.
68	42	pit	PWG	42	1	2.2	GRE	1	163		DD	LSBD	16th-18th c.
68	42	pit	PWG	42	1	2.2	IGBW	1	8	1			16th-18th c.
69	42	pit	PWG	42	1	2.2	GRE	1	53	1			16th-18th c.
69	42	pit	PWG	42	1	2.2	GRE	2	38	1	BL	BD	16th-18th c.
69	42	pit	PWG	42	1	2.2	KF	1	30	1	RING		
69	42	pit	PWG	42	1	2.2	PMSW	1	33	1	DS	THEV	17th c.
69	42	pit	PWG	42	1	2.2	PMSW	5	503	1	PL	THEV	17th c.
178	177	posthole			2	2.2	GRE	1	23	1			16th-18th c.
238	231	kiln	229	242	1		GRE	1	3	1			16th-18th c.
265	259	pit		9	1	2.2	GRE	1	30	1			16th-18th c.
265	259	pit		9	1	2.2	KF	1	91	1	SAG?		
272	271	pit		271	1	2.2	GRE	1	34	1	BL	BD	16th-18th c.
272	271	pit		271	1	2.2	GRE	1	16	1	DS?	THEV	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	64	1840	51			16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	24	1	BL	BD	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	67	1	BL	EVBD	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	3	64	2	BL	FTEV	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	24	1	BL/JR	FTEV	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	30	1	CH?	SQBD	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	2	64	1	CH?	THEV	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	2	97	2	DD	LSBD	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	4	64	1	DS	EVBD	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	100	1	DS	UPPL	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	2	153	1	JR		16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	2	63	1	JR	COLL	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	18	1	JR?	SQBD	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	2	18	1	LD	PL	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	273	1	LSV		16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	147	1	LSV	FTBD	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	577	1	PK		16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	10	1	PK?	COMP	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	13	1	PK?	LSCOLL	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	9	243	1	PL	EVBD	16th-18th c.
280	279	pit	PWG	42	1	2.2	GRE	1	32	1	PL	THEV	16th-18th c.
280	279	pit	PWG	42	1	2.2	IGBW	14	314	12			16th-18th c.
280	279	pit	PWG	42	1	2.2	IGBW	1	24	1	BL	FLAR	16th-18th c.
280	279	pit	PWG	42	1	2.2	IGBW	1	15	1	MG		16th-18th c.
280	279	pit	PWG	42	1	2.2	IGBW	1	3	1	MG	UPPL	16th-18th c.
280	279	pit	PWG	42	1	2.2	IGBW	2	27	2	TK/TY		16th-18th c.
280	279	pit	PWG	42	1	2.2	KF	1	30	1	RING		
280	279	pit	PWG	42	1	2.2	KF	7	404	2	SAG		
280	279	pit	PWG	42	1	2.2	KF	2	51	2	SAG?	BD	
280	279	pit	PWG	42	1	2.2	KF TGE	4	367	3	SAG		16th-18th c.
280	279	pit	PWG	42	1	2.2	KF TGE	1	18	1	SAG	UPTH	16th-18th c.
280	279	pit	PWG	42	1	2.2	KF TGE	1	10	1	SAG?		16th-18th c.
280	279	pit	PWG	42	1	2.2	KF TGE	1	82	1	TILE?		16th-18th c.
280	279	pit	PWG	42	1	2.2	LSRW	1	34		PL	EV	L.18th-19th c

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
280	279	pit	PWG	42	1	2.2	PMSW	2	32	1	DS		17th c.
280	279	pit	PWG	42	1	2.2	PMSW	1	17	1	DS/PL		17th c.
280	279	pit	PWG	42	1	2.2	PMSW	9	157	1	PL	THEV	17th c.
280	279	pit	PWG	42	1	2.2	SPEC	2	34	2			17th-18th c.
280	279	pit	PWG	42	1	2.2	SPEC	1	19	1	MG?		17th-18th c.
280	279	pit	PWG	42	1	2.2	SPEC	1	45	1	PK	SQBD	17th-18th c.
280	279	pit	PWG	42	1	2.2	TGE	2	11	2			16th-18th c.
281	279	pit	PWG	42	1	2.2	ESW	6	423	1	JG?		L.16th-19th c.+
281	279	pit	PWG	42	1	2.2	KF TGE	1	40	1	DISC		
281	279	pit	PWG	42	1	2.2	KF TGE	1	8	1	PROP		
281	279	pit	PWG	42	1	2.2	KF TGE	29	1888	22	SAG		
281	279	pit	PWG	42	1	2.2	KF TGE	34	2400	16	SAG	UPFT	
281	279	pit	PWG	42	1	2.2	TGE	13	116	10			16th-18th c.
281	279	pit	PWG	42	1	2.2	TGE	1	10	1	DJ		16th-18th c.
281	279	pit	PWG	42	1	2.2	TGE	10	127	2	JG	CAV	16th-18th c.
281	279	pit	PWG	42	1	2.2	TGE	1	34	1	JR	FLAR	16th-18th c.
281	279	pit	PWG	42	1	2.2	TGE	2	32	1	PL		16th-18th c.
282	279	pit	PWG	42	1	2.2	ESW	1	76				L.16th-19th c.+
282	279	pit	PWG	42	1	2.2	GRE	7	122	7			16th-18th c.
282	279	pit	PWG	42	1	2.2	GRE	1	17	1	BL	SQBD	16th-18th c.
282	279	pit	PWG	42	1	2.2	GRE	1	110	1	BLH		16th-18th c.
282	279	pit	PWG	42	1	2.2	GRE	7	101	1	CH	FTEV	16th-18th c.
282	279	pit	PWG	42	1	2.2	GRE	1	37	1	JR	SQBD	16th-18th c.
282	279	pit	PWG	42	1	2.2	GRE	1	19	1	PL	EVBD	16th-18th c.
282	279	pit	PWG	42	1	2.2	KF	1	64	1	SAG		
282	279	pit	PWG	42	1	2.2	KF	1	33	1	SAG?		
282	279	pit	PWG	42	1	2.2	KF TGE	3	235	3	SAG		
282	279	pit	PWG	42	1	2.2	KF TGE	2	145	2	SAG	UPFT	
282	279	pit	PWG	42	1	2.2	KF TGE	1	7	1	TOOL?		
282	279	pit	PWG	42	1	2.2	TGE	2	39	2			16th-18th c.
282	279	pit	PWG	42	1	2.2	TGE	1	80		DJ		16th-18th c.
282	279	pit	PWG	42	1	2.2	TGE	1	21		JG	CAV	16th-18th c.
282	279	pit	PWG	42	1	2.2	TGE	1	22	1	PL	EV	16th-18th c.
284	283	pit	PWG	42	1	2.2	ESW	2	70				L.16th-19th c.+
284	283	pit	PWG	42	1	2.2	GRE	23	461	23			16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	20	1	?	BD	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	3	33	3	BL	BD	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	17	1	BL?	EV?	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	13	1	BLH		16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	8	1	BLH?	BD	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	4	106	4	CH	FTBD	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	14	1	CH	FTEV	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	14	1	DS	THEV	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	2	50	2	JR	COLL	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	29	1	JR	SQBD	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	23	1	JR	UPFTTH	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	20	1	JR?	BD	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	65	1	LD		16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	9	1	LD	PL	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	9	1	LD?		16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
284	283	pit	PWG	42	1	2.2	GRE	1	30	1	LSV/DD	LSCOLL	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	2	27	2	PK		16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	43	1	PL		16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	4	105	3	PL	EVBD	16th-18th c.
284	283	pit	PWG	42	1	2.2	GRE	1	17	1	PL?	EVBD	16th-18th c.
284	283	pit	PWG	42	1	2.2	IGBW	2	54	2			16th-18th c.
284	283	pit	PWG	42	1	2.2	IGBW	5	78	4	MG		16th-18th c.
284	283	pit	PWG	42	1	2.2	IGBW	2	12	2	MG	UPPL	16th-18th c.
284	283	pit	PWG	42	1	2.2	KF	5	40	5	RING		
284	283	pit	PWG	42	1	2.2	KF	3	93	3	SAG		
284	283	pit	PWG	42	1	2.2	KF	2	58	2	SAG?	BD	
284	283	pit	PWG	42	1	2.2	KF	1	57	1	SAG?	FTBD	
284	283	pit	PWG	42	1	2.2	KF TGE	8	277	8	SAG		
284	283	pit	PWG	42	1	2.2	KF TGE	3	165	3	SAG	UPFT	
284	283	pit	PWG	42	1	2.2	LSRW	3	41	1	BL	FLAR	L.18th-19th c
284	283	pit	PWG	42	1	2.2	PMSW	4	67	4			17th c.
284	283	pit	PWG	42	1	2.2	PMSW	2	27	2	DS	EVBD	17th c.
284	283	pit	PWG	42	1	2.2	PMSW	1	15	1	PL	COMP	17th c.
284	283	pit	PWG	42	1	2.2	SPEC	3	49	3			17th-18th c.
284	283	pit	PWG	42	1	2.2	SPEC	1	16	1	JR?	UPPL	17th-18th c.
284	283	pit	PWG	42	1	2.2	SPEC	2	243	1	LSV		17th-18th c.
284	283	pit	PWG	42	1	2.2	SPEC	1	8	1	PZJG?		17th-18th c.
284	283	pit	PWG	42	1	2.2	TGE	9	72	8			16th-18th c.
284	283	pit	PWG	42	1	2.2	WEST	2	26	2			L.18th-19th c.
285	283	pit	PWG	42	1	2.2	ESW	1	19				
285	283	pit	PWG	42	1	2.2	GRE	64	1354	57			16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	20	1031	2	BL	BD	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	14	1	BL	FTEV	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	16	1	BL/DS		16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	22	1	BL?	FTEV	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	26	1	BLH	BD	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	27	1	CH	FTBD	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	31	1	JG?	FLAR	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	2	33	2	JR	BD	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	29	1	JR	COLL	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	21	1	JR?	BD	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	41	1	LSV		16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	144	1	LSV	LSCOLL	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	3	156	2	PK		16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	4	108	2	PK	LSCOLL	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	3	122	1	PK/LSV	LSCOLL	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	5	186	3	PL	EVBD	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	18	1	PL	HOOK	16th-18th c.
285	283	pit	PWG	42	1	2.2	GRE	1	30	1	SK?		16th-18th c.
285	283	pit	PWG	42	1	2.2	IGBW	3	118	3			16th-18th c.
285	283	pit	PWG	42	1	2.2	IGBW	1	33	1	JR	LSBD	16th-18th c.
285	283	pit	PWG	42	1	2.2	IGBW	1	14	1	JR	LSCOLL	16th-18th c.
285	283	pit	PWG	42	1	2.2	IGBW	1	75	1	MG		16th-18th c.
285	283	pit	PWG	42	1	2.2	KF	1	34	1	RING		
285	283	pit	PWG	42	1	2.2	KF	3	192	3	SAG		

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
285	283	pit	PWG	42	1	2.2	KF	8	309	8	SAG?		
285	283	pit	PWG	42	1	2.2	KF	1	56	1	SAG?	BD	
285	283	pit	PWG	42	1	2.2	KF TGE	22	824	22	SAG		
285	283	pit	PWG	42	1	2.2	KF TGE	8	560	7	SAG	UPFT	
285	283	pit	PWG	42	1	2.2	LSRW	10	233	1	PL	EV	L.18th-19th c
285	283	pit	PWG	42	1	2.2	PMSW	3	21	3			17th c.
285	283	pit	PWG	42	1	2.2	PMSW	1	12	1	DS	EVBD	17th c.
285	283	pit	PWG	42	1	2.2	PMSW	1	14	1	DS	THEV	17th c.
285	283	pit	PWG	42	1	2.2	SPEC	4	91	4			17th-18th c.
285	283	pit	PWG	42	1	2.2	SPEC	3	281	3	LSV		17th-18th c.
285	283	pit	PWG	42	1	2.2	SPEC	1	30	1	LSV	COLL	17th-18th c.
285	283	pit	PWG	42	1	2.2	TGE	21	179	20			16th-18th c.
285	283	pit	PWG	42	1	2.2	TGE	1	41	1	DJ		16th-18th c.
285	283	pit	PWG	42	1	2.2	TGE	2	46	2	DJ	FLAR	16th-18th c.
285	283	pit	PWG	42	1	2.2	TGE	1	8	1	DS	FLAR	16th-18th c.
285	283	pit	PWG	42	1	2.2	TGE	1	10	1	JR?	SQBD	16th-18th c.
285	283	pit	PWG	42	1	2.2	TGE	1	11	1	PL		16th-18th c.
285	283	pit	PWG	42	1	2.2	TGE	1	9	1	PL	EV	16th-18th c.
285	283	pit	PWG	42	1	2.2	TGE	1	11	1	PORR		16th-18th c.
286	283	pit	PWG	42	1	2.2	ESW	5	191	1	BT	COLL	L.16th-19th c.+
286	283	pit	PWG	42	1	2.2	GRE	2	514	1	CH	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	600	1	CH?		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	273	1	SK	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	KF	3	91	3	RING		
286	283	pit	PWG	42	1	2.2	GRE	12	1796	11			16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	263	2	JR		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	65	1	JR	LSCOLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	27	1	JRH	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	93	1	LSV		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	5	639	4	LSV	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	84	1	LSV	FLAN	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	139	1	LSV	LSBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	6	807	3	LSV	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	60	1	PL	EVBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	92	2262	88			16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	8	1	?	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	136	2	BL	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	16	1	BL	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	13	1	BLH		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	12	1	BLH	UPBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	84	2	CH	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	22	1	CH	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	30	1	CH	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	14	1	CH?		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	16	1	DS	EVBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	14	1	JR	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	6	164	5	JR	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	58	1	LSV	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	16	1	PK	LSEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	35	1	PK?	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	18	1	PL		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	105	2	PL	EVBD	16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
286	283	pit	PWG	42	1	2.2	IGBW	5	110	5			16th-18th c.
286	283	pit	PWG	42	1	2.2	KF	4	140	4	SAG		
286	283	pit	PWG	42	1	2.2	KF	2	48	2	SAG?		
286	283	pit	PWG	42	1	2.2	KF	1	23	1	SAG?	BD	
286	283	pit	PWG	42	1	2.2	SPEC	1	12	1			17th-18th c.
286	283	pit	PWG	42	1	2.2	SPEC	5	136	4	LSV/JR		17th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	32	1529	32			16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	225	1	BLH?		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	9	1089	3	LSV		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	82	1	PK		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	20	1	SK		16th-18th c.
286	283	pit	PWG	42	1	2.2	IGBW	1	32	1	MG		16th-18th c.
286	283	pit	PWG	42	1	2.2	KF	3	69	3	SAG?		
286	283	pit	PWG	42	1	2.2	SPEC	2	351	1	LSV		17th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	112		BL	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	20	1	BL	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	5	309	4	CH	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	165	2	CH	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	38		CH	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	140	1	CH?	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	44	1	DS	THEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	5	298	3	JR	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	225	3	JR	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	143	1	LSV	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	4	510	1	LSV	COLL?	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	380	3	LSV	FLAR	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	142	1	LSV	LSBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	387	1	LSV	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	27		PK	LSEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	56	1853	47			16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	25	1358	16	LSV		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	75	1	PK		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	5	563	3	PL/BL		16th-18th c.
286	283	pit	PWG	42	1	2.2	SPEC	1	45	1			17th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	13	344	12			16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	6	138	6	BL	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	9	1	BL	COMP	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	153	1	BL	EVBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	68		BL	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	32	1	BL	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	19	1	BL	TRBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	24	1	BLH	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	21		BLH	UPBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	5	189	3	CH	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	75		CH	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	31		CH	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	70	1	DD	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	112	1	JG	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	54	1	JG?		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	140	3	JR	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	72	1	JR	COLL	16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
286	283	pit	PWG	42	1	2.2	GRE	1	73	1	JR	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	78	1	LSV	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	90	1	LSV	COMP	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	42	1	LSV	LSCOLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	34	1	PK	THEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	29	1	PK?	LSBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	191	2	PL	EVBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	13	1	SK?	CAV	16th-18th c.
286	283	pit	PWG	42	1	2.2	IGBW	6	106	5			16th-18th c.
286	283	pit	PWG	42	1	2.2	PMSW	1	35	1	PL	EVBD	17th c.
286	283	pit	PWG	42	1	2.2	SPEC	3	56	3			17th-18th c.
286	283	pit	PWG	42	1	2.2	TGE	2	12	1			16th-18th c.
286	283	pit	PWG	42	1	2.2	KF	8	430	8	SAG		
286	283	pit	PWG	42	1	2.2	KF	2	100	2	SAG	BD	
286	283	pit	PWG	42	1	2.2	KF	10	379	10	SAG?		
286	283	pit	PWG	42	1	2.2	KF	6	260	3	SAG?	BD	
286	283	pit	PWG	42	1	2.2	GRE	149	3240	121			16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	34		BLH		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	104	1	CD?		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	13	513	4	LSV		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	17	1	PK		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	27	1	SK		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	13	309	13			16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	15	1	?	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	14	1	BL	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	105	3	BL	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	37	1	BL	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	48	2	BLH		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	24	1	BLH?	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	7	223	4	CH	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	6	205	6	CH	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	12	1	DS	EVBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	8	1	DS	THEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	27	1	JR	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	5	140	3	JR	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	70	2	JR	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	19	1	JR?	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	32	1	JR?	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	5	254	3	LSV	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	106		LSV	COMP	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	16	1	LSV	LSCOLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	43	1	PK	COMP	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	33	1	PK	LSCOLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	18	1	PK?	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	9	260	5	PL	EVBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	21	1	PL	HOOK	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	20	1	PL	THEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	54	1	PN	TAPBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	10	1	SK?	CAV	16th-18th c.
286	283	pit	PWG	42	1	2.2	KF	7	194	7	SAG		
286	283	pit	PWG	42	1	2.2	KF	9	219	9	SAG?		
286	283	pit	PWG	42	1	2.2	GRE	86	1777	82			16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
286	283	pit	PWG	42	1	2.2	GRE	1	22	1	?	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	14	1	BL	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	111	1	BL	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	23	1	BL	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	15	1	BL?		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	10	1	BL?	COMP	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	14	1	BL?	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	11	1	BLH	UPBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	55	3	CH	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	23	1	CH	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	29	1	JG		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	9	1	JG?	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	15	1	JR/CH	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	16	1	JR?	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	15	510	5	LSV		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	60		LSV	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	70	1	LSV	FLAR	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	22	1	PK	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	14	1	PK	LSCOLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	17	1	PK	THEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	63	1	PL	EVBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	22	2			16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	57	1	JR	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	15		JR	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	27	1	JR	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	KF	24	1723	17	SAG		
286	283	pit	PWG	42	1	2.2	KF	2	65	1	SAG	BD	
286	283	pit	PWG	42	1	2.2	KF	3	142	3	SAG	SQBD	
286	283	pit	PWG	42	1	2.2	KF	2	107	1	SAG/JR	BD	
286	283	pit	PWG	42	1	2.2	KF	24	650	23	SAG?		
286	283	pit	PWG	42	1	2.2	KF	6	144	3	SAG?	BD	
286	283	pit	PWG	42	1	2.2	KF	1	51	1	SAG?	TAPBD	
286	283	pit	PWG	42	1	2.2	GRE	50	2719	42			16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	5	201	4	BL	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	50	2	BL	FTBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	55	2	BL	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	59	1	BLH	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	5	267	1	CH	FTEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	421	2	DD	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	45	1	DD?	LSBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	116	2	JR	BD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	33	1	JR	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	40	1	JR	SQBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	5	321	4	LSV		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	86		LSV	COMP	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	3	345	3	PK		16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	34	1	PK	COLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	2	88	2	PK	LSCOLL	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	52		PK	THEV	16th-18th c.
286	283	pit	PWG	42	1	2.2	GRE	1	85	1	PL		16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
286	283	pit	PWG	42	1	2.2	GRE	8	488	4	PL	EVBD	16th-18th c.
286	283	pit	PWG	42	1	2.2	KF	1	10	1	JR/SAG?		
286	283	pit	PWG	42	1	2.2	KF	2	131	2	SAG		
286	283	pit	PWG	42	1	2.2	SPEC	14	203	11			17th-18th c.
286	283	pit	PWG	42	1	2.2	SPEC	1	74	1	CH?	FTBD	17th-18th c.
286	283	pit	PWG	42	1	2.2	IGBW	21	226	20			16th-18th c.
286	283	pit	PWG	42	1	2.2	IGBW	1	55	1	JG		16th-18th c.
286	283	pit	PWG	42	1	2.2	IGBW	2	177	2	JG?		16th-18th c.
286	283	pit	PWG	42	1	2.2	IGBW	1	28	1	LSV		16th-18th c.
286	283	pit	PWG	42	1	2.2	IGBW	10	521	6	MG		16th-18th c.
286	283	pit	PWG	42	1	2.2	IGBW	2	8	2	MG	UPPL	16th-18th c.
286	283	pit	PWG	42	1	2.2	IGBW	4	225	4	TK/TY		16th-18th c.
286	283	pit	PWG	42	1	2.2	PMSW	3	77	2			17th c.
286	283	pit	PWG	42	1	2.2	PMSW	9	313	3	PL		17th c.
286	283	pit	PWG	42	1	2.2	PMSW	5	444	5	PL	EVBD	17th c.
286	283	pit	PWG	42	1	2.2	KF TGE	3	156	3	SAG		
286	283	pit	PWG	42	1	2.2	KF TGE	1	77	1	SAG	UPPL	
286	283	pit	PWG	42	1	2.2	KF TGE	1	23	1	SAG?	FT	
286	283	pit	PWG	42	1	2.2	TGE	2	15	1			16th-18th c.
286	283	pit	PWG	42	1	2.2	TGE	1	69	1	DJ	THEV	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	9	639	1	CH		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	22	1260	1	CH	FTBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	20	464	1	JG	COLL	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	357	1	PK		16th-18th c.
287	283	pit	PWG	42	1	2.2	IGBW	1	704	1	JG	UPPL	16th-18th c.
287	283	pit	PWG	42	1	2.2	IGBW	3	301	2	MG	UPPL	16th-18th c.
287	283	pit	PWG	42	1	2.2	IGBW	6	1980	2	MG IN SAG	UPPL	16th-18th c.
287	283	pit	PWG	42	1	2.2	IGBW	3	1400	1	TK IN SAG	UPPL	16th-18th c.
287	283	pit	PWG	42	1	2.2	IGBW	1	196	1	TY		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	35	754	26			16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	4	83	3	BL	BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	27	1	BL	COMP	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	8	503	1	BL	FTBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	6	303	4	BL?		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	3	87	1	BLH	COMP	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	37	1	BLH?	BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	2	77	1	COL		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	14	1472	3	LSV		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	206	1	PL/BL		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	22	757	17			16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	5	930	1	LSV		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	7	385	4	PK		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	23	1424	11			16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	13	918	4	CH	FTBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	23	743	1	CH/JR	BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	161	1	CH?		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	2	148	1	DD?		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	8	573	1	JG?		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	207	1	JR		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	5	323	1	JR?		16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
287	283	pit	PWG	42	1	2.2	GRE	6	912	2	LSV		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	2	45	1	SK	LSEV	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	73	1870	58			16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	56	1		BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	13	751	1	BL	LSBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	78	1	BL	THEV	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	34	1	BLH	BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	3	277	3	CH?		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	5	255	2	LSV		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	2	174	2	PK		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	54	1	PL	EVBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	285	1	PL	HOOK	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	33	1	PL	THEV	16th-18th c.
287	283	pit	PWG	42	1	2.2	SPEC	7	185	4			17th-18th c..
287	283	pit	PWG	42	1	2.2	GRE	1	51	1	BL	BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	20	1	BL	EVBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	81	1	BL	SQBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	4	173	2	CH	FTBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	2	30	1	CH	FTEV	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	3	140	1	CH/JR	BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	94	1	DD	BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	48	1	DD	EV	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	49	1	DS		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	26	1	DS	THEV	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	18	1	JG?	FTEV	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	5	218	5	JR	BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	59	1	JR	COLL	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	33	1	JR	EVBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	2	36	2	JR?	COLL	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	33	1	JR?	FLAR	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	17	1	JR?	TRBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	2	147	2	LSV		16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	8	772	5	LSV	COLL	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	2	118	1	LSV	COMP	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	9	209	1	PK?	COLL	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	2	67	2	PK?	THEV	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	4	93	3	PL	EVBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	70	1	PN	BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	8	166	8			16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	16	1		THEV	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	2	53	2	JR/SAG?	BD	16th-18th c.
287	283	pit	PWG	42	1	2.2	GRE	1	68	1	PL	EVBD	16th-18th c.
287	283	pit	PWG	42	1	2.2	KF	1	10	1	RING		
287	283	pit	PWG	42	1	2.2	KF	25	1246	10	SAG		
287	283	pit	PWG	42	1	2.2	KF	25	889	1	SAG?		
287	283	pit	PWG	42	1	2.2	KF	6	272	5	SAG?	BD	
287	283	pit	PWG	42	1	2.2	KF	2	87	2	SAG?	FTBD	
287	283	pit	PWG	42	1	2.2	KF	20	1505	1	SAG	BD	
287	283	pit	PWG	42	1	2.2	IGBW	20	377	16			16th-18th c.
287	283	pit	PWG	42	1	2.2	IGBW	7	94	2	MG		16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
287	283	pit	PWG	42	1	2.2	IGBW	2	12	1	MG	UPPL	16th-18th c.
287	283	pit	PWG	42	1	2.2	IGBW	2	46	1	MG/TY		16th-18th c.
287	283	pit	PWG	42	1	2.2	IGBW	6	52	1	MG/TY	UPPL	16th-18th c.
287	283	pit	PWG	42	1	2.2	SPEC	1	16	1	JG		17th-18th c.
289	288	pit	PWG	42	1	2.2	GRE	3	24	2			16th-18th c.
289	288	pit	PWG	42	1	2.2	GRE	1	13	1	BL	FLAR	16th-18th c.
289	288	pit	PWG	42	1	2.2	GRE	1	27	1	JR?	BD	16th-18th c.
289	288	pit	PWG	42	1	2.2	GRE	1	43	1	PL	EVBD	16th-18th c.
289	288	pit	PWG	42	1	2.2	KF	2	27	2	RING		
290	317	pit	PWG	42	1	2.2	GRE	13	353	13			16th-18th c.
290	317	pit	PWG	42	1	2.2	GRE	1	94	1	BL	BD	16th-18th c.
290	317	pit	PWG	42	1	2.2	GRE	1	21	1	CH	FTEV	16th-18th c.
290	317	pit	PWG	42	1	2.2	GRE	11	426	2	CH?	FTBD	16th-18th c.
290	317	pit	PWG	42	1	2.2	GRE	6	967	1	LSV	BD	16th-18th c.
290	317	pit	PWG	42	1	2.2	GRE	1	68	1	LSV	COLL	16th-18th c.
290	317	pit	PWG	42	1	2.2	GRE	1	79	1	PK		16th-18th c.
290	317	pit	PWG	42	1	2.2	GRE	1	53	1	PK	COLL	16th-18th c.
290	317	pit	PWG	42	1	2.2	GRE	2	119	2	PL	EVBD	16th-18th c.
290	317	pit	PWG	42	1	2.2	GRE	1	62	1	PL	THEV	16th-18th c.
290	317	pit	PWG	42	1	2.2	KF	1	28	1	RING		
290	317	pit	PWG	42	1	2.2	KF	11	527	10	SAG		
290	317	pit	PWG	42	1	2.2	KF	1	67	1	SAG	BD	
290	317	pit	PWG	42	1	2.2	KF	1	95	1	SAG	FTBD	
290	317	pit	PWG	42	1	2.2	KF	4	209	4	SAG?		
290	317	pit	PWG	42	1	2.2	KF	3	120	3	SAG?	BD	
290	317	pit	PWG	42	1	2.2	PMSW	1	15	1			17th c.
290	317	pit	PWG	42	1	2.2	PMSW	3	140	2	PL	EVBD	17th c.
290	317	pit	PWG	42	1	2.2	PMSW	1	68	1	PL	THEV	17th c.
291	317	pit	PWG	42	1	2.2	GRE	10	255	10			16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	1	23	1	BL?	BD	16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	2	78	2	CH	FTBD	16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	2	100	1	CH	FTEV	16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	1	16	1	CH?	FTBD	16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	1	15	1	DS	EVBD	16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	1	15	1	JR	BD	16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	1	15	1	JR	COLL	16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	2	43	2	JR/PK	COLL	16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	1	65	1	LSV		16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	1	32	1	PL	EV	16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	1	53	1	PL	HOOK	16th-18th c.
291	317	pit	PWG	42	1	2.2	GRE	1	22	1	PL	THEV	16th-18th c.
291	317	pit	PWG	42	1	2.2	KF	2	71	2	SAG		
291	317	pit	PWG	42	1	2.2	KF	2	30	2	SAG?		
291	317	pit	PWG	42	1	2.2	PMSW	3	55	3			17th c.
296	295	pit	PWG	42	1	2.2	KF	1	31	1	SAG		
298	297	pit			1	2.2	GRE	1	229	1			16th-18th c.
299	297	pit			1	2.2	GRE	2	99	1			16th-18th c.
299	297	pit			1	2.2	GRE	7	1331	2	LSV		16th-18th c.
303	302	pit		271	1	2.2	GRE	4	58	3			16th-18th c.
303	302	pit		271	1	2.2	GRE	2	30	1	JR/PK	COLL	16th-18th c.

Context	Cut	Feature type	Group	Feature no	Area	Period	Fabric	SumOfNo	SumOfWt/g	SumOfMNV	Form	Rim	Date range
303	302	pit		271	1	2.2	GRE	4	270	2	LSV		16th-18th c.
307	295	pit	PWG	42	1	2.2	IGBW	1	4	1			16th-18th c.
312	311	pit			1	2.2	GRE	16	541	15			16th-18th c.
312	311	pit			1	2.2	GRE	4	42	1	BL?		16th-18th c.
312	311	pit			1	2.2	GRE	1	53	1	CH?	SQBD	16th-18th c.
312	311	pit			1	2.2	GRE	1	22	1	JR	SQBD	16th-18th c.
312	311	pit			1	2.2	GRE	1	24	1	LSV		16th-18th c.
312	311	pit			1	2.2	GRE	1	57	1	LSV	BD	16th-18th c.
312	311	pit			1	2.2	GRE	5	137	4	PK/JR	COLL	16th-18th c.
312	311	pit			1	2.2	GRE	2	77	2	PL	EVBD	16th-18th c.
312	311	pit			1	2.2	IGBW	1	7	1			16th-18th c.
312	311	pit			1	2.2	KF	3	140	3	JR/SAG?		
312	311	pit			1	2.2	KF	1	20	1	RING		
312	311	pit			1	2.2	TGE	1	18	1			16th-18th c.
99999	U/S						KF TGE	1	8	1	PROP		
99999	U/S						TGE	7	41	7			16th-18th c.
99999	U/S						TGE	1	1	1	MG?	UPPL	16th-18th c.

B.7 Ceramic building material (CBM) and fired clay

By Sue Anderson

Introduction

B.7.1 This report considers the assemblage of CBM found in features other than the pottery waster Pit Group 42, CBM from which is largely pottery kiln waste and is included with the pottery assemblage (see App. B.6 above). Fragmentary and complete bricks and tiles totalling 235 pieces (131.857kg) were recovered from 39 contexts, the majority in Area 1 (19 pieces were collected from three contexts in Area 2). Twenty-nine fragments (870g) of fired clay were collected from four contexts. CBM recovered during the evaluation (Anderson 2013) is noted as appropriate.

Methodology

B.7.2 The assemblage was quantified (count, weight, minimum no. of objects) by fabric and form. Fabrics were identified on the basis of macroscopic appearance and main inclusions. The width, length and thickness of bricks and floor tiles were measured, but roof tile thicknesses were only measured when another dimension was available. Forms were identified from work in Norwich (Drury 1993), based on measurements; other form terminology follows Brunskill's glossary (1990). A full catalogue by context, fabric and form is available in the archive, as an Access database, a summary of which is included as an appendix to this report.

Forms and fabrics

B.7.3 Table B7.1 shows the CBM quantification by form. Most of the CBM recovered was either post-medieval brick or plain roof tile.

Form	Code	No.	Wt/g	Min. No.
Plain roof tile: medieval	RTM	1	18	1
Plain roof tile: post-medieval	RTP	50	3971	49
Pantile	PAN	4	272	4
Post-medieval brick	LB	172	123567	101
	LB?	2	1196	2
Tile	T	2	2531	2
Unidentified	UN	4	302	4
Totals		*235*	*131857*	*163*

Table B7.1: CBM quantities by form

B.7.4 Table B7.2 shows the quantities by form and fabric, based on minimum numbers of objects.

fabric	code	LB	LB?	PAN	RTM	RTP	T	UN	*Totals*
fine sandy	fs					11			*11*
fs with clay pellets	fscp	2		4					*6*
fs with coarse quartz	fscq	1							*1*
fs with flint	fsf							1	*1*
fscp with flint	fsfcp	5				3			*8*
fs with ferrous oxide	fsfe	15			1	7			*23*
fs with grog	fsg					2			*2*
medium sandy	ms?					1			*1*
ms with chalk and flint	mscf					1			*1*
ms with clay pellets	mscp?	1							*1*
mscp with ferrous oxide	mscpfe	1				11			*12*
ms with flint	msf	46	2			7		3	*58*
mscp with flint	msfcp	1							*1*
ms with ferrous oxide	msfe	1				1			*2*
msfe with flint	msffe	26				3	1		*30*
msfe poorly mixed	msxfe	1							*1*
white-firing fs	wfs						1		*1*
white-firing fsfe	wfe					2			*2*
white-firing fsg	wfg	1							*1*

Table B7.2: CBM by fabric and form (min. no.)

B.7.5 A wide range of fabric groups was recorded, but this was in part due to the lack of clean breaks for some of the more intact objects, or the small size of other pieces. The three main fabrics were fine sandy with ferrous inclusions (fsfe), medium sandy with flint (msf), and medium sandy with flint and ferrous inclusions (msffe). Other fabrics were similar with other natural inclusions such as clay pellets or chalk in some, and only a few pieces had deliberate additions of grog. A small proportion of the assemblage is white-firing.

Period 1.1: Area 2 sinkholes

B.7.6 Seven small fragments (93g) of post-medieval roof tile were recovered from the fill of natural sinkhole **128**. All were in fabric 'mscpfe', and one has a circular peg-hole. Two small pieces (18g) of orange fine sandy clay with flint and clay pellet inclusions came from natural sinkhole fill **164**; the fragments are flattish and 14mm thick.

Period 2.1: brick kilns

B.7.7 Complete bricks were recovered as samples from the structures of kilns, as well as the deposits inside them and other dump deposits around the site. Generally two to three samples were recovered from each area of the kiln.

Kiln 21

B.7.8 Fifty-two fragments (33819g) of bricks and four roof tiles (137g) were recovered from the structure and primary fill of this kiln. Table B7.3 shows the measurements of the bricks which made up the kiln structure. One brick was sampled in the evaluation.

context	Function	fabric	abr	length	width	height
21	Kiln	msf			116	45
		msf		236	110	53
		msf			108	52
23	Kiln	msf		235	112	51
		msf		232	115	50
78	Kiln W outer wall	msfcp		223	110	50
		mscp?			106	46
79	Kiln N outer wall	msf				55
		msf		230	110+	59
		msf	+		114	59
80	Kiln N wall of entrance	msf		236+	113	57
		msf			115	59
81	Kiln S wall of entrance	msf		242	117	55
		msf			113	60
84	Kiln furnace arch	msf		229	114	52
		msfe		240	110	55
Eval	Kiln structure	msf			110	48

Table B7.3: Brick samples from Kiln 21

B.7.9 Several of the more complete bricks have vitrified or reduced headers and/or stretchers, and those recovered from kiln walls 78–79 have clay mortar adhering, while the bricks from walls 80 and 81 have thick white lime mortar. Five bricks have diagonal hack marks.

B.7.10 In addition to the structural brick samples, small fragments were collected from a bulk sample of the ash fill 94. Although two fragments of brick in this layer, which is thought to relate to the last firing, were in 'msf' fabric, fifteen pieces are in 'fsfe' fabric, some of which are underfired, indicating that the kiln had probably been used for at least two separate batches of brick. Four plain roof tile fragments were also recovered from this fill, two in 'msf' fabric and two in 'fsg', but there was no evidence to suggest that these had been fired or used in the kiln.

Kiln 34

B.7.11 The Period 2.1 assemblage from this kiln comprised 54 pieces of brick (25492g), 15 fragments of roof tile (1089g), a small piece of tile (21g), three unidentified fragments (59g) and a fragment of fired clay (23g). Table B7.4 shows the dimensions of the bricks which made up the kiln structure, and the samples recovered from ash layer 29.

context	Function	fabric	abr	length	width	height
26	Kiln wall	msf		225	110	51
		msf		233	111	50
27	Kiln	msf		223	108	51
		msf		227	106	50
29	Firing ash layer	msffe		223	110	51
		msf		225	110	52
		msf		227	113	50
		msffe			115	48
		msf			102	47

context	Function	fabric	abr	length	width	height
138	Kiln arch	msf		228	113	54
		msf		216	112	50
215	Kiln	msffe				46
		msffe		227	110	49

Table B7.4: Brick samples from Kiln 34

B.7.12 The sample bricks in this group appear to have been more affected by heat than those in Kiln 21, with most being partly reduced, cracked or vitrified. In some cases the reduction reached a depth of 50mm. One brick has a diagonal cut post-firing, presumably a deliberate removal of the corner. Three bricks have diagonal hack marks, no mortar was recorded on the surfaces of these bricks. However, three unidentified 'msf' slabs were collected from ash layer 29, which could be pieces of clay 'mortar' used to bond the kiln walls, or possibly underfired roof tiles. One other piece from fill 29 was recorded as fired clay 'mortar', and was 15mm thick with a reduced surface.

B.7.13 In addition to the more complete bricks from ash layer 29, there are fragments of roof tile in 'fs' and 'msf' fabrics, several of which were fully or partly reduced. A small piece of white-firing tile may relate to the tin-glazed earthenware production to the north of the site, and is likely to be intrusive, as is a brick fragment in 'fscq' fabric which may have had a horizontal hack mark.

Kiln 52

B.7.14 Fourteen fragments (12502g) of post-medieval brick were recovered from this kiln, representing the six bricks shown in Table B7.5. Fragments of two other bricks were recovered in the evaluation.

Context	Function	fabric	abr	length	width	height
54	Kiln wall	fsfcp		230	105	54
		fsfcp	+	235	109	55
71	Kiln storage	msffe	+		105	53
		msffe			110	52
72	Kiln wall	msf	+	234	107	56
		msf		232	107	54
Eval	Kiln wall	msf		226	109	48–57
		msf				52

Table B7.5: Brick samples from Kiln 52

B.7.15 The two bricks in context 71 are underfired. No 'mortar' was present on the samples. Two have diagonal hack marks.

Kiln Group 229

B.7.16 Seven fragments of four bricks (11895g) were recovered from Kiln 241, and seven more (16427g) from Kiln 242 of this kiln group, as shown in Table B7.6.

Feature/kiln	Context	Function	fabric	abr	length	width	height
241	233	Kiln wall	msffe		242	121	53
			msffe		248	121	52
	234	Kiln wall	msffe		241	120	55
			msffe		249	121	56
242	235	Kiln wall	msffe		243	116	55
			msffe			118	51
			msffe		240	120	55
	236	Kiln wall	msffe		244	122	55
			msffe			116	52

Feature/kiln	Context	Function	fabric	abr	length	width	height
			msffe		249	121	51
	238	Kiln floor	mscpfe	+		118	50+

Table B7.6: Brick samples from Kiln Group 229

B.7.17 Three of the four bricks from Kiln 241 have vitrified stretchers and two have clay 'mortar' adhering. Those from Kiln 242 have reduced stretchers, apart from the brick from the floor 238, which has a burnt surface; clay is present on the surfaces of most.

B.7.18 Twenty fragments of buff-coloured fired clay were recovered from the floor 237 of Kiln 241 and are hard slabs with a flattish undulating surface in a silty fabric, between 14–31mm thick, some of which had ferrous deposits on one side.

Period 2.2: Disuse of kilns and evidence of pottery manufacture

Kiln demolition and dumps

B.7.19 A few pieces of plain roof tile were recovered from the backfills of the kilns and related demolition deposits. A fragment from Kiln 21 comprises two tile pieces which had been fused together with brown glaze, and presumably related to the pottery production waste found to the north of the site. Three roof tiles from Kiln 34 are in 'msfe', 'mscf' and 'msffe' fabrics, two with circular peg holes and one with a square hole. Two are slightly overfired and their peg holes are not full thickness. One of the fragments with circular peg holes is 170mm wide and 11mm thick. One other fragment in 'msffe' fabric was found in the demolition layer of Kiln 52. Two fragments from dump deposit 8, both with circular peg holes, are in 'mscpfe' and 'msf' fabrics, and the latter is overfired and reduced.

B.7.20 Brick fragments from the kiln backfills included a small piece in 'fsfcp' fabric from Kiln 21 and two complete examples from Kiln 52, measuring 225 x 112 x 50mm and 225 x 103 x 55mm respectively, making them shorter and thinner than most of the structural brick samples from that kiln.

B.7.21 Some possible 'specialist' types which do not fit within the typical size range of the bricks and tiles from the site were also recovered from the kiln demolition deposits. These include a tile with a knife-trimmed edge and underside, 34mm thick, from fill 19 of Kiln 21; a roughly-made large tile (>200mm x >150mm x 50mm) in the fill of Kiln 52; and a fragment of an overfired 'brick' 85mm wide and 70mm thick from the same kiln.

