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Post-Excavation Assessment and Updated Project Design

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Newfound Farm, Cringleford, Norfolk

Post-Excavation Assessment and Updated Project Design

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Summary

Between 29th October 2018 and 4th February 2019, Oxford Archaeology East (OA East) undertook an excavation on land at Newfound Farm, Cringleford, Norfolk ahead of a proposed residential development. The locations of the excavation areas (Areas 1 and 2) were based on the results of previous stages of evaluation including geophysical survey, fieldwalking and trial trenching.

The earliest evidence of activity comprised 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. This adds to the growing body of evidence for utilisation of the Yare valley during the prehistoric period.

However, the main phase of activity related to the production of brick/tile and pottery. The former is represented by the remains of at least four early post-medieval brick kilns which had survived to varying degrees, alongside numerous extraction pits and several ditched boundaries. Fragments of tile, brick and pottery had been backfilled into the extraction pits, with the pottery predominantly dating to the 16th-18th centuries. A notable cluster of six intercutting pits located in the far north-eastern corner of Area 1 (close to Newfound Farm and the road) produced large quantities of mid-17th to 18th-century pottery wasters, kiln furniture and tile wasters, in addition to fragments of clay tobacco-pipe (many datable to 1660-1680) and glass bottles.

The greater part of the pottery assemblage from the site comprises material from a pottery manufacturing waste dump (nearly 200kg) and has been classed as highly significant since few pottery production sites of this period have been identified in East Anglia so far. The pottery itself is largely glazed red earthenware with some iron-glazed blackware, slipware and speckle glazed ware – with a small but notable element of tin glazed earthenware. This important assemblage complements the documentary evidence that potters were working in this area from at least the mid-17th century onwards but had seemingly ceased production here by the early 19th century at the latest.

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1 INTRODUCTION

1.1 Background

- 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 in Norfolk (Figure 1; TG 18658 06864). This followed a programme of desk-based research, geophysical survey, fieldwalking and trial trench evaluation which identified evidence of a previously-unknown area of early post-medieval brick and tile production 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.
- 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:
- **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.
 - **Geophysical survey** (Cranfield University (Masters 2011); Figure 3): a magnetic survey of c.53ha identified a number of kiln-like anomalies, linear and curvilinear anomalies and tree planting pits associated with a former (unknown) orchard.
 - **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 is perhaps indicative of prehistoric activity. Single sherds of Roman and Middle Saxon pottery were also found.
 - **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 a 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 a number of undated pits and ditches.

- 1.1.4 This assessment 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 Geology and topography

- 1.2.1 The excavation areas were located immediately south of Colney Lane, with Newfound Farm and residential houses located to the north-east and Norfolk and Norwich University Hospital further to the north-west (Figure 1), with farmland extending to the west and south (Plates 1-2). The site is relatively flat (Plate 3), at around 21m-22m OD, with the River Yare located c.250m to the north-east.
- 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).

1.3 Archaeological background

- 1.3.1 The following section provides a brief summary of the archaeological background for the area surrounding the site. It is drawn from the DBA (Gajos 2010) and the WSI (Clark 2018). An updated HER search will be commissioned at the analysis and final report stage. Selected entries from the Norfolk Historic Environment Record (HER) are referenced in the text with the most pertinent **in bold** font and also shown on Figure 2; those in normal font originate from within the wider landscape.

Prehistoric

- 1.3.2 Within a 500m radius of the proposed development site, there have been 24 prehistoric (and part-prehistoric) NHER entries recorded. Most of these were represented by flint scatters and artefacts found during fieldwalking exercises, as well as possible ring ditches located with photography. The DBA stated that the potential for finding artefacts and features from this period across the whole development area was moderate.
- 1.3.3 A small number of worked flint finds from the Palaeolithic and Mesolithic periods have been found approximately to the south and north of the site respectively. The Neolithic period is better represented, with a selection of 12 flint flakes and a Neolithic pick (**NHER 25507**) being recovered to the south-west of Area 2. Construction of the John Innes centre in 2000, c.600m to the north of the site recovered 28000 pieces of worked flint in association with a Neolithic occupation layer (NHER 9332). An archaeological evaluation undertaken prior to the construction of the Norfolk and Norwich hospital site c.300m to the north of the current site, revealed a Late Neolithic/Early Bronze Age pit containing Beaker pottery, alongside undated pits and

ditches and small amounts of unstratified pottery and later prehistoric worked flint (**NHER 31871**).

- 1.3.4 The Bronze Age period is represented by a round barrow (NHER 9395) approximately 1km to the south-west of the excavation area close to the A47, with cropmarks of further possible Bronze Age ring ditches located nearby to the north-west (also adjacent to the A47), with the largest possibly being an earlier henge-type monument (NHER 36402). Two Bronze Age axe heads were also located c.400m to the east of the site during the 1920s in the garden of a property off Colney Lane (**NHER 9358**).

Romano-British

- 1.3.5 Roman finds and features recorded within a 1km radius of the excavation are numerous and consist of small quantities of pottery as well as 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

- 1.3.6 As with the preceding Roman period, finds and artefacts dating to the Anglo-Saxon period have emerged through the process of metal detecting and fieldwalking, presumably as a result of chance loss or the manuring of agricultural land. Six records of Saxon finds including brooches, strap ends and a bridle cheek piece were located within a 1km radius of the site (see Gajos 2010). Historical documents indicate the presence of Cringleford as a settlement, with an Anglo-Saxon charter of 1043 or 1044 referencing *Cringelforð* and the Domesday Book of 1086 documenting the settlement as *Kringelforda*, meaning 'ford by the round hill'.
- 1.3.7 There were 17 records of medieval finds from a 1km radius of the site, 14 of which were from within 500m of the study area investigated in the original DBA (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**). Collectively, these finds appear as items casually lost during agricultural or travelling activities rather than directly deposited in areas of direct occupation.

Post-medieval to modern

- 1.3.8 Records pertaining to the post-medieval period are numerous. Some are significantly relevant since they refer to possible pottery and brick/tile manufacture. 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; so good that there were records of it being sent to Holland. A rough survey map from 1572 describes the area as "*being baraine ground and not built*" (see DBA, 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 to have bought the area and formed Balleston Newfound. One mortgage document from the 17th century describes the site and the surrounding fields as 'Potters Close, formerly Gravel Pit Close'. Two wills from potters Robert Coleman and Edward Vincent attested that they were the occupiers of the site in 1657 and 1679 respectively.

- 1.3.9 Examination of maps from the 17th century onwards (not illustrated; see Gajos 2010) shows little developmental change. A 1695 map by Robert Morden showed the site was located within the Humbleyard Hundred but the scale was too small to show relevant detail. The 1797 map by William Faden displays Newfound Farm and a neighbouring orchard. The 1842 Tithe map illustrates Newfound Farm but there is little difference between this and subsequent Ordnance Survey maps from 1882 onwards, apart from alterations to field boundaries and the addition of a quarry pit at the end of the track from Newfound Farm.
- 1.3.10 Apart from the documentary evidence, archaeological remains and metal detected finds have confirmed that the site was located in an area of post-medieval industry. Approximately 400m to the south-west of the excavation areas is a disused quarry, possibly a former clay pit (**NHER 9407**), along with a pottery kiln complex (**NHER 9406**) first identified in 1976 from surface scatterings of kiln debris and lead-glazed pottery wasters. Further to the south-west of the excavation, another possible kiln site was recorded (NHER 14272) where over 100 sherds of post-medieval pottery and kiln debris were located during a fieldwalking exercise. To the north-east of this, closer to the site, further pottery sherds have been found (**NHER 9403**), located approximately at the centre of the study area of the DBA (Gajos 2010); indicating the extant remains of a clay pit. The DBA also recorded a number of non-kiln related artefacts (41) that were found within the 1km radius of the study area (Gajos 2010). Finds from this period were significant enough to declare the site having a high potential for post-medieval archaeology, particularly related to tile/pottery kilns and associated activity. 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.

1.4 Previous work

- 1.4.1 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.

Geophysical survey

- 1.4.2 The geophysical survey from 2011 showed several anomalies pertaining to large burnt areas (outlined red on Figure 3). Particularly relevant were the results from Field H adjacent to Newfound Farm relating to excavation Area 1, and also Field G, pertaining to Area 2.

- 1.4.3 Results from Area 1 (Field H) showed dipolar anomalies indicating kiln-like structures or areas of burning (marked 'K' on Fig 3). No evidence for such structures is shown on the Tithe and OS maps, indicating they had disappeared in the 18th century.
- 1.4.4 Results from Area 2 (Field G; Fig 3A) revealed a series of uniformly-spaced individual discrete anomalies forming neat rows. These were interpreted as remains of tree pits collectively indicating the location of a former orchard, possibly that depicted on the 1797 map by William Faden (see post-medieval background above). Orchards were 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, contrary to the geophysical survey results.
- 1.4.5 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 another three dipolar anomalies located towards the southwestern edge (marked 'K' on Fig 3) indicating the presence of intense burning/possible kilns. Another of these anomalies in Field I (the area of land immediately to the east of excavation Area 1) 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, another anomaly possibly indicating a kiln was located 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 located in the north-west area of Field B 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** (see Fig 2), a concentration of surface finds containing Staffordshire comb-ware and salt-glazed pottery sherds.

Fieldwalking and metal detecting

- 1.4.6 Investigations undertaken by NAU Archaeology (Barnett 2011) 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, figures 2-3). Notwithstanding this omission of land survey, the fieldwalking and metal detecting recovered 231 finds, the majority of which dated to the post-medieval period (161 finds comprising 79% of total). 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 collected and recorded.
- 1.4.7 A brief examination of the finds (see Barnett 2011, figures 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 Saxon date scattered indiscriminately throughout. A general overview of the post-medieval and modern finds showed that the majority of pottery originated from the middle and south of the development area with copper alloy metal work being prevalent towards the northeastern corner. Coins

from this period were recovered in the northeastern 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

- 1.4.8 Trial trenching by NPS in 2013 (Crawley 2013) comprised seven trenches of varying lengths that were targeted over the geophysical anomalies (see Figure 3), with the most relevant to the present excavations being Trench 5 (in Area 1) and Trench 6 (in Area 2).
- 1.4.9 Trench 5 located the presence of three extraction pits towards the northern end of the trench, along with an indication of the extant remains of a kiln to the south. Examination of the deposits found within these features as well as the surrounding immediate area indicated these were not coal-firing kilns, rather, they were small kilns used by landholders producing bricks during seasonal industrial periods. This activity became prevalent in the 17th century, especially in the Norfolk area where brickyards were common.
- 1.4.10 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.
- 1.4.11 Discoveries within the trenches outside the zone of the current excavation Areas 1 and 2 are also of note (Figure 1). Trench 1, situated over the geophysical anomalies 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. 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 all archaeological remains.

1.5 Original research aims and objectives

- 1.5.1 A series of project research aims and objectives were 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 has been used to inform the assessment of the results in this report. The objectives can be separated into 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

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

1.5.2 The original research aims will be considered, evaluated and updated as part of the assessment process in this report (see Section 6). This will ensure that they 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).

1.6 Fieldwork methodology

- 1.6.1 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 were machine excavated to the level of natural geology or the archaeological horizon; whichever was encountered first.
- 1.6.2 Machine excavation 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.
- 1.6.3 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.
- 1.6.4 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, taken on a camera conforming to the requirements set out in 'Standards for development-led archaeological projects in Norfolk' (Robertson *et al.* 2018).

- 1.6.5 Numerous natural features were scattered across Area 2 in particular, a sample of which were investigated (Figure 4). Although many of the solution hollows/sinkholes were investigated, most of the deeper examples could not be full-excavated for health and safety-reasons.
- 1.6.6 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.
- 1.6.7 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. 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 enabled the further formation of solution hollows: a common feature in the archaeological horizon (Plates 1-3 and 8).

1.7 Project scope

- 1.7.1 This assessment deals solely with the excavation phase of fieldwork undertaken by OA East, although reference is made to previous stages of work where appropriate.

2 FACTUAL DATA: STRATIGRAPHY

2.1 Introduction

- 2.1.1 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 focussed in Area 1. An overview of the excavation results, including interventions, is given on Figure 4, which also shows the sinkholes that were investigated and which of the features produces prehistoric pottery and/or flint (see below). Figure 5 shows the preliminary phasing, with Figure 6 showing more detail of the kilns and associated features in Area 1. Selected sections are shown on Figures 7 and 8, followed by a selection of photographs showing the site conditions and working shots (Plates 1-3, 7 and 8), pertinent features (including the kilns: Plates 4-12) and examples of the pottery wasters and kiln furniture recovered from Phase 2 backfill deposits (Plates 13-15).
- 2.1.2 The preliminary phasing of the site is based on a combination of stratigraphy and spatial associations, with dating provided by stratified artefacts, primarily pottery, although these were by no means abundant. A very small amount (five sherds) of Roman and ?Anglo-Saxon pottery was recovered which is likely to represent residual finds/'background scatter'. The site appears to have 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.
- 2.1.3 Summary descriptions of the features identified, and artefacts recovered, are given in this section supplemented by a full context inventory in Appendix A and artefact and environmental assessments in Appendices B. and C. Full feature descriptions will be included in the analysis report; the aim here is to characterise the archaeological remains and provide an overview of the results.
- 2.1.4 In addition to natural and undated features, two main phases of activity have been identified:
- | | |
|---------|---|
| Phase 0 | Natural and unphased features |
| Phase 1 | Prehistoric (Early Neolithic to Early Iron Age) (c. 4000BC – c.350BC) |
| Phase 2 | Post-medieval (16th-18th century) |

2.2 Phase 0: Natural and unphased features

Natural features

- 2.2.1 Features interpreted as solution hollows (sinkholes) were abundant in Area 2, with just a single (unexcavated) example found in Area 1, located at the southern end. Only a sample number of sinkholes in Area 2 were excavated (Figure 4; coloured green) and those that contained prehistoric finds (flint/pottery) have been described under Phase 1 (see below).

2.2.2 Solution hollows and sinkholes were formed through the dissolution of the underlying chalk by downward-seeping ground water. This then caused the overlying sandy gravels and top/subsoils to collapse into the void created below. The sinkholes found on site were predominantly circular in plan with steep, almost vertical, sides which naturally undercut the top-surface edge. Where investigated, these features were excavated down to a 1m depth in line with the agreed excavation methodology and following Health and Safety regulations.

2.2.3 A total of 87 probable solution hollows/sinkholes were located but were not excavated (see Figures 4 and 5, unnumbered), with a further 22 sinkholes/natural features that were excavated but contained no datable finds (Table 1). The largest of the natural features containing no associated finds was sinkhole **61** (Figure 8, S. 18) located at the north-west corner of Area 2, which measured 4.38 x 3.94m and 2.8m deep. Other sinkholes were significantly smaller in diameter and in depth (Figure 8, S. 3 and Plate 4): most resembled small circular pits which upon inspection yielded nothing within other than silty sand, infill from the collapsed top and subsoils from above.

Phase 0: natural features
Excavated sinkhole/solution hollows: 14, 61, 98, 105, 107, 115, 117, 119, 139, 155, 165, 179, 181, 183, 189, 191, 193, 195, 211, 223, 225, 227

Table 1: Undated natural features

Unphased features

2.2.4 Eight pits located in Area 2 were oval/sub-circular in plan and measured a maximum of 1.24m long and a maximum 0.48m deep (see Figures 4 and 5). A single post-hole located at the northern edge of the group measured 0.5m in diameter and was 0.09m deep. No archaeological finds were recovered from any of the features. Their proximity to features containing prehistoric pottery and flint suggests that they may conceivably belong to this broad phase (Phase 1, see below), although it is feasible that some may relate to the much more recent tree planting pits identified by the geophysical survey (Figure 3).

Phase 0: Unphased features
Pits: 109, 147, 149, 153, 167, 173, 183, 213
Post-hole/pit: 185

Table 2: Unphased features

2.2.5 Note: Samples from two of these features (**98** and **185**) were sent for radiocarbon dating (see S. 4.5 below) and consequently they will be rephased during the analysis stage.

2.3 Phase 1: Prehistoric (Early Neolithic to Early Iron Age)

2.3.1 Artefacts and features dated to the prehistoric era were entirely located in Area 2, with a notable concentration in the north-east corner where burnt flint, small fragments of pottery and worked flint were present in a small number of features (Figures 4 and 5). In general the features assigned to this phase were discrete pits, although a number of solution hollows also contained prehistoric material. The latter had presumably originated from top surface scatters which had inevitably become incorporated into

the sinkholes during their gradual formation, although this material and the nearby features are indicative of activity in this location during the Neolithic and Early Iron Age periods. The nearby River Yare c.250-300m to the north-east of the site could explain the attraction of this site to prehistoric communities. Two features also contained single sherds of prehistoric pottery (gully **151** and Phase 2 extraction pit **18**), both of which were probably residual. Gully **111** was investigated by two slots (**111** and **151**) showing it measured a maximum of 0.11m deep and 0.38m wide. This gully ran parallel to post-medieval ditch **103** immediately to the east, and it is likely that this feature will be rephased to Phase 2 during analysis.

- 2.3.2 There were four discrete features from this phase: pits **48, 123, 159** and post-hole **130**. The pits ranged in length from 0.76m to 0.92m, while the post-hole measured 0.34m in diameter. Collectively these contained small amounts of worked/burnt flint and prehistoric pottery (Tables 3 & 4), with pit **123** (Plate 5) producing 13 Early Iron Age sherds (App. B.5), alongside charcoal from an environmental sample (App. C.3).
- 2.3.3 Solution hollows and natural features that contained prehistoric material comprised features **121, 128** (Figure 8, S. 36), **132, 141, 145, 157, 161, 163** and **169**. These features ranged in length from 1.24m to 2m and were oval/sub-circular in plan, similar to the unexcavated natural features from Phase 0. Of these, feature **141** (Plate 6) is of note as it produced 16 sherds of Late Neolithic pottery alongside worked and burnt flint (see App. B.2 and 5). Also of note is sinkhole **132** (Figure 8, S. 38) which produced a single sherd of prehistoric pottery that is not closely datable alongside a large quantity of burnt flint (c. 5.5kg, App. B.2) from its lower (excavated) fill; charcoal was also recovered from an environmental sample. Two sherds from the upper fill of feature **132** have provisionally been identified as Anglo-Saxon but will require further analysis. Sinkhole **169** also produced three sherds of Roman pottery that are likely to have been introduced through subsequent agricultural activities.

Phase 1 feature inventory	
Pits and post-hole:	48, 123, 130 and 159
Gully:	111
Natural/sinkhole features:	121, 128, 132, 141, 145, 157, 161, 163 and 169

Table 3: Phase 1 features

Context	Cut	Feature type	Object name	Count	Weight (g)
49	48	pit	Flint (struck)	1	1
122	121	Natural feature	Flint (struck)	2	2
122	121	Natural feature	Flint (burnt)	1	132
125	123	pit	pot	12	55
125	123	pit	Flint (struck)	1	1
129	128	Natural feature	Flint (struck)	1	1
133	132	Natural feature/ Sinkhole	pot	2	7
134	132	Natural feature/ Sinkhole	pot	1	2
134	132	Natural feature/ Sinkhole	Flint (struck)	12	12
134	132	Natural feature	Flint (burnt)	235	4189
142	141	natural feature	Pot	6	42
142	141	Natural feature	Flint (struck)	11	11
142	141	Natural feature	Flint (burnt)	10	196
146	145	Natural feature	Flint (struck)	6	6
146	145	Natural feature	Flint (burnt)	6	83
152	151	gully	Pot	1	3
152	151	Natural feature	Flint (struck)	1	1

Context	Cut	Feature type	Object name	Count	Weight (g)
158	157	Natural feature	Flint (struck)	1	1
160	159	pit	Flint (struck)	2	2
160	159	pit	Flint (burnt)	4	298
164	163	Natural feature	Flint (struck)	8	8
170	169	Natural feature	Flint (struck)	2	2
170	169	Natural feature	Flint (burnt)	2	53
170	169	Natural feature	pot	3	37

Table 4: Finds recovered from Phase 1 features

2.4 Phase 2: Post-medieval (16th-18th centuries)

2.4.1 Phase 2 included the remains of four brick kiln structures (Plates 1-2; 7-12); numerous clay extraction pits that had been backfilled with ceramic building material and other debris, as well as large spreads of dumped waste associated with the kiln structures (Figures 5 & 6). These features appeared exclusively in Area 1. Ditch systems associated with this phase were evident in both excavation areas (Plate 3). Associated artefacts indicated activity broadly in the 16th-18th centuries, with a focus on the 17th century.

Extraction pits

2.4.2 Several large pits were directly associated with (occasionally cut by) the kilns, which along with numerous other clay extraction cuts, had been backfilled with kiln waste.

2.4.3 The first group of pits associated with the kilns were generally situated at one end of the firing chamber. These appeared to be large irregular truncations which had been backfilled with material presumably cleared out from (other) kiln chambers. These features are provisionally interpreted as extraction pits for material to be used in the brick/pot manufacturing process. Associated with (and seemingly cut by) kiln **21**, pit **74** lay at the far south-eastern end and was backfilled with brick and tile waste along with silty clay containing quantities of ash and charcoal. This pit also cut a series of earlier pits (**90**, **92**, **95** (Figure 7, S. 21) and **318**). A further pit (**18**) appears to have been cut by the construction cut for kiln **21** at its western end. The dual chambered kiln **229** had a large circular shallow pit **232** (Figure 7, S. 88) at its northern end, again backfilled with brown silty clay mixed with brick fragments, with a layer of thin black charcoal at its base. The only kiln to not have direct pit cuts associated with it was square kiln **52**.

2.4.4 Further pits probably associated with clay extraction that had subsequently been backfilled were identified across Area 1. A cluster of six intercutting pits in the far north-eastern corner (close to Newfound Farm and the road) are significant as they were backfilled with large quantities of mid 17th to 18th-century pottery and tile wasters (see Plates 13-15); notably pit **279** which contained examples of rare early tin glazed earthenware (App. B.5). Large quantities of pottery and tile wasters of similar date were also found in neighbouring/intercutting pits **283**, **317** and **42** (Figure 7, S. 19); with pit **42** producing 2542 sherds, weighing 89,509g, alongside clay tobacco pipe fragments and part of an iron vessel (SF 8). Pit **283** (Figure 7, S. 92) contained 2054 sherds (82,703g), alongside clay tobacco pipe (several examples datable to c.1660-1680; App. B.8), bottle glass fragments (App. B. 4) and animal bone (App. C.1).

2.4.5 A clay extraction pit (**297**) containing 16th-18th century pottery sherds was also located to the immediate south of kiln **21**, with one of the largest examples (**259**) being

found to the north of the kiln close to the edge of excavation. This measured 8.57m x 3.95m and was at least 1.8m deep. It had been backfilled with consecutive layers of dumped tile and mixed clay and brick (Figure 7, S. 89).

2.4.6 Other pits were scattered around Area 1, which included two smaller features containing dumped brick fragments (pits **300** and **308**) close to the north-eastern edge of excavation. Further to the south, a shallow pit **331** contained dumped charcoal-rich fills. In the southeastern corner of Area 1, two medium large pits (**302** and **271**) were situated south of kiln **229**. A post-hole containing small amounts of post-medieval glass and pottery (**177**) was also located to the north, in Area 2, but may not have been related to the industrial activity to the south.