B.7.22 Six fragments of fired clay from fill 58 of Kiln 52 comprise five hard rounded lumps containing coal chips, and one small abraded fragment which may be a piece of brick.

Quarry pit backfills

B.7.23 CBM was recovered from the fills of five quarry pits, mostly in association with pottery kiln waste.

B.7.24 Two post-medieval bricks in fabrics typical of the brick kilns (msf, msffe) were recovered from pit **297**. These measure 114 x 50mm and 115 x 48mm respectively. The latter has a diagonal hack mark. These are within the range of the bricks used to construct nearby Kiln 21.

B.7.25 Seven bricks, seven plain roof tiles and four pieces of pantile were collected from pit **9/259**. Several bricks show signs of reduction or vitrification and had probably been

used in one of the kilns. Two are complete and measured 233 x 112 x 48mm and 234 x 114 x 51mm. The others vary in thickness between 50–60mm, the thickest having a clay 'mortar' deposit. Again, these could be bricks used in the construction of Kiln 21. The presence of pantile in the fill suggest a 17th-century or later date.

B.7.26 Two brick fragments were collected from pit **300**. One, in 'msffe' fabric, is overfired and blown, and probably as a result of this was only 90mm wide, although it is within the normal range of thicknesses at 55mm. The other fragment, in 'fscp' fabric, is 53mm thick.

B.7.27 Pit **311** contained fragments of four bricks, one of which is probably a 'specialist' form. This is overfired and blown, measured 105mm wide and 85mm thick, and is in the kiln-type 'msf' fabric. One fragment with glaze on the surface is only 42mm thick, and another is 45mm thick and has a reduced surface; both are in 'msf' fabric. The fourth brick is in 'fscp' fabric and measures 121 x 60mm; this size could suggest a 19th-century date but the fragment has a burnt stretcher and base, suggesting that it had been used in a kiln (or possibly a hearth/chimney).

B.7.28 Two bricks were collected from pit **302**. Both are chamfered types. One, in 'fsfcp' fabric, measures 110 x 50mm, and the other, in 'msffe', measures 234 x 106 x 51mm.

Pit Group 42

B.7.29 The CBM from this group is discussed with the pottery assemblage (see App. B.6), as most of it represents pottery kiln furniture.

Ditch Group 2

B.7.30 Eighteen fragments of CBM were found in fills of this ditch. Ten are pieces of plain roof tile and the remainder are fragments of brick. Three bricks were measurable, one being 109 x 51mm, and the other two 46mm and 56mm thick respectively. There is no evidence of overfiring or glaze drips on this material and none of it appears to relate to the brick or pottery production on the site. Only two small sherds of glazed red earthenware pottery came from the ditch.

Area 2 pit

B.7.31 A fragment of medieval plain roof tile and eleven pieces of a post-medieval white brick (fabric 'wfg') were recovered from pit fill 45 in pit **44**. The brick measures 107 x 46mm and may be a paviour of 18th/19th-century date.

Discussion

B.7.32 Post-medieval bricks form the largest part of this assemblage, but they only represent a small proportion of the brick which was present on the site. Most were recovered as samples of the brick kiln structures or were found in the demolition deposits associated with these features. Although they appear to be in a wide range of fabrics, these are probably a result of different batches using slightly different mixes of clay, and the overall range of inclusions suggests that most were made at the production site. A few may be later and intrusive.

B.7.33 Brick sizes and types in Kiln Group 229 (Kilns 241 and 242) were similar, with all bricks in this group measuring over 240mm in length. The brick sizes in these kilns are

comparable with those from later 15th- and 16th-century structures in the region, such as Breckles Hall, Stutton Hall and Hengrave Hall (Lloyd 1925, 89–95) and Gedding Hall (Anderson and Tester 2003). This suggests that these two structures represent the earliest use of the site for brick production. They had been backfilled before there was any pottery waste on the site. A single small sherd of glazed redware came from the base of Kiln 242, but there was no evidence that this was a waster and it may have been made elsewhere.

B.7.34 At least one brick of similar size was used in the south entrance wall of Kiln 21, but most of the other bricks from this structure fall in a smaller range in terms of length and thickness. This group is within the range of Drury's Norwich LB1 size (Drury 1993, 165) which he suggests can be dated to the later 16th to the 18th century. However, they are also comparable with late 15th-century bricks at Oxburgh Hall and early 16th-century ones at East Barsham manor (Lloyd 1925). The bricks of Kilns 34 and 52 are of similar size to the majority of those from Kiln 21, although those in Kiln 34 (including those recovered from its fill) are generally slightly shorter than the others. It is possible that Kiln 34 was slightly earlier than Kilns 21 and 52, as it only contained one sherd of reduced green-glazed red earthenware (or late medieval and transitional ware), perhaps of 16th-century date. The demolition deposits of Kilns 21 and 52 both contained pottery wasters, suggesting that they were backfilled during the period of pottery manufacture on the site, which is assumed to belong to the 17th century.

B.7.35 Bricks recovered from Kiln 229 had traces of the silty clay 'mortar' used in the kiln attached to them, and some of those from Kiln 21 also have this material on one or more surfaces. However, the bricks recovered from the entrance of Kiln 21 were mortared together with conventional white lime mortar, perhaps forming a later repair. If so, this might suggest that the longer, broader, thicker bricks were later than the shorter thinner types, but there is of course high potential for re-use of earlier bricks on a brickwork site.

B.7.36 Diagonal hack (pressure) marks on the stretchers of bricks were noted in all of the kilns except Kilns 241 and 242, which may indicate a difference in the method of drying between the two groups. The position of hack marks has been used to suggest dating of bricks in the county (Rose 2000), with a change from diagonal to horizontal stacking seemingly taking place towards the mid to late 18th century, with rare exceptions. This is further evidence that Kilns 21, 34 and 52 were probably built before the mid 18th century.

B.7.37 Overfiring and reduction of some roof tiles, other than those used in pottery manufacture, may indicate that these were also made at the site. However, if so, very little waste was recovered and any such production must have been short-lived.

B.7.38 Based on the evidence available, it appears that there were at least two phases of tile and brickmaking at the site, perhaps reflecting simply a sequence of kiln building and repair with one or two in use at any one time. The brick sizes provide tentative evidence for Kilns 241 and 242 being slightly earlier than the other kilns, followed by Kiln 34, but this method of dating is far from conclusive. There is also no direct evidence that the kilns were still operational when pottery manufacturing took place

on the site in the 17th century. Pottery waste was recovered from the upper backfills of Kilns 21 and 52, suggesting that these were only partially open at the time.

Retention, dispersal, and display

B.7.39 Recommendations for retention/discard are included in the database, but generally samples of all structures have been retained, together with examples from kiln fills and other features, all tile waste relating to pottery production on the site, and all unusual forms.

CBM Appendix

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
5	**4**	ditch fill	2.2	4	DG2	mscpfe	RTP	1	55	1					1 x R					pmed
5	**4**	ditch fill	2.2	4	DG2	msf	LB	1	832	1			109	51						pmed
5	**4**	ditch fill	2.2	4	DG2	msffe	LB	1	237	1				46						pmed
5	**4**	ditch fill	2.2	4	DG2	msffe	RTP	1	70	1										pmed
7	**6**	ditch fill	2.2	4	DG2	fsfe	RTP	5	83	5									1 thick (20mm)	pmed
8	**8**	dumped deposit	2.2	0	0	mscpfe	RTP	1	18	1					1 x R					pmed
8	**8**	dumped deposit	2.2	0	0	msf	RTP	1	54	1					1 x R				overfired, reduced	pmed
9	**9**	pit	2.2	9	0	fsfcp	RTP	3	343	3					1 x S					pmed
9	**9**	pit	2.2	9	0	fscp	PAN	4	272	4										pmed
9	**9**	pit	2.2	9	0	msf	LB	1	381	1			115	53					reduced header	pmed
9	**9**	pit	2.2	9	0	msf	LB	1	407	1				50					reduced header	pmed
9	**9**	pit	2.2	9	0	msf	LB	1	506	1				60		clay				pmed
9	**9**	pit	2.2	9	0	msf	LB	1	235	1				50					overfired, reduced, vit surface	pmed
9	**9**	pit	2.2	9	0	msf	LB	1	386	1	+								reduced header	
17	**16**	ditch	2.2	4	DG2	mscpfe	RTP	1	23	1										pmed
17	**16**	ditch	2.2	4	DG2	msf	LB?	1	31	1	+									pmed
17	**16**	ditch	2.2	4	DG2	msxfe	LB	3	181	1	+			56					=1 brick	pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
19	**18**	pit	2.2	21	0	fsf	UN	1	243	1				34					thick tile, rounded knife-trimmed edge and base - thick pantile or specialist KF?	pmed
20	**18**	pit	2.2	21	0	fsfe	RTP	1	137	2							B		tile fragments fused together, glaze on surface	pmed
20	**18**	pit	2.2	21	0	fsfcp	LB	1	30	1				50+						pmed
21	**74**	kiln	2.1	21	0	msf	LB	2	2378	1		236	110	53				diag	near-complete brick missing a corner	pmed
21	**74**	kiln	2.1	21	0	msf	LB	1	789	1			108	52						pmed
21	**74**	kiln	2.1	21	0	msf	LB	1	1427	1			116	45				diag	reduced header	pmed
23	**74**	kiln	2.1	21	0	msf	LB	1	2423	1		235	112	51					reduced stretcher	pmed
23	**74**	kiln	2.1	21	0	msf	LB	2.2	2360	1		232	115	50		clay on header			reduced stretcher	pmed
26	**33**	kiln	2.1	34	0	msf	LB	4	2162	1		225	110	51					reduced stretcher to depth of 50mm, cracked & vit	pmed
26	**33**	kiln	2.1	34	0	msf	LB	3	2138	1		233	111	50					reduced stretcher to depth of 40mm	pmed
27	**33**	kiln	2.1	34	0	msf	LB	1	2246	1		223	108	51					reduced stretcher to depth of 25mm	pmed
27	**33**	kiln	2.1	34	0	msf	LB	1	1853	1		227	106	50					stretcher reduced and cracked	pmed
28	**33**	backfill	2.2	34	0	msffe	RTP	1	288	1					1 x S				slightly overfired, peg hole not full thickness	pmed
28	**33**	backfill	2.2	34	0	mscf	RTP	1	379	1			170	11	1 x R(2)					pmed
28	**33**	backfill	2.2	34	0	msfe	RTP	1	175	1					1 x R				slightly overfired, peg hole not full thickness	pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
29	**33**	kiln	2.1	34	0	fscq	LB	1	176	1	++			52				longitudinal?	dense	pmed
29	**33**	kiln	2.1	34	0	msf	UN	3	59	3	+								poss clay 'mortar' slabs, or underfired RT	pmed
29	**33**	kiln	2.1	34	0	wfs	T	1	21	1	+			15					kiln furniture?	pmed
29	**33**	kiln	2.1	34	0	fs	RTP	3	60	3					1 x R				reduced	pmed
29	**33**	kiln	2.1	34	0	msf	LB	25	696	5	+								overfired, reduced, porous, some vit - small sample retained	pmed
29	**33**	kiln	2.1	34	0	fs	RTP	8	184	8										pmed
29	**33**	kiln	2.1	34	0	msf	RTP	4	845	4				10	1 x S				all partly reduced - 2 retained	pmed
29	**33**	kiln	2.1	34	0	msffe	LB	1	1998	1		223	110	51					incomplete brick	pmed
29	**33**	kiln	2.1	34	0	msffe	LB	1	1062	1			115	48					aprox half brick, stretcher reduced/vit	pmed
29	**33**	kiln	2.1	34	0	msf	LB	1	947	1			102	47				diag	aprox half brick, stretcher reduced/vit	pmed
29	**33**	kiln	2.1	34	0	msf	LB	1	2455	1		227	113	50					near-complete brick, reduced surface & header, cracked	pmed
29	**33**	kiln	2.1	34	0	msf	LB	1	2453	1		225	110	52					near-complete brick, fully reduced	pmed
39	**38**	ditch	2.2	4	DG2	msffe	LB	1	63	1										pmed
39	**38**	ditch	2.2	4	DG2	msf	LB	1	6	1	++									pmed
39	**38**	ditch	2.2	4	DG2	wfe	RTP	2	14	2										pmed
43	**42**	pit	2.2	42	PWG	ms	RTP	2	16	1									joining frags, vit material adhering	pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
43	**42**	pit	2.2	42	PWG	ms	RTP	1	223	1							G/B		dark greenish brown glaze all over, ?saggar rim stuck to one side	pmed
43	**42**	pit	2.2	42	PWG	ms	RTP	2	285	2							G/B		dark greenish brown glaze all over, ?saggar rim stuck to one side	pmed
43	**42**	pit	2.2	42	PWG	ms	RTP	1	584	1			169	12			G/B		dark greenish brown glaze all over, ?saggar rim stuck to one side	pmed
43	**42**	pit	2.2	42	PWG	ms	RTP	1	135	1							G/B		dark greenish brown glaze all over, hollow ware base stuck to one side	pmed
43	**42**	pit	2.2	42	PWG	fs	RTP	1	195	1					1 x S		B		glaze, kiln scars, some overlapping or glaze-covered, suggesting at least 2.2 uses, glaze on breaks	pmed
43	**42**	pit	2.2	42	PWG	msffe	RTP	1	275	1			168	12	1 x R(1)		B		reduced surfaces, glaze on underside	pmed
43	**42**	pit	2.2	42	PWG	fs	RTP	1	303	1							B		tile with kiln scar of jug rim (90mm diam)	pmed
43	**42**	pit	2.2	42	PWG	fs	RTP	1	237	1			166	11	1 x R(2)		B		glaze on both surfaces	pmed
43	**42**	pit	2.2	42	PWG	msffe	RTP	1	377	1			164	11	1 x S(2)		BL		glaze on both surfaces, kiln scars	pmed
43	**42**	pit	2.2	42	PWG	msffe	RTP	1	390	1							B		kiln scars, 2.2 fingermarks close to edge, reduced, glaze both sides	pmed
43	**42**	pit	2.2	42	PWG	msffe	RTP	2	623	2					1 x S		B		glaze all over, fused tiles	pmed
43	**42**	pit	2.2	42	PWG	msf	LB	1	971	1			115	47					vit stretcher	pmed
43	**42**	pit	2.2	42	PWG	fsfe	T	1	813	1				35					partial floor brick/tile - KF?	pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
43	**42**	pit	2.2	42	PWG	fsfe	T	1	548	1				41					partial floor brick/tile, unfused glaze on surface - KF	pmed
43	**42**	pit	2.2	42	PWG	msf	LB	1	1550	1			127	52					channel of ?drilled hole in 1 stretcher	pmed
43	**42**	pit	2.2	42	PWG	msffe	LB	1	905	1			118	41					vit stretcher	pmed
43	**42**	pit	2.2	42	PWG	msf	LB	1	1134	1			118	44		clay on header			reduced stretcher	pmed
45	**44**	pit	2.2	0	0	wfg	LB	11	1057	1	+		107	46						pmed
45	**44**	pit	2.2	0	0	fsfe	RTM	1	18	1									reduced core	med
54	**56**	kiln	2.1	52	0	fsfcp	LB	1	2404	1		230	105	54						pmed
54	**56**	kiln	2.1	52	0	fsfcp	LB	4	2064	1	+	235	109	55						pmed
58	**56**	kiln	2.2	52	0	msf	LB?	1	1165	1			85	70					poss specialist kiln brick? slightly curved? overfired, blown, vit, reduced	pmed
58	**56**	kiln	2.2	52	0	msf	LB	1	2197	1		225	112	50				diag		pmed
58	**56**	kiln	2.2	52	0	msf	LB	1	2423	1		225	103	55				diag	dragged fingermarks on surface, sooted	pmed
58	**56**	kiln	2.2	52	0	msffe	RTP	1	250	1										pmed
58	**56**	kiln	2.2	52	0	msffe	T	1	2510	1		>200	>150	50					roughly made - specialist kiln brick?	pmed
63	**317**	pit	2.2	42	PWG	msffe	LB	1	710	1	+		93	50					partial brick with hole through thickness, c.20mm diam, open to header end	pmed
63	**317**	pit	2.2	42	PWG	msf	LB	1	385	1				46					overfired, reduced, vit stretcher	pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
63	**317**	pit	2.2	42	PWG	msffe	LB	1	417	1	+			49					deep groove in surface, pre-firing, vit/glaze on surface	pmed
63	**317**	pit	2.2	42	PWG	msf	LB	1	1062	1	+		116	49						pmed
63	**317**	pit	2.2	42	PWG	msf	LB	1	903	1	+		117	49		clay			?unfused glaze on edged, but under clay 'mortar' - reused?	pmed
63	**317**	pit	2.2	42	PWG	msf	LB	1	476	1				45		clay on base			stretcher reduced	pmed
63	**317**	pit	2.2	42	PWG	msgfe	LB	1	446	1			108	47			O		glaze on surfaces and stretcher	pmed
65	**42**	pit	2.2	42	PWG	fs	RTP	1	697	2			170	13	1 x S		B		2 tiles fused together, glaze and kiln scars, reduced	pmed
65	**42**	pit	2.2	42	PWG	msffe	LB	1	933	1	+		113	41			O		glaze on surfaces and stretcher	pmed
65	**42**	pit	2.2	42	PWG	msfe	LB	1	1156	1			121	48					corner not at right-angles, cut before firing. reduced surface	pmed
68	**42**	pit	2.2	42	PWG	fs	RTP	1	388	1					1 x R		B		multiple kiln scars, including 2.2 bobs	pmed
69	**42**	pit	2.2	42	PWG	msffe	RTP	1	326	1			165	12					warped, reduced, kiln scar	pmed
71	**56**	kiln	2.1	52	0	msffe	LB	1	1466	1			110	52					underfired	pmed
71	**56**	kiln	2.1	52	0	msffe	LB	2	1675	1	+		105	53					underfired	pmed
72	**56**	kiln	2.1	52	0	msf	LB	1	2492	1		232	107	54				diag		pmed
72	**56**	kiln	2.1	52	0	msf	LB	5	2401	1	+	234	107	56				diag	dense	pmed
78	**74**	kiln	2.1	21	0	mscp?	LB	1	1902	1		207+	106	46		clay all over				pmed
78	**74**	kiln	2.1	21	0	msfcp	LB	6	2179	1		223	110	50		clay on stretcher				pmed
79	**74**	kiln	2.1	21	0	msf	LB	1	449	1				55		clay				pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
79	**74**	kiln	2.1	21	0	msf	LB	1	1417	1	+		114	59		clay c.13mm thick			eroded stretcher	pmed
79	**74**	kiln	2.1	21	0	msf	LB	5	2202	1		230	110+	59		clay			brick fragments	pmed
80	**74**	kiln	2.1	21	0	msf	LB	1	2795	1		236+	113	57		white ms on surface, patches on stretcher				pmed
80	**74**	kiln	2.1	21	0	msf	LB	1	2676	1			115	59		white ms on surface, patches on stretcher				pmed
81	**74**	kiln	2.1	21	0	msf	LB	1	1862	1			113	60		thick white mortar		diag	reduced header	pmed
81	**74**	kiln	2.1	21	0	msf	LB	5	2956	1		242	117	55		thick white ms mortar all over in patches				pmed
84	**74**	kiln	2.1	21	0	msf	LB	2	2048	1		229	114	52					reduced/vit header and stretcher	pmed
84	**74**	kiln	2.1	21	0	msfe	LB	3	2640	1		240	110	55				diag	reduced/vit header and stretcher	pmed
94	**21**	kiln	2.1	21	0	fsg	RTP	2	54	2										pmed
94	**21**	kiln	2.1	21	0	fsfe	LB	15	945	15	+							1 diag	some underfired	pmed
94	**21**	kiln	2.1	21	0	msf	LB	2	371	3	+					ms white			brick fragments mortared together, with frag of tile	pmed
94	**21**	kiln	2.1	21	0	msf	RTP	2	83	2										pmed
129	**128**	natural	1	0	0	mscpfe	RTP	7	93	7					1 x R					pmed
138	**33**	kiln	2.1	34	0	msf	LB	3	2161	1		228	113	54				diag	reduced header	pmed
138	**33**	kiln	2.1	34	0	msf	LB	1	2286	1		216	112	50				diag	poss deliberate removal of corner with diagonal cut post-firing, header reduced	pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
178	**177**	post hole	2.2	0		fsfe	RTP	1	24	1										pmed
215	**33**	kiln	2.1	34	0	msffe	LB	4	1682	1		227	110	49					underfired, cracked, header reduced	pmed
215	**33**	kiln	2.1	34	0	msffe	LB	6	1177	6				46					partly reduced frags, no joining, but could be 1 brick	pmed
233	**230**	kiln	2.1	241	229	msffe	LB	1	3107	1		242	121	53		clay on surface			vit stretcher	pmed
233	**230**	kiln	2.1	241	229	msffe	LB	1	2854	1		248	121	52					vit stretcher	pmed
234	**230**	kiln	2.1	241	229	msffe	LB	2	3010	1		249	121	56		clay			vit stretcher	pmed
234	**230**	kiln	2.1	241	229	msffe	LB	3	2924	1		241	120	55						pmed
235	**231**	kiln	2.1	242	229	msffe	LB	1	3109	1		240	120	55		clay on surface			reduced stretcher	pmed
235	**231**	kiln	2.1	242	229	msffe	LB	1	3247	1		243	116	55		clay on surface			reduced stretcher	pmed
235	**231**	kiln	2.1	242	229	msffe	LB	1	1672	1			118	51		clay			reduced stretcher	pmed
236	**231**	kiln	2.1	242	229	msffe	LB	1	1683	1			116	52		clay			reduced stretcher	pmed
236	**231**	kiln	2.1	242	229	msffe	LB	1	2951	1		244	122	55					reduced stretcher	pmed
236	**231**	kiln	2.1	242	229	msffe	LB	1	3035	1		249	121	51		clay			reduced stretcher	pmed
238	**231**	kiln	2.1	242	229	mscpfe	LB	1	730	1	+		118	50+					burnt surface - from floor of kiln?	pmed
265	**259**	pit fill	2.2	9	9	ms?	RTP	1	141	1									overfired, warped	pmed
265	**259**	pit fill	2.2	9	9	msf	LB	1	2597	1		234	114	51				diag		pmed
265	**259**	pit fill	2.2	9	9	fsfcp	LB	1	2200	1		233	112	48				diag		pmed
265	**259**	pit fill	2.2	9	9	mscpfe	RTP	3	622	1			169	11						pmed
280	**279**	pit fill	2.2	42	PWG	wfs	T	1	82	1							SW		corner frag, kiln furniture	pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
280	**279**	pit fill	2.2	42	PWG	GRE?	UN	1	117	1							B		part of sphere?	pmed
280	**279**	pit fill	2.2	42	PWG	msffe	LB	1	649	1	+		110	43					completely reduced	pmed
280	**279**	pit fill	2.2	42	PWG	msffe	RTP	1	468	1			165	11	1 x R(2)		B		glaze all over base	pmed
280	**279**	pit fill	2.2	42	PWG	fsfe	RTP	1	115	1					1 x R		O		peg tile	pmed
281	**279**	pit fill	2.2	42	PWG	wfs	T	1	830	1			>130	37					kiln furniture? Sooted, KT edge	pmed
281	**279**	pit fill	2.2	42	PWG	wfs	T	1	116	1							SW		corner frag, kiln furniture	pmed
281	**279**	pit fill	2.2	42	PWG	wfs	T	1	76	1	+						W		kiln furniture	pmed
281	**279**	pit fill	2.2	42	PWG	wfs	T	1	118	1				35					kiln furniture?	pmed
281	**279**	pit fill	2.2	42	PWG	fs	PAN	1	257	1									soot patches	pmed
282	**279**	pit fill	2.2	42	PWG	msffe	RID	1	285	1				19					partial chamfered edge	pmed
282	**279**	pit fill	2.2	42	PWG	msffe	KILN	2	5267	2				48					large curved V-shaped tiles, c.110mm high, cut horizontal ends, may be part of kiln structure (see also context 285)	pmed
282	**279**	pit fill	2.2	42	PWG	msf	LB	1	2368	1		220	113	52				diag		pmed
282	**279**	pit fill	2.2	42	PWG	msffe	LB	1	1245	1			87	52					small brick - specialist?	pmed
282	**279**	pit fill	2.2	42	PWG	msgfe	LB	1	1090	1			100	60					vit header	pmed
282	**279**	pit fill	2.2	42	PWG	msgfe	LB	1	571	1				65					vit ?header	pmed
282	**279**	pit fill	2.2	42	PWG	fs	PAN	1	198	1						patch white ms			curving corner, patches of soot	pmed
284	**283**	pit fill	2.2	42	PWG	wfs	T	1	27	1									kiln furniture, straight edge, flat	pmed
284	**283**	pit fill	2.2	42	PWG	fsfe	PAN	1	169	1										pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
284	**283**	pit fill	2.2	42	PWG	msffe	LB	1	1367	1			100	58					partial brick overfired, dark purple	pmed
284	**283**	pit fill	2.2	42	PWG	fsfe	PAN	1	134	1	+						DB			pmed
284	**283**	pit fill	2.2	42	PWG	msfe	RTP	1	120	1							B		kiln scars, some glazed over	pmed
284	**283**	pit fill	2.2	42	PWG	fs	PAN	1	124	1										pmed
285	**283**	pit fill	2.2	42	PWG	ms	RTP	1	58	1									dark brown glaze, small ring stilt adhering (37mm diam)	pmed
285	**283**	pit fill	2.2	42	PWG	wfs	T	1	86	1				15					kiln furniture?	pmed
285	**283**	pit fill	2.2	42	PWG	wfs	T	1	35	1				12					kiln furniture?	pmed
285	**283**	pit fill	2.2	42	PWG	wfs	T	3	38	1									kiln furniture? Not full thickness	pmed
285	**283**	pit fill	2.2	42	PWG	msffe	LB	1	996	1			110	63					overfired, vit headed	pmed
285	**283**	pit fill	2.2	42	PWG	msffe	LB	1	1253	1			110	58					reduced header	pmed
285	**283**	pit fill	2.2	42	PWG	msf	LB	1	1479	1	+		119	52					partial brick	pmed
285	**283**	pit fill	2.2	42	PWG	msffe	QFT	1	2129	1			227	42+					worn, KT edges	pmed
285	**283**	pit fill	2.2	42	PWG	fsfe	PAN	2	783	1			230	14		ms white on edge			width is straight across, not via curve. soot patches	pmed
285	**283**	pit fill	2.2	42	PWG	msffe	KILN	2	4315	1		135		47					large curved cbm fragment may be part of kiln structure (see also context 282)	pmed
285	**283**	pit fill	2.2	42	PWG	msgfe	TERR	1	9520	1		302	262	130+		patches white on flat base			square plinth, roughly hollowed base, surface mostly lost (remaining areas sanded from mould)	pmed
286	**283**	pit fill	2.2	42	PWG	ms	RTP	1	82	1									dark brown glaze, ?saggar rim adhering	pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
286	**283**	pit fill	2.2	42	PWG	wfs	T	1	92	1				16					kiln furniture, straight edge, flat	pmed
286	**283**	pit fill	2.2	42	PWG	msffe	T	1	4330	1		235	225	45					KT edges, 1 corner roughly cut off diagonally (slightly concave)	pmed
286	**283**	pit fill	2.2	42	PWG	fsfe?	RTP	1	1032	2							B		warped, covered in glaze on convex side, concave side contains mortar-like material also found in saggars	pmed
286	**283**	pit fill	2.2	42	PWG	fsfe	RTP	1	103	1							B		kiln scars, glaze all over	pmed
286	**283**	pit fill	2.2	42	PWG	msgfe	LB	1	704	1			98	68					overfired, dark purple, stretcher vit - specialist kiln?	pmed
286	**283**	pit fill	2.2	42	PWG	fsfe	LB	1	2082	1		222	109	48+					worn surface	pmed
286	**283**	pit fill	2.2	42	PWG	fsfe	LB	1	2224	1		221	115	50				diag?		pmed
287	**283**	pit fill	2.2	42	PWG	un	LB?	1	1044	1						white deposit, poss mortar			overfired, blown brick, large holes	pmed
287	**283**	pit fill	2.2	42	PWG	msffe	LB	1	1171	1			111	50					overfired, reduced core	pmed
287	**283**	pit fill	2.2	42	PWG	fsfe	RTP	1	245	1									kiln scars, glaze all over, at least 2 uses	pmed
287	**283**	pit fill	2.2	42	PWG	fsfe	RTP	1	130	1					1 x S				kiln scars, glaze all over, at least 2 uses	pmed
290	**317**	pit fill	2.2	42	PWG	fs	RTP	1	830	2									2 peg tiles fused together by glaze	pmed
290	**317**	pit fill	2.2	42	PWG	msf	LB	1	1555	1	+		115	50		clay				pmed
296	**295**	pit fill	2.2	42	PWG	msfe	RTP	1	142	1										pmed
298	**297**	pit fill	2.2	0	0	msf	LB	1	647	1			114	50						pmed
299	**297**	pit fill	2.2	0	0	msffe	LB	1	1176	1			115	48				diag		pmed

Context	Cut	Feature Type	Period	Feature No.	Group	fabric	form	no	wt/g	Min no	abr	length	width	height	peg	mortar	glaze	hackmarks	comments	date
301	**300**	pit	2.2	0	0	msffe	LB	1	946	1			90	55					purple, overfired, blown	pmed
301	**300**	pit	2.2	0	0	fscp	LB	1	799	1				53						pmed
303	**302**	pit fill	2.2	271	0	msffe	LB	1	2213	1		234	109	51				diag	chamfered brick	pmed
303	**302**	pit fill	2.2	271	0	fsfcp	LB	1	707	1			110	50					chamfered brick	pmed
307	**306**	pit fill	2.2	42	PWG	fscp	RTP	2	48	2										pmed
312	**311**	pit fill	2.2	0	0	msf	LB	1	403	1				45					reduced surface	pmed
312	**311**	pit fill	2.2	0	0	msf	LB	1	1040	1			105	85					specialist brick, overfired, blown	pmed
312	**311**	pit fill	2.2	0	0	msf	LB	1	598	1				42			B		partially glazed, overfired, reduced	pmed
312	**311**	pit fill	2.2	0	0	fscp	LB	1	1165	1			121	60					burnt stretcher and base	pmed

B.8 Clay tobacco pipe

By Carole Fletcher

Introduction

B.8.1 Archaeological works produced an assemblage of 71 fragments of white ball clay tobacco pipe, weighing 0.543kg. The bulk of the assemblage was recovered from a post-medieval (Period 2.2) clay extraction pit, the remainder were recovered from pits, a sinkhole fill and a single fragment of clay tobacco pipe came from one of the brick kilns. The assemblage has undergone a moderate degree of reworking; no complete pipes were recovered, although complete bowls were found.

Methodology

B.8.2 Terminology used in this report is taken from Oswald's simplified general typology (1975, 37–41) and Hind and Crummy (1988, 47–66) with reference to Atkinson and Oswald (1969 7–11). The catalogue is based on the recording methods recommended by the Society for Clay Pipe Research (SCPR 1994). The plain and undecorated stem fragments have been counted and weighed with length and diameter recorded, burnishing or seam trimming details are only mentioned briefly unless significant. Stem bore analysis has also not been conducted. However, the bulk of the pipe bowls are relatively closely datable. The assessment of the assemblage has tentatively identified and dated the bowls present, only a single set of initials were recorded and no decoration beyond the milling/rouletting of the pipe bowl was found. The clay tobacco pipe and archive are curated by OA East until formal deposition.

Assemblage

B.8.3 This assemblage of 71 fragments of white ball clay tobacco pipe, weighing 0.543kg, comprises fragments of stem and 19 complete, partial or fragmentary bowls. The earliest pipe is an Oswald type 5 (Oswald 1975) bowl from *c*.1640–1660, recovered from Period 2.2 pit **42**, associated with pottery manufacturing waste. No decorated stem fragments were recovered, and rouletting was the only decoration found on bowls. A single example of a partially lead-filled pipe was found in pit **283** (Fig. B8.2), although the reason for this remains obscure and no parallels for this have been identified.

B.8.4 The majority of the pipe bowls recovered are *c*.1660–1680, both Oswald type 6 and 7 (Oswald 1975 37–42). Other pipe bowls are present in low numbers, with single examples of Oswald type 8 and 9 both *c*.1680–1710 (*ibid*). A single example of makers' initials was seen on the heel of a partial bowl (post-1660; Fig. B8.1). The initials IM (*ie* JM) were also found on heels of 18 pipes recovered from the excavation at Duke Street, Norwich, where they appear on the heels of Oswald type 9 bowls (Fletcher 2019), and it seems very probable that the initialled pipe here is also an Oswald type 9. The initials IM may stand for: Jane Morgan, 1693, pipe maker in Norwich (Karshner 1979, 337).

Discussion

B.8.5 The assemblage is very probably, in part, locally produced, since pipe makers were present in Norwich in this period (Atkin 1985). Unfortunately, only a single initialled fragment was recovered, although 18 pipes with the same initials were also recovered from excavations at Duke Street Norwich (Fletcher 2019). The assemblage spans *c*.1640–1710, with the bulk of the assemblage dating to *c*.1660–1680. This small but relatively closely dated assemblage indicates the consumption of tobacco on, or in the vicinity of, the site during this period. This was very probably associated with the brick makers or kiln loaders, although some may relate to the potters producing the post-medieval vessels whose wasters were recovered from the extraction pits, or indeed to the occupants of Newfound Farm.

Retention, dispersal and display

B.8.6 The plain, undecorated stems are recorded in the catalogue and may be discarded. The complete pipe bowls should be retained.

Area	Context	Cut	Period	Form	Total	No stems or stem fragments	No bowls or bowl fragments including heel fragments	Description	Weight kg.	Dating
1	10	**9**	2.2	Plain stem fragment	1	1	0	Length (51mm) of plain, undecorated, burnished stem, seams are still visible but well-trimmed. 9.5mm diameter tapering to 7.6mm	0.005	Not closely datable (NCD)
1	20	**18**	2.2	Plain stem fragment	1	1	0	Short length of plain, undecorated stem, slightly teardrop shaped with somewhat visible seams and possibly lightly burnished. 36mm long, 8.5 x 8.2mm	0.004	NCD
1	43	**42**	2.2	Complete bowl, Oswald type 6	1	0	1	Complete bowl, heel and moderate length of stem (50mm) attached (diameter 9.8mm). The bowl is well formed, all seams have been trimmed, although they are still visible and there is some light burnishing around the area of the seams. The bowl is rouletted around part of its circumference, beginning at and slightly overlapping the seam on the back of the bowl, until approximately halfway around the left side of the bowl, after which it is absent. The heel is sub-rounded, with slight damage where it joins the stem, which may be due to trimming. The bore is relatively centrally placed and there is some discolouration in the bowl, but it is likely to be staining; it is not clear as to whether this pipe was smoked. The bowl is described as a type 6, although it is perhaps slightly straighter than most examples. This slight deviation may indicate that the pipe is local, although this is uncertain, as it does not have an exact parallel in Atkin (Atkin 1985)	0.016	*c.*1660-1680
				Complete bowl, Oswald type 6	1	0	1	Near-complete bowl with chip to rim at front of bowl, and a complete well-formed round heel, slightly damaged joint with stem (short length 12mm, diameter 10mm), where it has been trimmed. The lower seam beyond the heel is poorly trimmed. The upper seam and those on the bowl are more visible. The bowl having been relatively well finished with some light burnishing in the area of the front seam below the rim is a line of rouletting that is relatively deep on the back of the bowl and almost absent at the front of the bowl. The rim itself has been trimmed externally. There is a hairline crack running from the damaged rim to about halfway down the bowl on the right side of pipe and the trimming of the seam and subsequent light burnishing has left the surface uneven	0.014	*c.*1660-1680
				Complete bowl, Oswald type 6	1	0	1	Near-complete bowl with large chip (triangular) to rim on the right side of the bowl, with a complete well-formed slightly sub-round heel with an obvious visible and not well trimmed seams running across the heel. Somewhat uneven at joint with stem, slightly sub-rounded stem (11 x 10.8mm, short length 27mm, misshapen due to what appears to be relatively heavy trimming flattening the stem on either side of the seam where it has been trimmed. The upper seam trimming has also been somewhat flattened. The seam on the front of the bowl is visible and has been lightly burnished all around it. Burnishing is more thorough on the back of the bowl where the seam is more carefully hidden as a line of rouletting below the rim and only survives for	0.015	*c.*1660-1680

Area	Context	Cut	Period	Form	Total	No stems or stem fragments	No bowls or bowl fragments including heel fragments	Description	Weight kg.	Dating
								short length on the back of the bowl. The rim of the bowl has been trimmed. Externally there is little if any discolouration internally the bowl or on the bowl, which is somewhat off-centre; it is unclear if the pipe has been smoked. The bowl having been relatively well finished with some light burnishing in the area of the front seam below the rim is a line of rouletting that is relatively deep on the back of the bowl and almost absent at the front of the bowl. The rim itself has been trimmed externally. There is a hairline crack running from the damaged rim to pottery halfway down the bowl on the right side of pipe and the trimming of the seam and subsequent light burnishing has left the surface uneven		
				Incomplete bowl	2	0	1	Incomplete bowl missing most of the rim and front of bowl and broken into. A short section of rim survives at the back of the bowl with traces of rouletting, with a complete well-formed sub-rounded heel, and short length of stem (8mm, slightly sub-rounded, diameter roughly 10.4mm). The bowl having been relatively well finished with some light burnishing and well-trimmed seams. The interior of the bowl is somewhat grey, the discolouration extending into the fabric pipe	0.010	*c.*1660-1680
				Plain stem fragment	1	1	0	Length of plain stem (58mm), undecorated, slightly oval, 7.9 x 7.3mm, tapering to 6.9-6.8mm. The stem is irregular, as if slightly squeezed when the clay was still malleable. The 'squeezed' area feels comfortable between finger and thumb, as if someone was attempting to form a barley twist but did not quite succeed. Trimmed seams, although still visible, and lightly burnished. Grey and burnt surfaces are probably the result of burning to clean the bore	0.003	NCD
				Plain stem fragment	1	1	0	Length (117mm) of plain, undecorated, slightly curved stem. Slightly diamond shaped, 12 x 11mm. tapering to 9.6 x 8.5mm. Seams are apparent in the somewhat diamond-shaped profile, but well-trimmed. Bore very off-centre, so close to the edge of the stem that the wall of the stem has broken to expose the bore. The stem appears to have been wiped rather than burnished	0.015	NCD
				Plain stem fragment	1	1	0	Length (88mm) of plain, undecorated, slightly curved stem. Circular profile with central bore. 8.4mm in diameter, tapering to 7.1mm, neatly trimmed seams	0.007	NCD
				Plain stem fragment	2	1	0	Length (84mm) of plain, undecorated stem, broken in two, slightly oval in profile. 10.4 x 9.6mm in diameter, tapering to 9.4 x 8.9mm. Pale grey surrounding bore, indicating use. Neatly trimmed seams and lightly burnished	0.009	NCD
				Plain stem fragment	1	1	0	Length (56mm) of plain, undecorated stem, slightly oval in profile. 10.4 x 9.4mm in diameter, tapering to 9.2 x 8.9mm. Trimmed seams, resulting in a flattened area to the side of the remaining visible seam	0.007	NCD
				Plain stem fragment	1	1	0	Length (50mm) of plain, undecorated stem, slightly oval in profile, curving. Trimmed seams and lightly burnished. Appears somewhat grey and	0.005	NCD

Area	Context	Cut	Period	Form	Total	No stems or stem fragments	No bowls or bowl fragments including heel fragments	Description	Weight kg.	Dating
								discoloured. very probably due to burning to clean the pipe bore. 9.3mm in diameter, tapering to 8.6mm		
				Plain stem fragment	1	1	0	Length (38mm) of plain, undecorated stem. Surface is grey and discoloured from burning. Well-trimmed seams and lightly burnished. 8.6mm in diameter, tapering 8.2mm	0.003	NCD
				Plain stem fragment	1	1	0	Length (39mm) of plain, undecorated stem. Slightly oval 9.6 x 8.8mm, tapering to 8.9 x 8.6mm. Well-trimmed seams and lightly burnished around seams	0.004	NCD
				Plain stem fragment	1	1	0	Length (33mm) of plain, undecorated stem, broken at join with bowl. Slightly oval 10 x 9.3mm in diameter, tapering to 9.3 x 8.8mm, seams are trimmed, lower seam very visible, lightly burnished around upper seam. Off-centre narrow bore by comparison with most of the stems recovered	0.004	NCD
				Plain stem fragment	1	1	0	Length (33mm) of plain, undecorated stem. Externally somewhat grey due to burning and bore also grey. Slightly oval 9.9 x 9.5mm in diameter, tapering to 9.2 x 9mm	0.004	NCD
				Plain stem fragment	1	1	0	Length (34mm) of plain, undecorated stem, internally grey, surface white with slight heat alteration. 10 x 9.3mm in diameter, tapering to 9.3 x 8.8mm	0.004	NCD
				Plain stem fragment	1	1	0	Length (32mm) of plain, undecorated stem. 6.9mm in diameter, well-trimmed seams and slightly burnished	0.002	NCD
				Plain stem fragment	1	1	0	Length (24mm) of plain, undecorated stem with some heat alteration. Bore off-centre, moderately well-trimmed seams, 10.6 x 9.7mm in diameter	0.003	NCD
				Plain stem fragment	1	1	0	Short length (22mm) of plain, undecorated stem, diameter 6.3mm tapering to 5.7mm. From close to the mouthpiece of the pipe. Seams trimmed but one still visible and lightly burnished	0.001	NCD
1	58	**56**	2.2	Plain stem fragment	1	1	0	Length of plain, moderately abraded stem (72mm), broken where stem begins to flare outwards at heel of bowl, 11mm tapering to 9mm in dimeter. One seam has been trimmed, leaving a flattened line, the other appears un-trimmed. There is a fault in the stem that may have been part of the mould as the seam runs across the fault	0.010	NCD
1	64	**317**	2.2	Near-complete bowl, Oswald-type 6	1	1	0	Near-complete bowl with a chip in the rim on the back of bowl. Relatively thick-walled below rim is an incomplete line of rouletting running from the right side through to the left side across the back of the bowl. The line cannot be seen on the front of the bowl, where the trimming of the seam has resulted in flat planes and a ridge where the knife has been pulled up the rear seam on the bowl. On the stem, the surviving length of which is 21mm, the seams are neatly done. The bowl and stem are burnished. Stem bore is moderately sized, smaller than some of the other bores and off-centre towards the top of the pipe stem. Stem diameter is 10.6mm, the heel has been cut flat with, or parallel to, the stem and is teardrop shaped and neatly finished making it more similar to a type 7 bowl. However, as both bowl types	0.016	*c.*1660-1680