Phase 2: pit inventory
Clay extraction pits: 18, 42, 74, 90, 92, 95, 135, 232, 259, 279, 283, 288, 297, 317, 318
Smaller pits: 271, 300, 302, 306, 308, 331
Other: post-hole 177

Table 5: Phase 2 pits

Context	Cut	Feature type	Object name	Count	Weight (in g)
43	42	pit	pot	2430	83892
63	317	pit	pot	18	654
64	317	pit	pot	157	5902
68	42	pit	pot	6	561
69	42	pit	pot	10	657
178	177	post-hole	pot	1	23
265	259	pit fill	pot	2	121
272	271	pit fill	pot	2	50
280	279	pit fill	pot	157	5615
281	279	pit fill	pot	98	5078
282	279	pit fill	pot	32	1128
284	283	pit fill	pot	114	2581
285	283	pit fill	pot	215	6640
286	283	pit fill	pot	1074	43555
287	283	pit fill	pot	651	29927
289	288	pit fill	pot	8	134
290	42	pit fill	pot	64	3511
291	42	pit fill	pot	32	888
298	297	pit fill	pot	1	229
299	297	pit fill	pot	9	1430
303	302	pit fill	pot	10	358
307	306	pit fill	pot	1	4

Table 6: Pottery recovered from Phase 2 pits

Kilns

2.4.7 The most northerly kiln structure was kiln **21** (Figure 6; Plates 2 and 9) which was situated towards the north-western corner of Area 1 and was aligned WNW/ESE. It consisted of a large narrow (red) brick chamber measuring 1.6m wide and 8.8m long, within a construction cut. At the western end were 10 surviving brick arches that spanned the 0.8m deep chamber below. These were formed to create a firing surface for materials placed above during the manufacturing process.

2.4.8 Kiln structure **34** (Figure 6; Plate 10) was located approximately in the middle of Area 1 to the south-east of Kiln **21** and was aligned north-west to south-east. It measured 7.42m x 1.57m and consisted of a narrow rectangular brick chamber 0.98m deep. This

kiln mirrored kiln **21** in shape and construction but did not have the surviving brick arches. Only the broken collapsed remains of one brick arch (**134**) lay on top of the curved western end of the chamber, showing that this feature shared similar structural properties with kiln **21** and kiln group **229** to the south-east.

- 2.4.9 Kiln group **229** (Figure 6, Plates 7 and 11) was situated at the eastern edge of Area 1 and was aligned north-east to south-west.). This kiln may have been double-chambered, with two narrow rectangular brick firing chambers situated side by side measuring between 13m-13.62m long and between 1.18-1.77m wide. However, the construction cuts and associated sequence (**231** and **230**) may indicate that kiln **241** was slightly earlier (Figure 7, S. 87). Both these structures were constructed with unfrogged red brick, similar to the other kilns in Area 1. Westernmost chamber **241** survived to a depth of 0.75m and was backfilled with a dense thick layer of collapsed brick and redeposited clay. Up to eight courses of brick formed the firing chamber wall of this kiln, on top of which were the clear remains of arch spring bases. This was the same for easternmost firing chamber **242** (0.6m deep) where arch springs were seen to be present on top of both walls. Again, this demonstrated a similarity in construction to kiln **34** where arches straddled the firing chamber to provide the basis of a kiln chamber for the production of brick/pottery above.
- 2.4.10 Kiln structure **52** (Figure 6; Plate 12) was originally revealed in Trench 5 during the evaluation programme (see Crawley 2013). Further excavation revealed the extant basal remains of a rectangular kiln measuring 4.71 x 3.06m and just 0.21m deep. Two courses of brick work remained at the south and south-west corner with a further course of brick marking an interior partition wall running parallel to the southern end. This brickwork encapsulated a burnt clay floor/surface.
- 2.4.11 Deposits and backfill layers directly overlying and infilling the kilns consisted of extensive dumps of silty clay mixed with abundant amounts of collapsed brick and kiln wall masonry, as well as tile wasters and pottery (see Table 8 and App. B.6 and B.7). They represented the general demolition and backfilling of the kiln structures after they were abandoned. The pottery includes large fragments and predominantly dates to the 16th-18th centuries (App B.6; see Plates 13-15).

Phase 2 - kiln inventory
Kilns: 21, 34, 52, 229

Table 7: Phase 2 kilns

Context	Feature type	Kiln	Object name	Count	Weight (in g)
19	backfill over kiln	21	pot	1	9
20	demolition over kiln	21	pot	47	1974
28	backfill within kiln	34	pot	1	34
58	backfill within kiln	52	pot	41	2403
238	deposit from kiln base	229 – 242, eastern chamber	pot	1	3

Table 8: Pottery from Phase 2 kiln backfills

Ditches

- 2.4.12 Several ditches were discovered within the excavation areas and appeared to represent two alignments of post-medieval boundaries or field divisions, presumably associated with Newfound Farm and perhaps the industrial activity to the south.

- 2.4.13 In Area 1, NNE-SSW running ditch **16** extended for 73m from the southern excavation edge and produced two sherds of 16th-18th century pottery along with fragments of tile, animal bone, burnt stone and a fragmentary pair of iron shears (SF1). This ditch appeared to cut earlier ditch **36** which was aligned northwest-southeast and continued into Area 2 as ditch **96**. It was on a similar alignment to ditch **46** in Area 2 (see below).
- 2.4.14 In Area 2, ditch **96** was exposed for 10.5m and terminated close to the end of ditch **103**, which ran at a perpendicular angle to it for a distance of 33m. Collectively, these ditches appeared to form the corner of a field system or plot extending from the road to the north-east; adjacent ditch **103** probably also belongs to this phase (see Phase 1). This north-east to south-west alignment appears to have been mirrored by ditches **50** and **207** further to the west.
- 2.4.15 Located towards the centre of Area 2 was undated ditch **46** that was stratigraphically earlier than ditch **207** and was orientated NNE to SSW on a similar axis to ditch **16** in Area 1. This extended for 58m from the northern LOE of Area 2 and terminated within the area. Ditch **207** was exposed for 83m from the northern LOE and terminated in the southwestern corner of Area 2; it was cut by an unexcavated pit. Running parallel to this but positioned approximately 40m to the west, ditch **50** (Plate 3) was exposed for a distance of 78m and appeared to extend beyond both the southwestern and northern LOEs. None of the ditches contained any datable finds but they are not shown on the available historic maps, which suggests that they pre-date Parliamentary Enclosure in the 19th century.

Phase 2: ditch inventory
Ditches: 16, 36, 50, 46, 96, 103

Table 9: Phase 2 ditches

Context	Feature type	Feature	Object name	Count	Weight (in g)
7	Ditch fill	6	Pot	2	4

Table 10: Pottery recovered from Phase 2 ditches

3 FACTUAL DATA: ARTEFACTS

3.1 General

3.1.1 All finds have been washed, quantified and bagged. The catalogue of all finds has been entered onto an MS Access database. Total quantities for each material type are listed below.

Material	No.	Weight (kg)
Metal objects (iron)	13	-
Worked flint	49	-
Burnt flint	-	6.459
Fuel by products/stone	7	3.08
Glass	97	4.449
Prehistoric pottery	32	0.114
Roman & ?Anglo-Saxon pottery	5	0.044
Post-medieval pottery and kiln furniture	5237	198.67
CBM	325	201.64
Fired clay		0.877
Clay tobacco pipe	71	0.543

Table 11: Quantification of finds

3.2 Metal objects, by Denis Sami (App. B.1)

3.2.1 Thirteen iron artefacts were recovered from pits, ditches and a kiln dating to the post-medieval to modern periods. The small assemblage is in poor condition and is composed of incomplete hand-forged nails (eight in total), a fitting, the base of a large vessel and a pair of shears; all of probable post-medieval or modern date based on the associated ceramic material.

3.3 Lithics, by Lawrence Billington (App. B.2)

3.3.1 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 sinkhole feature **132**. 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 ditch **151**.

3.3.2 The small assemblage of worked flint from the excavations is made up almost exclusively of unretouched flake-based material and exhibited very few chronologically diagnostic features. Nonetheless, the technological traits of the material suggest the vast majority is of Neolithic to Early Bronze Age date. The small quantities of burnt flint recovered from several of the pits and sinkholes seems likely to represent residual material. However, 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**.

3.4 Burnt stone and fuel residues, by Simon Timberlake (App.B.3)

3.4.1 In total, some 2.86kg (x1 piece) of burnt stone and 226g (x6 pieces) of coal and burnt fuel (coal cinders and shale) were recovered from this excavation. It seems likely that the burnt slab-like glacial boulder of dolerite is quite unrelated to the probable post-medieval use of fossil fuel which is most likely to have been associated with the firing

of the kilns, but instead that it relates to an earlier prehistoric presence. 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. 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).

3.5 Glass, by Carole Fletcher (App. B.4)

3.5.1 A moderate assemblage of vessel glass (97 shards, weighing 4.449kg) was recovered, with a minimum number of vessels (MNV) of 34, the majority of which are utility bottles of 17th to 18th-century date, many being dark olive green (natural black) glass bottles. A number of pharmaceutical bottles or phials were also recovered. Most of the material was recovered from pits and the assemblage is fragmented, the exception being a complete mid 18th-early 19th century bottle recovered from pit **18**, which may have been one of the latest deposits into the feature.

3.6 Prehistoric pottery, by Nick Gilmour (App. B.5)

3.6.1 The excavation yielded 32 sherds of prehistoric pottery (114g) with a mean sherd weight (MSW) of 3.6g. The pottery was recovered from five contexts (pits, a ditch and natural features) currently phased to Phase 1 and 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. The pottery is in moderate to poor condition. Most of sherds are small and abraded, while the Early Iron Age pottery is generally in better condition.

3.7 Roman and ?Anglo-Saxon pottery, by Nick Gilmour

3.7.1 Three sherds (37g) of pottery were recovered from deposit 170, within natural sinkhole feature **169**. These sherds are wheel-made, and their fabric suggests a Roman date. A further two sherds (7g) of possible Anglo-Saxon pottery were recovered from deposit 133, a fill of natural sinkhole feature **132**.

3.8 Post-medieval pottery and kiln furniture, by Sue Anderson (App. B.6)

3.8.1 A total of 5237 sherds of pottery and kiln furniture (198.666kg) was recovered from 32 contexts. A further c.110kg (including some CBM) was assessed and discarded on site (C. Fletcher, pers. comm.) The assemblage is dominated by post-medieval material which spans the 16th to 18th centuries, with a focus potentially on the 17th century. A few sherds of potentially later pottery were also recovered.

3.8.2 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 (Plates 13-15). One stoneware vessel may also be a waster, but there is no evidence for stoneware manufacture on the site so far. Redware kiln furniture comprised two main types: saggars and ring props. Small quantities of other pottery were also recovered that were not made directly on site, including Frechen and Westerwald; North Italian

marbled slipware; a late slipped redware bowl and fragments of English (?London) stoneware.

3.9 Ceramic building material, *by Sue Anderson (App. B.7)*

3.9.1 Fragmentary and complete bricks and tiles totalling 325 pieces (201,643g) were recovered from 55 contexts, the majority in Area 1 (20 pieces were collected from three contexts in Area 2).

3.9.2 Late bricks form the largest part of this assemblage, but they are only a small proportion of the brick which was present on the site. 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. Preliminary study of these data suggests that brick sizes and types in 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). The bricks of kilns **34** and **52** were of similar size to the majority of those from kiln **21**, although those in **34** (including those recovered from its fill) were generally slightly shorter than the others.

3.9.3 Outside the kilns, CBM was recovered from pit and ditch fills, mostly in association with pottery kiln waste and included fragments of peg tile which had been used in the pottery kiln(s) as spacers. A few fragments of pantile were recovered from pits **9**, **279** and **283**, suggesting a date no earlier than the 17th century for these fills.

3.10 Fired clay, *by Sue Anderson (App. B.7)*

3.10.1 Thirty fragments (877g) of fired clay were collected from five contexts. Two small fairly flat pieces (18g) of orange fine sandy clay with flint and clay pellet inclusions came from natural sinkhole fill 164 (Phase 1 feature **163**) in Area 2. All other fragments came from contexts associated with the brick kilns in Area 1. Two pieces were probably fragments of the clay ‘mortar’ used to bond the kiln walls, with 20 fragments being hard slabs recovered from floor 237 of kiln **241**. Six fragments from fill 58 of kiln **52** included five hard rounded lumps containing coal chips, and one small abraded fragment which may be a piece of brick.

3.11 Clay tobacco-pipe, *by Carole Fletcher (App. B.8)*

3.11.1 A total of 71 fragments of white ball clay tobacco pipe, weighing 0.543kg was recovered, mostly from a Phase 2 post-medieval clay extraction pit (**42**), with the remainder found in pits and a sinkhole fill; a single fragment of clay tobacco pipe also came from one of the brick kilns. The assemblage has undergone a moderate degree of reworking; no complete pipes were recovered, although some complete bowls were found. Datable examples span the mid 17th to early 18th centuries, with most being datable to the period 1660-1680.

4 FACTUAL DATA: ENVIRONMENTAL EVIDENCE

4.1 General

- 4.1.1 Small assemblages of animal bone and shell were recovered, while environmental samples produce few preserved remains.

Material	No.	Weight (kg)
Faunal remains	-	6.38
Shell	-	0.018
Bulk samples	13	-

Table 12: Quantification of environmental remains

4.2 Faunal remains, by Hayley Foster (App. C.1)

- 4.2.1 A small assemblage of animal bone was recovered (6.38kg) solely from features dating to the post-medieval (Phase 2) period. The assemblage is in a fair condition with moderate levels of fragmentation. Material was recovered from pits **(18, 42, 128, 259, 283, 286, 293)** and ditch **16** (section) in Area 1. Sheep/goat remains made 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 pits **18** and **259** and were partial skeletons of neonate lambs. Other mammals represented in the assemblage were pig, dog, bird and rabbit.

4.3 Marine mollusca, by Carole Fletcher (App. C.2)

- 4.3.1 A total of 0.018kg of shell was collected by hand from Phase 2 pit **311**; all 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.

4.4 Environmental bulk samples, by Rachel Fosberry (App. C.3)

- 4.4.1 Twelve bulk samples were taken from features across Areas 1 and 2. Those from the features in Area 1 mainly produced wood charcoal, frequently in abundance and probably largely associated with the brick/tile kilns. The only other plant remains preserved are a few fragments of charred hazelnut shell from undated pit **98** (see below) and untransformed elderberry seeds recovered from the basal fill of prehistoric (Phase 1) pit **123**.

4.5 Radiocarbon dating (App. C.4)

- 4.5.1 Two samples were submitted to SUERC for radiocarbon dating (hazelnut shell from the fill of undated pit **98** and charcoal from undated pit **185**). It was not considered to be worthwhile to submit samples from the kilns as their likely period of operation (16th-18th century) falls within a period of increased levels of atmospheric carbon during the industrial age, which affects 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). This is called the Suess effect, after the Austrian chemist Hans Suess, and refers to a change in the ratio of the atmospheric concentrations of heavy isotopes of carbon (¹³C and

¹⁴C) by the admixture of large amounts of fossil-fuel derived CO₂, which is depleted in ¹³CO₂ and contains no ¹⁴CO₂ (Source: https://en.wikipedia.org/wiki/Suess_effect).

- 4.5.2 The sample from pit **98** returned a date in the Late Neolithic to Early Bronze Age period (2338-2145 cal BC @95% SUERC-89927), while that from pit **185** returned a possibly erroneous date of 712-888 cal AD, placing it in the Middle Saxon period.

5 STATEMENT OF POTENTIAL

5.1 Stratigraphy

5.1.1 The following stratigraphic records were created:

Record type	Excavation
Context register	8
Context records	319
Sections register	3
Sections drawings	101
Sample register	2
Photographic register	7
Digital photographs	121
Small finds register	1

Table 13: Quantity of written and drawn records

The excavation record

5.1.2 The written and drawn elements of the contextual record form the main components of the excavation data and are sufficient to form the basis of the site narrative. This record has good potential to further understand the archaeological remains dating to the Neolithic and post-medieval periods.

Condition of the primary excavation sources and documents

5.1.3 The records are complete and have been checked for internal accuracy. Written and drawn records have been completed on archival quality paper and are indexed. All paper archives have been digitised into the individual site Access database. Site drawings and/or photogrammetry have been digitised in AutoCAD.

5.1.4 The site data is of sufficient quality to address all of the project’s Research Objectives and form the basis of further analysis and targeted publication of the key features, finds and environmental assemblages. Further analysis will concentrate on the prehistoric (to a lesser extent) and post-medieval phases of activity, notably the evidence for brick/tile and pottery production.

Range and variety of features and deposits

5.1.5 Features on the site included sink holes, pits and post-holes; post-medieval boundary/drainage ditches along with post-medieval brick kilns and extraction/waste pits.

Condition of features and deposits

5.1.6 The survival of the archaeological features and deposits was generally good although there was some truncation of the upper deposits of features by plough scarring.

5.2 Artefacts

Metal objects (App. B.1)

- 5.2.1 The small assemblage of incomplete hand-forged nails, a fitting, the base of a large vessel and a pair of shears has been fully catalogued. It is not intrinsically datable and is not well-preserved. The items have limited potential to contribute to the project's research objectives.

Lithics (App. B.2)

- 5.2.2 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. However, although the relatively small worked flint assemblage from the excavations provides evidence for prehistoric activity at the site it has very little potential to provide more detailed information on the date and nature of this activity. The large assemblage of burnt flint from sinkhole **132** is of some interest and if it could be dated (NB only a small amount of wood charcoal was recovered) would make a small but useful addition to the record of the use of heated flint in the region. The assemblage has been fully catalogued and classified and no further analytical work is required.

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

- 5.2.3 This very small assemblage has been fully-recorded and has little potential to further contribute to the project's research priorities. No further work is required.

Glass (App. B.4)

- 5.2.4 The fragmentation of the assemblage and its redeposited nature mean it has limited potential to further contribute to the project's research priorities, other than to provide additional dating of the post-medieval activity on the site. However, the bottle seal could be examined and compared with other Norwich assemblages, which may aid dating of the assemblage.

Prehistoric pottery (App. B.5)

- 5.2.5 This very small assemblage has been fully recorded has little potential to further contribute to the project's research priorities, other than to further demonstrate low-level activity during the later prehistoric period in this part of the Yare valley. This statement acts as a full record of the prehistoric pottery for the archive and no further work is required beyond integrating evidence from previous phases of work on the site and summarising the information for publication.

Roman and Saxon pottery

- 5.2.6 The Saxon and Roman pottery sherds should be identified by relevant specialists.

Post-medieval pottery (App. B.6)

- 5.2.7 The pottery retrieved from this excavation has been classed as highly significant since few pottery production sites of this period have been identified in East Anglia so far.

This is both true for the Glazed Red Earthenware (GRE) as well as the Tin Glazed Earthenware (TGE). Currently, all GRE from Norwich is given a broad date-range of 16th–18th century, based on Jennings' work which suggested that it was in use in the city from soon after the fire of 1507 (Jennings 1981, 157). The Cringleford assemblage allows for a deeper study of the local pottery produced here, to be added and compared to the relatively small corpus of work regarding the material from this location and this time period. Furthermore, the importance of the Cringleford site cannot be over stressed, since only a few production GRE sites of this period have been identified in East Anglia (Kings Lynn, Wroxham and Fulmodestone).

- 5.2.8 This is true also of the TGE sites in the region. The only other site responsible for tin glazed earthenware production was reported in documentary evidence placing production centre at Ber Street, Norwich. However, this was only documentary evidence and extant remains of any such kilns etc have yet to be uncovered. The revelation of tin glazed earthenware being produced at Cringleford is therefore highly significant since it will be actual physical evidence of a production site, the first of its type in the region and one that is not merely hinted at from documentary evidence. The Cringleford assemblage has the potential, therefore, to help phase and characterise future discoveries and provide comparable date on fabric, surface treatment, decoration and ceramic technology.
- 5.2.9 Further work is therefore needed to study the material in greater detail as an assemblage as a whole. Additionally, comparisons to other assemblages should be made to those production sites from the area (from Norfolk: Norfolk Street, Kings Lynn, Wroxham, Fulmodestone; from Suffolk: Mendham, Wattisfield, Hacheston, Sutton, Lawshall and Stowmarket; from Cambridgeshire: Ely). Further study of the Ber Street production is also required in regard to the discovery of the TGE (as well as the GRE) and if possible, it will be worth comparing samples from Ber Street with the Cringleford redwares and TGE to see if the fabrics are chemically distinct.

Ceramic building material (App. B.7)

- 5.2.10 The site is well stratified and most of the assemblage is derived from sealed contexts. These originate from the post-medieval period, namely between the 16th-18th centuries AD. Further work will be required to complete the CBM analysis once any radiocarbon and other artefact dating information is available (see S. 4.5 above). Its main potential is to provide information on the range of fabrics and forms being produced by the brick kilns, to provide evidence for the kiln technology used by the potters, and to aid in site taphonomy and dating.

Fired clay (App. B.7)

- 5.2.11 Apart from two pieces of fired clay from sinkhole **164**, all other fragments came from contexts associated with the brick kilns in Area 1 and adds little to their understanding. No further work is required, other than incorporation with the CBM report and catalogue where appropriate.

Clay tobacco-pipe (App. B.8)

- 5.2.12 The assemblage has some potential to aid the understanding of the post-medieval economy of the site, indicating the supply of clay tobacco pipes to the site, although only a single initialled pipe was recovered. However, the assemblage mainly provides additional dating evidence for the brick making and the longevity of the brick kilns and pottery manufacture indicated by the waster sherds (from unlocated kilns).

5.3 Environmental remains

Faunal remains (App. C.1)

- 5.3.1 The material is a good representation of a post-medieval domestic faunal assemblage and has some potential to shed light on activities being undertaken during the period of ceramic production associated with the kilns. The data represents a modest quantity of identifiable animal bone, composed of mixed domestic refuse and partial young skeletons. It is recommended that measurements and full recording be undertaken for the analytical/archive report and a summary included in any publication. The assemblage should also be retained as it could add to the regional picture of diet and husbandry practices in this area of Norfolk.

Marine mollusca (App. C.2)

- 5.3.2 This small assemblage has little potential to aid the project's research objectives and no further work is required.

Environmental bulk samples (App. C.3)

- 5.3.3 The small assemblage has limited potential for further study. Radiocarbon dating of the hazelnut shell in Sample 4 has been undertaken while the wood charcoal associated with the kilns is currently considered to be unlikely to produce an accurate date (see S. 4.5 above).

Overall potential

- 5.3.4 When considered together, the stratigraphic data along with the potential offered by some of the artefacts (notably post-medieval pottery, CBM and clay tobacco pipe) and ecofacts (faunal remains) is considered to be of sufficient quality to address the majority of the project's Research Objectives and provide a firm base on which to progress an archive report and targeted publication work.