Area	Context	Cut	Period	Form	Total	No stems or stem fragments	No bowls or bowl fragments including heel fragments	Description	Weight kg.	Dating
								have the same date range this is not as significant as it seems, and as with other bowls in the assemblage, may indicate it is a local pipe. A similar bowl and heel is illustrated in Atkin and recorded as 17th century (Atkin 1985 p126 fig2, 8)		
				Plain stem fragment	1	1	0	Length (51m) of plain, undecorated stem with some heat discolouration. Bore centrally placed, moderately well-trimmed seams, slightly oval, 8.1 x 7mm, tapering to 7 x 6.4mm	0.004	NCD
1	67	**42**	2.2	Near-complete bowl (Oswald type 7) and short stem fragment	1	0	1	Complete bowl with a very short (13mm) stub of stem still attached. Rouletted at the back of the bowl only	0.015	*c.*1660-1680
				Near-complete bowl (Oswald type 5) and stem fragment	1	0	1	Near-complete bowl and heel with a short (25mm) length of plain stem still attached. Rouletted around the bowl just below the lip, dropping slightly to the front and right side and not meeting up with where it started. Teardrop shaped heel and front of bowl greyed	0.015	*c.*1640-1660
				Incomplete bowl (probably Oswald type 7) and stem fragment	1	0	1	Incomplete bowl, damaged on both sides and particularly the front, entirely missing rim. An oval heel and 45mm of plain stem survive. Slightly greyed on the right side of bowl. Definite signs of use	0.017	*c.*1660-1680
				Incomplete bowl (probably Oswald type 7)	1	0	1	Incomplete bowl, damaged on left side, missing rim on that side. Rouletted on surviving back of bowl, just below the rim. Most of an oval heel survives. Appears unused	0.009	*c.*1660-1680
				Stem fragment with complete heel	1	0	1	Length of plain stem (35mm) with complete oval heel, flaring out where it would have joined the bowl. Interior of stem is grey	0.008	Uncertain
				Plain stem fragment	1	1	0	Length of somewhat curved plain stem (58mm), undecorated, slightly oval 8.9 x 8.2mm, tapering to 7.6 x 7.3mm, well-trimmed seams, relatively centrally placed bore	0.005	NCD
				Plain stem fragment	1	1	0	Length of somewhat curved plain stem (51mm), undecorated, slightly oval 10.3 x 9.6mm, tapering to 9.7 x 9.5mm, poorly trimmed seams, slightly prominent, relatively centrally placed bore grey from use	0.006	NCD
				Plain stem fragment	1	1	0	Length of plain stem (50mm), undecorated, circular profile 9mm, tapering to 8.8mm, well-trimmed seams, relatively centrally placed bore. blackened from use	0.005	NCD
				Plain stem fragment	1	1	0	Length of plain stem (48mm), undecorated, slightly oval 9.5 x 9.2mm, tapering to 8.8 x 8.3mm, well-trimmed seams, somewhat off-centre bore	0.005	NCD
				Plain stem fragment	1	1	0	Length of plain stem (41mm), undecorated, distinctly oval 8.9 x 8.3mm, tapering to 8.2 x 7.8mm, well-trimmed seams and lightly burnished around seams, relatively centrally placed bore, grey from use	0.003	NCD
				Plain stem fragment	1	1	0	Length of plain stem (31mm), undecorated, slightly oval 10.1 x 10mm, tapering to 10 x 9.9mm, well-trimmed seams. Interior grey in section, relatively centrally placed bore	0.003	NCD

Area	Context	Cut	Period	Form	Total	No stems or stem fragments	No bowls or bowl fragments including heel fragments	Description	Weight kg.	Dating
				Plain stem fragment	1	1	0	Length of plain stem (29mm), undecorated, slightly oval 7.7 x 7.2mm, tapering to 7.2mm, well-trimmed seams, relatively centrally placed bore	0.002	NCD
				Plain stem fragment	1	1	0	Length of plain stem (26mm), undecorated, fairly circular profile 8.8mm in diameter, well-trimmed seams, relatively centrally placed bore	0.003	NCD
1	68	**42**	2.2	Near complete bowl, Oswald-type 7	1	0	1	Near-complete bowl, broken at stem/heel with only a small section of flat heel surviving. Rouletted below the rim from front to back but absent on the right side of the bowl. The bowl is grey and discoloured, very probably due to the pipe having been burnt to clear or clean the bore/bowl	0.012	*c.*1660-1680 (6/64-7/64)
1	69	**42**	2.2	Plain stem fragment	1	1	0	Length (92mm) of plain, undecorated stem, slightly oval, tapering from 10.3-8.5 x 8.2mm, off-centre bore. Damaged, with large flakes missing from the stem and stained by iron rich clay at the wider end. Well-trimmed seams and lightly burnished	0.009	NCD
2	129	**128**	1	Plain stem fragment with fragment of heel	1	0	1	Length (72mm) of plain, undecorated stem, tapering from 12.2-11mm. Slightly oval, broken at point of formation of heel and bowl, however, not enough of either survives to identify the likely form of the bowl. The upper seam is well trimmed, the lower less so, especially as it approaches the heel. The bore is slightly blackened and centrally placed in the stem, until it reaches the bowl end of the stem, where it is very much off to one side, almost against the stem wall	0.011	NCD
1	280	**279**	2.2	Plain stem fragment	1	1	0	Length of plain stem (46mm), undecorated, slightly oval, 9.5-9.3mm tapering to 9.1-8.4mm. Well-trimmed seams, although still visible, and lightly burnished grey discoloured and burnt, probably due to cleaning. Bore is filled with chalk or plaster	0.005	NCD
				Fragment of bowl	1	0	1	Fragment of bowl wall and rim that is trimmed and chamfered internally, possibly an Oswald type 7	0.003	*c.*1660-1680
				Complete bowl, Oswald type 8	1	0	1	Complete bowl with minor chip to rim edge. Ring of rouletting below the rim edge (fades slightly towards front of the bowl) well-formed rounded heel with slight roughness to left side which might be trimming damage. Neatly trimmed seams, only visible at heel stem junction, short length of stem, broken shortly after junction with heel. Lightly burnished	0.019	*c.*1680-1710
1	282	**279**	2.2	Plain stem fragment	1	1	0	Length of plain stem (40mm), undecorated, slightly oval 7.7 x 7mm, tapering to 6.4-6.9mm, well-trimmed seams and lightly burnished	0.002	NCD
				Plain stem fragment	1	1	0	Length of plain stem (58mm), undecorated, diameter 9.6mm, tapering to 8.9mm. Well-trimmed seams and lightly burnished around seams	0.005	NCD
1	284	**283**	2.2	Plain stem fragment	1	1	0	Length of plain stem (50mm), undecorated, slightly oval 8.9 x 8.8mm, tapering to 8.4 x 7.9mm, well-trimmed seams, one slightly prominent and lightly burnished, relatively centrally placed bore, grey from use	0.005	NCD
				Plain stem fragment	1	1	0	Length of plain stem (45mm), moderately abraded, undecorated, diameter 8.8mm, tapering to 8.4mm, well-trimmed seams. The bore (slightly oval) is poorly placed in the stem, very much off to one side against the stem wall	0.004	NCD

Area	Context	Cut	Period	Form	Total	No stems or stem fragments	No bowls or bowl fragments including heel fragments	Description	Weight kg.	Dating
				Plain stem fragment	1	1	0	Length of plain stem (49mm), undecorated, diameter 10.3mm, tapering to 9.8mm, becoming more oval as it tapers. Well-trimmed seams and light burnishing give a striped appearance to part of the stem	0.006	NCD
1	285	**283**	2.2	Plain stem fragment and partial heel/bowl	1	0	1	Short length of stem (38mm 9.6mm diameter) with trimmed seams and fragment of bowl back wall, partial base and near-complete teardrop-shaped heel (with initials) on each side of the heel. The left appears to be an I and the right an M (IM). The initial 'J' was almost always depicted as an 'I' until the mid-19th century, after which the 'J' was sometimes used http://www.pipearchive.co.uk/pdfs/howto/Guidelines%20Ver%201_2%20030917.pdf There are 18 examples of the initials IM on pipe heels in the assemblage from Duke Street Norwich (Fletcher 2019) and, where the pipe form could be recorded, these were identified as Oswald type 9 bowls *c*.1680-1710 (Oswald 1975). No pipe maker IM or JM was identified at the time of writing, however, further work on the Duke Street assemblage by the relevant specialist may identify a maker. This is the only initialled pipe in this assemblage and, if a type 9, is one of the later pipes in the assemblage	0.008	Post-1660, possibly *c*.1680-1710
				Incomplete bowl Oswald type 9	1	0	1	Short length of stem (20mm, 11mm diameter) and complete back wall and partial sides of bowl front of the bowl is almost entirely missing with a large jagged break, having also removed part of the rounded heel. Seams are all well-trimmed and below the lightly trimmed rim is a line of rouletting. The internal surface of the pipe bowl and, partially, the outer surface are grey and discoloured, as if indicating the pipe was smoked and burnt to clean the bowl Bore is centrally placed	0.013	*c*.1680-1710
				Plain stem fragment	1	1	0	Length of plain stem (77mm, diameter 10.6mm, tapering to 9.4mm, slightly sub-rounded). The seams are relatively well trimmed, with some flattening to one surface due to trimming. There is no discolouration of the pipe stem	0.009	NCD
				Plain stem fragment	1	1	0	Length of plain stem (54 mm) with a diameter of 11.4 mm, tapering to 10.4mm. One end has broken close to the junction of stem and heel/bowl as it is flaring. Seams are slightly trimmed, but what is presumed to be the lower seam is quite visible and still relatively prominent. The outer surface of the pipe is somewhat grey and discoloured from burning	0.008	NCD
				Plain stem fragment	1	1	0	Length of plain stem (62 mm, diameter 9.9mm, tapering to 9mm mm, slightly sub-rounded). The seams are trimmed, with some flattening to one surface due to trimming and the other seam is still relatively highly raised, like burnishing. No discolouration of the stem	0.007	NCD
				Plain stem fragment	1	1	0	Length of plain stem (62 mm, slightly oval 10.3 x 9.6mm tapering to 9.2 x 8.7mm). The seams are trimmed, with some flattening, but both seams are still visible, and one is slightly raised; the bore is off-centre and the stem is not discoloured	0.007	NCD

Area	Context	Cut	Period	Form	Total	No stems or stem fragments	No bowls or bowl fragments including heel fragments	Description	Weight kg.	Dating
				Plain stem fragment	1	1	0	Length of plain stem (42mm), undecorated, slightly oval 9.2 x 8.7mm, tapering to 8.7 x 8.4mm. Trimmed seams, slightly grey from burning	0.004	NCD
1	286	283	2.2	Near-complete bowl (Oswald type 7) and short stem fragment	1	0	1	Complete bowl with a short (31mm) length of stem still attached, and a complete oval/sub-rectangular heel. Rouletted around the bowl just below the rim, with gap around the seam on the front of the bowl. Definite signs of use. Well-trimmed seams, causing some flattening of the upper surface at junction with the bowl at the back of the pipe	0.018	*c.*1660-1680
				Partial bowl (probably Oswald type 6) and short stem fragment	1	0	1	Partial bowl with a short (27mm) length of stem still attached, damaged on both sides, particularly the front and right of the bowl; only a small fragment of the rim survives, the surviving fragment is unlined or rouletted. The bowl wall is extremely thick. A complete oval heel survives, with well finished seams	0.014	*c.*1660-1680
				Near-complete bowl (Oswald type 7) and stem fragment	2	0	1	Near-complete bowl and heel with 80mm of plain stem, broken at the join with bowl, possibly pre-deposition. Rouletted around the bowl just below the lip, which is slightly rough at the back of the bowl as if the clay was a little too wet when the rouletting was applied. Oval heel. Back and right of bowl and top part of stem are slightly greyed, very probably the result of burning to clean the bowl and bore. Well finished seams	0.025	*c.*1660-1680
				Incomplete bowl, possibly an Oswald type 6 and two short stem fragments, joined by lead	1	0	1	Incomplete bowl, missing rim and upper 50-60% of the bowl and at the front of the bowl a missing V-shaped fragment almost to the heel, more damaged on front. A complete oval heel survives, with the mould seam still visible on the heel and back of stem. Some signs of use. It appears that sometime after its final use, the pipe had molten lead poured into the bowl, partially filling it and running into the pipe stem. This sudden heating seems to have cracked the stem in several places, allowing the cooling lead to expand slightly, pushing the broken stem fragments apart, while still leaving them connected. The bowl remains partially filled with lead and the sections of stem are likewise connected by lead	0.023	*c.*1660-1680
				Stem fragment with partial heel and bowl	1	0	1	Partial bowl with a short (25mm) length of stem still attached. Extensively damaged, most of the bowl is missing. A partial heel survives, probably originally teardrop shaped. No signs of use	0.007	NCD
				Plain stem fragment	1	1	0	Length of plain stem (78 mm, slightly oval, 8.4 x 8.9mm, tapering to 6.9 x 7.5mm). The seams are relatively poorly trimmed with some burnishing to one seam. Some discolouration of stem	0.007	NCD
				Plain stem fragment	1	1	0	Length of plain stem (54 mm slightly oval at wider end, teardrop shaped at narrower end, 8.4 x 8.9mm, tapering to 6.9 x 7.5mm). The poorly trimmed seams are still relatively prominent and are the cause of the change in profile	0.004	NCD
				Plain stem fragment	1	1	0	Length of plain stem (34mm, oval 6.9 x 5.7mm, tapering to 6.5 x 5.5mm). The seams are poorly trimmed with some flattening to one surface due to trimming; one seam is still relatively raised. Some discolouration of the stem	0.002	NCD

Area	Context	Cut	Period	Form	Total	No stems or stem fragments	No bowls or bowl fragments including heel fragments	Description	Weight kg.	Dating
				Plain stem fragment	1	1	0	Length of plain stem (33mm, slightly oval 9.8 x 9.5mm, tapering to 9.7 x 9.1mm). The seams are trimmed, with some flattening but both seams are still visible, and one is slightly raised	0.004	NCD
				Plain stem fragment	1	1	0	Length of plain stem (42mm slightly oval 8.6 x 7.9mm, tapering to 8.2 x 7.8mm). Fairly well trimmed seams	0.002	NCD
1	287	**283**	2.2	Complete bowl Oswald type 6	1	0	1	Complete bowl and slightly teardrop shaped heel, unmarked, neatly finished, lined around the rim, although very faint on left side of the bowl. Seams trimmed but still visible, especially on underside of stem and on heel and at heel/bowl join on front of bowl. Lightly burnished over all of pipe stem and bowl, which is internally grey suggesting use	0.016	*c.*1660-1680
1	290	**42**	2.2	Plain stem fragment	1	1	0	Length of plain stem (48mm), moderately abraded, undecorated, diameter 7.7mm tapering to 6.4 x 6.8mm, becoming more oval as it tapers towards the mouthpiece. Trimmed seams	0.003	NCD
				Plain stem fragment	1	1	0	Length of plain stem (70.5mm), undecorated, slightly oval 10.6 x 10.3mm, tapering to 9.5 x 8.4mm. Well-trimmed seams although still visible, and lightly burnished around the seams, relatively centrally placed bore. Grey and burnt around bore, probably due to use	0.009	NCD
1	312	**311**	2.2	Incomplete bowl	1	0	1	Partial bowl, all of the upper part having been lost, thick walled, to back of bowl a complete somewhat lopsided and slightly irregular heel survives, attached to a short length of slightly oval stem (22mm, 10.2 x 9.3mm). All of the seams are neatly trimmed and lightly burnished around them, with some flattening of the bowl due to the trimming. The edge of the heel has been left somewhat rough and the base of the foot shows drag marks. There is no discolouration to indicate it has been smoked. The form is uncertain but is very probably an Oswald type 6 (Oswald 1975), although it not an exact match. It may, like some of the bowls from pit **42**, be a local pipe, although this is uncertain, as it does not have an exact parallel in Atkin (Atkin 1985)	0.011	17th century
					71	**46**	**22**		**0.543**	

Table B8.1: Clay tobacco pipe by context

APPENDIX C ENVIRONMENTAL REPORTS

C.1 Animal bone

By Hayley Foster

Introduction and Methodology

C.1.1 The animal bone represents a small assemblage of faunal remains weighing 6.36kg in total. There are 100 identifiable, phased fragments retrieved via hand-collection. The species represented include cattle (*Bos taurus*), sheep/goat (*Ovis/Capra*), horse (*Equus caballus*), pig (*Sus scrofa),* rabbit (*Oryctolagus cuniculus),* dog *(Canis familiaris)* and domestic fowl (*Gallus gallus*). Remains are primarily from Period 2.2, dating to the post-medieval (early/mid 17th to 18th century) and one fragment from Period 1.1 dating to the Neolithic to Iron Age periods.

C.1.2 The evaluation produced a further eleven fragments of animal bone (159g) from pit fill 29 in Trench 5 (18th century). The bones showed no obvious signs of butchery, but were though to probably be from cattle, and so it seemed likely that these were the remains of food waste (Sillwood 2013, 45).

C.1.3 The method used to quantify this assemblage was based on that used for Knowth by McCormick and Murray (2007) which is modified from Albarella and Davis (1996). Identification of the faunal remains was carried out at Oxford Archaeology East. References to Hillson (1992), Schmid (1972), von den Driesch (1976) were used where necessary.

C.1.4 Several methods of ageing were implemented when analysing the mammalian bone remains, including observing evidence of dental eruption and wear and epiphyseal fusion. When analysing tooth wear of sheep/goat, tooth wear stages by Payne (1973 and 1987) were implemented. Tooth wear stages by Grant (1982) were implemented when assessing wear for cattle and pig. Higham (1967) mandibular wear stages (MWS) were assigned to loose mandibular third molars (M3s) and mandibles with the innermost tooth still present. The Higham wear stages are used to estimate a minimum age of an individual animal. The state of epiphyseal fusion is determined by examining the metaphysis and diaphysis of a bone. Fusion was recorded according to Silver (1970) and Schmid (1972) for cattle, sheep, and pig.

C.1.5 Measurements were taken according to the specifications of von den Driesch (1976), Payne and Bull (1988) and Davis (1992). Taphonomy was noted where present, however only one example of burning was observed, on a sheep humerus from pit/sinkhole **128**.

Results of analysis

C.1.6 The assemblage is in a fair condition with moderate levels of fragmentation. Material was recovered from Period 2.2 (post-medieval) pits (**18**, **42**, **259**, **283**, **286**, **293**) and ditch **4**. The single fragment attributed to Period 1.1 is from pit/sinkhole **128**.

C.1.7 Sheep/goat remains make up the highest percentage of the NISP followed by horse and cattle. It should be noted that the vast majority of sheep remains were retrieved from Period 2.2 pits **18** and **259** and were partial skeletons of neonate lambs.

Species	NISP	NISP%	MNI	MNI%
Sheep/Goat	47	47.0	3	25.0
Horse	24	24.0	3	25.0
Cattle	18	18.0	2	16.7
Pig	8	8.0	1	8.3
Dog	1	1.0	1	8.3
Bird	1	1.0	1	8.3
Rabbit	1	1.0	1	8.3
TOTAL	100	100.0	12	100.0

Table C1.1: Number of identifiable specimens (NISP) and minimum number of individuals (MNI) of the total assemblage.

C.1.8 Horse remains are from four separate features and consist of both cranial elements and meat bearing elements. Only one specimen contains an unfused epiphysis indicating an animal ageing to less than 3.5 years of age at death.

C.1.9 Cattle are the third most frequent species recovered, with a variety of elements represented in most contexts where bone is present. A single mandible is aged to 24–30 months of age at death, while there are two unfused distal radii, which fuse before 42–48 months of age.

C.1.10 Pig remains are solely from pit **18.** The remains consist of a partial piglet skeleton of 4–7 weeks of age at death according to the mandible wear data. As bone belonging to young animals is often porous and fragile, the piglet may have been buried complete.

C.1.11 Other species including dog, domestic fowl and rabbit are each represented by a single bone fragment.

C.1.12 Metrical data was minimal due to the high levels of fragmentation (Table C1.3), and estimated shoulder height could not be calculated as no complete bones were retrieved.

Discussion

C.1.13 This small assemblage provides insight into disposal of faunal remains and husbandry activity. Remains were primarily disposed of in post-medieval pits. The presence of two partial skeletons of lambs in two separate features suggests that on-site breeding was taking place. Based on epiphyseal fusion the lambs belong to neonate animals, so were perhaps culled at birth due to a surplus. The partial pig skeleton from pit **18** was also from a young animal of 4–7 weeks, which suggests pig breeding was occurring on site. The small amount of ageing data from cattle suggests they were slaughtered primarily for meat, as there was a lack of animals over 50 months plus. Horses would have been exploited for traction power as working animals.

C.1.14 The farming activity represented by the faunal remains seems to have been broadly contemporary with the pottery manufacturing occurring on site during the 17th century, or possibly extending into the 18th century.

C.1.15 This assemblage is unusual as a vast portion of the remains belong to partial skeletons of young animals, therefore there are few comparable assemblages. The faunal remains from Heigham Street, Norwich (Weinstock 2002), shows one similar trend with cattle and horses, in that during the post-medieval period cattle became exploited more for meat as the importance of horses as working animals grew. Gaining insight into size changes in animals is not possible with this assemblage due to high fragmentation and the presence of fragile young partial skeletons.

Retention, Dispersal, and Display

C.1.16 The assemblage should be considered for retention, as the animal remains represented by this assemblage are primarily datable to the post-medieval period (predominantly 17th century) and they provide an insight into settlement activity, diet, and husbandry practices in this region of Norfolk.

Summary catalogues and tables

Context	Cut	Period	Species	Element
5	4	2.2	Horse	Humerus
5	4	2.2	Horse	Phalanx 2
20	18	2.2	Sheep/Goat	Femur
20	18	2.2	Pig	Femur
20	18	2.2	Pig	Femur
20	18	2.2	Sheep/Goat	Femur
20	18	2.2	Sheep/Goat	Femur
20	18	2.2	Pig	Humerus
20	18	2.2	Pig	Humerus
20	18	2.2	Sheep/Goat	Humerus
20	18	2.2	Sheep/Goat	Humerus
20	18	2.2	Sheep/Goat	Loose Mandibular Tooth
20	18	2.2	Sheep/Goat	Loose Maxillary Tooth
20	18	2.2	Sheep/Goat	Loose Maxillary Tooth
20	18	2.2	Sheep/Goat	Loose Maxillary Tooth
20	18	2.2	Sheep/Goat	Metacarpal 1
20	18	2.2	Sheep/Goat	Metacarpal 1
20	18	2.2	Sheep/Goat	Metacarpal 1
20	18	2.2	Sheep/Goat	Mandible
20	18	2.2	Sheep/Goat	Mandible
20	18	2.2	Pig	Mandible
20	18	2.2	Dog	Metapodial Unsided
20	18	2.2	Sheep/Goat	Metatarsal 1
20	18	2.2	Sheep/Goat	Metatarsal 1

Context	Cut	Period	Species	Element
20	18	2.2	Sheep/Goat	Metatarsal 1
20	18	2.2	Sheep/Goat	Pelvis
20	18	2.2	Sheep/Goat	Pelvis
20	18	2.2	Sheep/Goat	Pelvis
20	18	2.2	Sheep/Goat	Radius
20	18	2.2	Pig	Radius
20	18	2.2	Sheep/Goat	Radius
20	18	2.2	Pig	Scapula
20	18	2.2	Sheep/Goat	Scapula
20	18	2.2	Sheep/Goat	Scapula
20	18	2.2	Sheep/Goat	Scapula
20	18	2.2	Sheep/Goat	Tibia
20	18	2.2	Sheep/Goat	Tibia
20	18	2.2	Sheep/Goat	Tibia
20	18	2.2	Sheep/Goat	Tibia
20	18	2.2	Pig	Tibia
20	18	2.2	Rabbit	Tibia
20	18	2.2	Sheep/Goat	Ulna
43	18	2.2	Cattle	Mandible
43	18	2.2	Cattle	Phalanx 1
43	18	2.2	Cattle	Phalanx 3
43	18	2.2	Cattle	Radius
68	42	2.2	Cattle	Phalanx 1
68	42	2.2	Cattle	Phalanx 3
68	42	2.2	Cattle	Radius
68	42	2.2	Cattle	Radius
68	42	2.2	Cattle	Ulna
129	128	1.1	Sheep/Goat	Humerus
261	259	2.2	Sheep/Goat	Humerus
261	259	2.2	Sheep/Goat	Humerus
261	259	2.2	Sheep/Goat	Metacarpal 1
261	259	2.2	Sheep/Goat	Metacarpal 1
261	259	2.2	Sheep/Goat	Phalanx 1
261	259	2.2	Sheep/Goat	Phalanx 1
261	259	2.2	Sheep/Goat	Radius
261	259	2.2	Sheep/Goat	Radius
261	259	2.2	Sheep/Goat	Scapula
261	259	2.2	Sheep/Goat	Scapula
261	259	2.2	Sheep/Goat	Ulna
261	259	2.2	Sheep/Goat	Ulna
280	279	2.2	Cattle	Loose Mandibular Tooth
280	279	2.2	Sheep/Goat	Metatarsal 1
282	279	2.2	Horse	Metatarsal 1

Context	Cut	Period	Species	Element
282	279	2.2	Cattle	Radius
284	283	2.2	Sheep/Goat	Femur
284	283	2.2	Sheep/Goat	Metatarsal 1
285	283	2.2	Sheep/Goat	Loose Maxillary Tooth
285	283	2.2	Cattle	Mandible
285	283	2.2	Cattle	Phalanx 3
286	283	2.2	Cattle	Femur
286	283	2.2	Horse	Humerus
286	283	2.2	Horse	Loose Maxillary Tooth
286	283	2.2	Horse	Loose Maxillary Tooth
286	283	2.2	Horse	Loose Maxillary Tooth
286	283	2.2	Horse	Loose Maxillary Tooth
286	283	2.2	Horse	Loose Maxillary Tooth
286	283	2.2	Horse	Loose Maxillary Tooth
286	283	2.2	Horse	Loose Maxillary Tooth
286	283	2.2	Bird (Domestic Fowl)	Tarso-Metatarsus
286	283	2.2	Horse	Radius
286	283	2.2	Cattle	Radius
286	283	2.2	Cattle	Scapula
286	283	2.2	Cattle	Tibia
294	293	2.2	Horse	Calcaneus
294	293	2.2	Horse	Humerus
294	293	2.2	Horse	Humerus
294	293	2.2	Horse	Humerus
294	293	2.2	Horse	Metatarsal 1
294	293	2.2	Horse	Phalanx 1
294	293	2.2	Horse	Radius
294	293	2.2	Horse	Radius
294	293	2.2	Horse	Radius
294	293	2.2	Cattle	Scapula
294	293	2.2	Horse	Scapula
294	293	2.2	Horse	Scapula
294	293	2.2	Horse	Tibia

Table C1.2: List of specimens

Context	Period	Species	Element	Bp	SD	Bd	BT	HTC
294	2.2	Horse	Humerus	88.8				53
294	2.2	Horse	Humerus			77	74.2	55.2
280	2.2	Sheep/Goat	Metatarsal 1		11.1	22.7		
282	2.2	Horse	Metatarsal 1			47.2		
286	2.2	Cattle	Radius	77.5		71		
294	2.2	Horse	Radius					
294	2.2	Horse	Radius	79				
68	2.2	Cattle	Radius	74				
68	2.2	Cattle	Radius					

Table C1.3: Measurements (in mm) for elements

Abbreviation	Description
Bd	Greatest breadth of distal end
BT	Greatest breadth of trochlea
HTC	Height of trochlea
Bp	Greatest breadth of proximal end
SD	Smallest breadth of diaphysis

Table C1.4: Abbreviations for table of measurements

		Period 2.2		Total
		Unfused	Fusing or Fused	
Cattle	Early fusion	2	6	8
	Mid fusion		1	1
	Late fusion	2	3	5
Sheep/goat	Early fusion	17		17
	Mid fusion	10	2	12
	Late fusion	14	1	15
Pig	Early fusion	4		4
	Mid fusion	1		1
	Late fusion	8		8

Table C1.5: Epiphyseal fusion ageing for cattle, sheep/goat and pig

C.2 Environmental samples

By Rachel Fosberry

Introduction and methodology

C.2.1 Twelve samples were taken from a range of undated and dated features spanning the prehistoric to post-medieval periods. The samples were processed by tank flotation using modified Siraff-type equipment for the recovery of preserved plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) of the samples was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve. A magnet was dragged through each residue fraction for the recovery of magnetic residues prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds.

C.2.2 The dried flots were subsequently sorted using a binocular microscope at magnifications up to x 60 and an abbreviated list of the recorded remains are presented in Tables C2.1–3.

Quantification

C.2.3 For the purpose of this assessment, items such as seeds and cereal grains have been scanned and recorded qualitatively according to the following categories:

= 1–5, ## = 6–25, ### = 26–100, #### = 100+ specimens

C.2.4 Items that cannot be easily quantified such as charcoal and molluscs have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

U=untransformed

Results

C.2.5 Preservation of plant remains is predominantly by carbonisation and is limited to wood charcoal. Seeds of elderberry (*Sambucus nigra*) occur in an untransformed state. These seeds have an extremely tough outer coat (testa) and are particularly resistant to decay.

Period 1: Prehistoric

C.2.6 Samples were taken from two prehistoric pits and a sinkhole located in Area 2. Sample 5, fill 125 of Period 1.2 pit **123** consists of a moderate amount of wood charcoal with frequent untransformed seeds of elderberry. Sample 4, fill 101 of pit **98**, produced oak (*Quercus* sp.) charcoal (identified by Denise Druce) and also contains charred hazelnut (*Corylus avellana*) shell fragments. A sample sent for radiocarbon dating returned a date in the Late Neolithic to Early Bronze Age period (2305-2190 cal BC @85.4% confidence, SUERC-89927; App. D). Sample 6, fill 134 of Period 1.1 sinkhole **132** contains a small amount of wood charcoal only.

Sample No.	Context No.	Cut No.	Period	Area	Feature type	Flot Volume (ml)	Weed Seeds	Charcoal volume (ml)	Pottery
4	101	98	1.1	2	Pit	20	#	35	0
5	125	123	1.2	2	Pit	125	####u	120	0
6	134	132	1.1	2	Sinkhole	5	0	5	0

Table C2.1: Samples from Period 1 prehistoric deposits

Period 2: Post-medieval

C.2.7 Samples taken from features in Area 1 were associated with post-medieval brick/tile kilns (Period 2.1) and pottery manufacture/waste disposal (Period 2.2). Wood charcoal is present in most of the samples as evidence of fuel (see App. C.3). No other plant remains are preserved.

Sample No.	Context No.	Cut No.	Master Number	Period	Area	Feature type	Function	Charcoal volume (ml)	Pottery	CBM
1	29	N/A	34	2.1	1	Kiln base	Disuse/Firing Ash	150	#	#####
2	58	N/A	52	2.2	1	Kiln base	Demolition Layer/ backfill	950	0	#####
3	94	21	0	2.1	1	Kiln base	Firing Waste	1	#	#####
8	238	242	242		1	Kiln base	kiln floor remnant	20	#	##
9	237	241	241	2.1	1	Kiln base	floor of kiln	0	0	####
10	287	283	0	2.2	1	Pit	dump	5	##	#
11	296	295	0	2.2	1	Pit	Backfill	800	0	0
12	312	311	0	2.2	1	Pit	backfill	50	##	####

Table C2.2: Samples from Period 2 post-medieval deposits

Period 0 - Undated

C.2.8 Sample 7 taken from an undated fill within pit/natural feature **185** in Area 2 produced oak (*Quercus* sp.) charcoal (identified by Denise Druce). This was subsequently radiocarbon dated but is presumed to be an erroneous result (see App. D).

Sample No.	Context No.	Cut No.	Area	Feature type	Flot Volume (ml)	Hazelnut shell	Charcoal volume (ml)
7	186	185	2	Post-hole	125	0	350

Table C2.3: Sample from undated deposits

Discussion

C.2.9 The environmental samples from this site have mainly produced wood charcoal, frequently in abundance. The only other plant remains preserved are a few fragments of charred hazelnut shell from Period 1.1 pit **98** and untransformed elderberry seeds recovered from the basal fill of Period 1.2 pit **123**. The elderberry seeds may be contemporary with the pit deposit as these seeds have a tough outer coat that renders them resistant to decay, particularly in the anaerobic lower fills of deep features.

C.3 Charcoal and fuel residues

By Denise Druce

Introduction

C.3.1 Following the archaeobotanical assessment of bulk samples taken during the excavation of the site, recommendations were made for further identification of the charcoal from eight deposits taken from several post-medieval (Period 2.1) brick kilns, and pits associated with 17th to 18th century (Period 2.2) pottery manufacture (Fosberry 2020). Following a rapid assessment, which highlighted the provision of each sample for informing fuel use and suitable material for radiocarbon dating, four samples were selected for further charcoal analysis. A more detailed assessment was carried out on an additional two samples to provide comparative data. Any charred plant remains surviving in the samples were also recorded as a means of identifying further evidence for fuel. Material from three of the features (Kilns 34, 21, and 229) were extracted and submitted for radiocarbon dating (see Section 3.6; Table 5).

Methodology

C.3.2 Charcoal fragments over 2mm in size were initially quantified and scanned to assess preservation and wood diversity. Subsequent analysis followed standard methods where *c.*100–150 fragments (or the entirety if less than this) charcoal >4mm, or failing this >2mm, in size were identified. The fragments were initially sorted into groups based on the features visible in transverse section using a Leica MZ6 binocular microscope at up to x40 magnification. Representative fragments of each group were then fractured to reveal both radial and tangential sections, which were examined under a Meiji incident-light microscope at up to x400 magnification. The percentage volume of the analysed material in relation to the whole flot was also calculated. Identification and classification were made with reference to Hather (2000), and modern reference material.

C.3.3 Charcoal types from the two samples subjected to a fuller assessment were quantified on a scale of abundance where # = 1–5, ## = 6–25, ### = 26–100, #### = 100+ fragments. Other plant remains, such as charred seeds, cereal grains/chaff, and leaves/stems were also quantified this way, as were other remains, such as bone, ceramic building material (cbm), industrial/metal waste, coal, and non-diagnostic heat-affected vesicular material (havm). The results are presented in Table C3.1.

Charcoal and charred plant remains

C.3.4 Five of the features, including the two earliest brick kilns, Kiln Group 229 and Kiln 34, and Period 2.2 (17th to 18th century) pottery waster pit **295**, were overwhelmingly dominated by gorse-type (leguminosae) round wood. The observation of radial splitting on many of the fragments from Kiln Group 229 and pit **295** indicates that it may represent recently harvested green wood (Théry-Parisot and Henry 2012). Gorse-type charcoal also dominated Kiln 52 and pit **283**, however the charcoal assemblages from these were much smaller.

C.3.5 Due to variations in their anatomy, the genera and species of the Leguminosae family are difficult to differentiate. Species native to Britain, including those which grow in eastern England, include broom (*Cytisus scoparius*), hairy greenweed (*Genista Pilosa*), petty whin (*Genista anglica*), Dyer's greenweed (*Genista tinctoria*), gorse (*Ulex europaeus*), and dwarf gorse (*Ulex minor*), and although the charcoal remains from Cringleford could represent any of them, the presence of gorse stems and gorse spines/leaves in Kilns 229 and 21, suggests this is the most likely species. The only other taxa recorded in the gorse-dominated samples were rare fragments of ash (*Fraxinus excelsior*) in Kiln 52 and pit **295**.

C.3.6 The charcoal in Kiln 21 differed from the others in that it comprised a mixed assemblage of gorse-type, ash, and oak (*Quercus* sp) round wood/sapwood. This feature also contained the most frequent cereal remains, including a single bread wheat type (*Triticum aestivum*-type) caryopsis, and several bread wheat and barley (*Hordeum vulgare*) rachis fragments. Both these cereals would be expected for the post-medieval period in Britain. Other items, commonly associated with crop processing waste or a crop by-product such as straw, included several culm nodes and frequent weed seeds, including a single seed from the typical weed of medieval cultivation, common chickweed (*Stellaria media*). The presence of small grass (Poaceae) stem fragments in Kilns 21, 229, and 52 provides tentative evidence for hay, however wild grasses may commonly invade crops.

Other remains

C.3.7 Several of the samples contained rare to frequent fired clay/daub fragments, which, along with comminuted heat affected calcareous fragments, is likely to represent remains of the kiln linings. Although rare coal fragments were recorded in several of the features, coal and cinder was particularly abundant in Kilns 21 and 52. Other remains included a single animal bone fragment, and a single spheroidal hammerscale fragment in Kiln 21.

Discussion

C.3.8 The charcoal evidence from Cringleford suggests that the primary fuel being used to fire both the brick kilns, and the later pottery kilns, was gorse round wood. It is possible the material was first converted into charcoal, perhaps in heathland clamps, however the evidence for possible green wood, and the presence of uncharred fine stems and spines/leaves suggests the material may have been used shortly after being collected. Although there is evidence for coal being used at the site, its recovery as likely demolition/backfill in Kiln 52 suggests it may comprise fuel waste perhaps generated by another activity taking place at the site, dumped into the kiln after it had gone out of use.

C.3.9 The presence of abundant coal in deposit 94, from Kiln 21, which is presumed to relate to the last firing of the kiln, suggests that at least a component of this fill may also comprise later backfill. This may also explain the higher levels of ash and oak in this deposit compared to the other features, and the later radiocarbon date provided by the material from this deposit (Table 5 and Discussion; Section 4.3). It is likely, for example, that cereal crop waste, perhaps being used as tinder, may have also been

incorporated into this backfill. Although very little interpretation can be advanced based on a single spheroid of hammerscale, its presence, at least, does suggest that possible iron working may have been taking place somewhere nearby.

C.3.10 The firing of bricks, tiles and pottery would have consumed significant quantities of wood (Edlin 1949, Rackham 2000). Warde and Williamson (2014), however, suggest that research into England's early fuel use, particularly in relation to the adoption of coal, has tended to concentrate on the availability of wood sourced from managed or coppiced woodland. It is clear, however, that a significant amount of fuel, certainly from the 1600s onwards, did not comprise coppiced wood, and was collected from common or marginal land.

C.3.11 Areas of heathland would have provided peat and turves for fuel, and fuel wood in the form of shrubby taxa, such as heather and gorse. Gorse, or furze, as it was commonly known, was obviously an important fuel supply, producing a quick hot blaze suitable for heating ovens (Rackham 2000). Evidence suggests that, even when trees and woodland were locally available, measures were taken to control the over-exploitation of gorse heathland, and to encourage its re-growth after harvesting (Warde and Williamson 2014). It is likely that existing woodland would have been preserved for timber and other industries, for which heathland products would have been less suited.

C.3.12 Significantly, Warde and Williamson (2014) state that gorse, broom, and heather were the preferred fuel for firing brick kilns. Not only does the charcoal evidence from Cringleford provide tangible evidence for the use of gorse for this purpose the data also shows its continued use in later pottery production. Gorse appears to have been particularly important for some of the brickmaking districts of Norwich and is likely to have continued to be so even after coal had become more easily available (*ibid*).

C.3.13 Although charcoal analysis has only been carried out on a handful of other post-medieval kiln sites in eastern England, the evidence does indicate a similar use of locally available resources. Limited charcoal evidence from 15th/16th century brick kilns from Great Horkesley, Essex indicates the use of gorse as fuel wood (Fosberry 2021). Charcoal and charred plant remains from a 16th/17th century brick kiln from Euston, Suffolk, indicates the use of a range of fuels, including wood, bracken (*Pteridium aquilinum*), possible heather, and cereal chaff and straw. The latter probably representing tinder or kindling (Brooks 2015a).

Conclusion

C.3.14 The fuels used for brick/tile and pottery production is an under-researched subject, therefore the charcoal evidence from Cringleford has provided an important dataset, which complements historical accounts for the use of heathland resources in an industrial context. Historical accounts suggest that heathland was a valued resource, and this would have been especially the case if other types of fuel, such as wood and coal, were in short supply or reserved for other purposes.