6 UPDATED PROJECT DESIGN

6.1 Revised research aims

Introduction

- 6.1.1 The research aims and objectives identified for the prehistoric and post-medieval period revealed during the evaluation and subsequent excavation, listed in Section 1.5, are included below. Summary statements are given, outlining the potential for further analysis, as well as a discussion of the extant archaeological remains encountered on the site in relation to these objectives. New research aims will be detailed as appropriate.
- 6.1.2 In general terms the site will contribute to the over-arching research into early post-medieval rural industry in and around the Cringleford area and the environs of Norwich. Moreover, analysis and appropriate dissemination of the results will provide a firm foundation for the study of early post-medieval pottery and brick industries in this area, which are still poorly-understood.

Site specific research objectives

1: To investigate the chronology and function of the currently undated features within the site (Original R0 3)

- 6.1.3 There is a proportion of undated features which are currently assigned to Phase 0, although more detailed analysis may be able to refine this through any shared similarities in fill composition, feature morphology and spatial associations. Area 1 was characterised almost exclusively by features associated with the kilns and pottery/CBM production from the post-medieval period (16th-18th century) and it is likely that any currently unphased features may be attributed to this phase of activity. Area 2, conversely, was characterised by natural sinkhole features. Those that were examined were almost entirely devoid of archaeological finds with the exception of nine sinkholes that contained struck and burnt flint and small sherds of prehistoric and later pottery, indicative of general (predominantly prehistoric) background activity in the immediate area.
- 6.1.4 Subsequently most of the natural features cannot be phased, although some of the undated features which appeared more archaeological in character may have been related to the identified prehistoric activity (see below) or perhaps the series of planting pits identified by the geophysical survey (Figure 3). Samples from two of these features have been sent for radiocarbon dating (see S. 4.5). Further documentary and cartographic research into the kilns/Newfound Farm may also help to establish the date of the undated but presumed post-medieval ditches on the site, although examination of available early maps of the site (see Gajos 2010) show no boundaries in their locations or are too small a scale to be useful.

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

- 6.1.5 Five features (pits, a post-hole and a gully) contained small quantities of prehistoric finds, including struck and burnt flint alongside Neolithic and Early Iron Age pottery.

The very small quantities recovered (along with occasional sherds of Roman and ?Saxon pottery) suggests that this was low-level and intermittent activity, with any focus of contemporary settlement perhaps located nearby, possibly closer to the River Yare to the north-east. At least some of the finds are likely to be residual – notably those in gully **111** gully which was probably related to post-medieval land drainage. The largest sherds were recovered from a small pit (**123**) and have been dated to the Early Iron Age.

- 6.1.6 The flake-based flint assemblage (and occasional pottery sherds) also found in Area 2 suggests some activity occurring on the site during the Neolithic and/or Early Bronze Age but there is no clear evidence of 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 flint-working. Although no further analysis is required on these assemblages, it would be useful to place this new evidence (incorporating additional data from the previous phases of work on the site) in the wider context of the surrounding area, adding to the very rich record of prehistoric activity of this part of the Yare valley.

3: To assess the role that the palaeoenvironmental evidence can play in enhancing our understanding of the activity undertaken on site (Original RO 4)

- 6.1.7 Environmental sampling from features across the site produced very few preserved plant remains, mostly comprising wood charcoal from the post-medieval kilns, although Phase 1 pit **123** dated to the Early Iron Age produced a small quantity of untransformed elderberry seeds. As such there is little potential for any reconstruction of the palaeoenvironment at this site.

Charcoal recovered from the base of the post-medieval (Phase 2) kilns (from deposits 29 (kiln **34**), 58 (kiln **52**), 94 (kiln **21**), 238 (kiln **242**), 237 (kiln **241**)) could potentially be used to help refine the chronology of the industry at Cringleford (although see S. 4.5 above).

4: To investigate the technological aspects of tile/brick manufacture on the site. (Original RO 1)

- 6.1.8 Understanding the development and diversity of rural industry (including brick making) in addition to the study of post-medieval material culture (including pottery, brick and tile; see RO4 below) were highlighted in the Revised Framework for the East of England (Medlycott 2011, 78) as important areas of future research.
- 6.1.9 Analysis (combining stratigraphic, artefactual (notably the CBM) and documentary evidence) of the four kiln structures in Area 1 will enable a detailed understanding of their construction and use and any technological or chronological differences that might be apparent between the various kilns on the site and any contemporary regional parallels. Based on the evidence available (within the CBM assemblage), 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. Linked to this would be how the kilns related to the extraction pits, nearby infrastructure and sources of fuel, and would need to incorporate evidence from the previous phases of work (including the possible surface/track found during the

evaluation). Detailed orthographic plans (based on the photogrammetry) and possibly reconstructions, of the kilns will be produced and the evidence combined with any relevant dating of the brick materials used in their construction (see RO 5 below). Three-dimensional spatial distribution of CBM fabrics and forms in features and structures will be important in studying the construction and use of the kilns, especially when combined with pottery data (see RO 7).

- 6.1.10 Evidence from the fuel by-products recovered from the bases of the kilns revealed that high quality coal was the main fuel of choice necessary to produce the high temperatures needed to fire large quantities of pottery, tile and brick. Local brushwood may have been used to help light the fuel and this was presumably represented by the quantities of wood charcoal recovered from samples.

5: To assess the range of brick and tile manufactured on the site, and to place this in its regional context (Original RO 2)

- 6.1.11 The very large assemblage of ceramic building material from Cringleford (of which a sample of over 200kg was retained for analysis) included bricks sampled directly from the kiln structures. These bricks appear to be comparable to the 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), although associated pottery and tobacco pipes suggest the kilns were later (mid-17th -18th century).
- 6.1.12 Further analysis of the CBM will provide more information on the range of fabrics and forms being produced by the brick kilns, to provide evidence for the kiln technology used by the potters (see ROs 4 and 7), and to aid in site taphonomy and dating. Moreover, a synthesis of the other sites would be needed to place this assemblage in its wider regional context (see App. B.7). A comparison of the assemblage with other large groups of CBM from the region will be necessary, alongside the analysis of tiles and bricks associated with the pottery waste dumps and other potting kiln waste.

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

- 6.1.13 Brickmaking was a seasonal activity and its schedule fitted well with the farming calendar, meaning that many farmers also became brickmakers. '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 clay extraction but also for weathering the clay 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).
- 6.1.14 Analysis of the faunal remains (which included evidence for on-site breeding and slaughter) will provide additional evidence for contemporary activities on the site, potentially linking the brickmaking with farming. This land was presumably part of that owned (and possibly leased) by the occupants of Newfound Farm (Gajos 2010 and see 1.3.8 above), a relationship that may be illuminated by further documentary research.

This research will also incorporate information held in the NHER for the current study area to help ascertain the extent of pottery (and brick) production across the wider area around Newfound Farm. It would also be interesting to identify if the same clay sources were being used for both pottery and brick production, and if the clay extraction pits located within the site were related to one or both industries. This is one of two sites in the vicinity of Newfound Farm that have now revealed the remains of post-medieval kilns that were probably producing a mix of pottery, brick and tile (NHER 9406). Analysis of the pottery and associated clay tobacco-pipes and glass will assist in establishing a chronology for the pottery production to help focus the documentary research.

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

6.1.15 The pottery retrieved from this excavation has been classed as highly significant since few pottery production sites of this period have been identified in East Anglia so far. This is true both for the Glazed Red Earthenware (GRE) as well as the Tin Glazed Earthenware (TGE). The discovery of tin glazed earthenware production at Cringleford is particularly significant since it is the first site to produce physical (rather than documentary) evidence of its production in the region. Taken together, all the evidence from Cringleford appears to indicate a 17th-century date for the manufacturing waste assemblage; a date largely supported by the clay tobacco-pipe and glass evidence. It appears clear from documentary sources (including wills and mortgage agreements, in addition to Blomefield) that potters were working in this area from at least the mid 17th century onwards but had seemingly ceased production here by the early 19th century (NHER 9406). There is presently no direct evidence that the kilns were still operational when pottery manufacturing took place on the site (see App. B. 7). Analysis (including accessing documents held at the NHER) will help to refine this chronology and establish the range of fabrics and forms being produced and the technologies employed in the firing process. This in turn will help phase and characterise future discoveries and provide comparable date on fabric, surface treatment, decoration and ceramic technology.

6.2 Interfaces, communications and project review

6.2.1 The Post-Excavation Assessment has been undertaken principally by Tom Collie and edited / finalised by Rachel Clarke (Post-Excavation Editor) and quality assured by Elizabeth Popescu (Head of Post-excavation and Publications). It will be distributed to the Client (CgMs on behalf on Barratt David Wilson Homes) and Steve Hickling (Historic Environment Office, Norfolk County Council (NCC)) for comment and approval.

6.2.2 Following approval of the Post-Excavation Assessment, discussions will be had between Tom Collie, Nick Gilmour, Rachel Clarke/Elizabeth Popescu, the Client and Steve Hickling to progress the post-excavation analysis, analytical/archive report and publication, as outlined in the task table below. Meetings will be arranged at relevant points during the post-excavation analysis.

6.3 Methods statements

Stratigraphic analysis

- 6.3.1 Contexts, finds and environmental data will be analysed using an MS Access database in combination with AutoCAD and GIS applications. The specialist information will be integrated to aid dating and complete more detailed grouping and phasing of the site, as well as spatial distribution plots where required. A full stratigraphic narrative will be produced and integrated with the results of the specialist analysis and will form the basis of the archive report.

Illustration

- 6.3.2 The existing CAD plans and sections will be updated with any amended phasing and additional sections digitised if appropriate. Report/publication figures will be generated using Adobe Illustrator. Finds recommended for illustration will be drawn by hand and then digitised, or where appropriate photography of certain finds-types will be undertaken. Data from previous work, notably the trench evaluation and geophysical survey, will be incorporated. Detail plans of the features and kiln will be illustrated, supplemented by photographs and sections.

Documentary research

- 6.3.3 Primary and published sources will be consulted where appropriate using the Norfolk Historic Environment Record and other resources, and will also include reports on comparable sites locally and nationally in order to place the site within its landscape and archaeological context. Documentary research will focus on material (maps, accounts etc.) relating to Newfound Farm and evidence of brick and pottery production. An updated HER search will also be commissioned at the analysis and final report stage. This evidence will be collated and where relevant reproduced in the full analytical/archive report and any subsequent publication.

Artefactual and ecofactual analysis

- 6.3.4 All the artefacts have been assessed/analysed with detailed recommendations for any additional work given in the individual specialist reports (Appendices B.1-10). Further work is recommended as follows:

Metalwork:

- The objects have been catalogued and no further work, other than selected X-rays (shears SF 1 and vessel SF 8) and updating of the report with phasing for the analytical/archive report is required.
- No further analysis is needed, although the report should be shared with the pottery specialist and summarised for publication.

Lithics:

- No further work other than incorporation into archive report.

Fuel by-products:

- No further analysis is needed.
- The items should be considered for dispersal/discard.

Glass

- The bottle seals should be examined and if possible, parallels found.
- For the bulk of the assemblage, no further work is recommended, beyond preparing a statement for publication and the catalogue acts as a full archival record.
- The complete bottle and the bottle seal should be retained. The remainder of the glass may be deselected prior to archive deposition.

Prehistoric pottery:

- No further work other than incorporation into archive report alongside a comparison and brief synthesis of other prehistoric sites in the immediate area and any relevant finds from previous stages of work.

Roman and Anglo-Saxon pottery

- Identification and record for the archive.

Post-medieval pottery:

- Lay out pottery from contexts 43, 286 and 287 to look for further cross-matches, select vessels for illustration and samples for ICP-MS, and decide on discard of material
- Prepare a full archive report on the pottery and manufacturing waste which will include:
 - descriptions of the fabrics and form types identified
 - evidence for manufacturing methods
 - comparison to other assemblages in the region and neighbouring counties, in particular the Ber Street Norwich TGE production site including a visit NHER to look for information on other sites in the Cringleford area (sampling of Ber Street material may be possible at the same time)
 - Compare vessel forms with Norwich type series and prepare a form/rim typology for Cringleford – attempt to tighten dating of particular form types
- Prepare a publication report from the archive report.

- Make allowance for at least 100 drawings and 50 photographs for subsequent grey lit and publication
- Select samples for chemical analysis, and if possible, compare to samples from the Ber Street kiln redware group (GRE, IGBW, PMSW) and the TGE will be submitted for ICP-MS analysis, together with one sample each from Ber Street, a total of 10 samples
- Select 2 samples for chemical sampling of saggars

Ceramic building material:

- produce detailed description of the material recovered from the kilns and related waste dumps as well as discussion of the types of CBM being produced,
- Comparison of the assemblage with other large groups of CBM from the region
- Three-dimensional spatial distribution of CBM fabrics and forms in features and structures will be important in studying the construction and use of the kilns.
- Analysis of tiles and bricks associated with the pottery waste dumps in conjunction with other potting kiln waste.
- Produce a report suitable for archive and/or publication.
- Up to 5 fragments are worthy of illustration by line drawing or photography

Fired clay:

- No further work other than incorporation into archive report (with CBM).
- The material should be considered for discard.

Clay tobacco pipe:

- Research on the pipe maker IM. Pipes with this mark were also recovered from the excavation at Duke Street Norwich. (0.25 day)
- Examine the lead-filled clay tobacco pipe and look for parallels. (0.25 day)
- Report on the above. (0.5 day)
- Photograph/illustrate the initialled pipe bowl for inclusion in the report.
- Photograph/illustrate the lead filled pipe for inclusion in the report.

- No further work is recommended for the remainder of the assemblage.
- The plain, undecorated stems are recorded in the catalogue and may be discarded. The complete pipe bowls should be retained.

Faunal remains:

- Full recording and analysis to be undertaken of bone
- Incorporation of full analysis report into archive report and summarise for publication.

Marine mollusca:

- No further work other than incorporation into archive report.

Environmental bulk samples

- No further work (possible charcoal ID)

Radiocarbon dating

- Possible kiln charcoal?

Report writing

6.3.5 Tasks associated with report writing are identified in Table 15 (see Section 7.2 below). An archive report, incorporating the pertinent evaluation data, will be prepared that will include results of all analyses.

6.3.6 It is proposed that a publication article will be produced which summarises the results and focuses on the key aspects of the site (see below).

Publication

6.3.7 It is proposed that the results of the project should be published in Norfolk Archaeology and / or a more ceramic-based journal (see Section 7.2).

6.4 Retention and dispersal of finds and environmental evidence

6.4.1 Recommendations for the retention and/or dispersal of each artefactual or ecofactual assemblage have been made by the relevant specialists during this assessment stage (see Appendices B.1-10). On completion of full analysis, discussions will be had between the relevant parties (see Section 6.2 above) to oversee the disposal/dispersal of redundant material and preparation for archiving of material considered to hold continuing value for the archaeological record. The retained material will be deposited with the site archive in due course (see below). It has been noted that Norfolk CC Historic Environment have expressed interest in retaining a selection of the discarded ceramics for their reference and public archaeology collection.

6.5 Ownership and archive

- 6.5.1 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. During analysis and report preparation, OA East will hold all material and reserves the right to send material for specialist analysis. It is Oxford Archaeology Ltd's policy, in line with accepted practice, to keep site archives (paper and artefactual) together wherever possible.
- 6.5.2 The archive will be prepared in accordance with current OA East guidelines, which are based on current national guidelines.
- 6.5.3 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.

7 RESOURCES AND PROGRAMMING

7.1 Project team structure

7.1.1 The project team is set out in Table 14 below:

Name	Initials	Organisation	Role
Nick Gilmour	NG	OAE	Project Manager and prehistoric pottery specialist
Elizabeth Popescu	EP	OAE	Head of Post-Excavation and Publication
Rachel Clarke	RC	OAE	Editor
Tom Collie	TC	OAE	Project Officer & author; documentary research
Denis Sami	DS	OAE	Metalwork specialist
Carole Fletcher	CF	OAE	Specialist (clay tobacco pipe, glass, CBM, pottery)
Sue Anderson	SA	Freelance	Pottery & CBM specialist and author
Hayley Foster	HF	OAE	Faunal remains specialist
Karen Barker	KB	OAN	Conservator and X-radiography
Illustrator	Ill	OAE	Illustrator (TBC)
James Fairbairn	JF	OAE	Finds photography
Katherine Hamilton	KH	OAE	Archive Supervisor
Ben Jervis	BJ	Freelance	Clay tobacco pipe specialist

Table 14: Project team

7.2 Task list and programme

7.2.1 Compilation of a final archive report is normally completed within one year of the approval of the Post-Excavation Assessment and Updated Project Design (May 2021). A publication proposal will be submitted to the preferred journal (possibly Norfolk Archaeology and / or Medieval Ceramics; joint authorship Tom Collie and Sue Anderson), once this has been agreed by the relevant parties. NB Archiving tasks and costs will be calculated once a dispersal and retention policy has been agreed with NWHCM.

7.2.2 A task list is presented below.

Task No.	Task	Staff	No. Days
Project Management			
1	Project management	NG EP/RC	3
2	Team meetings	NG EP/RC TC	1
3	Liaison with relevant staff and specialists, distribution of relevant information and materials	TC, RC, NG, SA, EP, HF	1.5
Stage 1: Stratigraphic analysis			
4	Integrate ceramic/artefact dating with site matrix	TC	1
5	Finalise site phasing	TC	1
6	Add final phasing and groups to database	TC	1
7	Compile group and phase text, incorporating evaluation data where appropriate	TC	3
8	Compile overall stratigraphic text and site narrative to form the basis of the full/archive report and incorporate evaluation data	TC	3

Task No.	Task	Staff	No. Days
9	Review, collate and standardise results of all final specialist reports and integrate with stratigraphic text and project results	TC	1.5
Illustration			
10	Prepare draft phase plans, sections and other report figures	Ill	2
11	Select photographs for inclusion in the report	TC	0.5
12	Select sections for inclusion in the report	TC	0.5
13	Illustrate post-medieval pottery: max 100 sherds	Ill	20
14a	Photograph post-medieval pottery and edit/archive: max 50 Photograph 2 x clay tobacco pipes	JF	4
14b	Paste up photos (scales etc)	Ill	4
15	Illustrate 5 CBM fragments	ill	1
Documentary research			
16	Updated HER search in the surrounding 1km area and other research	TC/NHER	2
Artefact studies			
17a	Metalwork: complete archive report following x-ray	DS	0.2
17b	X-ray of 2 objects @£25 per plate	KB	0.2
18	Flint work: complete archive report with any additional information	LB/TC	0.1
19	Prehistoric pottery: complete archive report (integrate eval)	NG	0.2
20a	Roman pottery: identification for archive, collate with any previous contemporary finds	KA	0.2
20b	Saxon pottery: identification for archive, collate with any previous contemporary finds	SA	0.2
21	Lay out material and help with pottery discard	CF	2
22	Prepare archive report/publication summary of glass. ID bottle seal	TBC	0.5
23a	Post-medieval pottery and manufacturing waste: X-fits, select sherds for illustration chemical analysis, comparison with Norwich type series; prepare form/rim typology; research, archive report and publication,	SA	7
23b	ICP-MS analysis of up to 12 pottery samples @ £50 per sample	TBC	-
23c	C14 x 2 max @£320 each (but see S. 4.5)	SUERC	-
24	CBM: research, report and publication synopsis along with comparisons with other sites etc	SA	2
25	Clay tobacco pipe: research IM, lead-filled pipe, report	CF/BJ	1
Ecofact studies			
26	Faunal remains: archive catalogue, further analysis, research, archive report and publication synopsis	HF	2
Stage 2: Report Writing			
27	Integrate documentary research	TC	1

Task No.	Task	Staff	No. Days
28	Write historical and archaeological background text	TC	1
29	Compile final list of illustrations/liaise with illustrators	TC	0.5
30	Write discussion and conclusions	TC/SA	2
31	Prepare final report figures	III	5
32	Collate/edit captions, bibliography, appendices etc.	TC/RC	1
33	Internal edit	RC/EP	3
34	Incorporate internal edits	TC	1
35	Final edit/check	RC / EP	0.5
36	Send to RPS/NCC for approval	NG TC	0.1
37	Approval revisions	TC/RC/III	1.5
Stage 3: Publication			
38	Produce draft publication(s) text (TBC)	TC/SA/RC	10
39	Compile list of illustrations/liaise with illustrators	TC RC III	1
40	Produce publication figures (TBC)	III	5
41	Internal edit	RC	3
42	Incorporate internal edits	TC	0.5
43	Final edit/check	RC	1
44	Send to publisher for refereeing	RC	0.5
45	Post-refereeing revisions	RC	2
46	Copy edit queries/proof reading	RC	1
49	Print costs (c. £50 per page) TBC	-	
Stage 4: Archiving			
47	Compile paper archive	TC/KH	1
48	Archive/delete digital photographs	TC/KH	1
49	Compile/check and deposit material archive (TBC)	KH	TBC

Table 15: Task list

* See Appendix D for product details and Appendix E for the project risk log.

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APPENDIX A CONTEXT INVENTORY

Context	Cut	Area	Phase	Category	Feature Type	Function	Length	Breadth	Depth	Shape In Plan	Colour	Fine Component
1	0		0	layer	topsoil	topsoil					dark brown	clay silt
2	0		0	layer	subsoil	subsoil					mid grey brown	silty sandy clay
3	0		0	layer	natural geology	natural geology					mid yellow brown	firm
4	4	1	2	cut	ditch	boundary	2	0.8	0.18	linear		
5	4	1	2	fill	ditch fill	disuse	2	0.8	0.18		mid brown grey	silty clay
6	6	1	2	cut	ditch	boundary	2	0.76	0.22	linear		
7	6	1	2	fill	ditch fill	disuse	2	0.76	0.22		light yellow brown	silty sand
8	0	1	2	layer	dumped deposit	discarded kiln debris	3.7	3.22	0.2		light grey brown	silty clay
9	9	1	2	cut	pit	rubbish pit	1	3.6	0.8	sub-circular		
10	9	1	2	fill	pit fill	dumped waste	1	2.2	0.78		mid grey brown	silty sand
11	9	1	2	fill	pit	backfill/waste deposit	1	0.8	0.3		mid greyish brown	silt sand
12	9	1	2	fill	pit	backfill/waste disposal	1	2.1	0.5		mid grey brown	silt sand
13	9	1	2	fill	pit	backfill/waste disposal	1	3.4	0.4		mid grey brown	silt sand
14	14	1	0	cut	natural	natural feature	0.92	0.92	0.14	circular		
15	14	1	0	fill	natural	silting	0.92	0.92	0.14		mid grey brown	silt sand
16	16	1	2	cut	ditch	boundary	1	1.08	0.18	linear		
17	16	1	2	fill	ditch	silting/disuse	1	1.08	0.18		mid grey brown	silt sand
18	18	1	2	cut	pit	extraction	1	4.52	0.58	sub-linear		
19	18	1	2	fill	pit	backfill	1	4.52	0.64		mid brown yellow	silt clay
20	18	1	2	fill	pit	demolition/rubble/backfill	1	2.5	0.42		mid brown red	ashy silt
21	18	1	2	masonry	structure	kiln brick	8.8	1.59	0.8		red brick	irregular mortar bonding flemish
22	18	1	2	masonry	structure	kiln	2.1	0.42	0.23		red	irregular english mortar
23	18	1	2	masonry	structure	kiln	2.1	0.42	0.23		red	english mortar
24	18	1	2	masonry	structure	brick kiln	2.1	0.42	0.23		red	irregular mainly header mortar
25	18	1	2	masonry	structure	kiln	2.1	0.33	0.23		red	english bond mortar
26	33	1	2	masonry	structure	wall/kiln	7.16	0.23	0.86		layer of blue overlay staining bricks blue	english garden mortar
27	33	1	2	masonry	structure	kiln	7.16	0.23	0.86		blue	english garden mortar
28	22	1	2	fill	backfill	backfill	1	1	0.75		pale yellow brown	silt sand