Sample No		**8**	**1**	**3**	**2**	**10**	**11**
Context No		**238**	**29**	**94**	**58**	**287**	**296**
Feature		**Kiln 229**	**Kiln 34**	**Kiln 21**	**Kiln 52**	**Pit 283**	**Pit 295**
Description		**Kiln floor**	**Disuse/ Firing ash**	**Firing waste**	**Demolition layer/ backfill**	**Associated with pottery manufacture**	**Associated with pottery manufacture**
Phase		**2.1**	**2.1**	**2.1**	**2.2 (Kiln use 2.1)**	**2.2**	**2.2**
Flot vol (ml)		**20**	**150 (hand-sorted charcoal only)**	**100**	**950**	**5**	**800**
>4mm charcoal analysed %		**100**	**25**	**100**	**-**	**-**	**12.5**
>2mm charcoal analysed %		**100**	**50**	**100**	**-**	**-**	**6.25**
Wood charcoal taxa							
Fraxinus excelsior	ash			15s	#		2s
Quercus sp	oak			39sr			
Leguminosae	gorse-type	67r with radial splitting (possible green wood)	100r	24r	##r	##r	137r with radial splitting (possible green wood)
Indeterminate fragments				9			
No of fragments analysed		**67**	**100**	**87**	**na**	**na**	**139**
Other remains							
Charred plant remains		## small Poaceae culm fragments, *Carex* sp seeds, and *Ulex europaeus* stems and spines/leaves (many uncharred)		### One *Triticum aestivum*-type cereal caryopsis. Cereal chaff, including frequent *Triticum aestivum* and *Hordeum vulgare* rachis, culm nodes and ear bases. Frequent crop weed seeds, including *Melilotus*-type, Poaceae, and *Stellaria media*. Frequent small Poaceae culm fragments and common *Ulex europaeus* stems and spines/leaves (some uncharred)	# small Poaceae culm fragments	# *Hordeum vulgare* caryopsis	
Small mammal bone				#			
Daub/fired clay fragments (kiln/oven lining?)			##	##		#	##
Comminuted lime fragments			#	###			###
Coal/cinder		#		####	####	#	#
Hammerscale				#			

Table C3.1: Results of the charcoal analyses. Charcoal figures are actual counts where s = abundant sapwood, and r = abundant round wood. Other remains are quantified on a scale of abundance, where # = <5 items, ## = 6-25, ### = 26-100, and #### = >100 items

C.4 Marine mollusca

By Carole Fletcher

Introduction and methodology

C.4.1 A total of 0.018kg of shell was collected by hand from a pit, during the archaeological works. The shell recovered is oyster *Ostrea edulis*, from estuarine and shallow coastal waters. The shell is moderately well-preserved and does not appear to have been deliberately broken or crushed, however, it has suffered post-depositional damage.

C.4.2 The shell was weighed and recorded by species, with right and left valves noted, when identification could be made, using Winder (2011) as a guide. The minimum number of individuals (MNI) was not established, due to the small size of the assemblage from most features. Simplified recording was used, and the shell is recorded in the text.

Assemblage

C.4.3 Shell was recovered from the fill of Period 2.2 pit **311:** a partial left valve from a relatively thick, medium sized oyster, heavily damaged on the posterior ventral edge, with an almost straight break, however, this damage may be post-depositional.

Discussion

C.4.4 This is too small an assemblage to draw any but the broadest conclusions, and the shell very probably represents general discarded food waste. Although not closely datable in itself, the shell may be dated by association with pottery or other material also recovered from the feature, in this case a mid to late 17th-century clay pipe bowl and post-medieval pottery.

Retention, dispersal and display

C.4.5 The marine shell may be deselected prior to archive deposition.

APPENDIX D FINDS INVENTORY

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
5	**4**	1	4	DG2	2.2	0	Ceramic	CBM	1		Post-med			
5	**4**	1	4	DG2	2.2	0	Stone	Artefact	1					
5	**4**	1	4	DG2	2.2	0	Ceramic	CBM	2		Post-med			
5	**4**	1	4	DG2	2.2	0	Organic	Bone	2					
5	**4**	1	4	DG2	2.2	0	Glass	Vessel	1					
5	**4**	1	4	DG2	2.2	0	Ceramic	CBM	1		Post-med			
7	**6**	1	4	DG2	2.2	0	Organic	Bone	1					
7	**6**	1	4	DG2	2.2	0	Fe (iron)	Artefact	1					
7	**6**	1	4	DG2	2.2	0	Ceramic	CBM	5		Post-med			
7	**6**	1	4	DG2	2.2	0	Fuel Residues	Coal	1					
7	**6**	1	4	DG2	2.2	0	Ceramic	Vessel	2			16-18th c		
8	**8**	1	0	0	2.2	0	Ceramic	CBM	2		Post-med			
8	**8**	1	0	0	2.2	0	Ceramic	Vessel	5			16-18th c		
9	**9**	1	9	0	2.2	0	Ceramic	CBM	1		Post-med			
9	**9**	1	9	0	2.2	0	Ceramic	CBM	1		Post-med			
9	**9**	1	9	0	2.2	0	Ceramic	CBM	1		Post-med			
9	**9**	1	9	0	2.2	0	Ceramic	CBM	1		Post-med			
9	**9**	1	9	0	2.2	0	Ceramic	CBM	4		Post-med			
9	**9**	1	9	0	2.2	0	Ceramic	CBM	3		Post-med			
9	**9**	1	9	0	2.2	0	Ceramic	CBM	1		Post-med			
10	**9**	1	9	0	2.2	0	Ceramic	Tobacco pipe	1	NCD				
17	**16**	1	4	DG2	2.2	0	Fe (iron)	Artefact	2					
17	**16**	1	4	DG2	2.2	0	Ceramic	CBM	5		Post-med			
19	**18**	1	21	0	2.2	0	Ceramic	CBM	1		Post-med			
19	**18**	1	21	0	2.2	0	Ceramic	Vessel	2			16th-17th c		
20	**18**	1	21	0	2.2	0	Fuel Residues	Burnt shale	3					

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
20	**18**	1	21	0	2.2	0	Glass	Vessel	17			16th-18th c		L17th-18th C & M18th-E19th C (latest)
20	**18**	1	21	0	2.2	0	Ceramic	CBM	1		Post-med			
20	**18**	1	21	0	2.2	0	Ceramic	CBM	1		Post-med			
20	**18**	1	21	0	2.2	3	Glass	Vessel	1			16th-18th c		
20	**18**	1	21	0	2.2	0	Organic	Bone	128					
20	**18**	1	21	0	2.2	0	Glass	Vessel	9			16th-18th c		L17th-18th C & M18th-E19th C (latest)
20	**18**	1	21	0	2.2	0	Ceramic	Vessel-Kiln furniture	1			16th-18th c		
20	**18**	1	21	0	2.2	0	Ceramic	Vessel-Kiln furniture	30			16th-18th c		
20	**18**	1	21	0	2.2	0	Ceramic	Vessel-Kiln furniture	14			16th-18th c		
20	**18**	1	21	0	2.2	0	Ceramic	Kiln furniture	2			16th-18th c		
20	**18**	1	21	0	2.2	0	Organic	Bone	15					
20	**18**	1	21	0	2.2	0	Ceramic	Tobacco pipe	1	NCD				
20	**18**	1	21	0	2.2	0	Fuel Residue	Cinder	3					
20	**18**	1	21	0	2.2	0	Glass	Vessel	1					L17th-18th C & M18th-E19th C (latest)
21	**74**	1	21	0	2.1	0	Ceramic	CBM	2		Post-med			
21	**74**	1	21	0	2.1	0	Ceramic	CBM	1		Post-med			
21	**74**	1	21	0	2.1	0	Ceramic	CBM	1		Post-med			
23	**74**	1	21	0	2.1	0	Ceramic	CBM	1		Post-med			
23	**74**	1	21	0	2.1	0	Ceramic	CBM	3		Post-med			
26	**33**	1	34	0	2.1	0	Ceramic	CBM	3		Post-med			
26	**33**	1	34	0	2.1	0	Ceramic	CBM	4		Post-med			
27	**33**	1	34	0	2.1	0	Ceramic	CBM	1		Post-med			
27	**33**	1	34	0	2.1	0	Ceramic	CBM	1		Post-med			
28	**33**	1	34	0	2.2	0	Ceramic	Vessel	1			16th-18th c.		
28	**33**	1	34	0	2.2	0	Ceramic	CBM	1		Post-med			
28	**33**	1	34	0	2.2	0	Ceramic	CBM	1		Post-med			
28	**33**	1	34	0	2.2	0	Ceramic	CBM	1		Post-med			

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
29	**33**	1	34	0	2.1	0	Ceramic	CBM	4		Post-med			
29	**33**	1	34	0	2.1	0	Ceramic	CBM	1		Post-med			
29	**33**	1	34	0	2.1	0	Ceramic	CBM	1		Post-med			
29	**33**	1	34	0	2.1	0	Ceramic	CBM	1		Post-med			
29	**33**	1	34	0	2.1	0	Ceramic	CBM	3		Post-med			
29	**33**	1	34	0	2.1	0	Ceramic	Kiln furniture-CBM	1		Post-med			
29	**33**	1	34	0	2.1	0	Ceramic	CBM	20		Post-med			
29	**33**	1	34	0	2.1	0	Ceramic	CBM	12		Post-med			
29	**33**	1	34	0	2.1	0	Fuel Residues	Charcoal	1					
29	**33**	1	34	0	2.1	0	Ceramic	CBM	1		Post-med			
29	**33**	1	34	0	2.1	0	Ceramic	CBM	6		Post-med			
29	**33**	1	34	0	2.1	0	Ceramic	CBM	1		Post-med			
39	**38**	1	4	DG2	2.2	0	Fuel Residues	shale/coal	1					
39	**38**	1	4	DG2	2.2	0	Ceramic	CBM	1		Post-med			
39	**38**	1	4	DG2	2.2	0	Ceramic	CBM	2		Post-med			
39	**38**	1	4	DG2	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	3	c.1660-1680				
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	4			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	6	c.1660-1680				
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	3			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	10			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	15					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	54					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	19			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	9			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	61					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	41					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	6			16th-18th c		

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	7			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	8			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	25					
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	2		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	66					
43	**42**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	4	c.1660-1680				
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	50					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	50					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	60			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	80			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	50			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	49			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	9			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	91					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	140			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	65			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	12			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	7					
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med	16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	4			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	43			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	64					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	100			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	42					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	3			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c		

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	9					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	24			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	56					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	49			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Organic	Bone	5					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	6			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	23			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	1	c.1660-1680				
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	3			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	9			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	5			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	64			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	55			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	5			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	18			16th-18th c		
43	**42**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	7					
43	**42**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	3	c.1660-1680				
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	4			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	21			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	3			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	19			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	4			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	12			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	5			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	34					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	20			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	5			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	8			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	27					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	4			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	48					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			17th c.		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	1			17th c.		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	19			17th c.		
43	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			17th c.		
43	**42**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	3	c.1660-1680				
43	**42**	1	42	PWG	2.2	0	Fe (iron)	Vessel	1			17th c.		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	3			17th c.		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	26			17th c.		
43	**42**	1	42	PWG	2.2	0	Organic	Bone	2					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	7			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2		Ceramic	Vessel	30			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	6			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	45					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	18			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	50			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	5			16th-18th c (17th c.)		

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	14					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	253					
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	5			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	44			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	11			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	62			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	12			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	2	Ceramic	Vessel	1			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	9			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
43	**42**	1	42	PWG	2.2	0	Organic	Bone	9					
45	**44**	2	0	0	2.2	0	Ceramic	CBM	1		Post-med			
45	**44**	2	0	0	2.2	0	Ceramic	CBM	11		Post-med			
49	**48**	2	0	0	1.1	0	Flint		1					
54	**56**	1	52	0	2.1	0	Ceramic	CBM	1		Post-med			
54	**56**	1	52	0	2.1	0	Ceramic	CBM	4		Post-med			
58	**56**	1	52	0	2.2	0	Ceramic	CBM	1		Post-med			
58	**56**	1	52	0	2.2	0	Ceramic	Vessel	41			16th-18th c (17th c.)		
58	**56**	1	52	0	2.2	0	Ceramic	CBM	1		Post-med			
58	**56**	1	52	0	2.2	0	Ceramic	CBM	1		Post-med			
58	**56**	1	52	0	2.2	0	Ceramic	CBM	1		Post-med			
58	**56**	1	52	0	2.2	0	Ceramic	CBM	1		Post-med			
58	**56**	1	52	0	2.2	0	Fuel Residues	burnt shale	22					
58	**56**	1	52	0	2.2	0	Fuel Residues	Cinder and coal	50					
58	**56**	1	52	0	2.2	0	Ceramic	Tobacco pipe	1	-				
58	**56**	1	52	0	2.2	0	Ceramic	Fired clay	6					
63	**317**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
63	**317**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	2					

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
63	**317**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	16					
63	**317**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
63	**317**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
63	**317**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
63	**317**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
63	**317**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
63	**317**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
64	**317**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	4					
64	**317**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	2	c.1660-1680				
64	**317**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	60					
64	**317**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	50					
64	**317**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c (17th c.)		
64	**317**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	41					
64	**317**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	1					
65	**42**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM	1		Post-med			
65	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
65	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
65	**42**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
67	**42**	1	42	PWG	2.2	0	Organic	Bone	1					
67	**42**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	14	c.1660-1680				
68	**42**	1	42	PWG	2.2	0	Organic	Bone	11					
68	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	6			16th-18th c.		
68	**42**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM	1					
68	**42**	1	42	PWG	2.2	0	Organic	Bone	9			.		
68	**42**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	1	c.1660-1680 (1664?)/c.1680-1710		.		
69	**42**	1	42	PWG	2.2	0	Organic	Bone	1					
69	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	4			16th-18th c (17th c.)		
69	**42**	1	42	PWG	2.2	0	Ceramic	Vessel	5			16th-18th c (17th c.)		
69	**42**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	1					
69	**42**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	1	post-med				

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
69	**42**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM	1					
71	**56**	1	52	0	2.1	0	Ceramic	CBM	1		Post-med			
71	**56**	1	52	0	2.1	0	Ceramic	CBM	2		Post-med			
72	**56**	1	52	0	2.1	0	Ceramic	CBM	5		Post-med			
72	**56**	1	52	0	2.1	0	Ceramic	CBM	1		Post-med			
78	**74**	1	21	0	2.1	0	Ceramic	CBM	4		Post-med			
78	**74**	1	21	0	2.1	0	Ceramic	CBM	1		Post-med			
79	**74**	1	21	0	2.1	0	Ceramic	CBM	6		Post-med			
79	**74**	1	21	0	2.1	0	Ceramic	CBM	1		Post-med			
79	**74**	1	21	0	2.1	0	Ceramic	CBM	1		Post-med			
80	**74**	1	21	0	2.1	0	Ceramic	CBM	1		Post-med			
80	**74**	1	21	0	2.1	0	Ceramic	CBM	1		Post-med			
81	**74**	1	21	0	2.1	0	Ceramic	CBM	1		Post-med			
81	**74**	1	21	0	2.1	0	Ceramic	CBM	5		Post-med			
84	**74**	1	21	0	2.1	0	Ceramic	CBM	3		Post-med			
84	**74**	1	21	0	2.1	0	Ceramic	CBM	2		Post-med			
94	**21**	1	21	0	2.1	0	Slag	Metal-working debris	1					
94	**21**	1	21	0	2.1	0	Fuel Residues	Coal	20					
94	**21**	1	21	0	2.1	0	Fuel Residues	burnt shale	25					
94	**21**	1	21	0	2.1	0	Fuel Residues	Cinder	125					
94	**21**	1	21	0	2.1	0	Ceramic	CBM	6		Post-med			
94	**21**	1	21	0	2.1	0	Slag	slag	11					
94	**21**	1	21	0	2.1	0	Ceramic	CBM	1		Post-med			
94	**21**	1	21	0	2.1	0	Ceramic	CBM	2		Post-med			
94	**21**	1	21	0	2.1	0	Fe (iron)	Nail	9					
125	**123**	2	0	0	1.2	0	Flint		1					
125	**123**	2	0	0	1.2	0	Ceramic	Vessel	13			EIA		
129	**128**	2	0	0	1.1	0	Organic	Bone	1					
129	**128**	2	0	0	1.1	0	Ceramic	Tobacco pipe	1	NCD				

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
129	**128**	2	0	0	1.1	0	Flint		1				Neo-EBA	
129	**128**	2	0	0	1.1	0	Ceramic	CBM	7		Post-med (intrusive)			
133	**132**	2	0	0	1.1	0	Ceramic	Vessel	2			IA?		
134	**132**	2	0	0	1.1	0	Flint		120				large assemblage of burnt flint	
134	**132**	2	0	0	1.1	0	Ceramic	Vessel	2			prehistoric		
134	**132**	2	0	0	1.1	0	Flint		11				burnt flint	
134	**132**	2	0	0	1.1	0	Flint		2				burnt flint	
134	**132**	2	0	0	1.1	0	Flint		12				burnt flint	
134	**132**	2	0	0	1.1	0	Flint		100				burnt flint	
134	**132**	2	0	0	1.1	0	Flint		40				burnt flint	
134	**132**	2	0	0	1.1	0	Flint		100				burnt flint	
134	**132**	2	0	0	1.1	0	Flint		100				burnt flint	
138	**33**	1	34	0	2.1	0	Ceramic	CBM	1		Post-med			
138	**33**	1	34	0	2.1	0	Ceramic	CBM	3		Post-med			
142	**141**	2	0	0	1.1	0	Flint		12				worked & burnt flint (Neo-EBA)	
142	**141**	2	0	0	1.1	0	Ceramic	Vessel	17			Late Neo		
142	**141**	2	0	0	1.1	0	Flint		10				worked & burnt flint (Neo-EBA)	
146	**145**	2	0	0	1.1	0	Flint		6				worked & burnt flint (Neo-EBA)	
146	**145**	2	0	0	1.1	0	Flint		6				worked & burnt flint (Neo-EBA)	
152	**151**	2	111	DG1	2.1	0	Flint		1			prehistoric (residual)	residual worked flint	
152	**151**	2	111	DG1	2.1	0	Ceramic	Vessel	1			prehistoric (residual)	residual worked flint	
158	**157**	2	0	0	1.1	0	Flint		1					
160	**159**	2	0	0	1.1	0	Stone	Stone	3					
160	**159**	2	0	0	1.1	0	Flint		4					
160	**159**	2	0	0	1.1	0	Flint		2					

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
164	**163**	2	0	0	1.1	0	Flint		10				(?Neo-EBA)	
170	**169**	2	0	0	1.1	0	Ceramic	Vessel	3			Roman (intrusive)		
170	**169**	2	0	0	1.1	0	Flint		4					
178	**177**	2	0		2.2	0	Ceramic	CBM	1		Post-med			
178	**177**	2	0		2.2	0	Flint		2					
178	**177**	2	0		2.2	0	Ceramic	Vessel	1			16th-18th c (17th c.)		
215	**33**	1	34	0	2.1	0	Ceramic	CBM	1		Post-med			
215	**33**	1	34	0	2.1	0	Ceramic	CBM	6		Post-med			
233	**230**	1	241	229	2.1	0	Ceramic	CBM	1		Post-med			
233	**230**	1	241	229	2.1	0	Ceramic	CBM	1		Post-med			
234	**230**	1	241	229	2.1	0	Ceramic	CBM	2		Post-med			
234	**230**	1	241	229	2.1	0	Ceramic	CBM	3		Post-med			
235	**231**	1	242	229	2.1	0	Ceramic	CBM	1		Post-med			
235	**231**	1	242	229	2.1	0	Ceramic	CBM	1		Post-med			
235	**231**	1	242	229	2.1	0	Ceramic	CBM	1		Post-med			
236	**231**	1	242	229	2.1	0	Ceramic	CBM	1		Post-med			
236	**231**	1	242	229	2.1	0	Ceramic	CBM	1		Post-med			
236	**231**	1	242	229	2.1	0	Ceramic	CBM	1		Post-med			
237	**230**	1	241	229	2.1	0	Ceramic	Fired clay	6					
237	**230**	1	241	229	2.1	0	Ceramic	Fired clay	12					
238	**231**	1	242	229	2.1	0	Ceramic	CBM	1		Post-med			
238	**231**	1	242	229	2.1	0	Ceramic	Vessel	1			16th-18th c.		
261	**259**	1	9	0	2.2	0	Organic	Bone	100					
265	**259**	1	9	9	2.2	0	Ceramic	CBM	1		Post-med			
265	**259**	1	9	9	2.2	0	Ceramic	CBM	1		Post-med			
265	**259**	1	9	9	2.2	0	Ceramic	CBM	3		Post-med			
265	**259**	1	9	9	2.2	0	Ceramic	CBM	1		Post-med			
265	**259**	1	9	9	2.2	0	Ceramic	Vessel-Kiln furniture	2					
272	**271**	1	271	0	2.2	0	Ceramic	Vessel	2			16th-18th c.		
279	**279**	1	42	PWG	2.2	5	Glass	Vessel	1					
280	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	1			17th c (L 18th)		
280	**279**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	50					

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
280	**279**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	50					
280	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	1			17th c (L 18th)		
280	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
280	**279**	1	42	PWG	2.2	0	Glass	Vessel	34					L17th-E18th c.
280	**279**	1	42	PWG	2.2	0	Organic	Bone	2					
280	**279**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	1					
280	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	3			17th c (L 18th)		
280	**279**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	4					
280	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	1			17th c (L 18th)		
280	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	1			17th c (L 18th)		
280	**279**	1	42	PWG	2.2	0	Organic	Bone	1					
280	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
280	**279**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	1	Post-med				
280	**279**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	1	Post-med				
280	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
280	**279**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	1					
280	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
280	**279**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	30					
280	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	12			17th c (L 18th)		
280	**279**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM	4					
281	**279**	1	42	PWG	2.2	0	Ceramic	CBM	2		Post-med			
281	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
281	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	24			M.17-18?		
281	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	1			M.17-18?		
281	**279**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	38					
281	**279**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	7					
281	**279**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	12					
281	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	1			M.17-18?		
281	**279**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	1					
281	**279**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM	1					
281	**279**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM	8		Post-med			
281	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	6			M.17-18?		

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
282	**279**	1	42	PWG	2.2	0	Fe (iron)	Nail	1					
282	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		Post-med			
282	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
282	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
282	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
282	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	1			17th-18th c.?		
282	**279**	1	42	PWG	2.2	0	Ceramic	CBM	2		post-med			
282	**279**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	4					
282	**279**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	2	post-med				
282	**279**	1	42	PWG	2.2	0	Organic	Bone	6					
282	**279**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	20					
282	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
282	**279**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM	1					
282	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	1			17th-18th c.?		
282	**279**	1	42	PWG	2.2	0	Ceramic	Vessel	4			17th-18th c.?		
282	**279**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
284	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	7			late 17th +		
284	**283**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM	1					
284	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	2			late 17th +		
284	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	13					
284	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	7			late 17th +		
284	**283**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	3	post-med				
284	**283**	1	42	PWG	2.2	0	Organic	Bone	4					
284	**283**	1	42	PWG	2.2	0	Glass	Vessel	6					post-med
284	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	75					
284	**283**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	5					
284	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	2			late 17th +		
284	**283**	1	42	PWG	2.2	0	Organic	Bone	2					
284	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	3			late 17th +		
284	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
284	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
284	**283**	1	42	PWG	2.2	0	Ceramic	CBM	3		post-med			

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
285	**283**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM	1					
285	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
285	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			E-M 18th c.
285	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	10			16th-18th c (17th c.)		.
285	**283**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	5	Post-1660, possibly c.1680-1710				
285	**283**	1	42	PWG	2.2	0	Ceramic	CBM	2		post-med			
285	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
285	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	1			16th-18th c (17th c.)		
285	**283**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	1	Post-1660, possibly c.1680-1710				
285	**283**	1	42	PWG	2.2	0	Ceramic	CBM	2		post-med			
285	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
285	**283**	1	42	PWG	2.2	0	Organic	Bone	9					
285	**283**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	1	Post-1660, possibly c.1680-1710				
285	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
285	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
285	**283**	1	42	PWG	2.2	0	Glass	Vessel	13					E-M 18th c.
285	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	38					
285	**283**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	2					
285	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	24			16th-18th c (17th c.)		
285	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c (17th c.)		
285	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c (17th c.)		
285	**283**	1	42	PWG	2.2	0	Glass	Vessel	5					E-M 18th c.
285	**283**	1	42	PWG	2.2	0	Organic	Bone	7					E-M 18th c.
285	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	3			16th-18th c (17th c.)		
285	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	60					
285	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	79					
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	21			16th-18th c (17th c.)		

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	15			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	40			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	50			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Glass	Vessel	6					M 17th-18thc; E-M18th c. (latest)
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	10			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	100			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	100			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	87			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	10			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	4			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	6			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	62					
286	**283**	1	42	PWG	2.2	4	Glass	Vessel	1					M 17th-18thc; E-M18th c. (latest)
286	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	3			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	3					
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	3			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	10	c.1660-1680				
286	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Glass	Vessel	1					M 17th-18thc; E-M18th c. (latest)
286	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	100			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	1	c.1660-1680				
286	**283**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM						
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	70			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	40			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	60			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	50			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	1					
286	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	7			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	40			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	7					
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	10			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	20			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	122			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	25					
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
286	**283**	1	42	PWG	2.2	0	Organic	Bone	22					
286	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	1					
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	7			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	9			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Fe (iron)	Artefact	1					
287	**283**	1	42	PWG	2.2	0	Fuel Residues	Coal	1					
287	**283**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	1					
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Organic	Bone	7					
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	101			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	16					
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	39					
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	7					
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	23					
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	21			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	30			16th-18th c (17th c.)		

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	5			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	20			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	50			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	100			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	2			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
287	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
287	**283**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
287	**283**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	1	c.1660-1680				
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	30			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	14			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	12			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	3					
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	16			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	8			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	3			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	3			16th-18th c (17th c.)		
287	**283**	1	42	PWG	2.2	0	Ceramic	Vessel	25			16th-18th c (17th c.)		
289	**288**	1	42	PWG	2.2	0	Ceramic	Vessel	6			16th-18th c.		
289	**288**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	2					
290	**317**	1	42	PWG	2.2	0	Ceramic	Kiln furniture-CBM	1					
290	**317**	1	42	PWG	2.2	0	Ceramic	Kiln furniture	1					
290	**317**	1	42	PWG	2.2	0	Ceramic	Tobacco pipe	2	post-med				
290	**317**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	37					
290	**317**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	26					
290	**317**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
291	**317**	1	42	PWG	2.2	0	Ceramic	Vessel	3			16th-18th c (17th c.)		
291	**317**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	29					

Context	Cut	Area	Feature Number	Group	PERIOD	SF No	Material	Object Name	Count	Date Range (Clay pipe)	Date Range (CBM)	Date Range (pottery)	Date range (flint)	Date Range (glass)
294	**293**	1	0	0	2.2	0	Organic	Bone	32					
294	**293**	1	0	0	2.2	0	Organic	Bone	10					
294	**293**	1	0	0	2.2	0	Organic	Bone	10					
296	**295**	1	42	PWG	2.2	0	Ceramic	CBM	1		post-med			
296	**295**	1	42	PWG	2.2	0	Ceramic	Vessel-Kiln furniture	1					
296	**295**	1	42	PWG	2.2	0	Flint		1					
298	**297**	1	0	0	2.2	0	Ceramic	Vessel	1			16th-18th c.		
298	**297**	1	0	0	2.2	0	Ceramic	CBM	1		post-med			
299	**297**	1	0	0	2.2	0	Ceramic	CBM	1		post-med			
299	**297**	1	0	0	2.2	0	Ceramic	Vessel	8			16th-18th c.		
301	**300**	1	0	0	2.2	0	Ceramic	CBM	1		post-med			
301	**300**	1	0	0	2.2	0	Ceramic	CBM	1		post-med			
303	**302**	1	271	0	2.2	0	Ceramic	CBM	1		post-med			
303	**302**	1	271	0	2.2	0	Organic	Bone	11					
303	**302**	1	271	0	2.2	0	Ceramic	Vessel	10			16th-18th c.		
303	**302**	1	271	0	2.2	0	Ceramic	CBM	1		post-med			
305	**304**	1	42	PWG	2.2	0	Fired clay	Fired clay	1					
307	**306**	1	42	PWG	2.2	0	Ceramic	CBM	2		post-med			
307	**306**	1	42	PWG	2.2	0	Ceramic	Vessel	1			16th-18th c.		
312	**311**	1	0	0	2.2	0	Ceramic	CBM	1		post-med			
312	**311**	1	0	0	2.2	0	Ceramic	CBM	1		post-med			
312	**311**	1	0	0	2.2	0	Ceramic	CBM	1		post-med			
312	**311**	1	0	0	2.2	0	Ceramic	CBM	1		post-med			
312	**311**	1	0	0	2.2	0	Organic	Bone	4					
312	**311**	1	0	0	2.2	0	Ceramic	Tobacco pipe	1	17th c.				
312	**311**	1	0	0	2.2	0	Organic	Shell	1					
312	**311**	1	0	0	2.2	0	Ceramic	Vessel	36			17th-18th c.		
312	**311**	1	0	0	2.2	0	Ceramic	Kiln furniture	1			17th-18th c.		
312	**311**	1	0	0	2.2	6	Stone	Artefact	1			.		
99999						0	Ceramic	Kiln furniture	1					
99999						0	Ceramic	Vessel	5					

CBM = Ceramic building material PWG = Pottery Waster Group DG = Ditch Group

APPENDIX E RADIOCARBON DATING CERTIFICATES

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

08 November 2019

Laboratory Code	SUERC-89927 (GU52906)
Submitter	Zoe Ui Choileain Oxford Archaeology East 15 Trafalgar Way Bar Hill Cambridgeshire CB23 8SQ
Site Reference	ENF 145412
Context Reference	101
Sample Reference	4
Material	Charred fruit fragment (nut shell fragment) : Corylus avellana
$\delta^{13}C$ relative to VPDB	-24.5 ‰
Radiocarbon Age BP	3808 ± 24

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

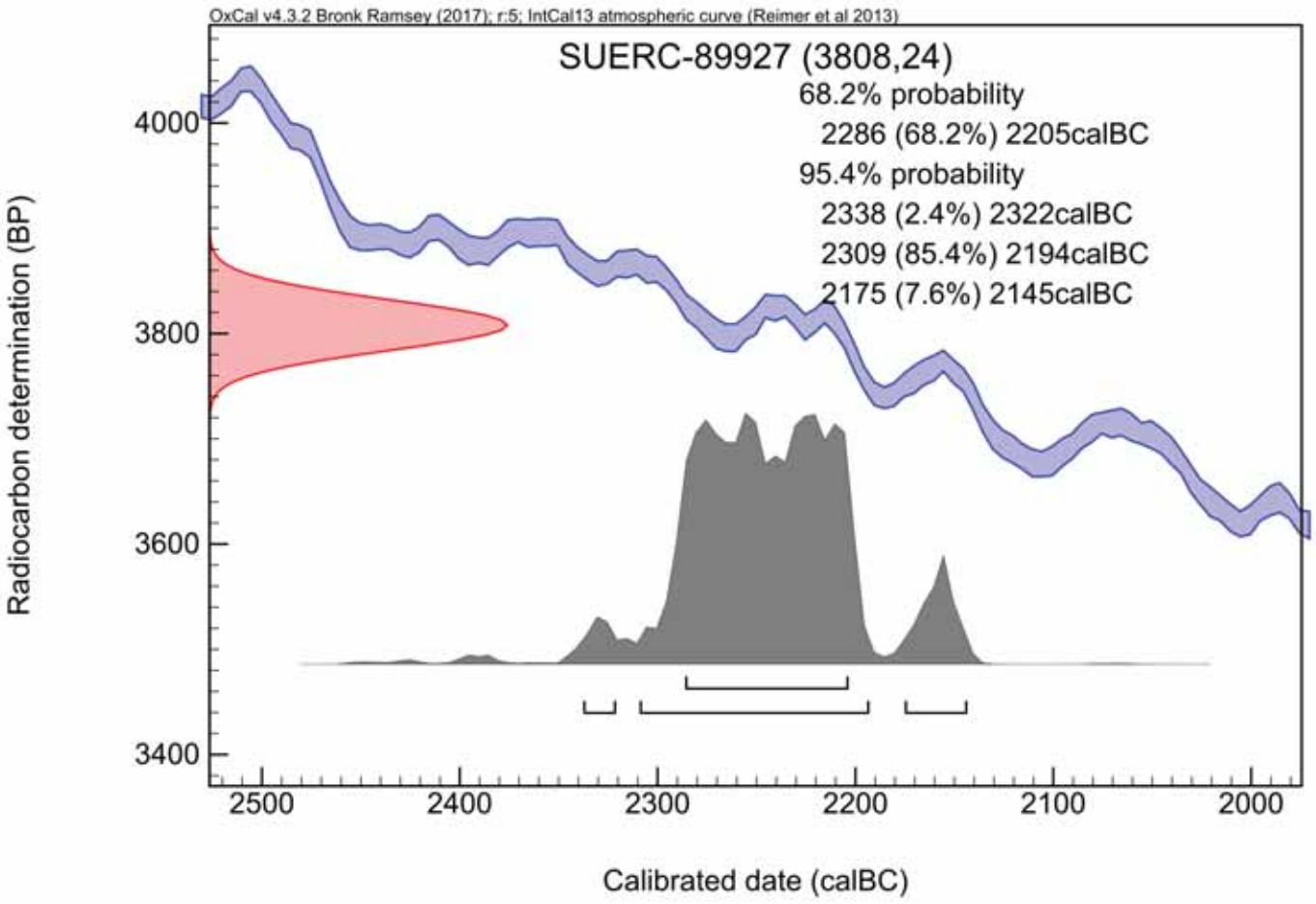
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by :

Checked and signed off by :



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal13 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*

† Reimer et al. (2013) *Radiocarbon 55(4) pp.1869-87*

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RADIOCARBON DATING CERTIFICATE

08 November 2019

Laboratory Code	SUERC-89928 (GU52907)
Submitter	Zoe Ui Choileain Oxford Archaeology East 15 Trafalgar Way Bar Hill Cambridgeshire CB23 8SQ
Site Reference	ENF 145412
Context Reference	186
Sample Reference	7
Material	Charcoal : Quercus sp
$\delta^{13}C$ relative to VPDB	-26.4 ‰
Radiocarbon Age BP	1216 ± 24

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

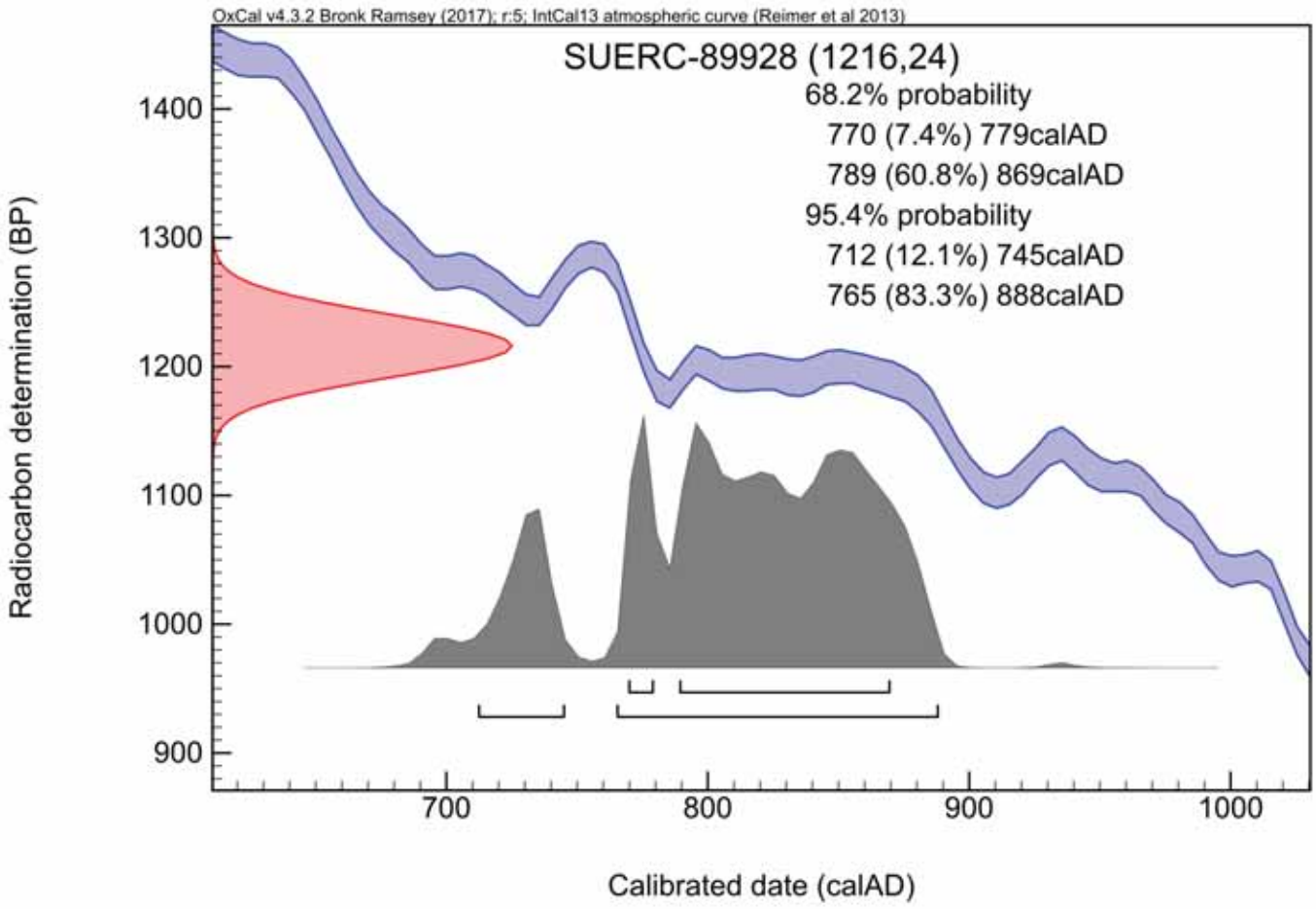
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by :

Checked and signed off by :



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal13 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*

† Reimer et al. (2013) *Radiocarbon 55(4) pp.1869-87*

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RADIOCARBON DATING CERTIFICATE

15 November 2021

Laboratory Code	SUERC-100806 (GU59302)
Submitter	Rachel Fosberry Oxford Archaeology East 15 Trafalgar Way Bar Hill Cambridgeshire CB23 8SQ
Site Reference	XNFNFC18
Context Reference	29
Sample Reference	1
Material	charcoal-round wood, 6 growth rings, bark absent : Leguminosae
$\delta^{13}C$ relative to VPDB	-27.9 ‰
Radiocarbon Age BP	282 ± 24

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

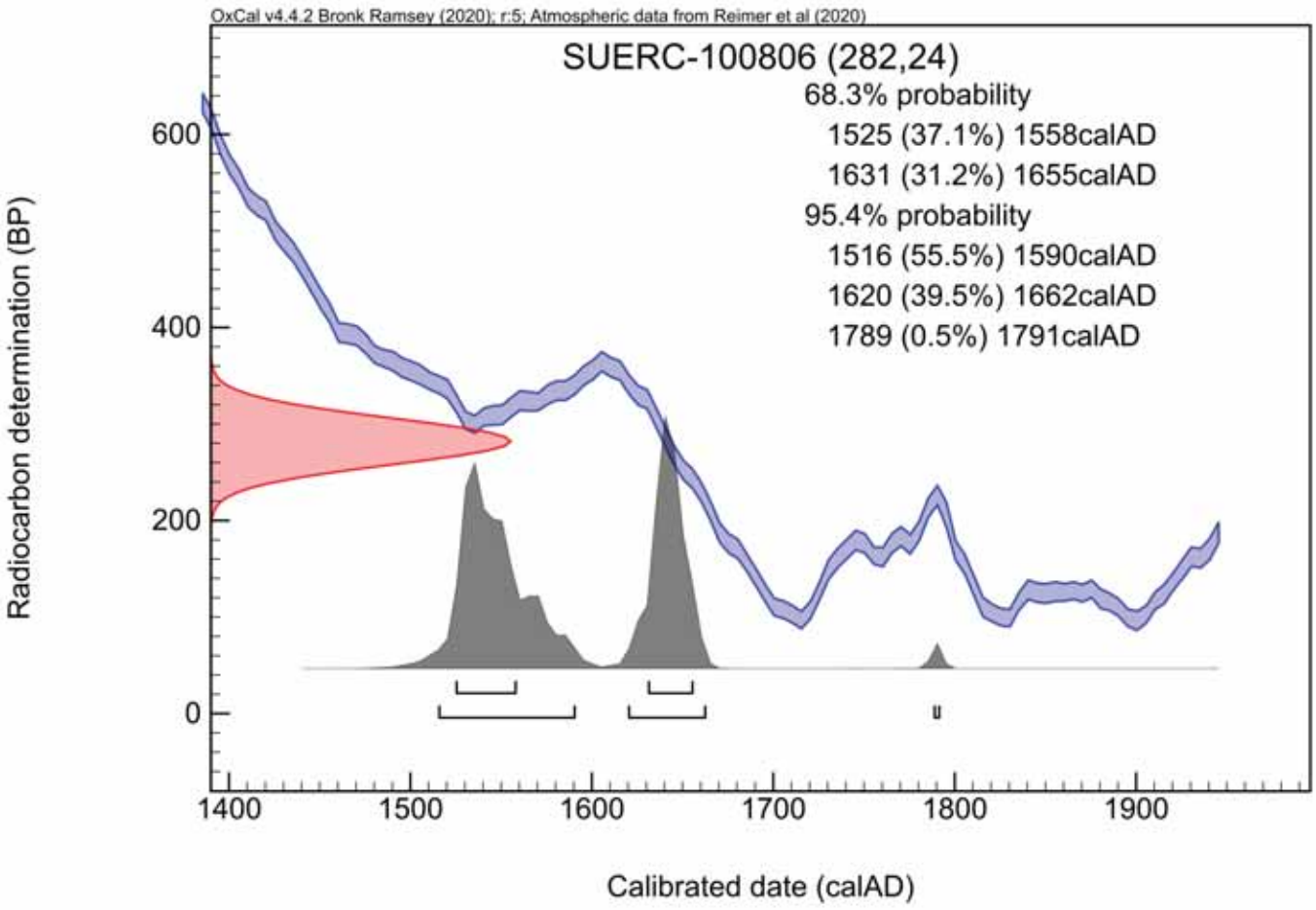
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : E. Dunbar