Context	Cut	Area	Phase	Category	Feature Type	Function	Length	Breadth	Depth	Shape In Plan	Colour	Fine Component
29	33	1	2	fill	kiln deposit	disuse/firing ash	1	0.9	0.23		dark grey	silt sand
30	33	1	2	fill	colluvium	natural silting/backfill	1	2.14	0.22		mid grey brown	silt sand
31	33	1	2	fill	backfill	backfill	1	2.14	0.2		dark grey brown	silt sand
32	33	1	2	fill	kiln	backfill	1	1.7	0.22		mid grey brown	silt sand with clay lenses
33	33	1	2	cut	structure	kiln construction	1	2.1	0.9	linear		
34	0	1	2	group	kiln	structure	7.42	1.57	0.98			
35	33	1	2	masonry	surface (internal)	kiln floor	7.16	0.82	0.05			irregular bond half broken brick and clay
36	36	1	2	cut	ditch	boundary/drainage	1.05	0.8	0.38	linear		
37	36	1	2	fill	ditch	disuse	1.05	0.8	0.38		mid yellow brown	sand clay
38	38	1	2	cut	ditch	boundary/drainage	0.68	0.7	0.17	linear		
39	38	1	2	fill	ditch	disuse	0.68	0.7	0.17		mid to dark grey brown	sand clay
40		1	0	layer	colluvium		1	1.06	0.42		dirty brown yellow	sand clay
41		1	0	layer	colluvium	quarry	1	1.06	0.1		mid to dark grey brown	sand clay
42	42	1	2	cut	pit	extraction	2.02	1.9	1.2	indeterminate		
43	42	1	2	fill	pit	backfill	1	3.3	1.2		mid grey brown	silt clay
44	44	2	0	cut	pit	uncertain	1.28	0.68	0.2	sub-circular		
45	44	2	0	fill	pit	silting	1.28	0.68	0.2		mid grey brown	silt sand
46	46	2	0	cut	ditch	boundary	1	0.8	0.14	linear		
47	46	2	0	fill	ditch	boundary	1	0.8	0.14		mid brown grey	silt sand
48	48	2	1	cut	pit	uncertain	0.92	0.92	0.2	sub-circular		
49	48	2	1	fill	Pit	silting	0.92	0.92	0.2		mid brown	silt sand
50	50	2	0	cut	ditch	boundary	1.46	0.73	0.2	linear		
51	50	2	0	fill	ditch	natural silting	1.46	0.73	0.2		mid brown grey	silt sand
52	0	1	2	masonry	structure	kiln group	4.71	3.06	0.22			
53	56	1	2	masonry	structure	kiln wall	2.6	0.11	0.21		red	clay and mortar
54	56	1	2	masonry	structure	kiln wall	2.7	0.11	0.19			mortar
55	56	1	2	fill	kiln	backfill/demolition layer	2.98	0.7	0.17		pale red brown	silt sand
56	56	1	2	cut	kiln	construction	4.3	2.98	0.22	square		
57	56	1	2	layer	surface (internal)	kiln floor	3.2	2.6	0.05		dark reddish brown	silt clay
58	56	1	2	fill	kiln	demolition layer/ backfill	2.74	0.7	0.22		pale red brown	silt sand
59	59	2	0	cut	ditch	field boundary	1	1.1	0.44	curvilinear		
60	59	2	0	fill	ditch	natural infill/ silting	1	1.12	0.45		mid grey brown	silt sand

Context	Cut	Area	Phase	Category	Feature Type	Function	Length	Breadth	Depth	Shape In Plan	Colour	Fine Component
61	61	2	0	cut	pit	possible sinkhole	4.38	2.94	2.8	sub-circular		
62	61	2	0	fill	pit	possible sink hole	4.38	2.94	2.8		light to mid grey brown	silt sand
63	317	1	2	fill	pit	backfill	1	1.33	0.22		mid yellow brown	silt clay
64	317	1	2	fill	pit	backfill	1	1.47	0.87		mid red brown	silt clay
65	42	1	2	fill	pit	backfill	1	1.44	0.46		mid yellow brown	silt clay
66	42	1	2	fill	pit	backfill	1	2.08	0.66		mid red brown	silt clay
67	42	1	2	fill	pit	backfill	1	1.02	0.08		dark brown grey	ashy clay
68	42	1	2	fill	pit	backfill	1	1.6	0.46		mid grey brown	silt clay
69	42	1	2	fill	pit	backfill	1	0.7	0.2		mid grey brown	silt clay
70	56	1	2	masonry	surface (internal)	kiln firing chamber floor	1.67	0.5	0.11			clay
71	56	1	2	masonry	kiln	storage	0.68	0.25	0.22			
72	56	1	2	masonry	structure	kiln wall	3.03	0.11	0.18			mortar
73	56	1	2	masonry	structure	kiln wall	3.2	0.25	0.05		dark red	clay
74	74	1	2	cut	pit	kiln	1	4.22	1.2	sub-rectangular		
75	74	1	2	fill	pit	demolition/backfill	1	4.22	0.8		dark grey	silt clay
76	90	1	2	fill	pit	extraction	1	2.58	0.78		dark brown grey	silt clay
77	95	1	2	fill	pit	extraction	1	1.4	0.98		mid brown grey	silt clay
78	18	1	2	masonry	structure	kiln west outer wall	2.2	1.75	0.4		red	mortar
79	18	1	2	masonry	structure	kiln north outer wall	5	1.5	0.8		red	mortar
80	18	1	2	masonry	structure	kiln north wall of entrance	2.8	1.3	0.3		red	mortar
81	18	1	2	masonry	structure	kiln south wall of entrance	2.8	1.3	0.3		red	mortar
82	18	1	2	masonry	structure	kiln furnace arch	2.1	0.23	0.4		red	mortar
83	18	1	2	masonry	structure	kiln furnace arch	2.1	0.23	0.42		red	mortar
84	18	1	2	masonry	structure	kiln furnace arch	2.1	0.23	0.42		red	mortar
85	18	1	2	masonry	structure	kiln furnace arch	2.1	0.23	0.42		red	mortar
86	18	1	2	masonry	structure	kiln furnace arch	2.1	0.23	0.4		red	mortar
87	18	1	2	masonry	structure	kiln furnace arch	2.1	0.23	0.42		red	mortar
88	18	1	2	masonry	structure	kiln furnace arch	2.1	0.23	0.42		red	mortar
89	0		0	void			0					
90	90	1	2	cut	pit	extraction	3.16	1.68	0.61	indeterminate		

Context	Cut	Area	Phase	Category	Feature Type	Function	Length	Breadth	Depth	Shape In Plan	Colour	Fine Component
91	90	1	2	fill	pit	extraction backfill	1	1.01	0.49		mid brown grey	silt clay
92	92	1	2	cut	pit	extraction	1	0.81	0.35	indeterminate		
93	92	1	2	fill	pit	backfill	1	1.11	0.43		mid grey brown	silt clay
94	21	1	2	fill	kiln	firing waste	8.14	1	0.3		mid red purple	ash
95	95	1	2	cut	pit	extraction	1	0.91	0.71	indeterminate		
96	96	2	2	cut	ditch	boundary	1	1.12	0.21	linear		
97	96	2	2	fill	ditch	silting	1	1.12	0.21		mid brown grey	silt sand
98	98	2	0	cut	pit	sinkhole	1.5	1.5	1.16	circular		
99	98	2	0	fill	Pit		1.5	1.5	0.92		mid brown	sand silt
100	98	2	0	fill	pit		0.62	0.62	0.36		light brown grey	silt sand
101	98	2	0	fill	pit		0.86	0.86	0.2		dark grey	sand silt
102	98	2	0	fill	pit	disuse	0.98	0.98	0.14		light grey brown	silt sand
103	103	2	0	cut	ditch	boundary	1	1.2	0.3	linear		
104	103	2	0	fill	ditch	natural infilling	1	1.2	0.3		yellow grey brown	silt sand
105	105	2	0	cut	natural	natural	1.9	1.9	1	circular		
106	105	2	0	fill	natural	natural	1.9	1.9	1		mid brown grey	silt sand
107	107	2	0	cut	natural	natural	1	0.95	0.36	circular		
108	107	2	0	fill	natural	natural	1	0.95	0.36		mid yellow brown	sand silt
109	109	2	0	cut	pit		2	0.82	0.48	curvilinear		
110	109	2	0	fill	pit	silting	2	0.82	0.48		mid brown grey	silt sand
111	111	2	1	cut	gully		1	0.3	0.02	linear		
112	111	2	1	fill	gully	natural infilling	1	0.3	0.02		mid grey brown	silt sand
113	113	2	0	cut	ditch	boundary	1	1.18	0.61	curvilinear		
114	113	2	0	fill	ditch	natural silting	1	1.18	0.61		mid grey brown	silt clay
115	115	2	0	cut	natural	tree bowl	1.3	1.26	0.24	sub-circular		
116	115	2	0	fill	natural	tree bowl	1.3	1.26	0.24		mid brown grey	silt sand
117	117	2	0	cut	natural	tree bowl	1.85	1.02	0.16	sub-circular		
118	117	2	0	fill	natural	silting	1.85	1.02	0.16		mid yellow brown	silt sand
119	119	2	0	cut	natural	tree bowl	1.5	0.9	0.43	sub-circular		
120	119	2	0	fill	natural	tree bowl	1.5	0.9	0.43		mid yellow grey brown	silt sand
121	121	2	1	cut	natural		1.9	1.6	1	sub-circular		
122	121	2	1	fill	natural		1.9	1.6	1		mid brown	silt sand
123	123	2	1	cut	pit	possible post pad	1.04	1	0.26	sub-circular		
124	123	2	1	fill	pit	silting	1.04	1	0.26		mid grey brown	silt sand
125	123	2	1	fill	pit	backfill	1.04	0.74	0.14		mid grey brown	silt sand
128	128	2	1	cut	natural	sinkhole	1.35	1.3	1	sub-circular		
129	128	2	1	fill	natural	sinkhole	1.35	1.3	1		mid grey brown	silt sand