Checked and signed off by :



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal20 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*

† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*

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RADIOCARBON DATING CERTIFICATE

15 November 2021

Laboratory Code	SUERC-100807 (GU59303)
Submitter	Rachel Fosberry Oxford Archaeology East 15 Trafalgar Way Bar Hill Cambridgeshire CB23 8SQ
Site Reference	XNFNFC18
Context Reference	94
Sample Reference	3
Material	Charred culm base : Cerealia
$\delta^{13}C$ relative to VPDB	-27.9 ‰
Radiocarbon Age BP	216 ± 21

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

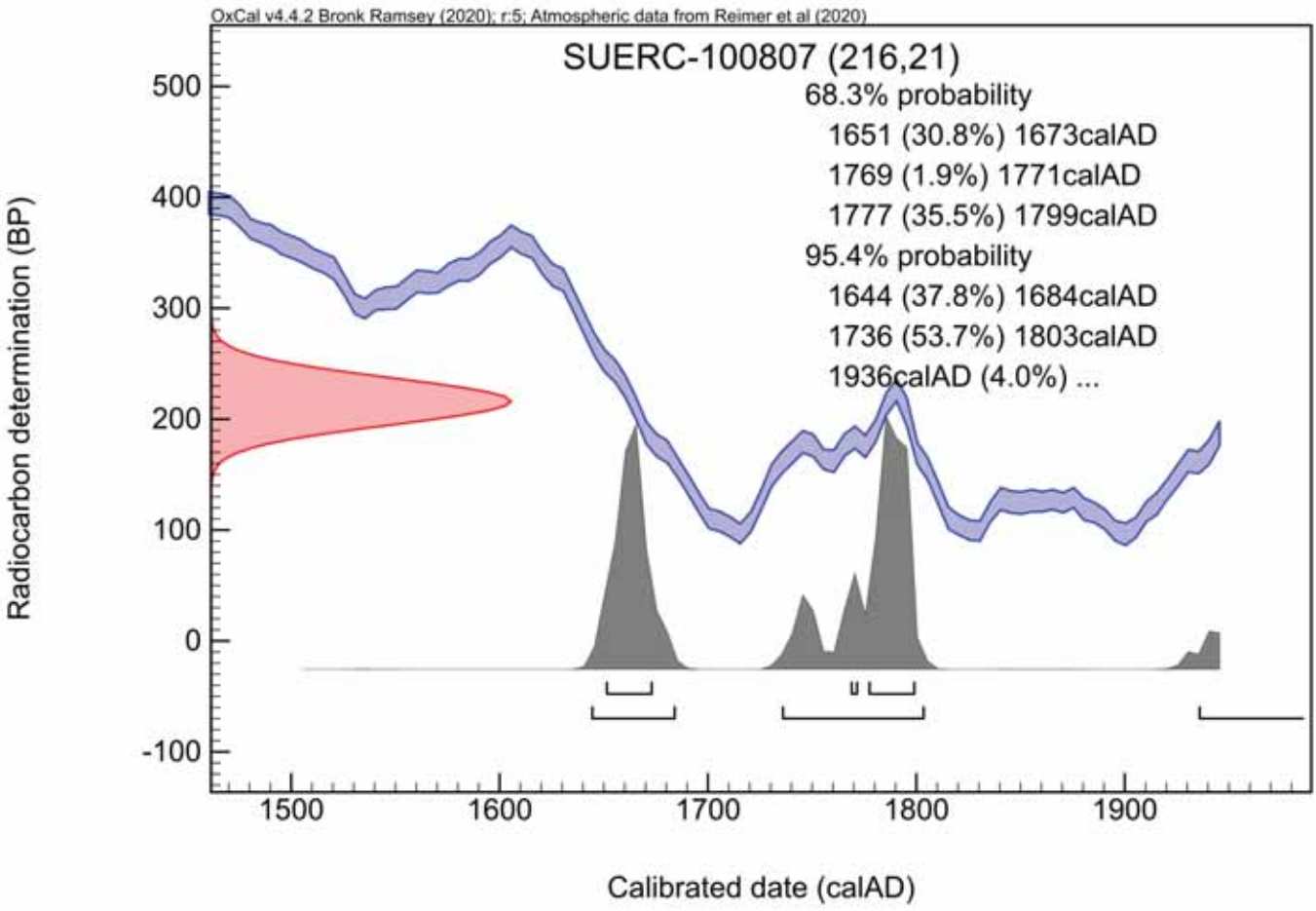
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : E. Dunbar

Checked and signed off by :



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal20 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*

† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

15 November 2021

Laboratory Code	SUERC-100808 (GU59304)
Submitter	Rachel Fosberry Oxford Archaeology East 15 Trafalgar Way Bar Hill Cambridgeshire CB23 8SQ
Site Reference	XNFNFC18
Context Reference	238
Sample Reference	8
Material	charcoal-round wood, 2 growth rings, with bark : Leguminosae
$\delta^{13}C$ relative to VPDB	-25.0 ‰ assumed
Radiocarbon Age BP	342 ± 24

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

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Conventional age and calibration age ranges calculated by : E. Dunbar

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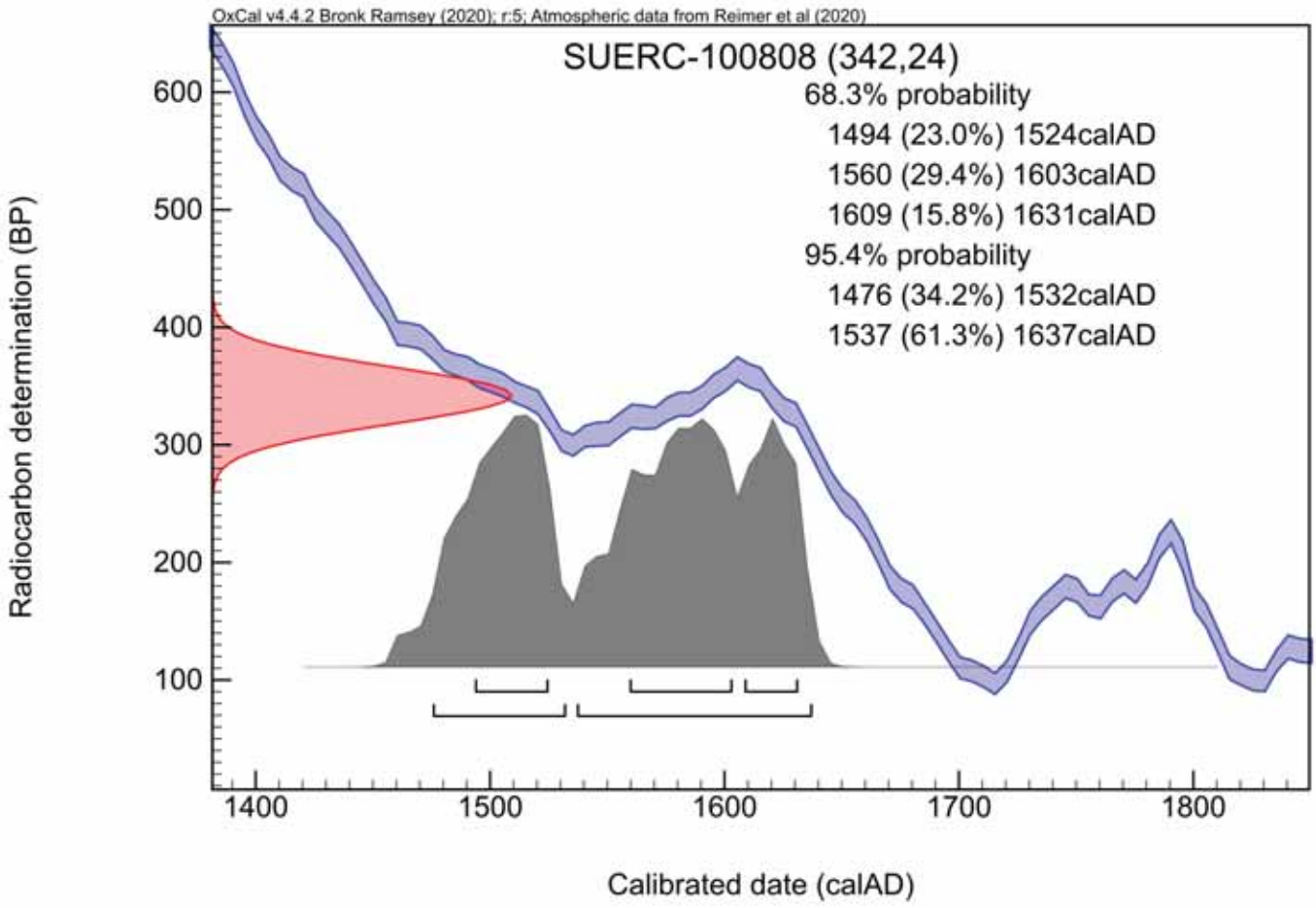

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APPENDIX G SITE SUMMARY DETAILS / OASIS REPORT FORM

Project Details

OASIS Number	oxfordar3-432582
Project Name	Land at Newfound Farm, Cringleford, Norfolk

Start of Fieldwork	29/10/18	End of Fieldwork	04/02/19
Previous Work	Yes	Future Work	No

Project Reference Codes

Site Code	ENF145412	Planning App. No.	2013/1793 Condition 42
HER Number	ENF145412	Related Numbers	NWHCM: 2019.59

Prompt	NPPF
Development Type	Residential
Place in Planning Process	After full determination (eg. As a condition)

Techniques used (tick all that apply)

☐	Aerial Photography – interpretation	☒	Open-area excavation	☐	Salvage Record
☐	Aerial Photography - new	☐	Part Excavation	☐	Systematic Field Walking
☐	Field Observation	☐	Part Survey	☐	Systematic Metal Detector Survey
☒	Full Excavation	☐	Recorded Observation	☐	Test-pit Survey
☐	Full Survey	☐	Remote Operated Vehicle Survey	☐	Watching Brief
☐	Geophysical Survey	☐	Salvage Excavation		

Monument	Period
Kiln	Post Medieval (1540 to 1901)
Pit	Post Medieval (1540 to 1901)
Ditch	Post Medieval (1540 to 1901)
Pit	Late prehistoric (-4000 to 43)

Object	Period
Pottery	Early Neolithic (- 4000 to - 3000)
Pottery	Late Neolithic (- 3000 to - 2200)
Pottery	Early Iron Age (- 800 to - 400)
Pottery	Post Medieval (1540 to 1901)
Ceramic building material	Post Medieval (1540 to 1901)
Animal bone	Post Medieval (1540 to 1901)

Project Location

County	Norfolk
District	South Norfolk
Parish	Cringleford
HER office	Norfolk
Size of Study Area	1.7 ha
National Grid Ref	TG 18658 06864

Address (including Postcode)

Newfound Farm, Colney Lane, Cringleford, Norfolk, NR4 7RG

Project Originators

Organisation	OA East
Project Brief Originator	Steve Hickling (NCC)/CgMs (RPS)
Project Design Originator	Nick Gilmour (OA East)
Project Manager	Nick Gilmour (OA East)
Project Supervisor	Tom Collie (OA East)

Project Archives

	Location	ID
Physical Archive (Finds)	Norwich Castle Museum	NWHCM: 2019.59
Digital Archive	Norwich Castle Museum	NWHCM: 2019.59
Paper Archive	Norwich Castle Museum	NWHCM: 2019.59

Physical Contents	Present?	Digital files associated with Finds	Paperwork associated with Finds
Animal Bones	☒	☒	☒
Ceramics	☒	☒	☒
Environmental	☒	☒	☒
Glass	☒	☒	☐
Human Remains	☐	☐	☐
Industrial	☒	☐	☐
Leather	☐	☐	☐
Metal	☒	☒	☒
Stratigraphic		☐	☐
Survey		☐	☐
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☐	☐	☐
Worked Stone/Lithic	☒	☒	☒
None	☐	☐	☐
Other	☐	☐	☐

Digital Media		Paper Media	
Database	☒	Aerial Photos	☒
GIS	☒	Context Sheets	☒
Geophysics	☐	Correspondence	☐
Images (Digital photos)	☒	Diary	☐
Illustrations (Figures/Plates)	☒	Drawing	☒
Moving Image	☐	Manuscript	☐
Spreadsheets	☒	Map	☐
Survey	☒	Matrices	☒
Text	☒	Microfiche	☐
Virtual Reality	☐	Miscellaneous	☒
		Research/Notes	☒
		Photos (negatives/prints/slides)	☐
		Plans	☒
		Report	☒
		Sections	☒
		Survey	☒

Further Comments

Selected elements of the ceramic assemblage (pottery and CBM) have been identified for deselection prior to archiving, in agreement with Norwich Castle Museum

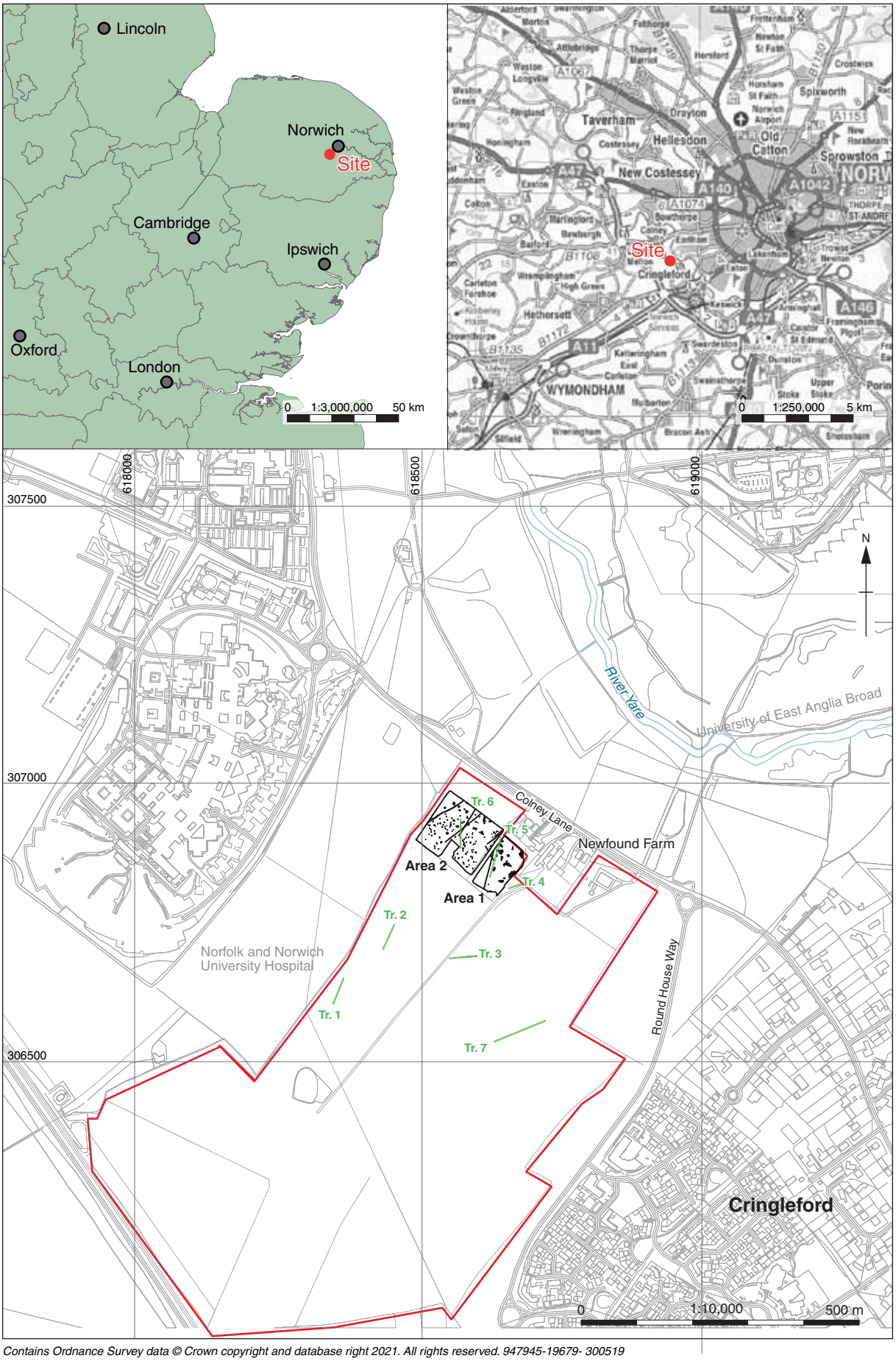


Figure 1: Site location showing archaeological excavation area (black), evaluation trenches (green) in development area (red)

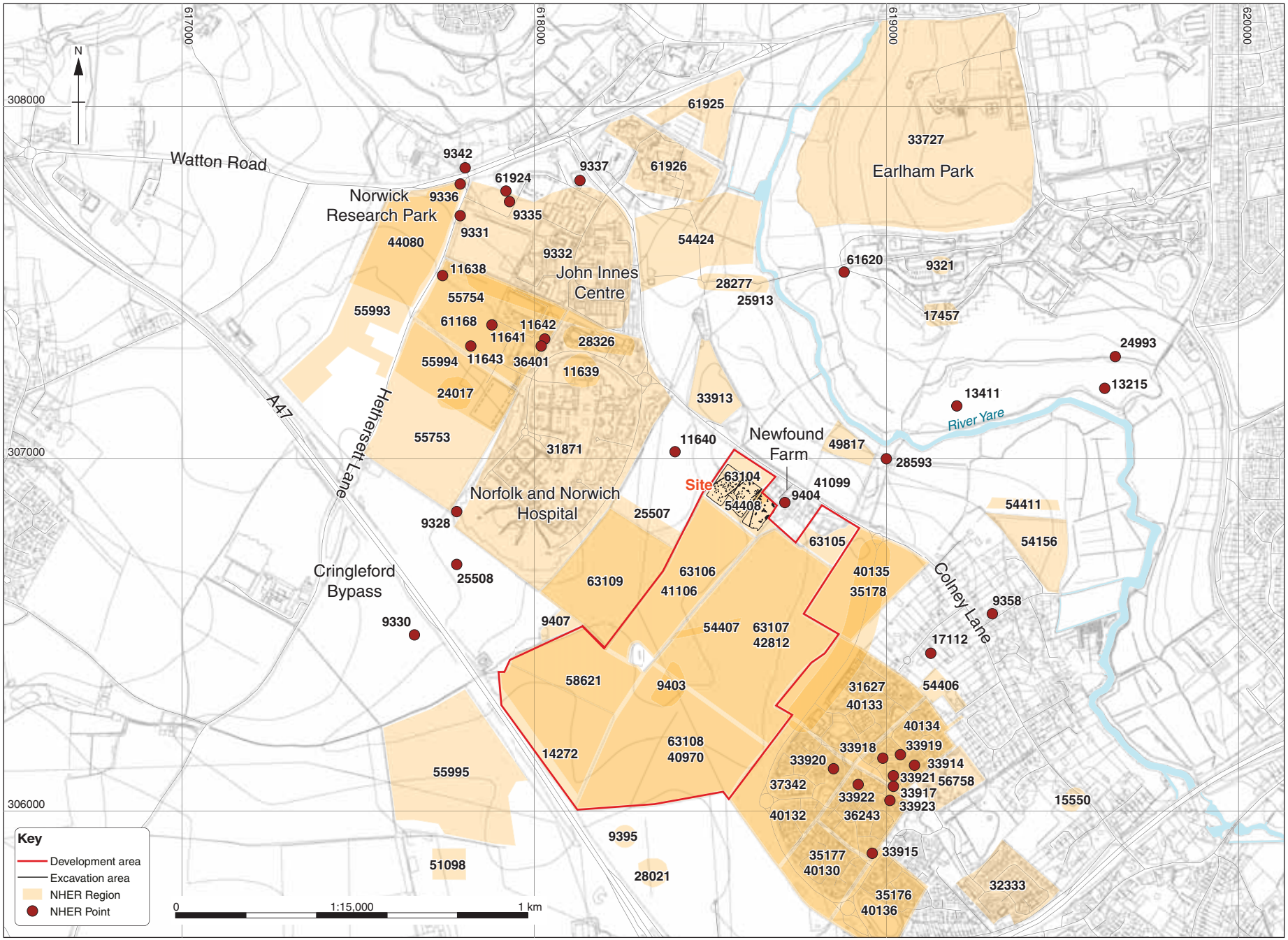


Figure 2: Excavation in relation to pertinent NHER sites

Figure 3: Detail of Faden's map of Norfolk (1797) showing Newfound Farm and a neighbouring orchard (http://www.fadensmapofnorfolk.co.uk)

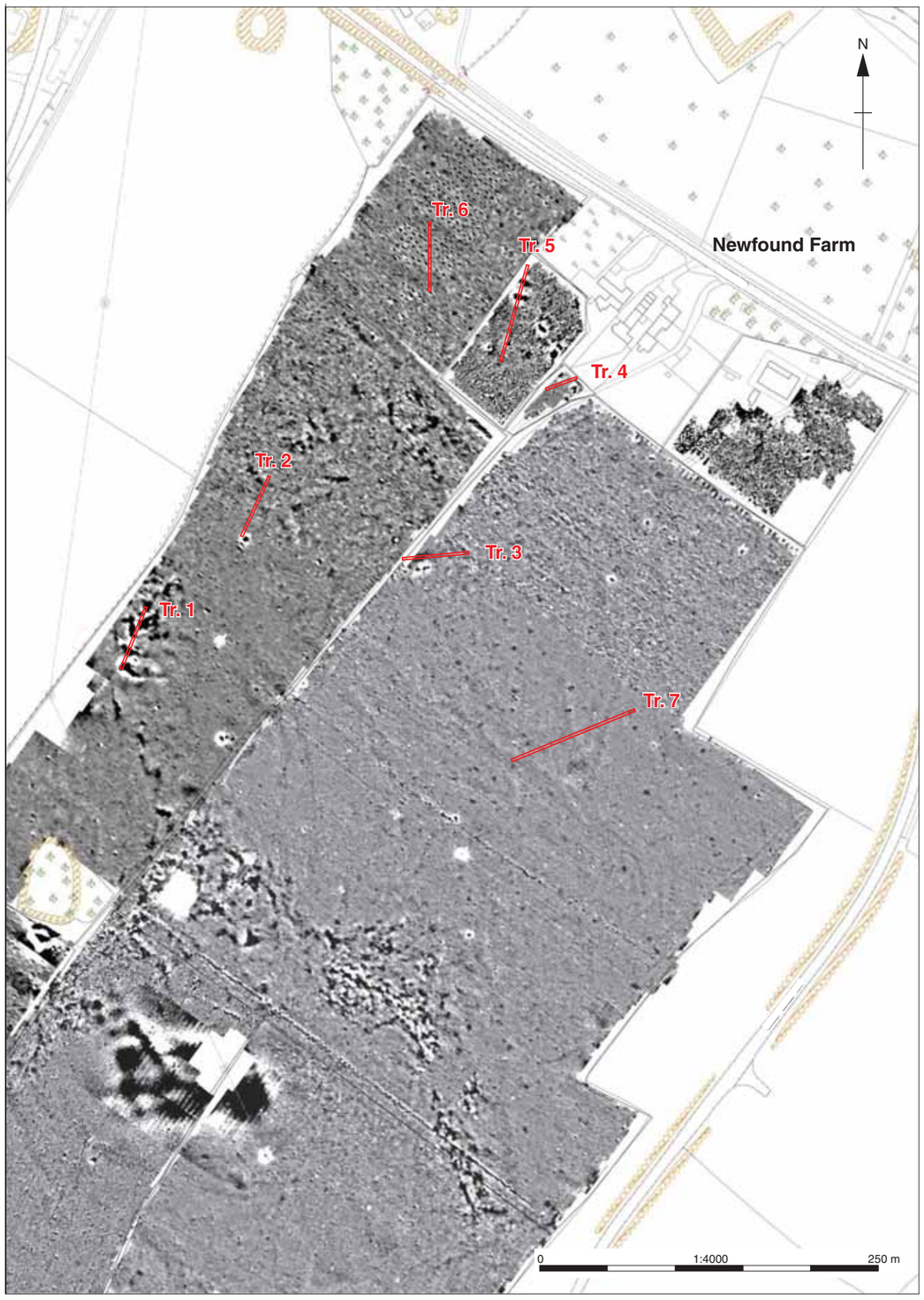


Figure 4a: Greyscale magnetic survey plot with evaluation trenches (in red) (after Masters 2011, fig. 2a and Crawley 2013, fig. 2)

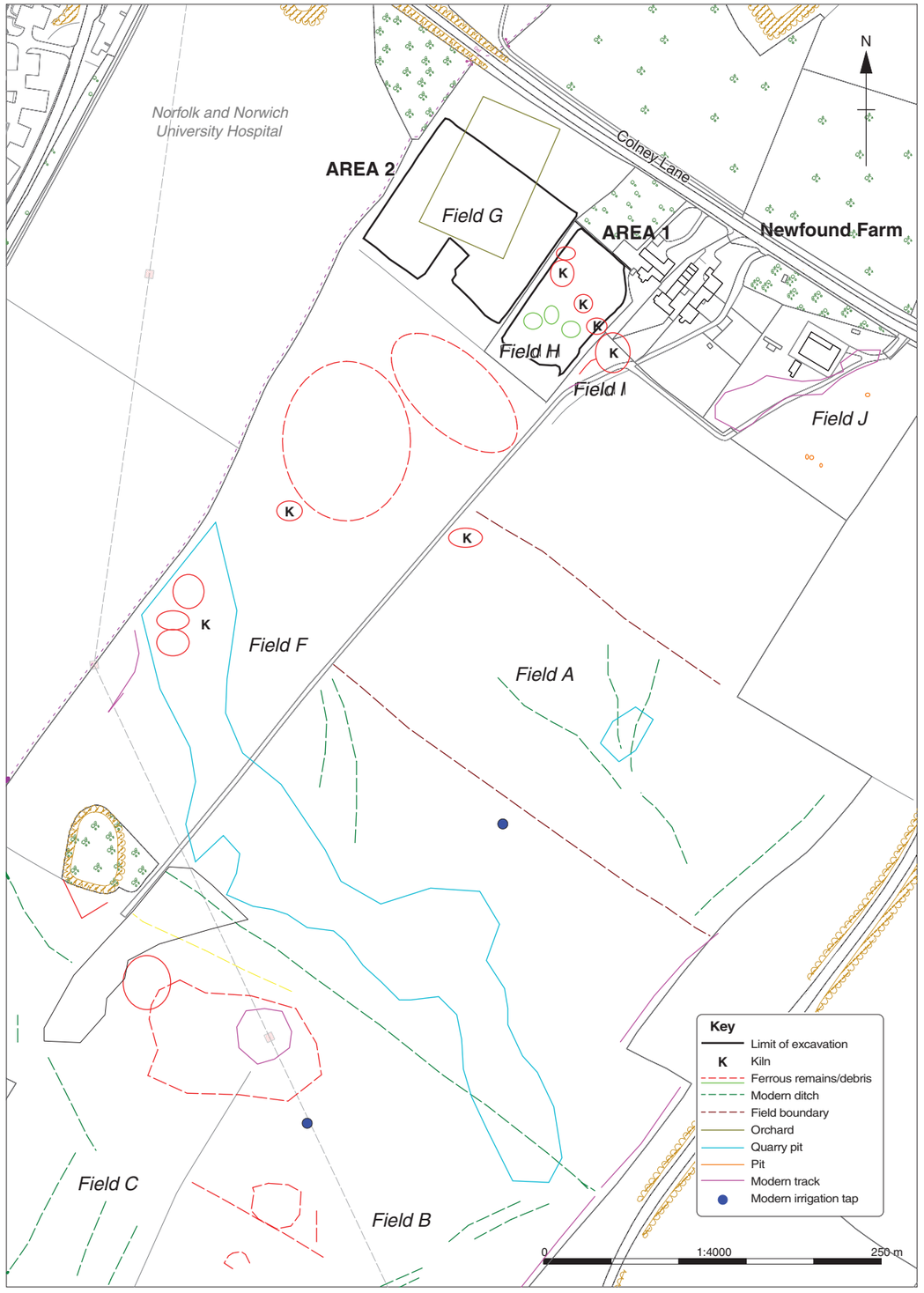


Figure 4b: Geophysical survey interpretation showing location of possible klin anomalies (**K**) (after Master 2011, fig. 25)

Key
Limit of excavation
Evaluation trench
118 Cut number
E18 Cut number (evaluation)
S.1 Section number
Archaeological feature
Archaeological feature (evaluation)
Excavated segment
Natural

618500 618600 618700

N

306900

AREA 2

Ditch Groups 1 and 2

Ditch Group 1

Ditch Group 2

Kiln 21

Kiln 34

Kiln 52

Kiln Group 229

AREA 1

Tr. 5

306800

0 1:750 50 m

Figure 5: All features plan

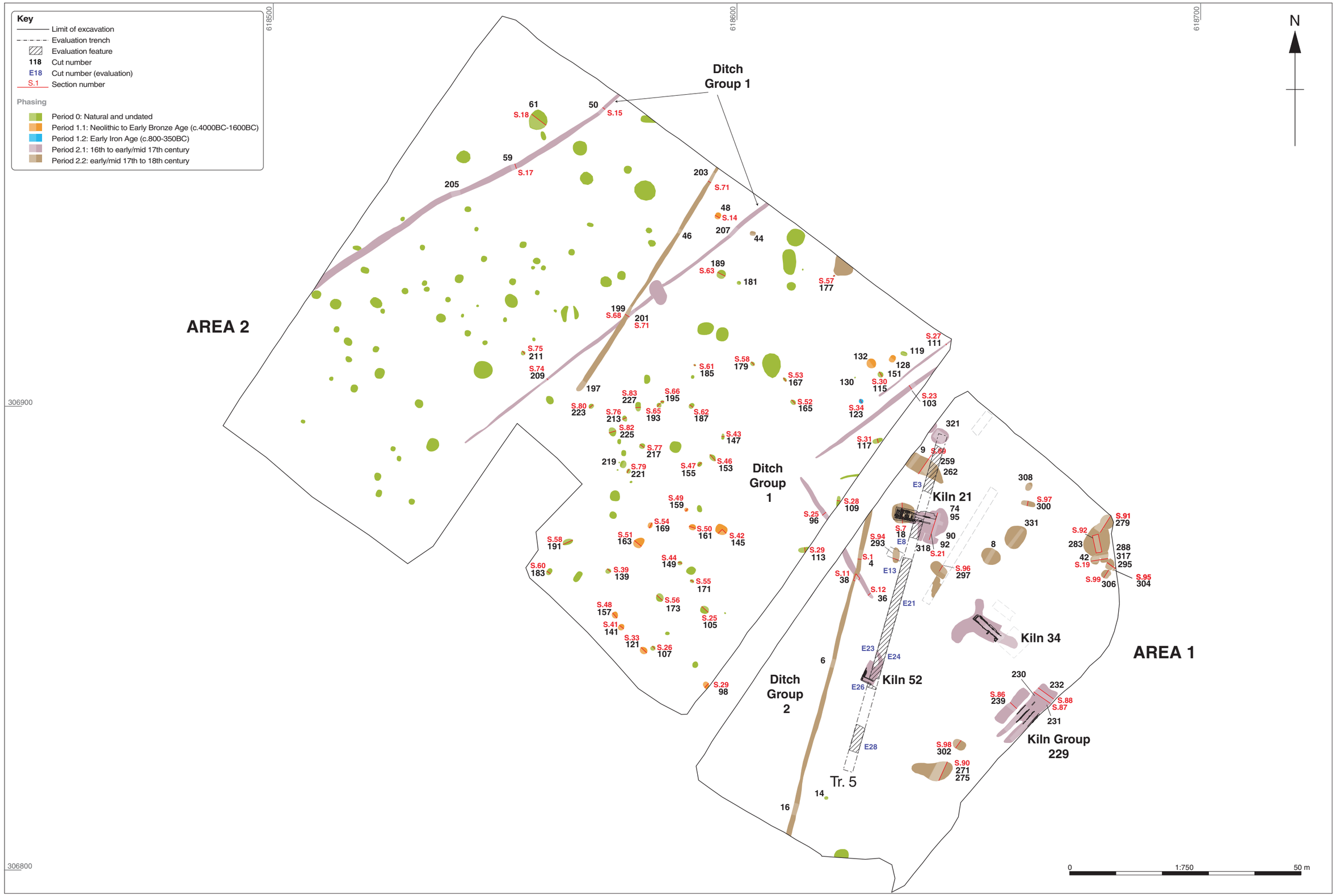


Figure 6: All features plan with phasing

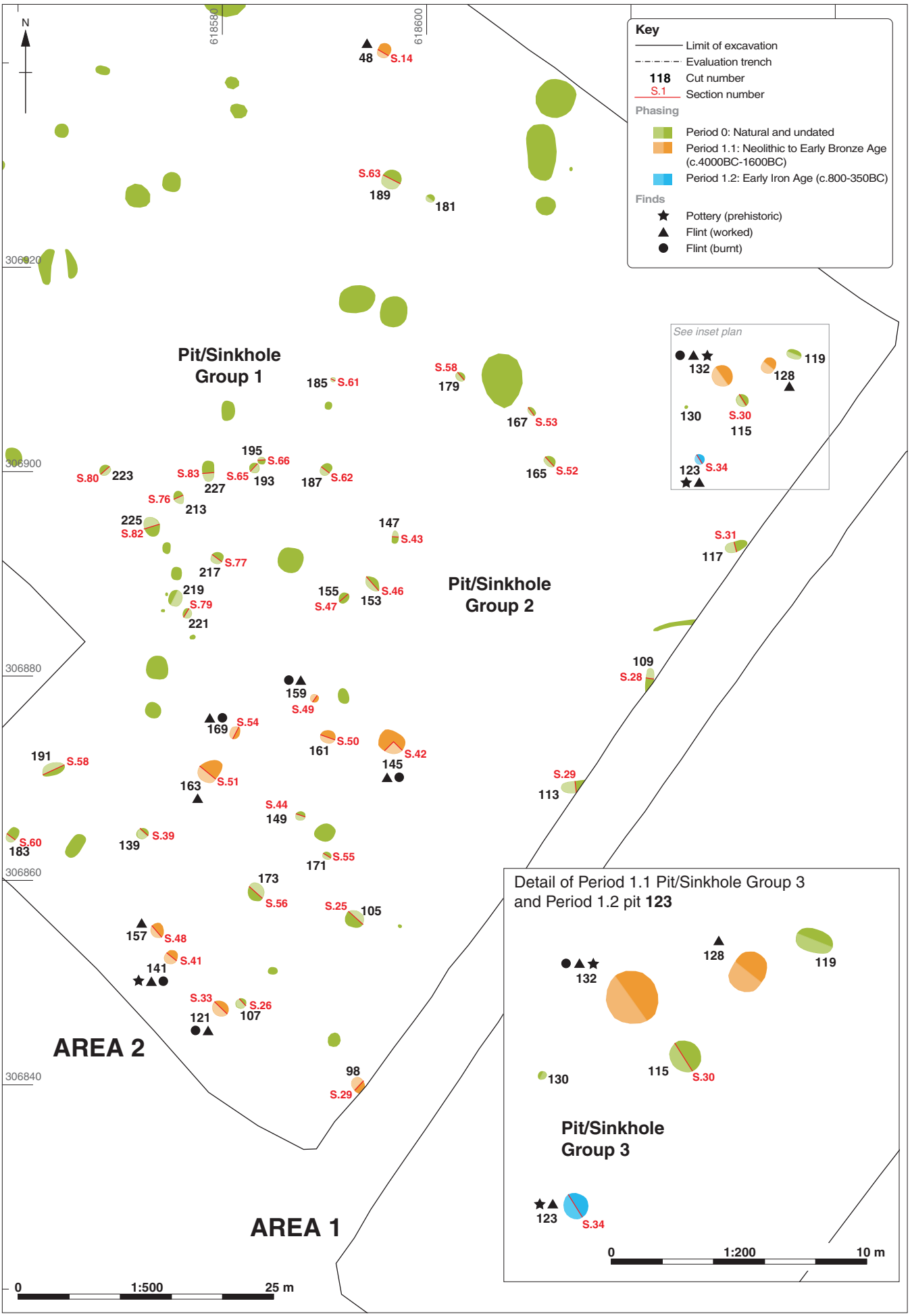
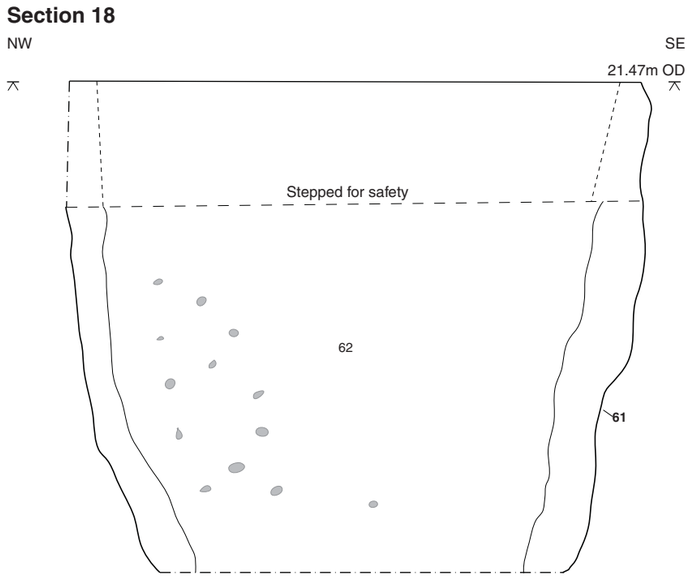
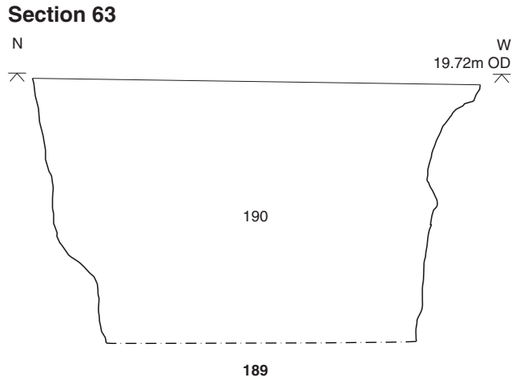
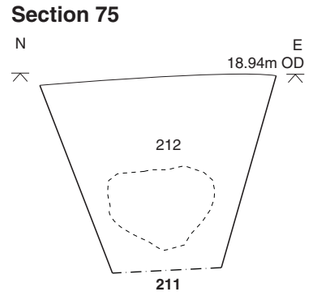
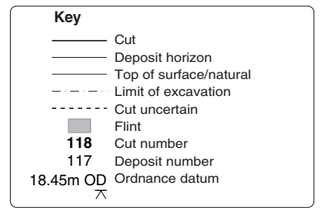


Figure 7: Detail plan of Area 2 showing main area of sinkholes, natural features and pits (Periods 0 and 1.1)

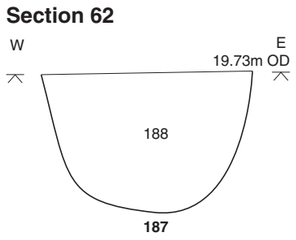


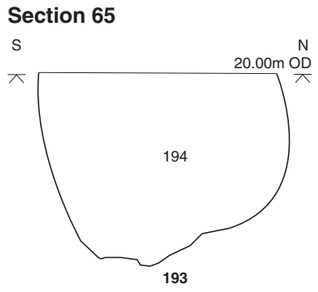


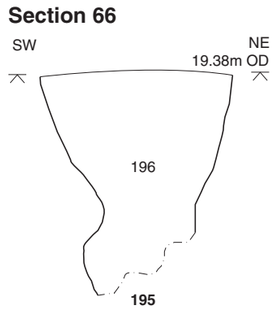


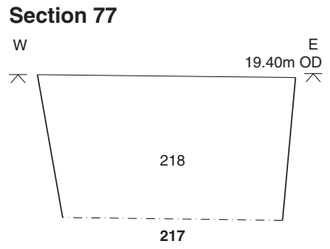


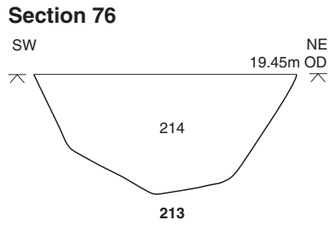
Pit/Sinkhole Group 1

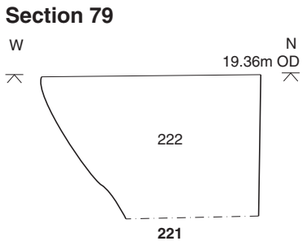


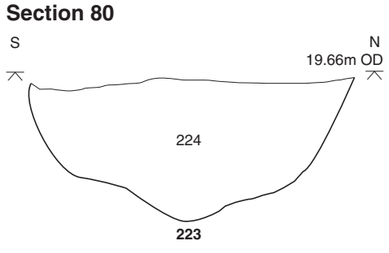


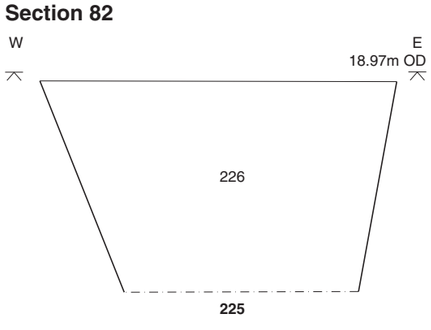












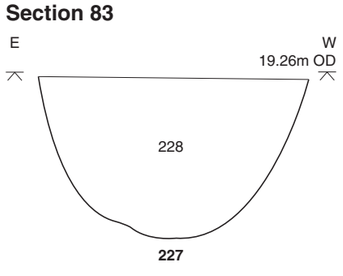
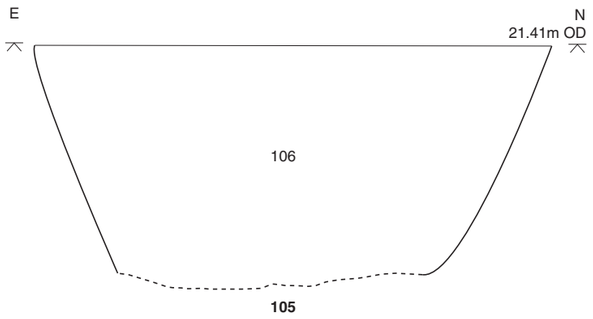


Figure 8a: Sections of Period 0 (undated/natural) features

Pit/Sinkhole Group 2

Key
- Cut
- Deposit horizon
- Top of surface/natural
- Limit of excavation
- Cut uncertain
- Stone
- 118 Cut number
- 117 Deposit number
- 18.45m OD Ordnance datum

Section 25


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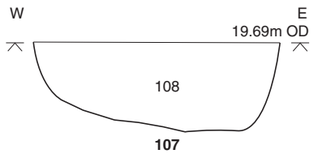

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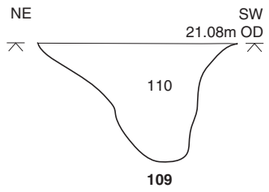

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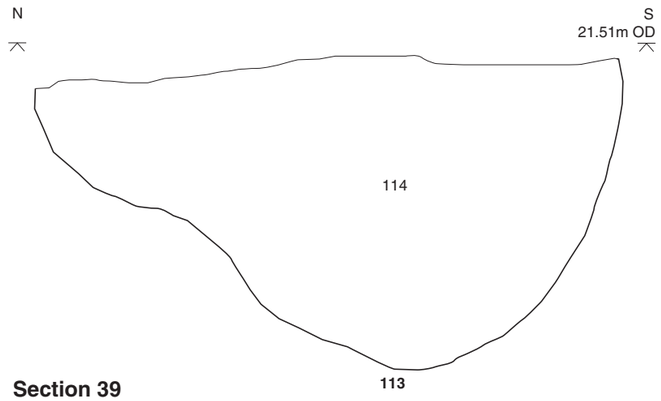
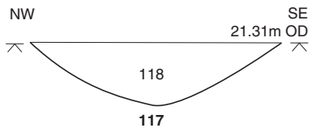


Section 30


Section 31


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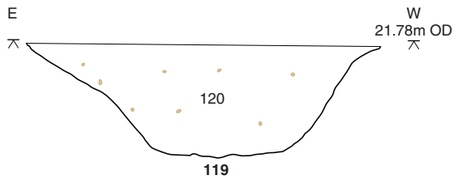

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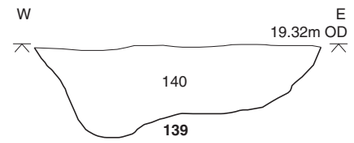

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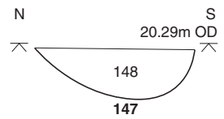

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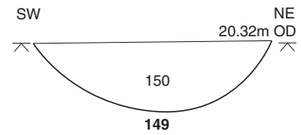

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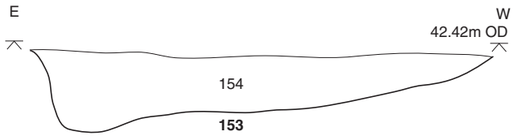

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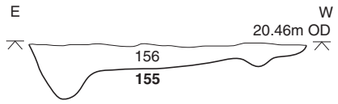

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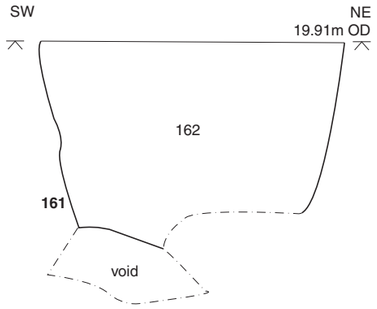

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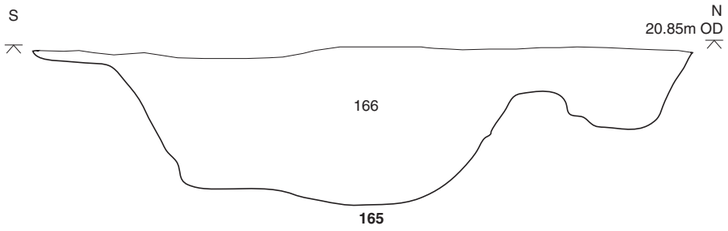

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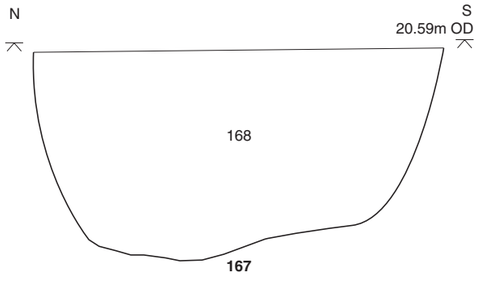

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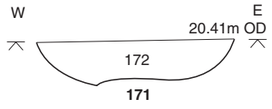

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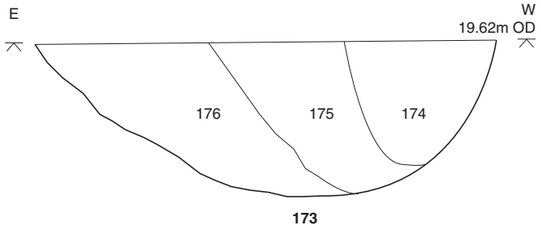

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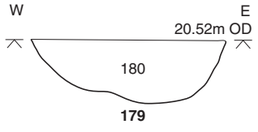

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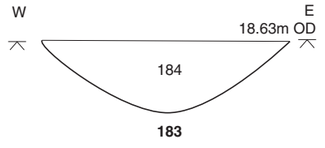

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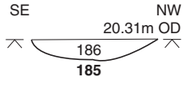

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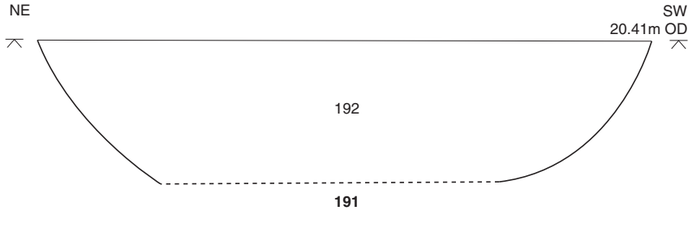


0 1:25 1 m

Figure 8b: Sections of Period 0 (undated/natural) features

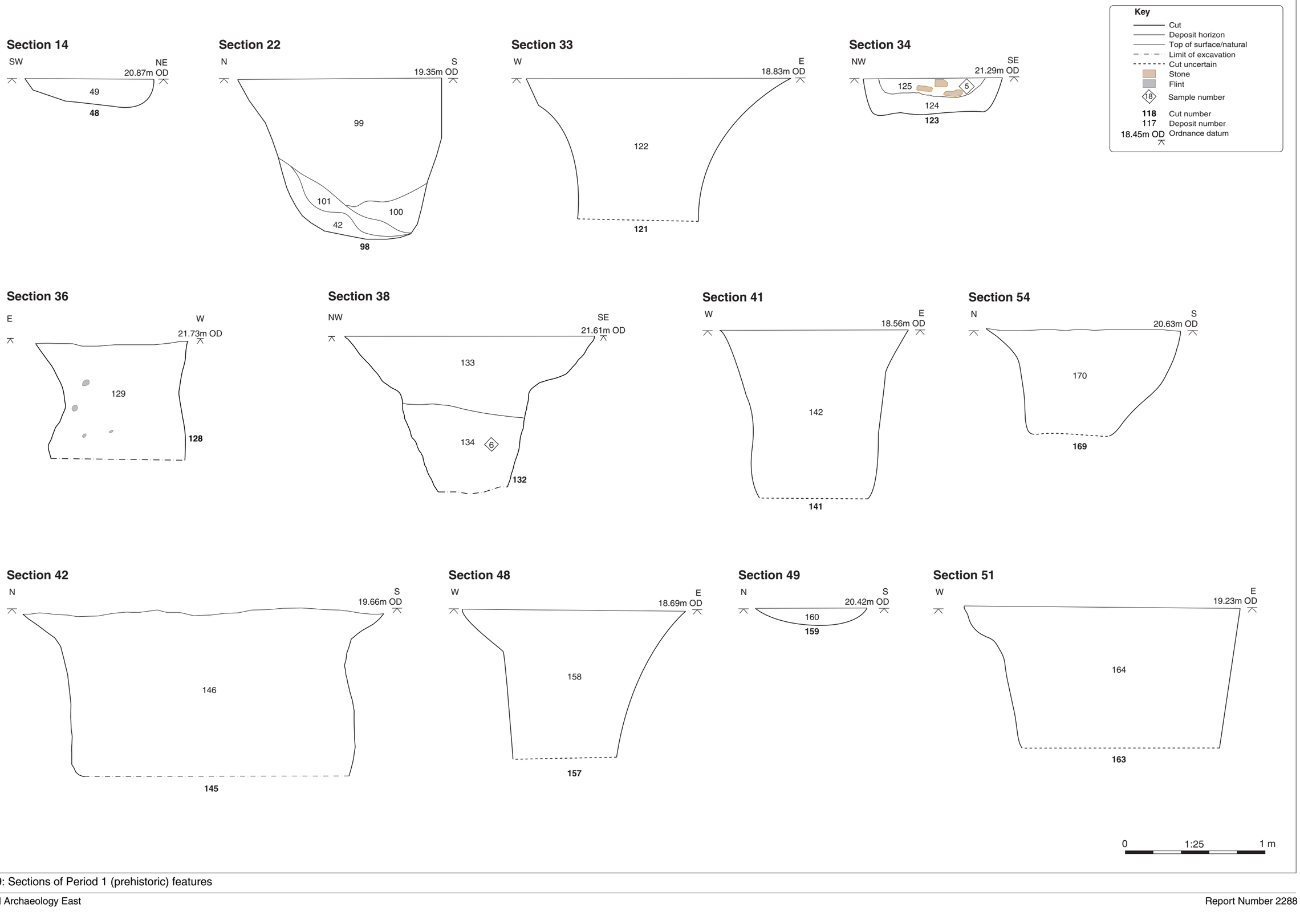


Figure 9: Sections of Period 1 (prehistoric) features

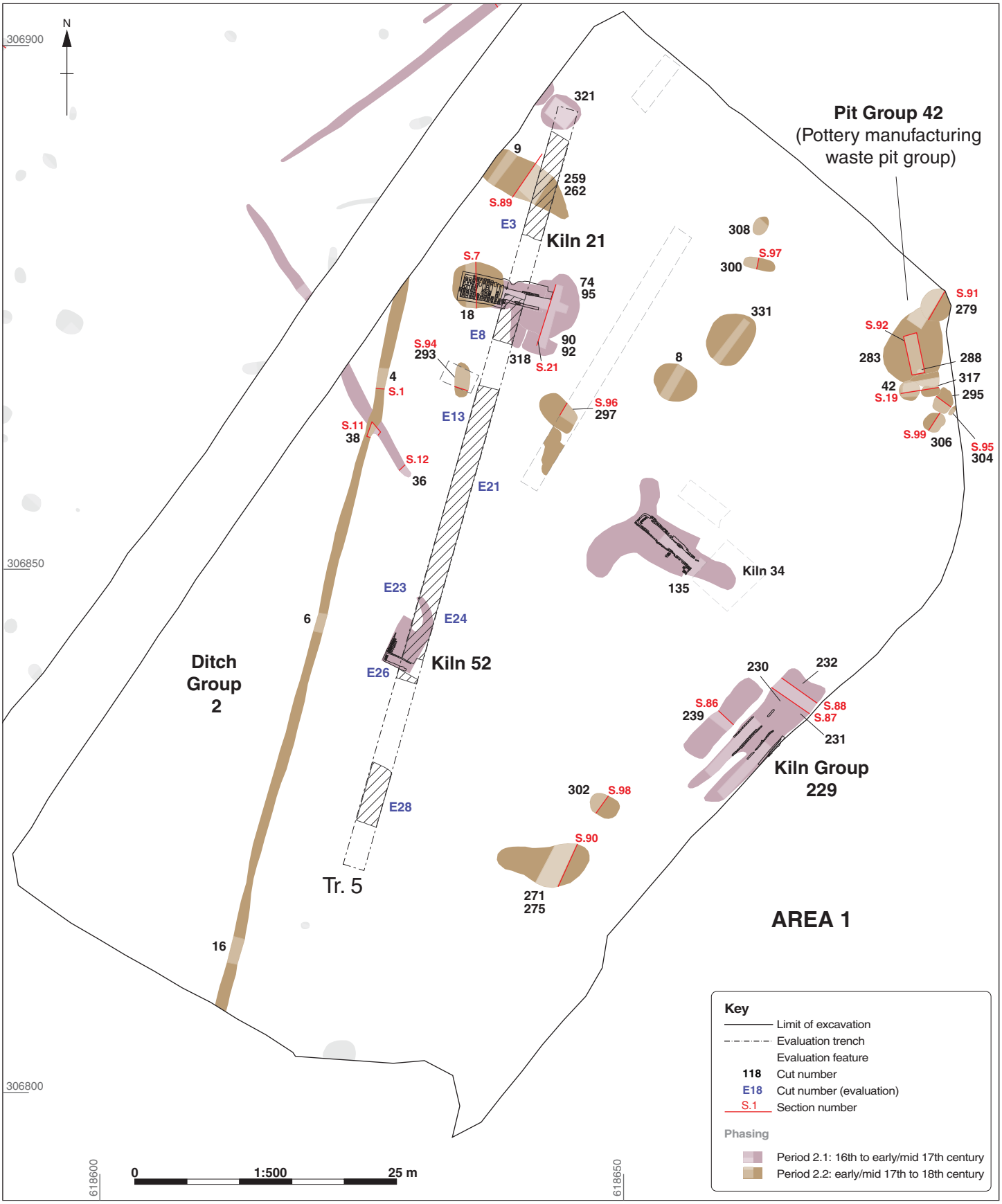
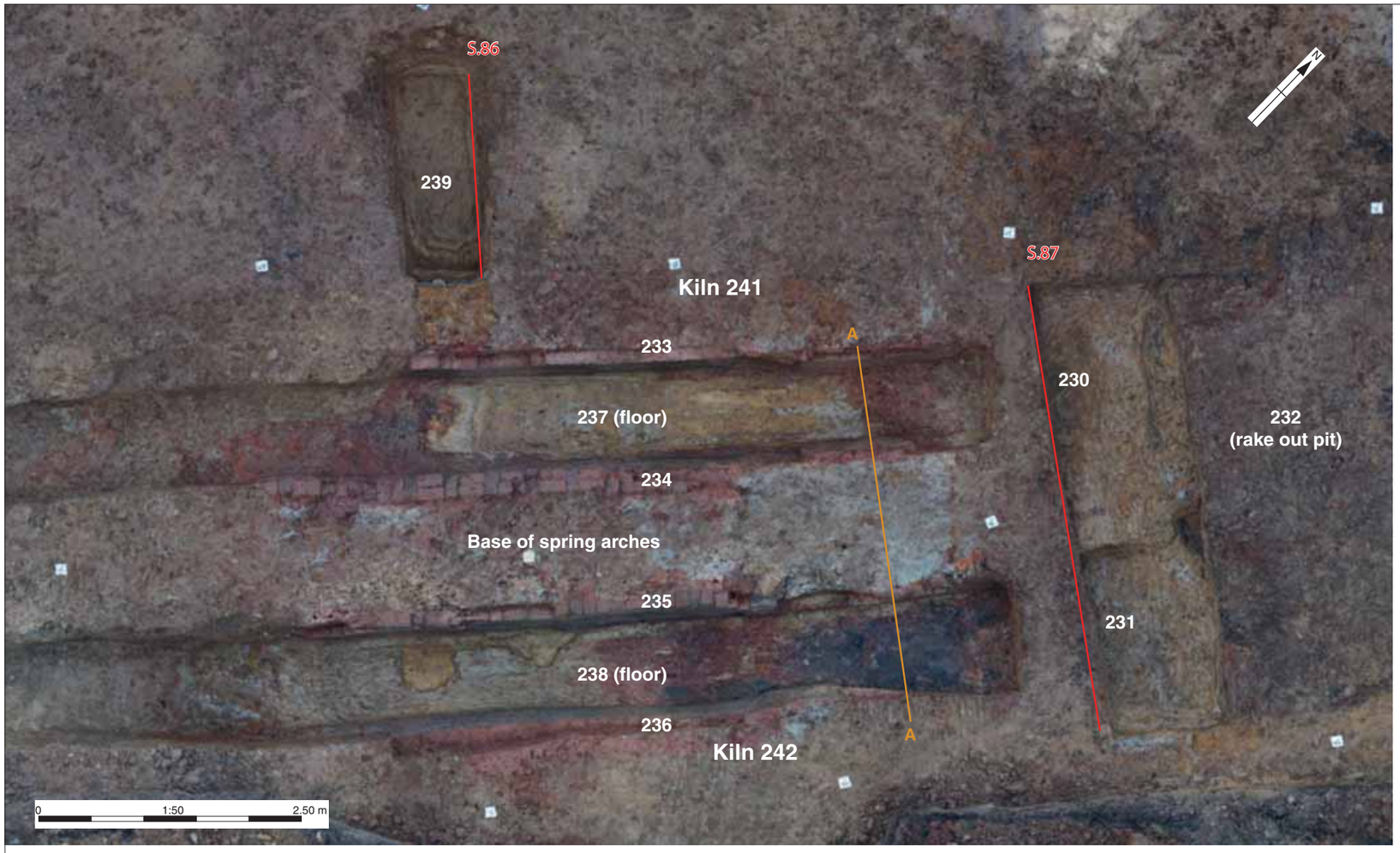
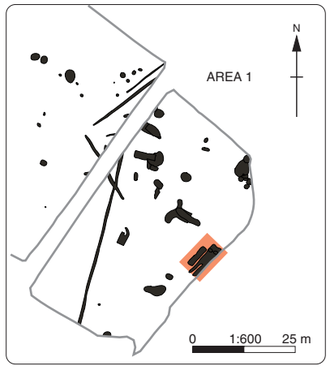


Figure 10: Detail plan of Area 1 showing kilns and extraction pits (Periods 2.1 and 2.2)



Orthographic top view of Kiln Group 229 (kilns 241 and 242)

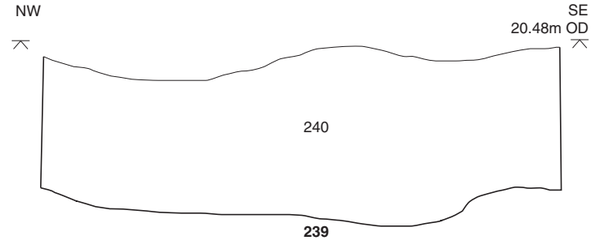


Key

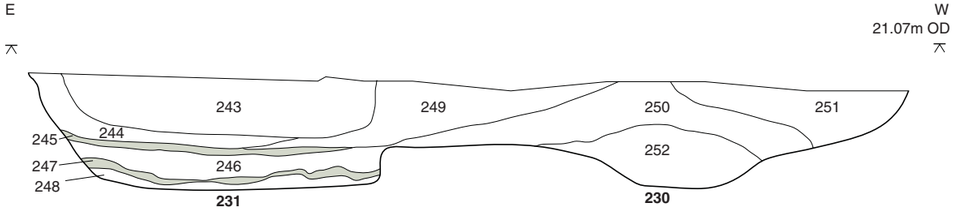
- Cut
- Deposit horizon
- Top of surface/natural
- Limit of excavation
- Clay
- 118 Cut number
- 117 Deposit number
- 18.45m OD Ordnance datum

Photogrammetry longitudinal cross-section (A-A) of kilns 241 and 242

Section 86

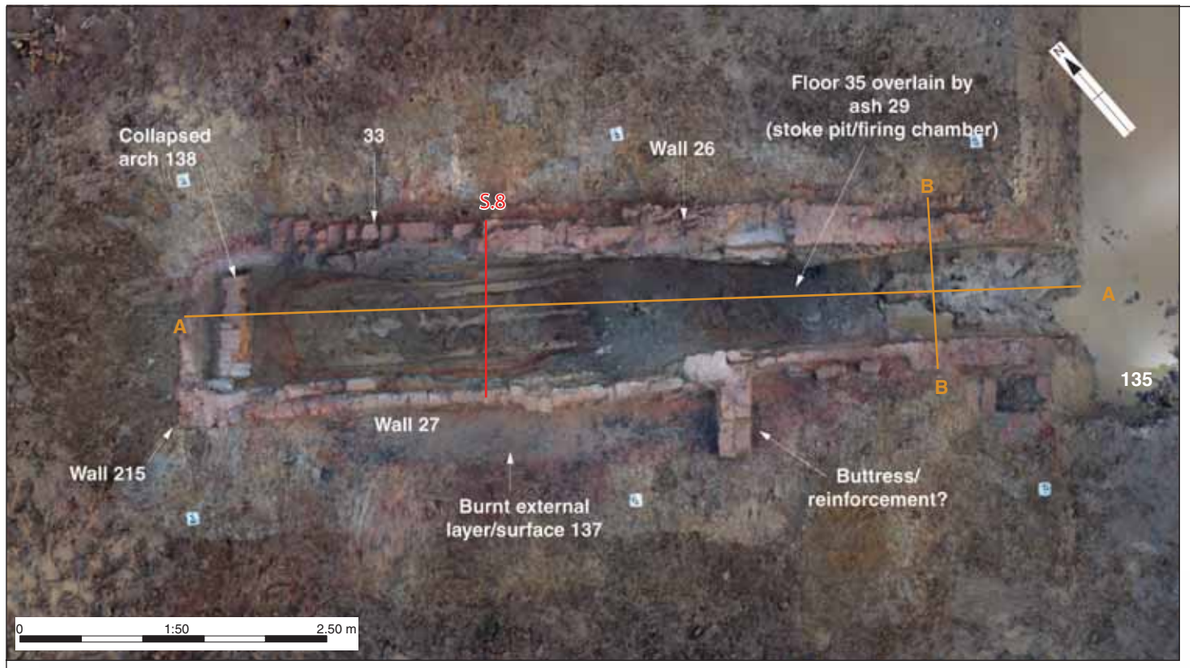


Section 87

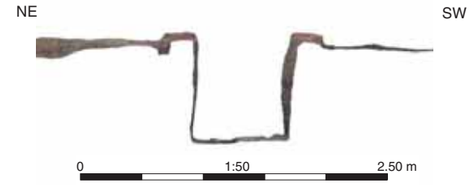


Sections through kilns 241 and 242

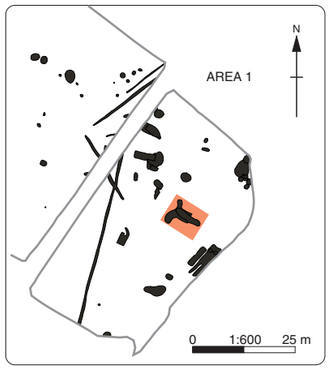
Figure 11: Kiln Group 229: photogrammetry plan and sections



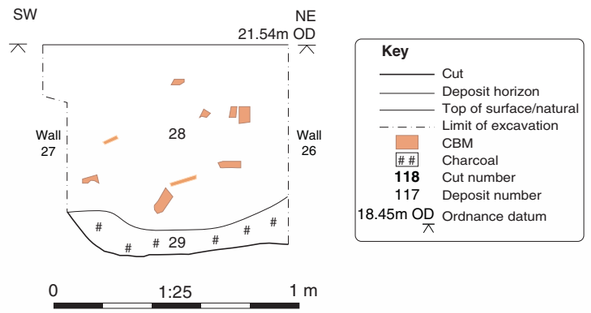
Orthographic top view of kiln 34



Section through Kiln 34 through excavated kiln (B-B)

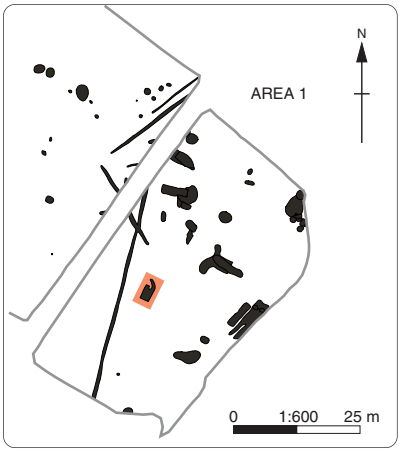


Section 8



Photogrammetry longitudinal cross-section (A-A) showing detail of kiln wall 26

Figure 12: Kiln 34: photogrammetry plan and sections



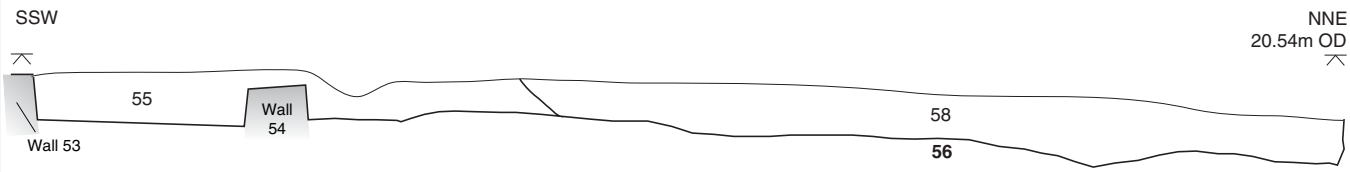
Key

	Cut
	Deposit horizon
	Top of surface
118	Cut number
117	Deposit number
18.45m OD	Ordnance datum

Orthographic top view of Kiln 52

Photogrammetry cross-section (A-A) detail

Section 16



Section through Kiln 52 showing infill deposits

Fig. 13: Kiln 52: photogrammetry plan and sections

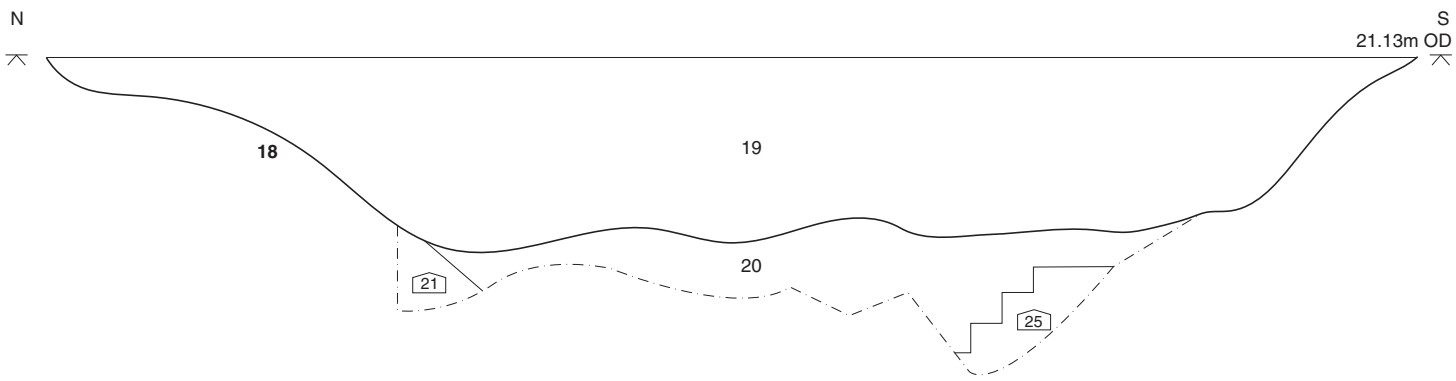
Orthographic top view of Kiln 21

Photogrammetry longitudinal cross-section (B-B) through Kiln 21 showing wall 79 and base of spring arches

Photogrammetry cross-section (A-A) through Kiln 21

0 1:50 2.50 m

Section 7



Section 21 (Kiln 21)

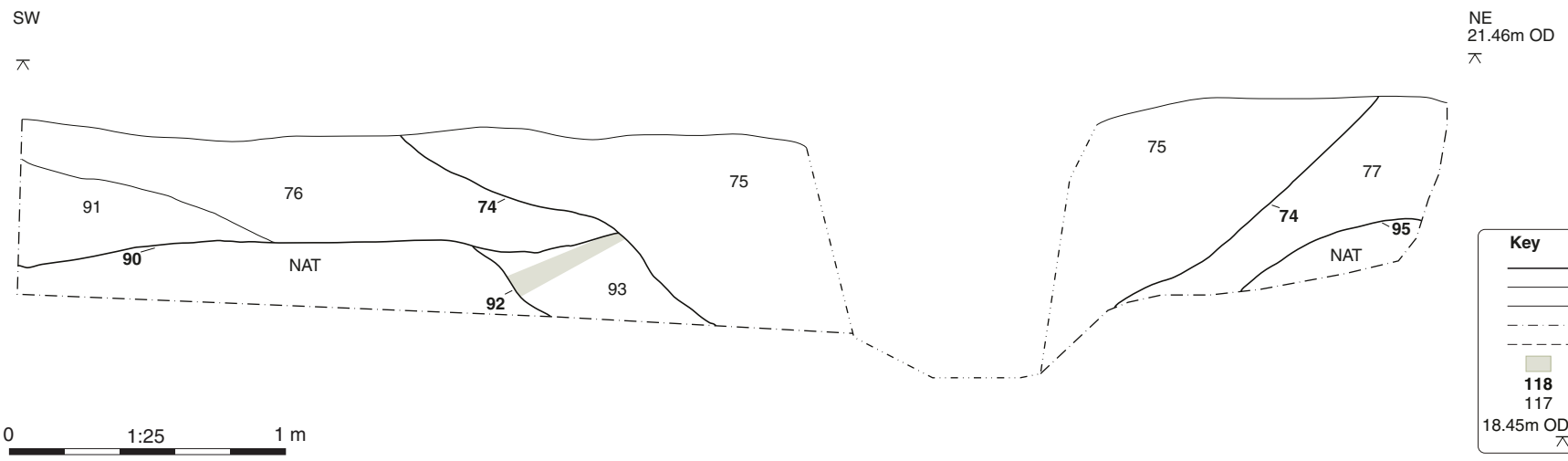
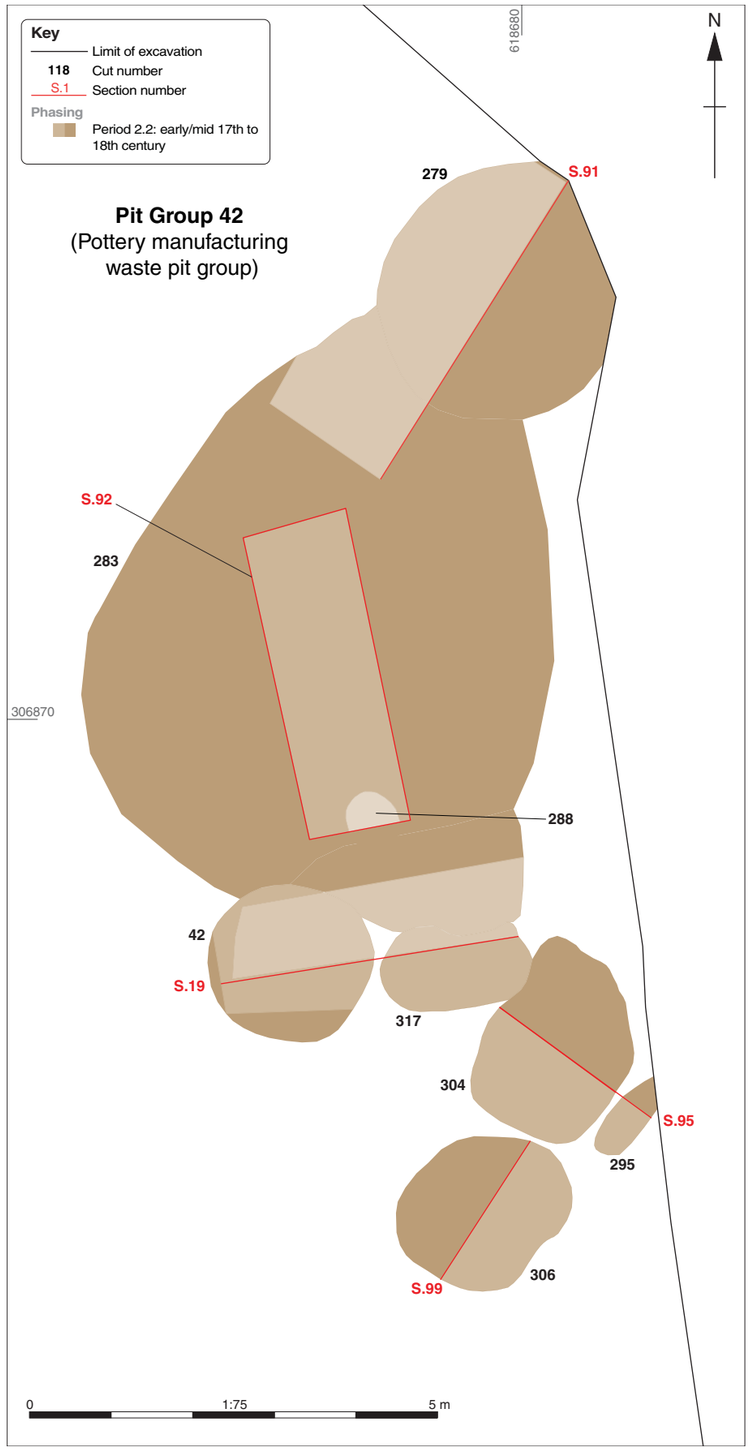
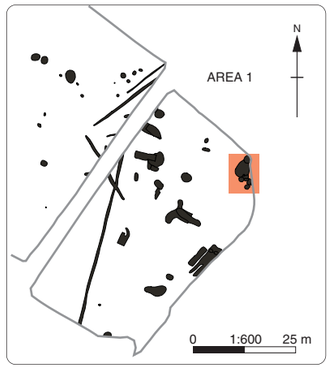


Figure 14: Kiln 21: Photogrammetry plan and sections



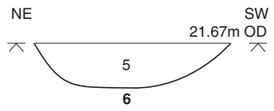


Pottery Waster Pit Group (Period 2.2, Area 1) working shot, looking south-east

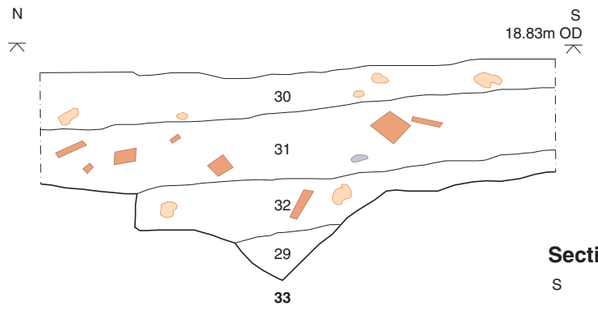
Pottery Waster Pit Group (Period 2.2, Area 1) working shot, looking north towards Newfound Farm

Figure 15: Detail of Pottery Waster Pit Group 42

Section 1



Section 9



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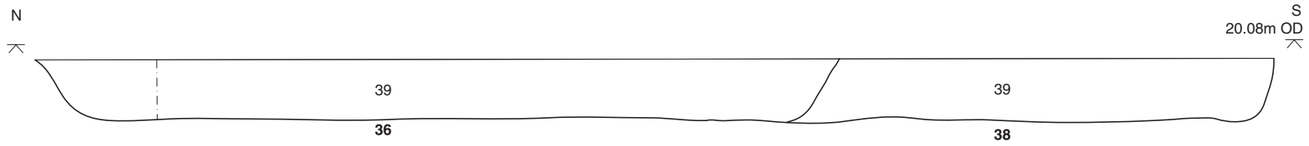

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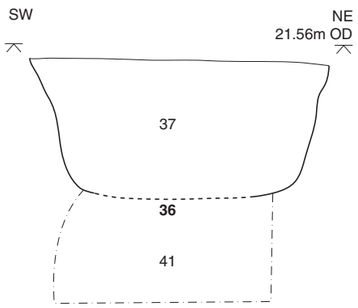

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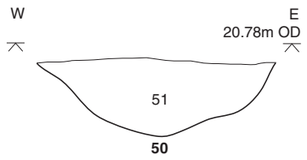

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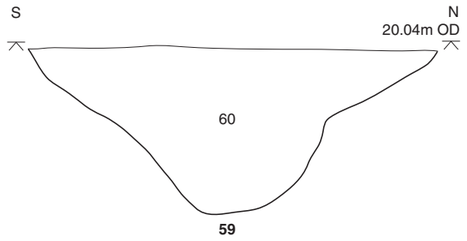
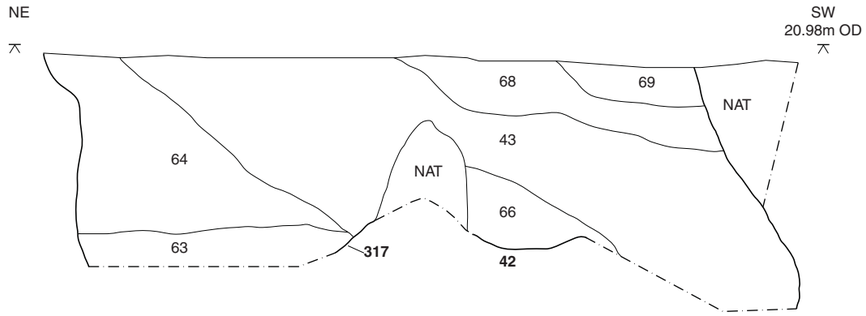


Section 19



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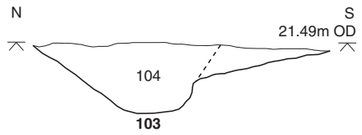

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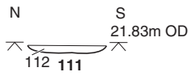

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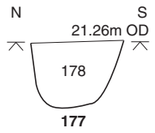

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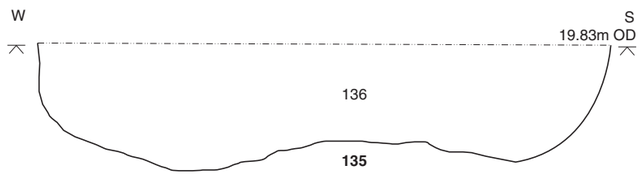

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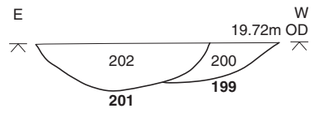

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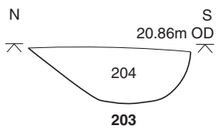

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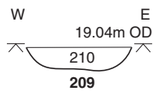

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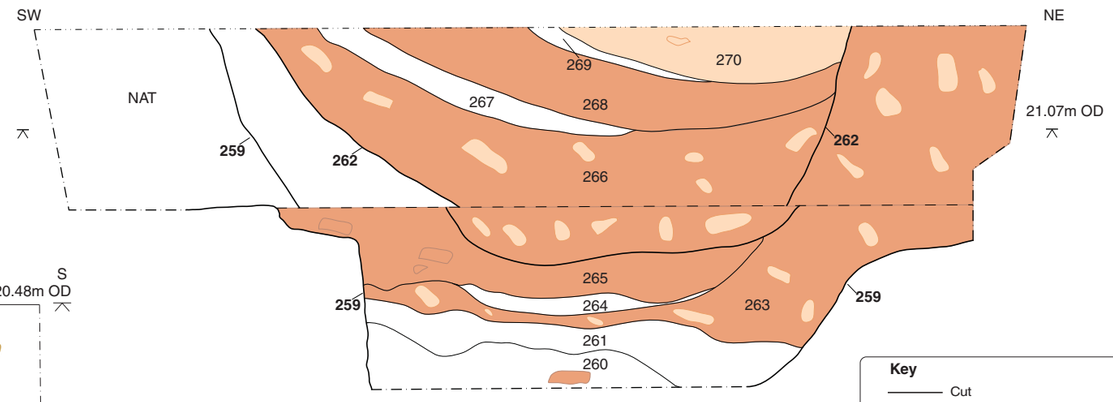

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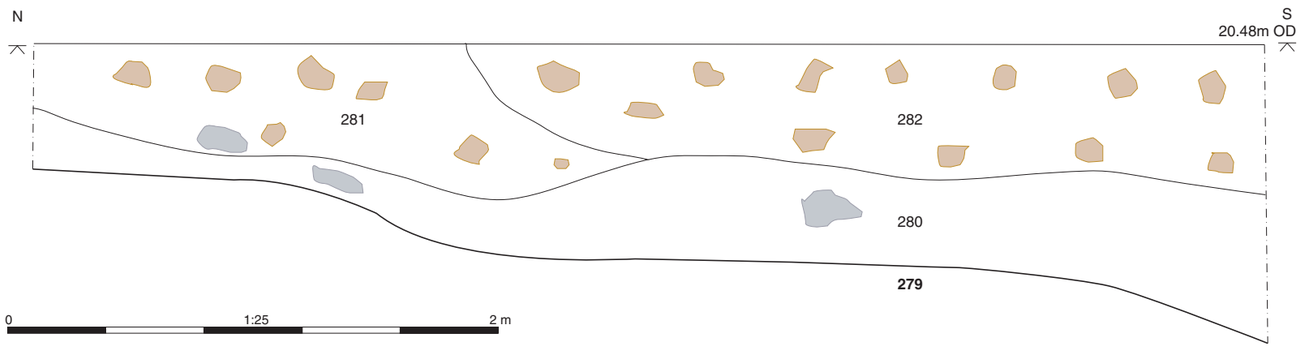
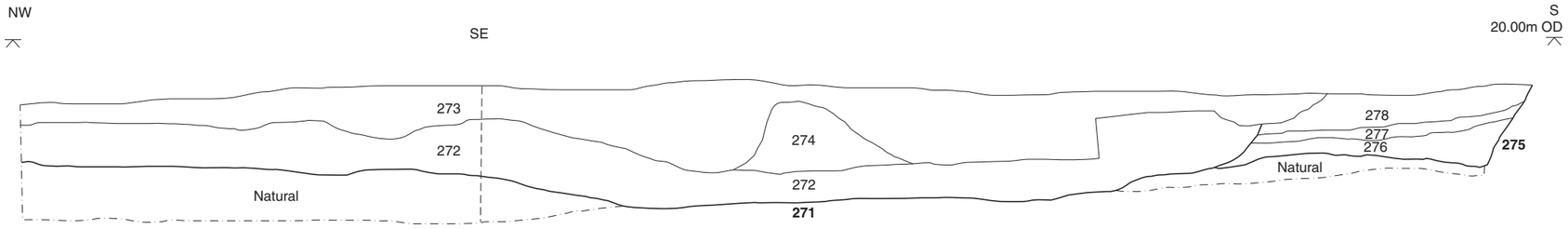


Key

- Cut
- Deposit horizon
- Top of surface/natural
- Limit of excavation
- Break in section/limit of section
- Tile
- Brick
- Stone
- Flint
- **118** Cut number
- 117 Deposit number
- 18.45m OD Ordnance datum

Figure 16a: Sections of Period 2 (post-medieval) features

Section 90



Key

- Cut
- Deposit horizon
- Top of surface/natural
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- Break in section/limit of section
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- Stone
- **118** Cut number
- 117 Deposit number
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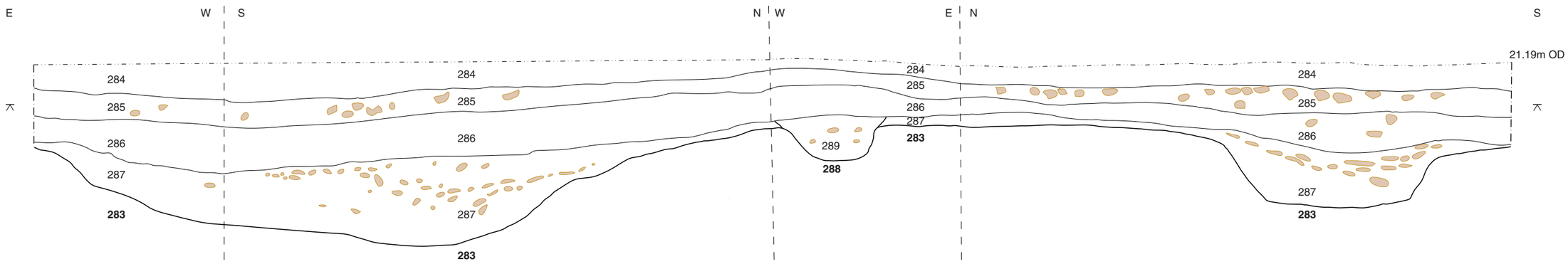
Section 92



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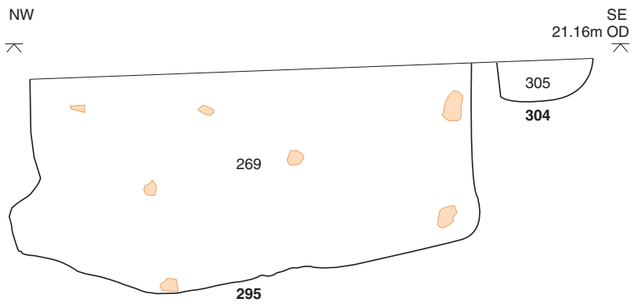

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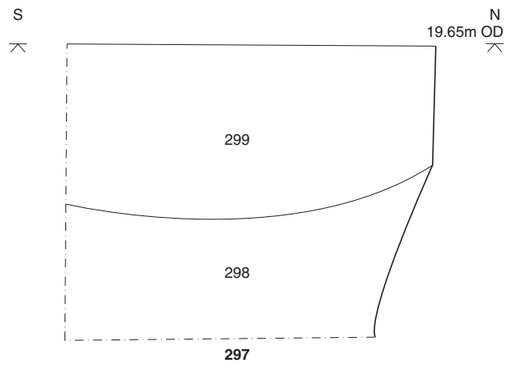

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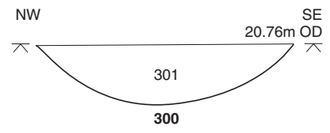

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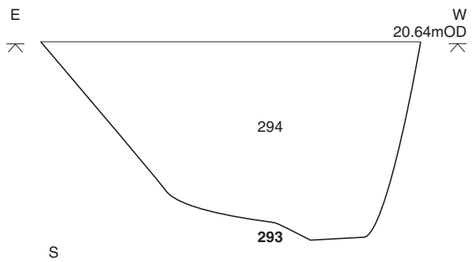

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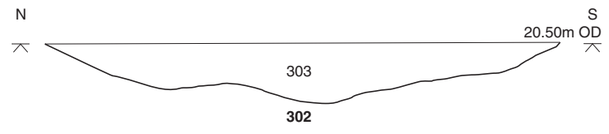

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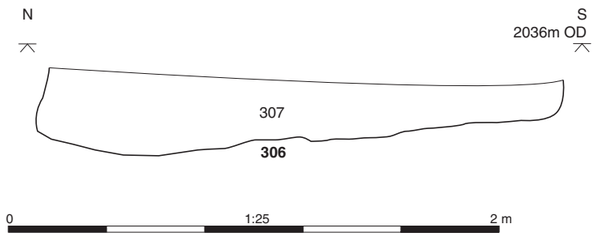

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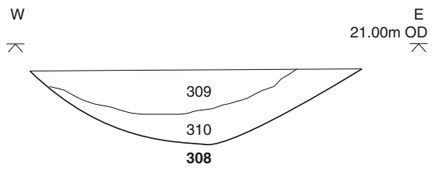

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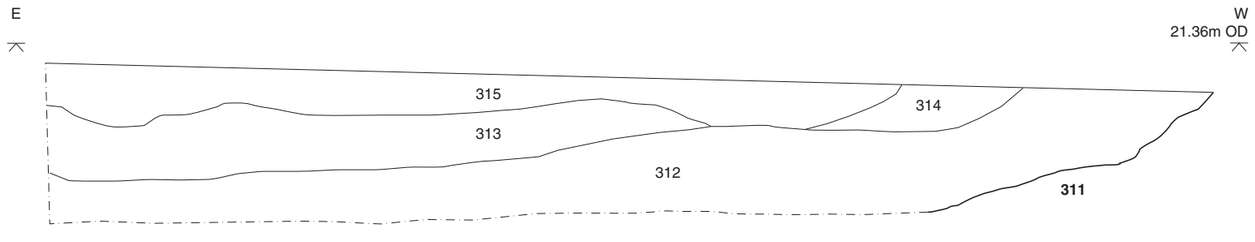


Figure 16b: Sections of Period 2 (post-medieval) features

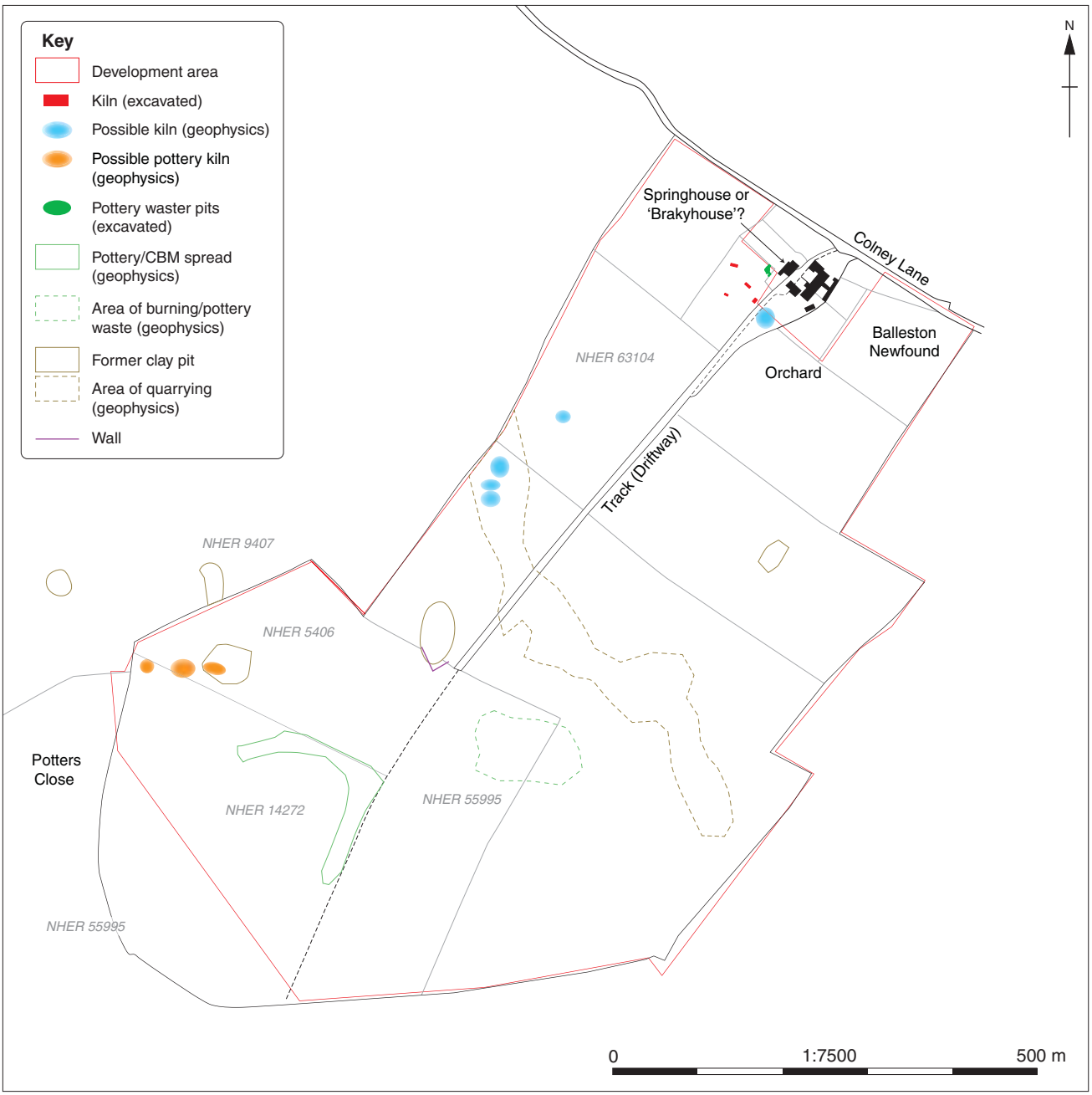


Figure 17: Balleston Newfound and Potters Close, based on First edition Ordnance Survey map (1882), geophysical survey, NHER data, documentary sources and excavated features

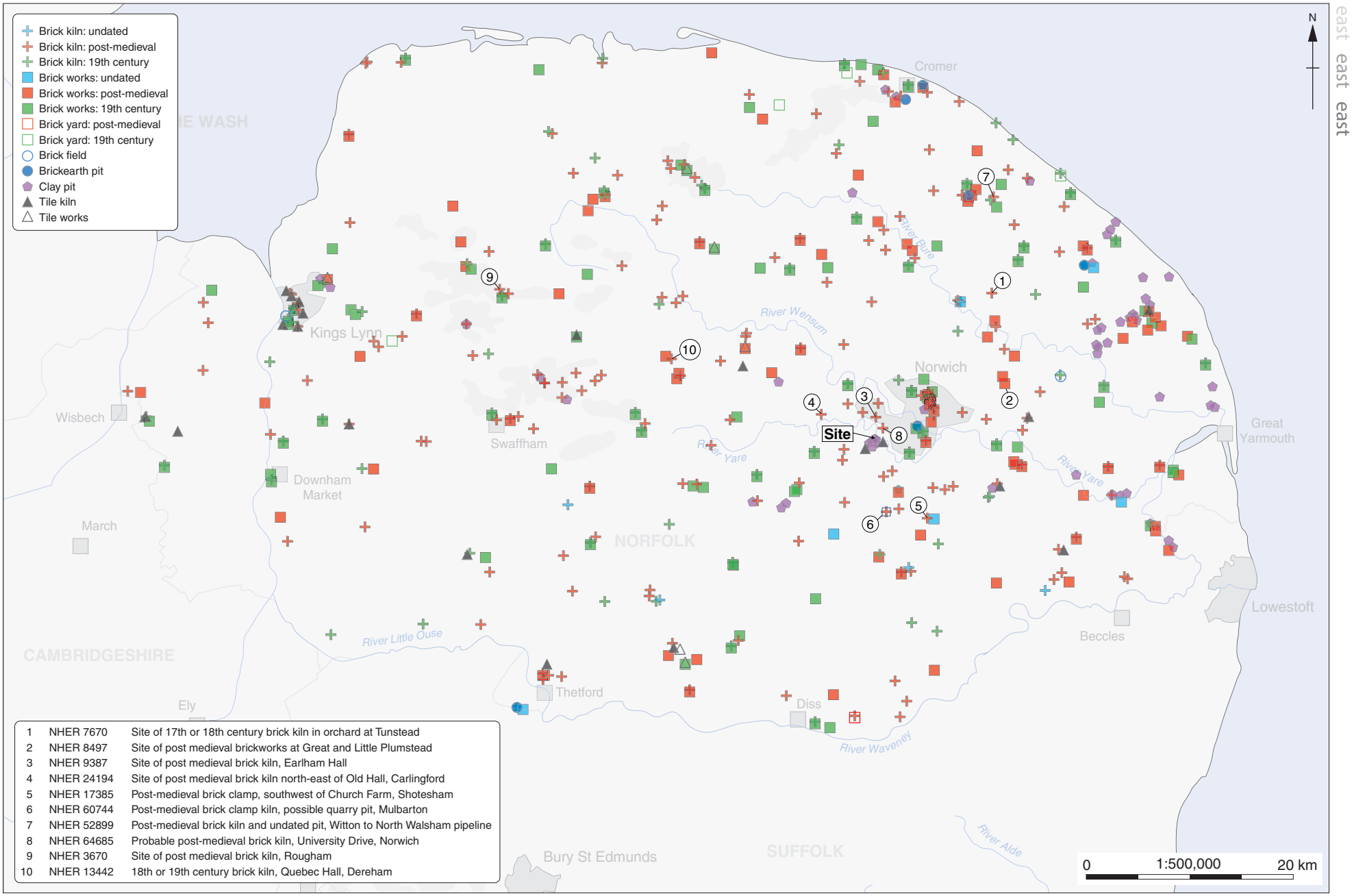


Figure 18: Distribution of brick and tile production sites, clay pits and associated elements listed in the NHER

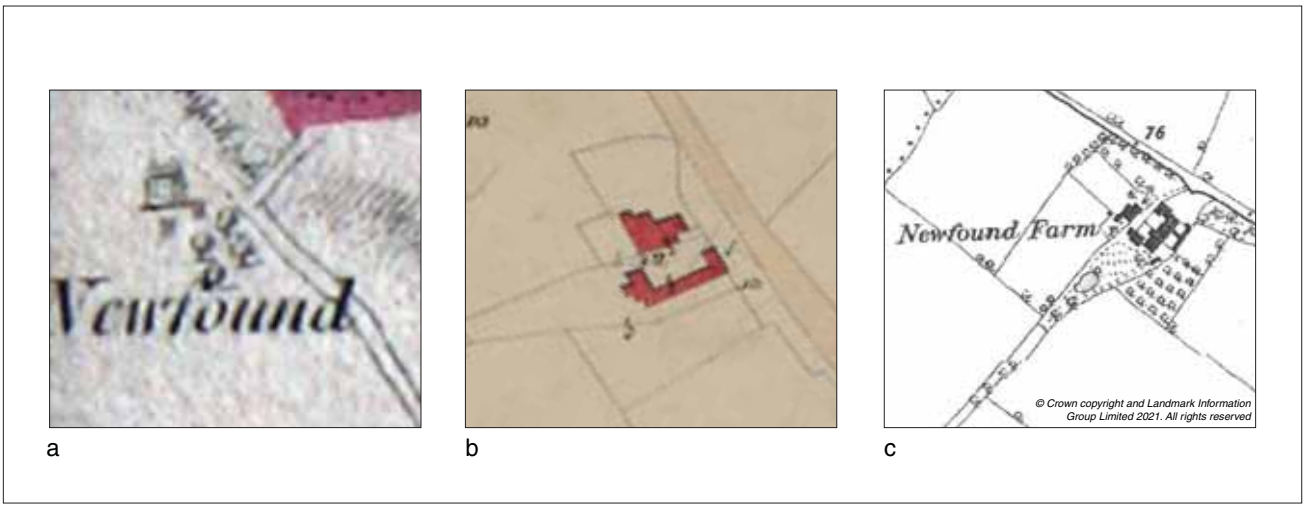


Figure 19: Detail of Newfound Farm from a) Faden's map of 1797; b) 1842 Tithe map c) 1882 First Edition Ordnance Survey (NB: not to scale)

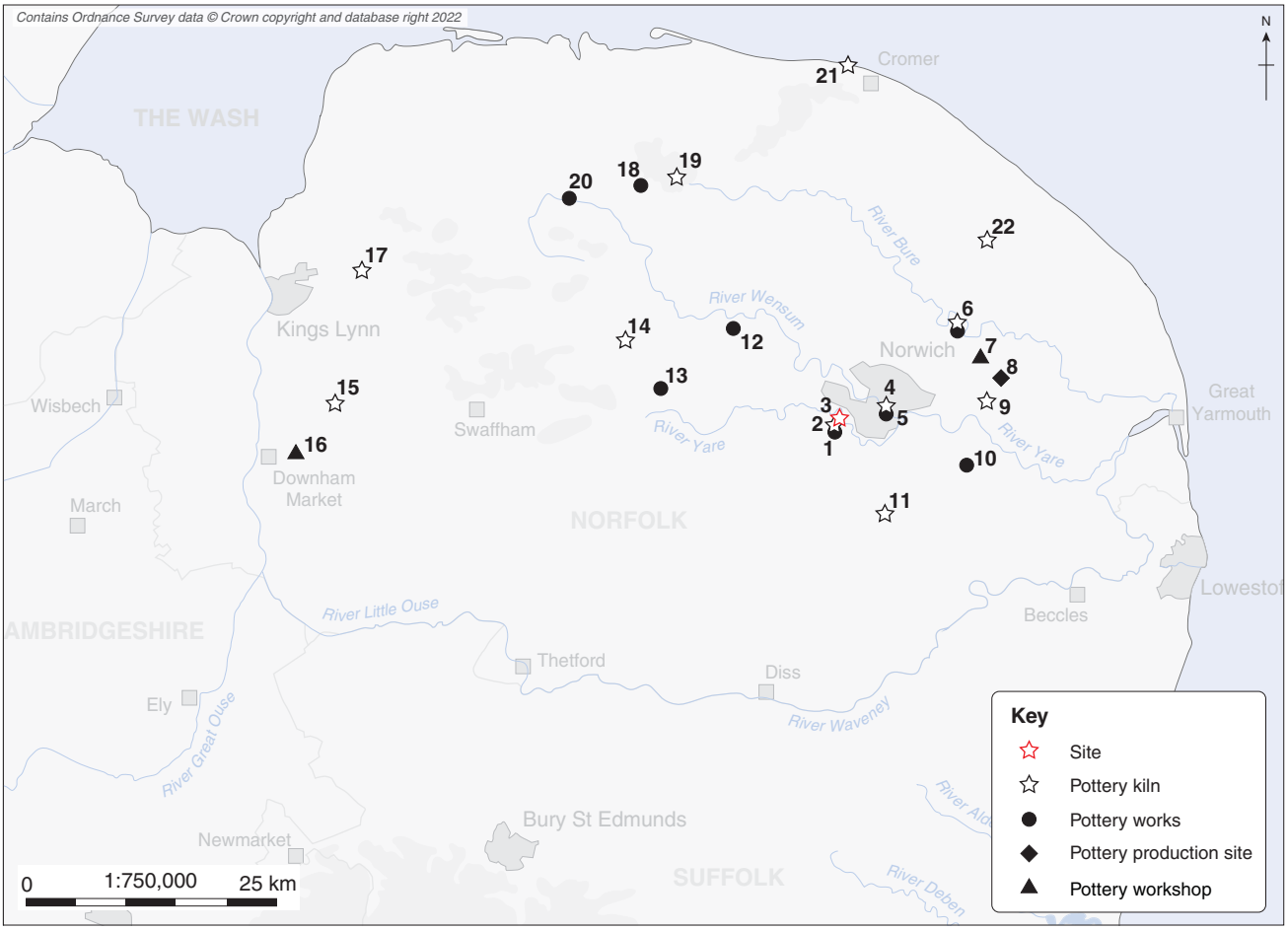


Figure 20: Distribution of pottery production and related sites listed in the NHER

Plate 1: Photogrammetry ortho view of the site during machining of Area 2

Plate 2: Working shot of kiln 21 (Area 1) with Newfound Farm Farm in background, looking east

Plate 3: Working shot of kiln 34 (Area 1) under excavation showing ground conditions

Plate 4: Active/new sinkhole opening during machining of the site

Plate 5: Sinkhole **61** (Period 0, Area 2), looking north

Plate 6: Sinkhole **189** (Period 0, Area 2), looking north

Plate 7: Sinkhole **211** (Period 0, Area 2), looking north

Plate 8: Sinkhole **105** (Period 0, Area 2), looking south

Plate 9: Pit **173** (Period 0, Area 2), looking south

Plate 10: Pit **115** (Period 0, Area 2), looking south

Plate 11: Sinkhole **141** (Period 1.1, Area 2), looking north

Plate 12: Sinkhole **145** (Period 1.1, Area 2), looking north-west

Plate 13: Sinkhole **98** (Period 1.1, Area 2), looking east

Plate 14: Sinkhole **132** (Period 1.1, Area 2), looking north-east

Plate 15: Pit **128** (Period 1.1, Area 2), looking north-east

Plate 16: Pit **123** (Period 1.1, Area 2), looking north-east

Plate 17: Ditch Group 1 and 2
(Period 2.1, Area 1: Ditches 4 and 36), looking north-west

Plate 18: Kiln Group 229 rake-out pit **232** (Period 2.1, Area 1) showing charcoal-rich fill, looking north-east

Plate 19: Kiln Group 229 (Period 2.1, Area 1) showing charcoal-rich fill in base of cut **231** overlain by backfill deposits, looking south-west

Plate 20: Kiln 241 (Kiln Group 229, Period 2.1, Area 1) working shot showing later truncation, looking north-west

Plate 21: Kiln 241 (Kiln Group 229, Period 2.1, Area 1) showing spring arch bases, looking north-east

Plate 22: Kiln 242 (Kiln Group 229, Period 2.1, Area 1) showing spring arch bases, looking north-west

Plate 23: Kiln 242 (Kiln Group 229, Period 2.1, Area 1) northern end, looking south-east

Plate 24: Kiln 34 (Period 2.1, Area 1) showing walls and floor 35, looking north-west

Plate 25: Kiln 34 (Period 2.1, Area 1) showing detail of floor 35, looking north-west

Plate 26: Kiln 34 (Period 2.1, Area 1) detail of wall 26, looking north-east

Plate 27: Kiln 34 (Period 2.1, Area 1) showing collapsed arch 138, looking north-west

Plate 28: Kiln 34 (Period 2.1, Area 1) fully-excavated with layer 137, looking north-east

Plate 29: Kiln 34 (Period 2.1, Area 1) detail of charcoal-rich fill 29 overlain by rubble backfill, looking north-west

Plate 30: Kiln 52 (Period 2.1, Area 1) part-excavated, looking south-west

Plate 31: Kiln 52 (Period 2.1, Area 1) part-excavated, looking west

Plate 32: Kiln 52 (Period 2.1, Area 1) fully-excavated, looking west

Plate 33: Kiln 52 (Period 2.1, Area 1) detail of bricks 71, looking north-west

Plate 34: Kiln 52 (Period 2.1, Area 1) detail of bricks 70, looking north-west

Plate 35: Kiln 21 (Period 2.1, Area 1) showing quarry pits, looking south-west

Plate 36: Kiln 21 (Period 2.1, Area 1), looking east

Plate 37: Kiln 21 (Period 2.1, Area 1), looking west

Plate 38: Kiln 21 (Period 2.1, Area 1), looking south-west

Plate 39: Kiln 21 (Period 2.1, Area 1), looking north-west

Plate 40: Kiln 21 (Period 2.1, Area 1), detail of arches, looking west

Plate 41: Kiln 21 (Period 2.1, Area 1), west end looking north

Plate 42: Ditches **199** and **201** (Periods 2.1 and 2.2, Area 2), looking south-west

Plate 43: Pit **18** (Period 2.2, Area 1) cutting Period 2.1 Kiln 21, looking north-east

Plate 44: Pit **259**/**9** (Period 2.2, Area 1), looking north-west

Plate 45: Detail of backfills in pit **259** (Period 2.2, Area 1), looking north-west

Plate 46: Pit **293** (Period 2.2, Area 1), looking south

Plate 47: Dump 8 (Period 2.2, Area 1), looking east

Plate 48: Undulating fills in pit **271** (Period 2.2, Area 1), looking north-east

Plate 49: Pit Group 42 (Period 2.2, Area 1) pit **295**, looking north-east

Plate 50: Pit Group 42 (Period 2.2, Area 1) pits **42** and **317**, part-excavated, looking south

Plate 51: Pit Group 42 (Period 2.2, Area 1) pits **42** and **317**, looking north-east

Plate 52: Pit Group 42 (Period 2.2, Area 1) pit **283**, looking north-west

Plate 53: Group 42 (Period 2.2, Area 1) pits **283** and **279**, looking north-east

Plate 54: Pit Group 42 (Period 2.2, Area 1) pit **279**, looking south-east

Fig. B4.1: SF4 Glass bottle seal from Period 2.2 pit **283**

Fig. B4.2: SF5 Glass bottle seal from Period 2.2 pit **279**

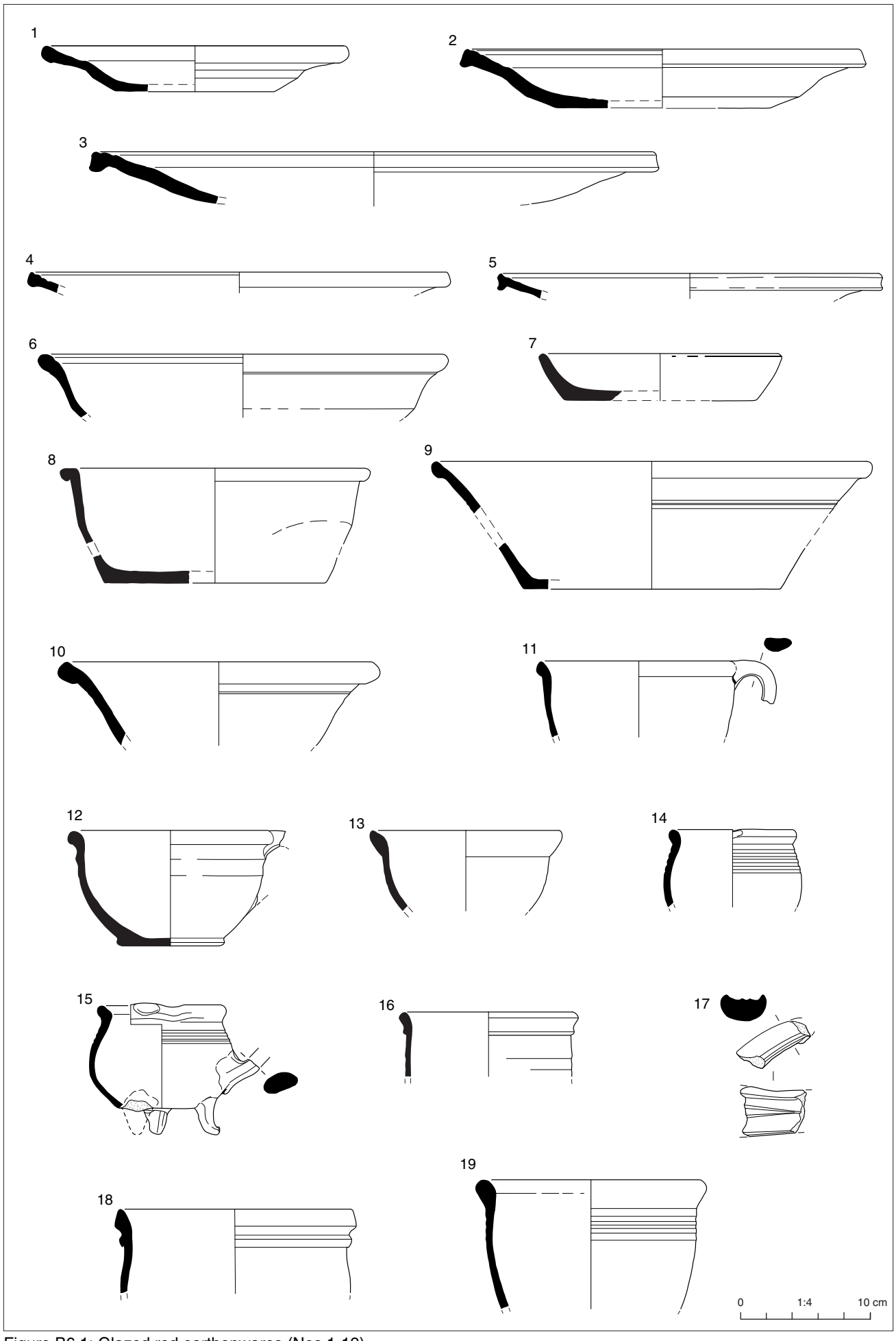


Figure B6.1: Glazed red earthenwares (Nos 1-19)

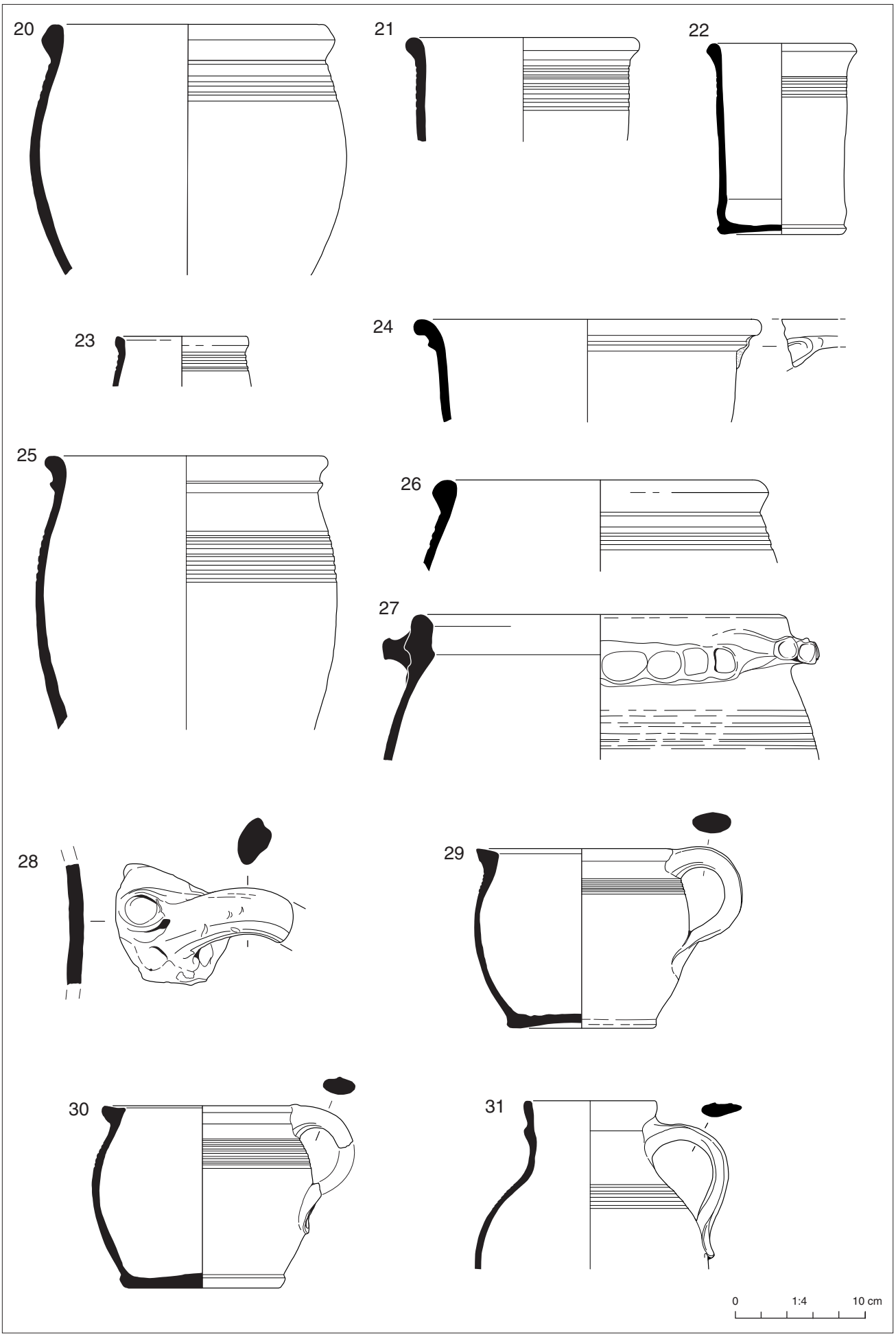


Figure B6.2: Glazed red earthenwares (Nos 20-31)

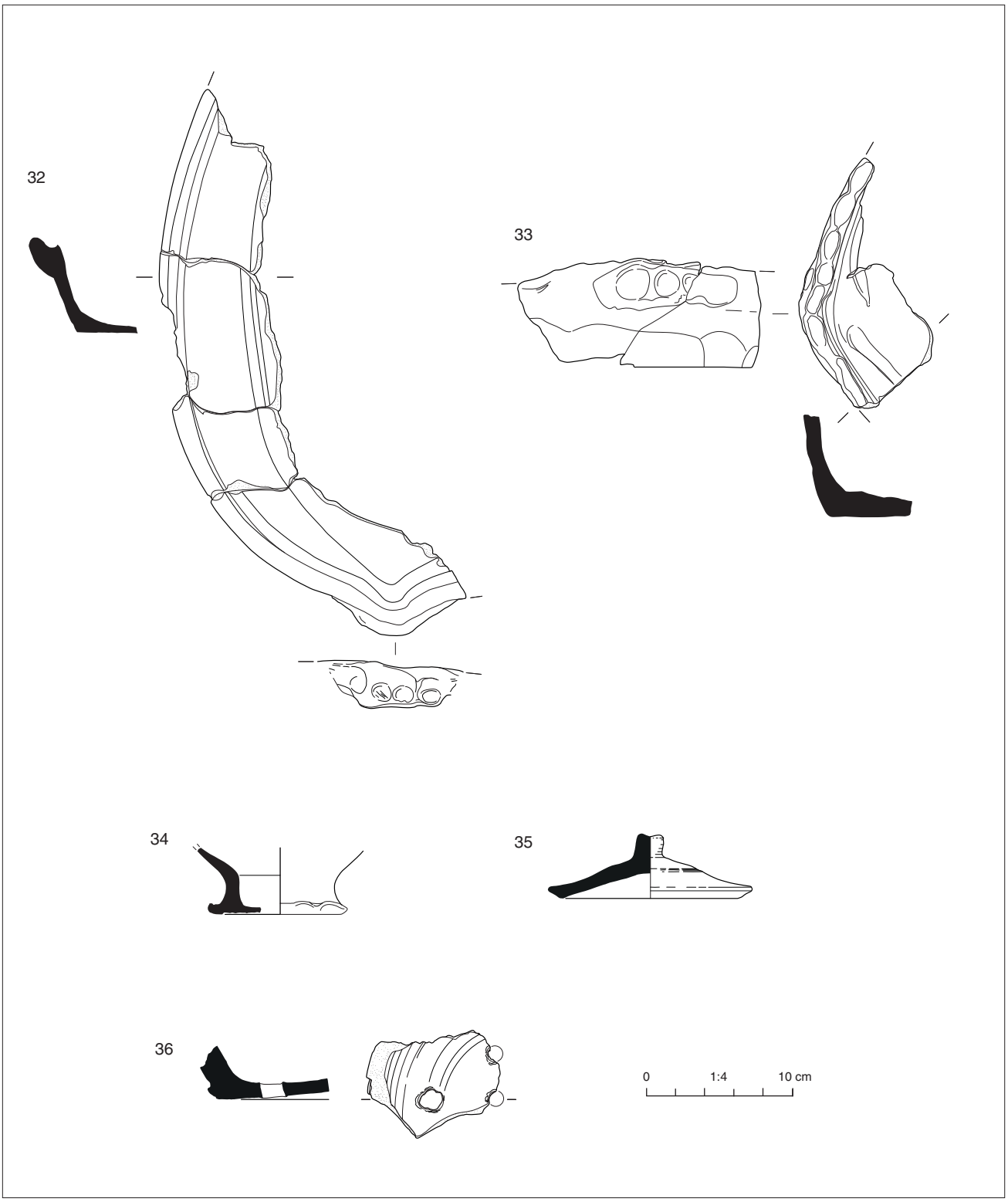


Figure B6.3: Glazed red earthenwares (Nos 32-36)

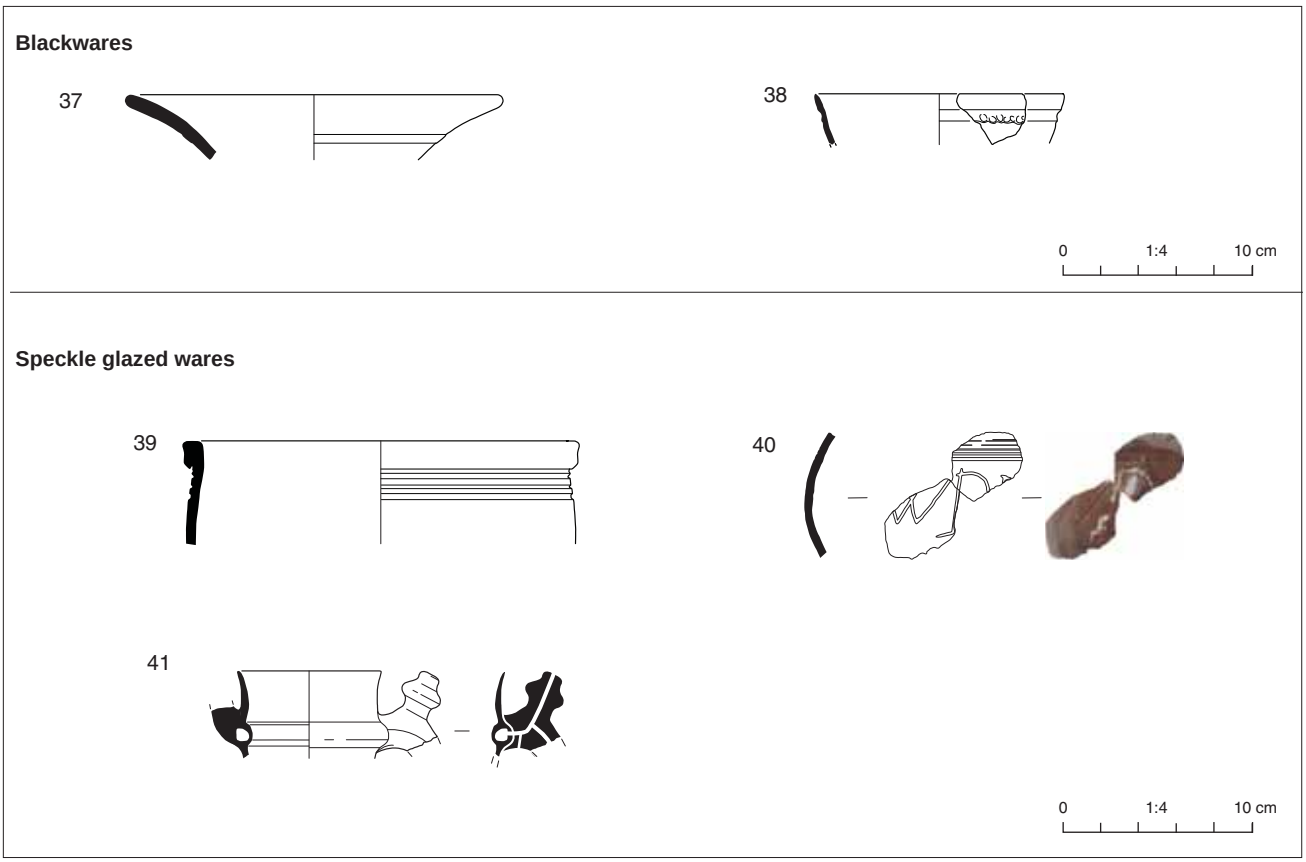


Figure B6.4: Blackwares (Nos 37-38) and speckled glaze wares (Nos 39-41)

Figure B6.5: English slipwares (Nos 42-47)

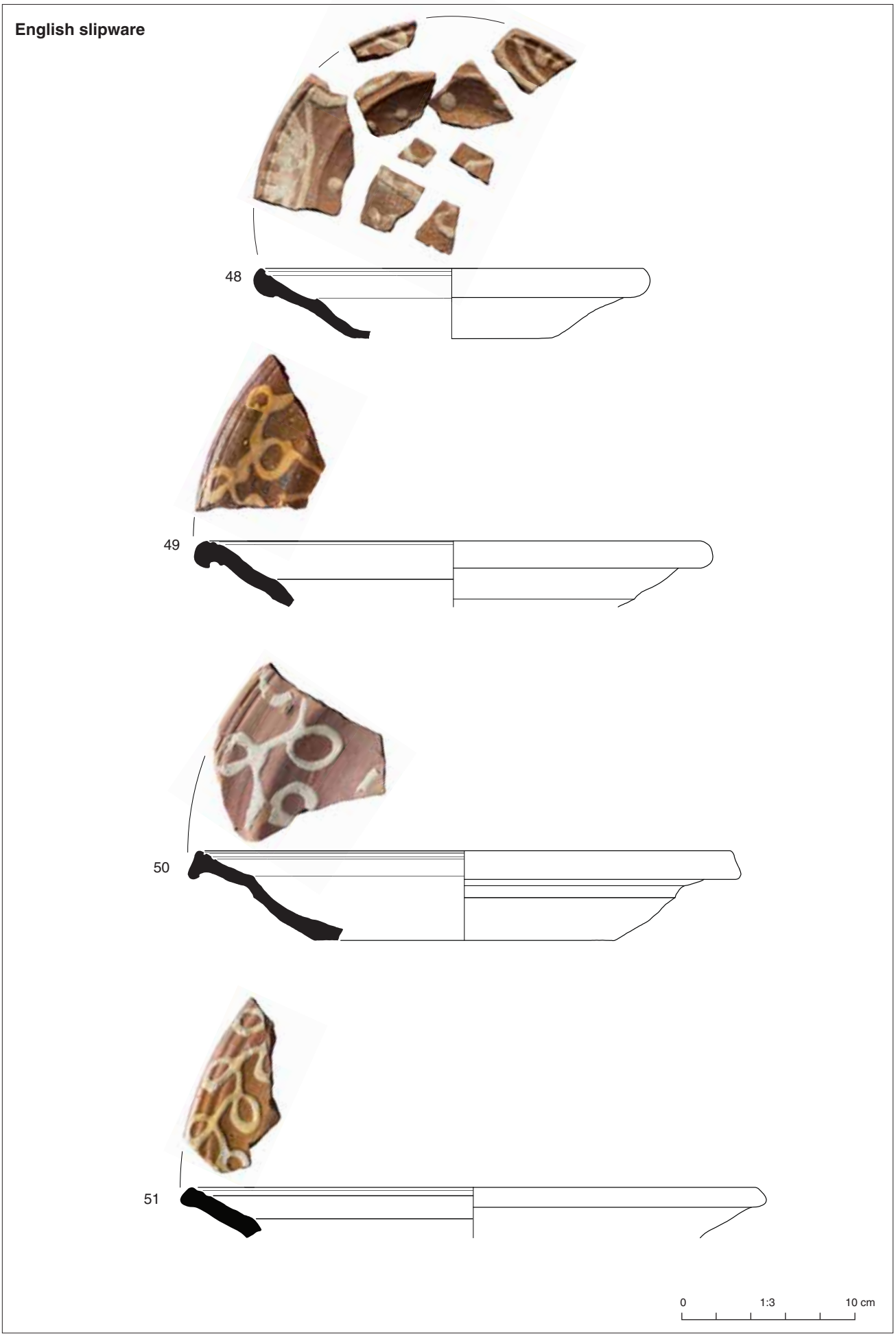


Figure B6.6: English slipwares (Nos 48-51)

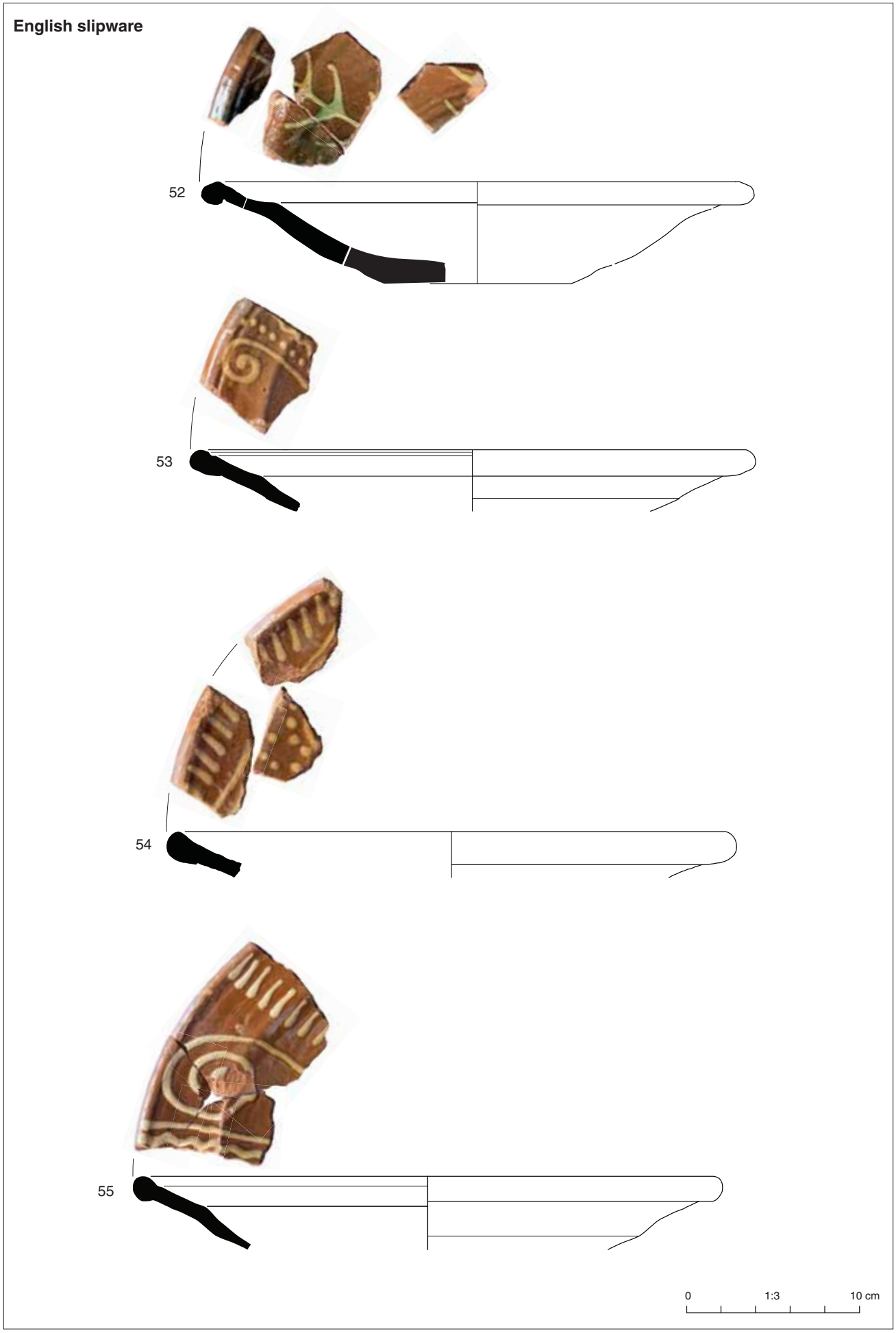


Figure B6.7: English slipwares (Nos 52-55)

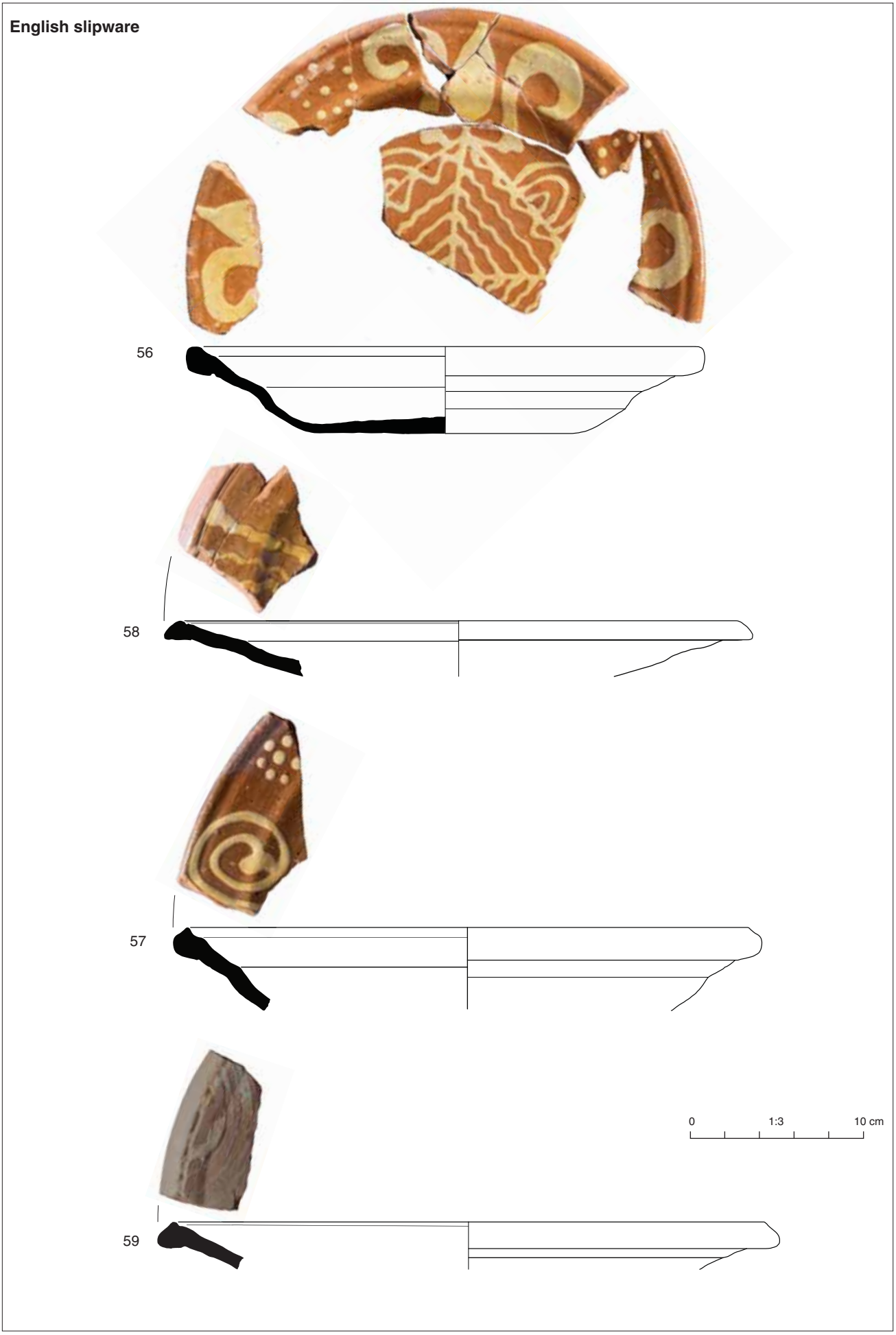


Figure B6.8: English slipwares (Nos 56-59)

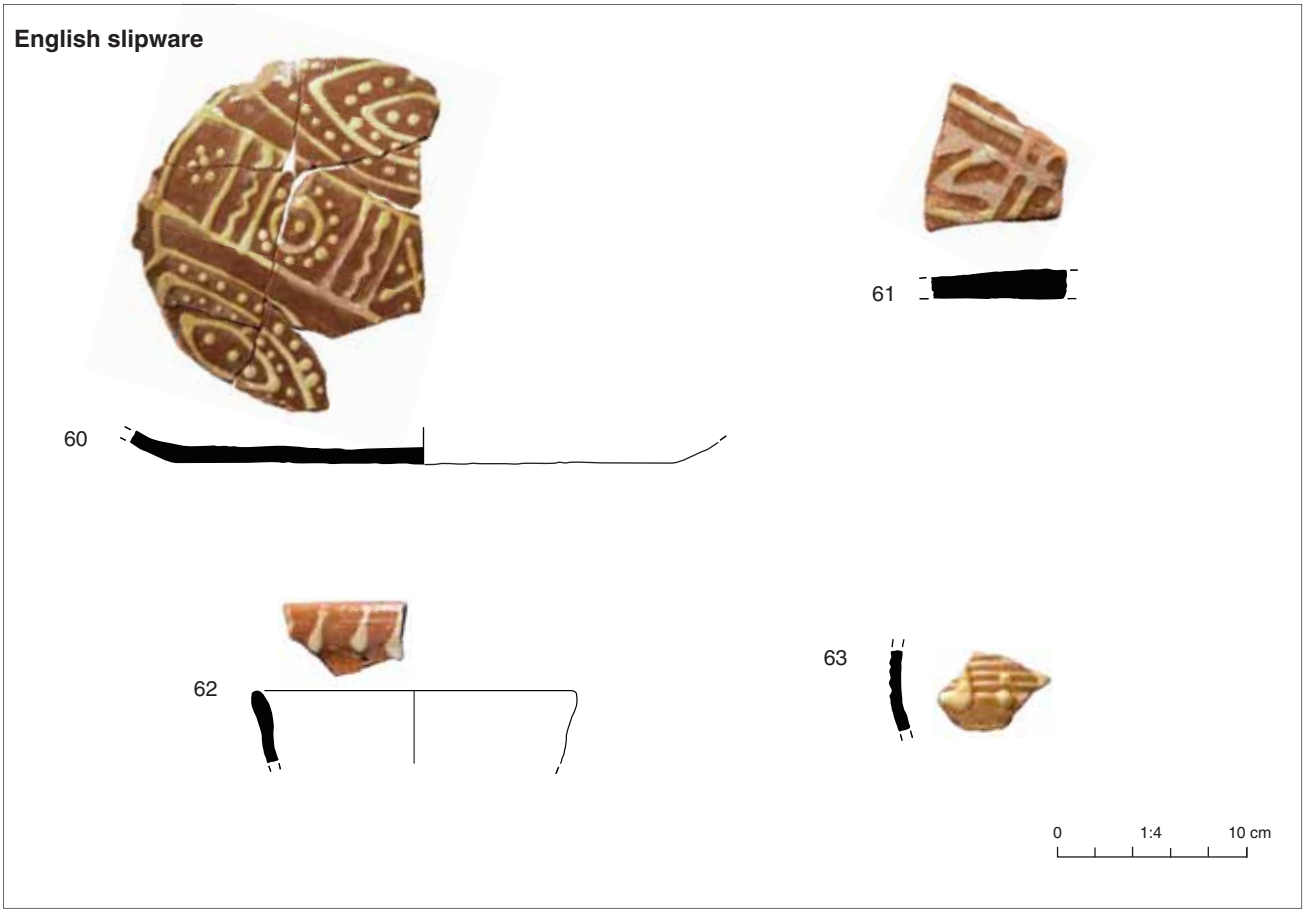


Figure B6.9: English slipwares (Nos 60-63)

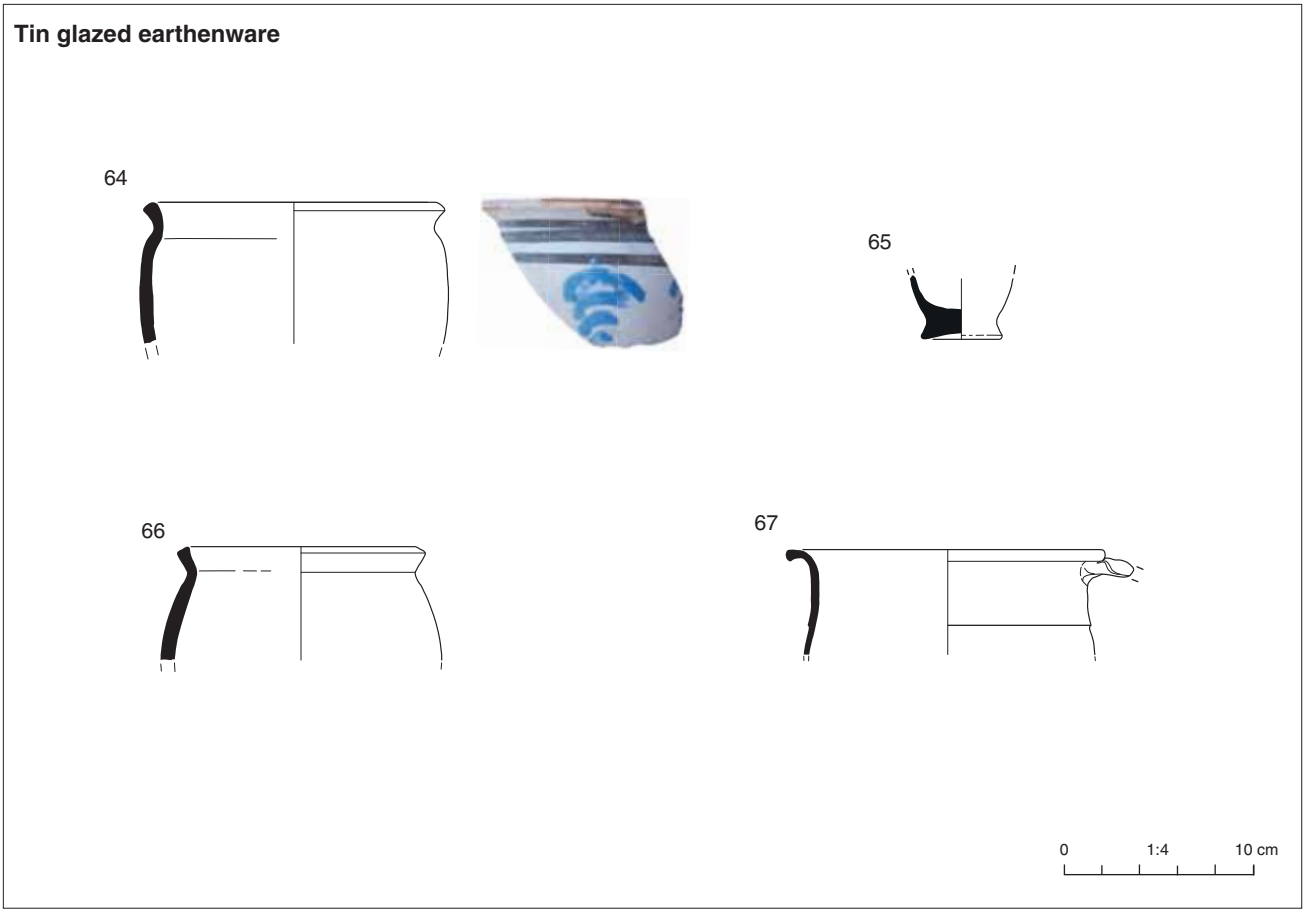
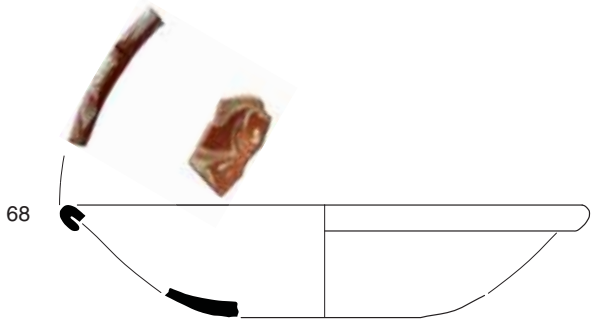
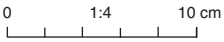


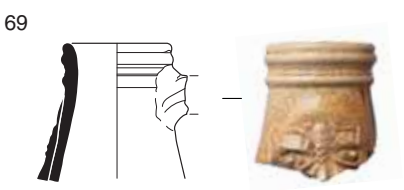
Figure B6.10: Tin glazed earthenwares (Nos 64-67)

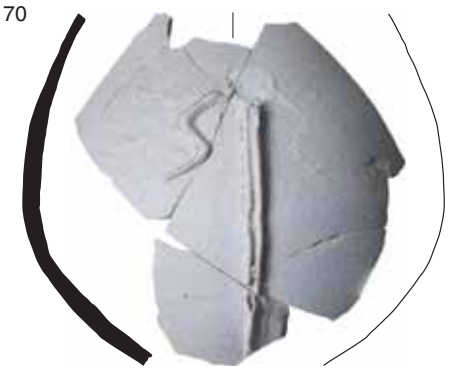
Other Slipware





Stone ware





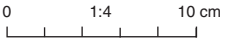
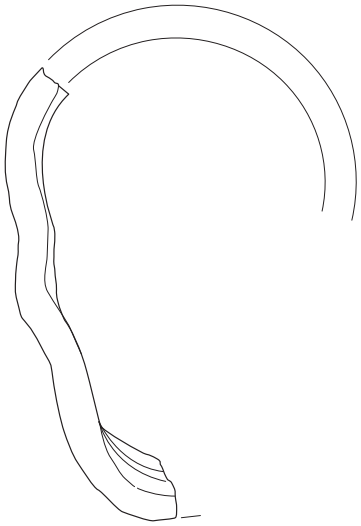
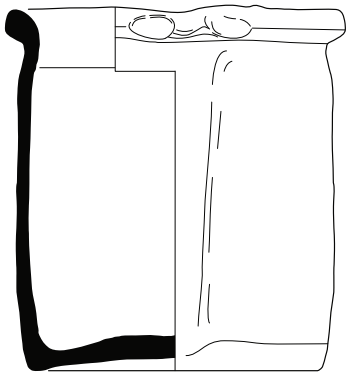


Figure B6.11: Stonewares (Nos 68-70)

Saggars





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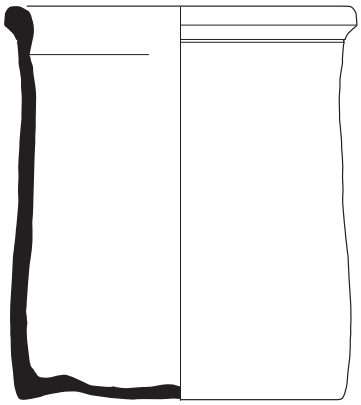

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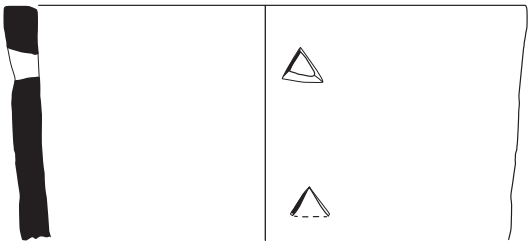

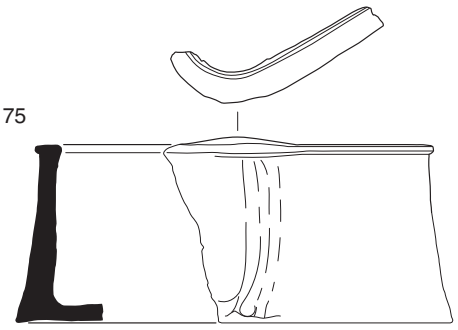

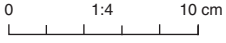

Figure B6.12: Saggars (Nos 71-75)

Figure B6.13: Ceramic building material (CBM) associated with Pottery Waster Pit Group 42 (Nos 1-2)

Figure B6.14: Ceramic building material (CBM) associated with Pottery Waster Pit Group 42 (Nos 3-4)

5

6

Figure B6.15: Ceramic building material (CBM) associated with Pottery Waster Pit Group 42 (Nos 5-6)

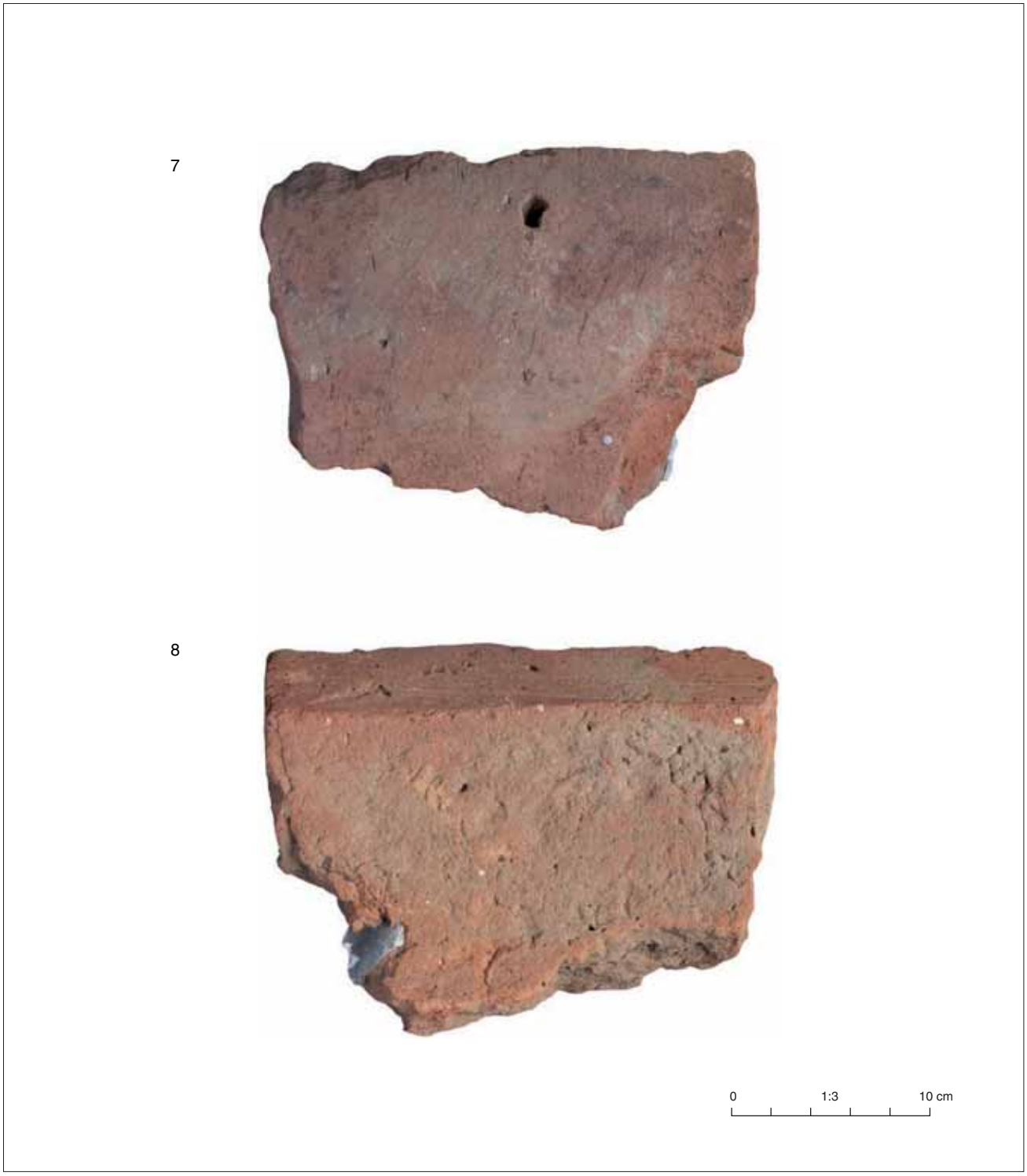

Figure B6.16: Ceramic building material (CBM) associated with Pottery Waster Pit Group 42 (Nos 7-8)

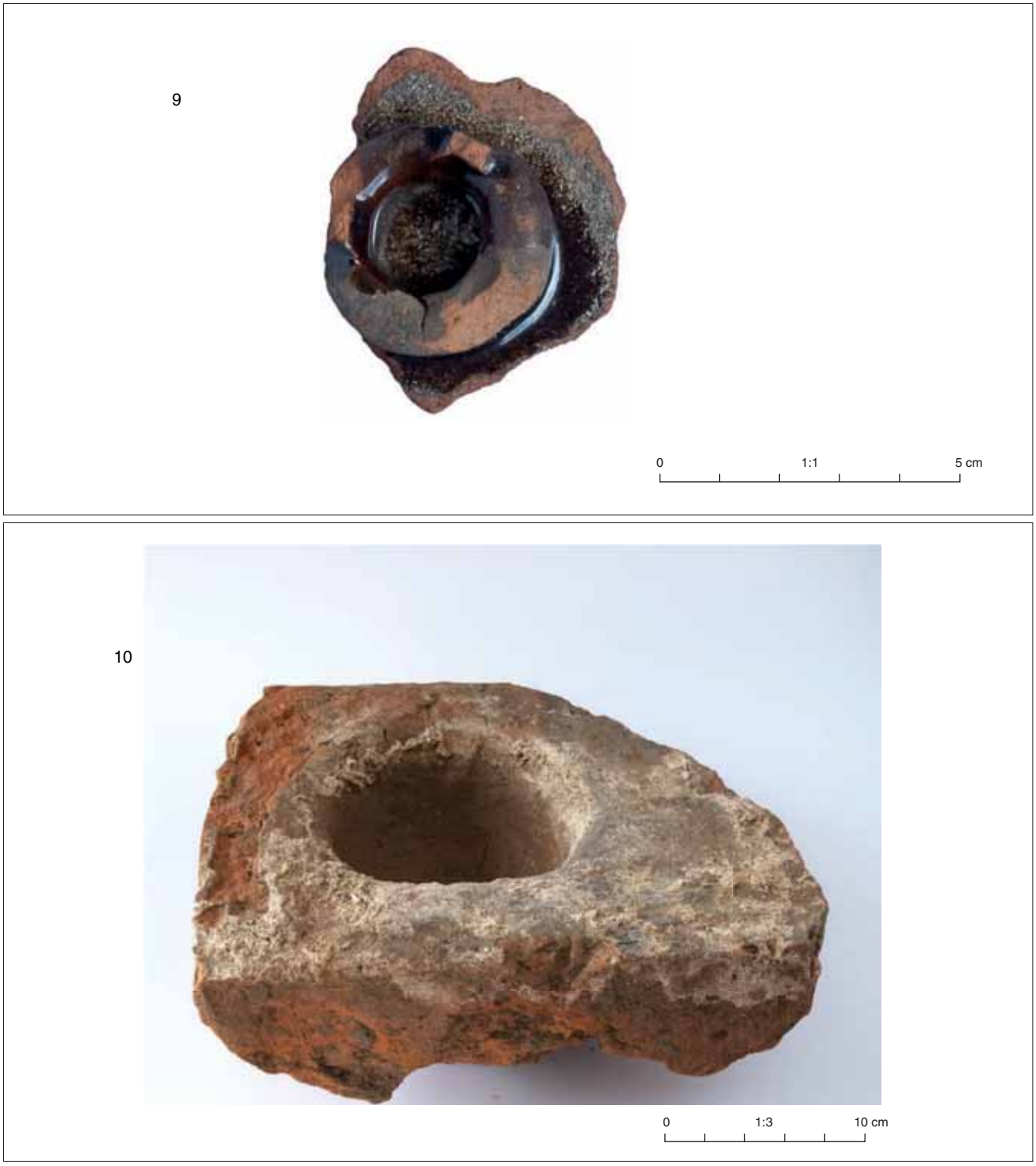

Figure B6.17: Ceramic building material (CBM) associated with Pottery Waster Pit Group 42 (Nos 9-10)

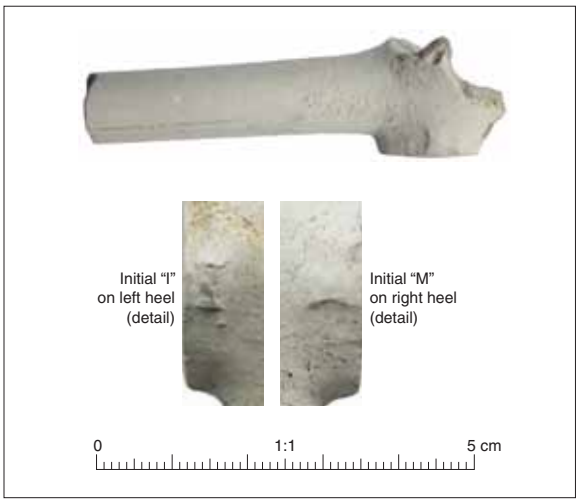

Fig. B8.1: Clay pipe with initials IM (Cxt 285)

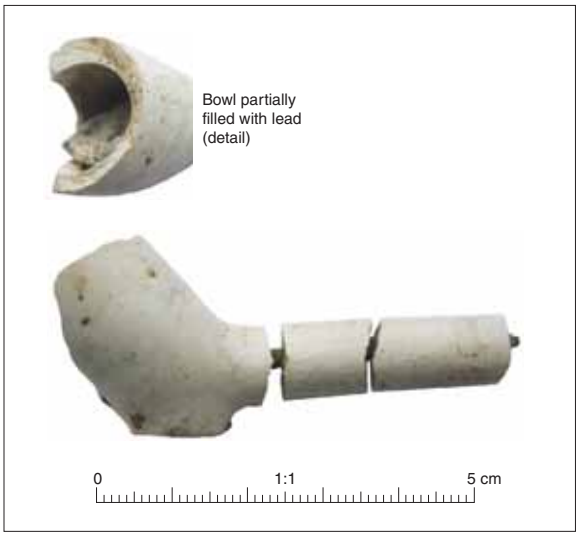

Fig. B8.2: Clay pipe filled with lead (Cxt 288)

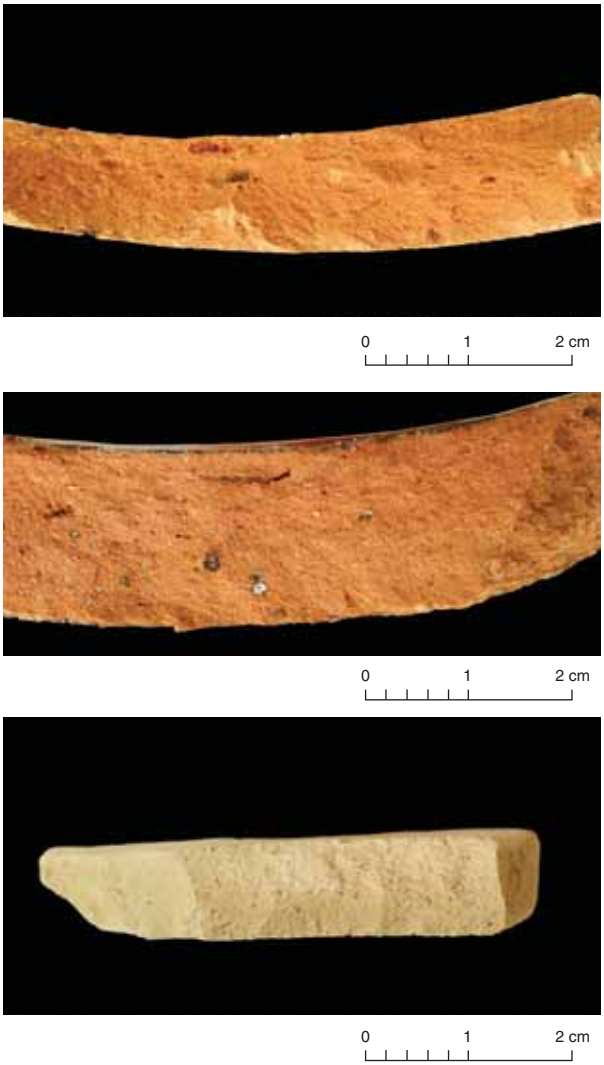

Plate B6.1 Section of three sherds showing typical redware and whiteware fabrics: top GRE, middle SPEC, bottom TGE

Plate B6.2: Internal surfaces of four vessels with possible or probable intentional green glaze, pit fill 43, Period 2.2 pit **42**

Plate B6.3: Base sherds of two colanders with yellowish orange glaze, pit fill 43, Period 2.2 pit **42**

Plate B6.4: GRE chamber pot, pit fill 287, Period 2.2 pit **283**

Plate B6.5: IGBW mugs and tyg, pit fill 287, Period 2.2 pit **283**

Plate B6.6: SPEC mug, pit fill 43, Period 2.2 pit **42**

Plate B6.7: IGBW jug, pit fill 287, Period 2.2 pit **283**

Plate B6.8: SPEC puzzle jug spout, pit fill 43, Period 2.2 pit **42**

Plate B6.9: TGE decorated sherds and porringer handle, pit fills 282 and 285 (Period 2.2 pits **279** and **283**) and unstratified

Plate B6.10: LSRW plate, pit fill 285, Period 2.2 pit **283**

Plate B6.11: IGBW mug in saggar, pit fill 287, Period 2.2 pit **283**

Plate B6.12: IGBW mug in saggar, pit fill 287, Period 2.2 pit **283**

Plate B6.13: IGBW tankard in saggar, pit fill 287, Period 2.2 pit **283**

Plate B6.14: Saggar fragments showing knife cuts, pit fills 43 and 64, Period 2.2 pits **42** and **317**

Plate B6.15: Examples of ring stilts, pit fill 43, Period 2.2 pit **42**

Plate B6.16: GRE jar and pipkin bases with ring stilts in situ, pit fills 43 and 287, Period 2.2 pits **42** and **283**

Plate B6.17: Two GRE sherds reshaped and worn from use as potter's ribs, pit fill 43, Period 2.2 pit **42**

Plate B6.18: Two TGE triangular-section props, pit fill 281, Phase 3, pit **279** and unstratified

Plate B6.19: Internal surface of TGE saggar showing impressions of triangular props, pit fill 281, Phase 3, pit **279**

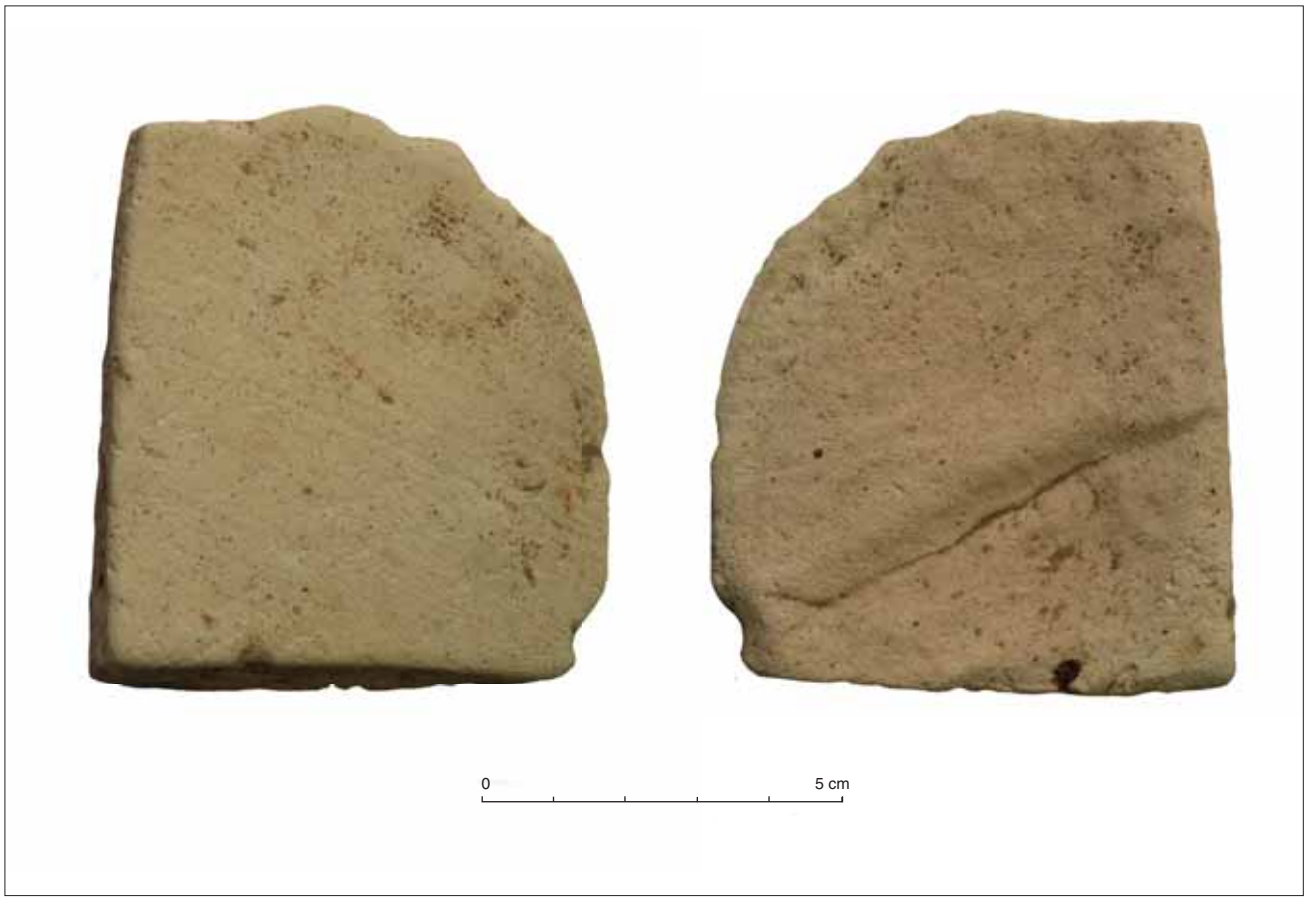

Plate B6.20: TGE sherd reshaped for use as a potter's rib, pit fill 282, Period 2.2 pit **279**

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