Context	Cut	Area	Phase	Category	Feature Type	Function	Length	Breadth	Depth	Shape In Plan	Colour	Fine Component
130	130	2	1	cut	post-hole	structural	0.34	0.34	0.33	circular		
131	130	2	1	fill	post-hole	natural silting	0.34	0.34	0.33		mid grey brown	silt sand
132	132	2	1	cut	natural	sinkhole	2.05	2.1	1.35	circular		
133	132	2	1	fill	natural	sinkhole	2.05	2.1	0.75		mid grey brown	silt sand
134	132	2	1	fill	natural	sinkhole	2.05	2.1	1.35		dark brown grey	silt sand
135	135	1	2	cut	pit	extraction then dump	1	1.88	0.42	sub-circular		
136	135	1	2	fill	pit	dump	1	1.88	0.42		mid grey brown	sand clay
137		1	2	masonry	surface (external)	floor	4.04	0.86			dark grey brown	hard fired clay
138	33	1	2	masonry	structure	kiln arch	0.83	0.29	0.36			mortar
139	139	2	0	cut	natural	tree throw	1.8	1.2	0.39	amorphous		
140	139	2	0	fill	natural	tree throw	1.8	1.2	0.39		dark brown	silt sand
141	141	2	1	cut	natural	sink hole	1.45	1.34	1.2	sub-circular		
142	141	2	1	fill	natural	silting	1.45	1.34	1.2		mid grey brown	silt sand
145	145	2	1	cut	natural	sinkhole	2.64	2.5	1.2	sub-circular		
146	145	2	1	fill	natural	sinkhole	2.64	2.5	1.2		light mid grey brown	silt sand
147	147	2	0	cut	pit		1.5	0.65	0.22	sub-circular		
148	147	2	0	fill	pit		1.5	0.65	0.22		mid grey brown	silt sand
149	149	2	0	cut	pit		1	0.95	0.18	sub-circular		
150	149	2	0	fill	pit	silting	1	0.95	0.18		mid grey brown	silt sand
151	151	2	1	cut	ditch	boundary	2	0.38	0.11	linear		
152	151	2	1	fill	ditch	natural silting	3	0.38	0.11		mid grey brown	silt sand
153	153	2	0	cut	pit		0.95	0.6	0.12	sub-circular		
154	153	2	0	fill	pit		0.95	0.6	0.12		mid grey brown	silt sand
155	155	2	0	cut	natural		0.5	1.12	0.22	sub-circular		
156	155	2	0	fill	natural		0.5	1.12	0.22		mid grey brown	silt sand
157	157	2	1	cut	natural	sinkhole	1.6	1.6	1.1	circular		
158	157	2	1	fill	natural	sinkhole	1.6	1.6	1.1		dark brown	silt sand
159	159	2	1	cut	pit		0.78	0.6	0.12	sub-circular		
160	159	2	1	fill	pit	silting	0.78	0.6	0.12		mid grey brown	silt sand
161	161	2	1	cut	natural	sinkhole	1.24	1.13	0.84	sub-circular		
162	161	2	1	fill	natural	silting	1.24	1.13	0.84		mid grey brown	silt sand
163	163	2	1	cut	natural	sinkhole	1.8	1.95	1	sub-circular		
164	163	2	1	fill	natural	sinkhole	1.8	1.95	1		mid grey brown	silt sand
165	165	2	0	cut	pit		1.33	0.7	0.32	sub-circular		
166	165	2	0	fill	pit		1.33	0.7	0.32		light to medium grey brown	silt sand
167	167	2	0	cut	pit		0.85	0.64	0.45	sub-circular		
168	167	2	0	fill	pit		0.84	0.64	0.45		mid grey brown	silt sand

Context	Cut	Area	Phase	Category	Feature Type	Function	Length	Breadth	Depth	Shape In Plan	Colour	Fine Component
169	169	2	1	cut	natural	sinkhole	1.4	0.86	0.76	sub-circular		
170	169	2	1	fill	natural	silting	1.4	0.86	0.76		mid grey brown	silt clay
171	171	2	0	cut	natural	sinkhole	0.8	0.8	0.16	circular		
172	171	2	0	fill	natural	sinkhole	0.8	0.8	0.16		mid grey brown	silt clay
173	173	2	0	cut	pit		2	1.9	0.64	sub-circular		
174	173	2	0	fill	pit		0.62	0.62	0.4		mid brown	silt sand
175	173	2	0	fill	pit		0.86	0.86	0.6		light grey brown	silt sand
176	173	2	0	fill	pit		1.3	1.3	0.6		mid brown	silt sand
177	177	2	2	cut	post-hole		0.5	0.4	0.25	sub-circular		
178	177	2	2	fill	post-hole		0.5	0.4	0.25		dark grey brown	silt sand
179	179	2	0	cut	natural	treebowl	0.8	0.8	0.25	circular		
180	179	2	0	fill	natural	silting	0.8	0.8	0.25		mid grey brown	silt sand
181	181	2	0	cut	natural	tree bowl/ animal burrow	0.95	0.8	0.62	sub-circular		
182	181	2	0	fill	natural	tree bowl/ animal burrow	0.95	0.8	0.62		mid grey brown	silt sand
183	183	2	0	cut	pit		1.24	1	0.3	sub-circular		
184	183	2	0	fill	pit	silting	1.24	1	0.3		mid grey brown	silt sand
185	185	2	0	cut	post-hole		0.5	0.5	0.09	circular		
186	185	2	0	fill	post-hole		0.5	0.5	0.09		dark grey	silt sand
187	187	2	0	cut	natural	sinkhole	0.96	0.96	0.58	circular		
188	187	2	0	fill	natural	sinkhole	0.96	0.96	0.58		dark brown	silt sand
189	189	2	0	cut	natural	sinkhole	1.85	1.8	1.1	sub-circular		
190	189	2	0	fill	natural	natural infilling	1.85	1.8	1.1		mid grey brown	silt sand
191	191	2	0	cut	natural	sinkhole	0.73	2	0.58	sub-circular		
192	191	2	0	fill	natural	sinkhole	0.73	2	0.58		mid brown grey	silt sand
193	193	2	0	cut	natural	sinkhole	1	1	0.78	circular		
194	193	2	0	fill	natural	sinkhole	1	1	0.78		dark brown	silt sand
195	195	2	0	cut	natural	sinkhole	0.95	0.8	0.9	sub-circular		
196	195	2	0	fill	natural	sinkhole	0.95	0.8	0.9		dark brown	silt sand
197	197	2	0	cut	ditch	terminus/bou ndary	2.59	1.1	0.21	linear		
198	197	2	0	fill	ditch	natural silting	2.59	1.1	0.21		mid grey brown	silt sand
199	199	2	0	cut	ditch	drainage/bou ndary	2	0.45	0.11	linear		
200	199	2	0	fill	ditch fill	disuse	2	0.45	0.11		mid yellow brown	silty sand
201	201	2	0	cut	ditch	drainage/bou ndary	2	0.67	0.18	linear		
202	201	2	0	fill	ditch fill	disuse	2	0.67	0.18		mid grey brown	silty sand
203	203	2	0	cut	ditch	field boundary/dra inage	1	0.65	0.24	linear		

Context	Cut	Area	Phase	Category	Feature Type	Function	Length	Breadth	Depth	Shape In Plan	Colour	Fine Component
204	203	2	0	fill	ditch fill	disuse/silting	1	0.65	0.24		mid grey brown	silty sand
205	205	2	0	fill	ditch	drainage/boundary	2	1.05	0.4	linear		
206	205	2	0	fill	ditch fill	disuse	2	1.05	0.4		mid grey brown	silty sand
207	207	2	0	cut	ditch	boundary/drainage	1	0.84	0.23	linear		
208	207	2	0	fill	ditch fill	natural silting	1	0.84	0.21		mid yellow brown	silty sand
209	209	2	0	cut	ditch	drainage/boundary	1	0.43	0.1	linear		
210	209	2	0	fill	ditch fill	drainage	1	0.43	0.1		mid grey brown	silty sand
211	211	2	0	cut	sink hole	natural feature	1	1	0.8	sub-circular		
212	211	2	0	fill	sinkhole fill	natural infilling	1	1	0.8		mid grey brown	silty sand
213	213	2	0	cut	pit	unknown	1.4	1.1	0.48	sub-circular		
214	213	2	0	fill	pit fill	disuse	1.4	1.1	0.48		dark brown	silty sand
215	33	1	2	masonry	kiln	brick/tile production	0.88	0.35	0.15			
216		2		void								
217	217	2	0	cut	sinkhole	natural feature	1.05	1	0.6	sub-circular		
218	217	2	0	fill	sinkhole fill	natural infilling	1.05	1	1		mid grey brown	silty sand
219	219	2	0	cut	sinkhole	natural feature	1.44	1.23	0.53	sub-circular		
220	219	2	0	fill	sinkhole fill	natural infilling	1.44	1.23	0.53		mid grey brown	silty sand
221	221	2	0	cut	sinkhole	natural feature	0.9	0.9	0.6	circular		
222	221	2	0	fill	sinkhole fill	natural infilling	0.9	0.9	0.6		mid grey brown	silty sand
223	223	2	0	cut	sinkhole	natural feature	1.18	1.02	0.54	circular		
224	223	2	0	fill	sinkhole fill	natural infilling	1.18	1.02	0.54		mid yellow brown	silty sand
225	225	2	0	cut	sinkhole	natural feature	1.5	1.45	0.9	sub-circular		
226	255	2	0	fill	sinkhole fill	natural feature	1.5	1.45	0.9		mid grey brown	silty sand
227	227	2	0	cut	sinkhole	natural feature	2	1.2	0.7	sub-oval		
228	227	2	0	fill	sinkhole fill	natural feature	2	1.2	0.7		mid grey brown	silty sand
229		1	2	masonry	kiln	group number for kiln	11.85	3.71	0.75			
230	230	1	2	cut	construction cut for kiln	cut for brick kiln	12.99	1.2	0.55	sub-rectangular		
231	231	1	2	cut	construction cut	kiln construction cut	13.9	1.64	0.56	sub-rectangular		
232	232	1	2	cut	pit	refuse/waste pit at the end	4.78	4.36	0.54	sub-circular		

Context	Cut	Area	Phase	Category	Feature Type	Function	Length	Breadth	Depth	Shape In Plan	Colour	Fine Component
						of kiln group 229						
233	230	1	2	masonry	wall	kiln wall	5.35	0.12	0.54			
234	230	1	2	masonry	wall	kiln wall	6.7	0.12	0.75			
235	231	1	2	masonry	wall	kiln wall	6.8	0.15	0.56			
236	231	1	2	masonry	wall	kiln wall	6.95	0.14	0.6			
237	230	1	2	layer	kiln chamber base	floor of kiln	5.4	0.9	0.05		mid grey red	silty clay
238	231	1	2	fill	kiln chamber base	kiln floor remnant	6.9	0.9	0.05		mid grey red	silty clay
239	239	1	2	cut	pit	extraction quarry pit	9.27	2.1	0.5	rectangular		
240	239	1	2	fill	extraction pit fill	backfill	9.27	2.1	0.5		mid grey brown	silty sand
241	230	1	2	masonry	brick kiln	industrial	13.05	1.18	0.75			
242	231	1	2	masonry	brick kiln	industrial	13.62	1.77	0.6			
243	231	1	2	fill	backfill	collapse and kiln backfill	1	1.54	0.3		mid red grey	silty clay
244	231	1	2	fill	kiln fill	redeposited clay	1	1.32	0.38		mid orange yellow	silty clay
245	231	1	2	fill	kiln fill	tread on top of kiln floor	1	1.54	0.03		dark brown grey	silty clay
246	231	1	2	fill	kiln fill	dumped waste deposit	1	1.52	0.12		mid grey yellow	silty clay
247	231	1	2	fill	kiln fill	waste deposit	1	1.52	0.04		dark grey black	silty clay
248	231	1	2	fill	kiln fill	disuse	1	1.52	0.03		mid grey yellow	silty clay
249	231	1	2	fill	kiln fill	backfill	1	1.74	0.03		mid brown grey	silty clay
250	230	1	2	fill	kiln fill	backfill	0.5	2.1	0.3		mid brown yellow	silty clay
251	230	1	2	fill	kiln fill	backfill	0.5	1.16	0.32		mid brown red	silty clay
252	230	1	2	fill	kiln fill	backfill	0.5	1.08	0.3		mid grey brown	silty clay
253	232	1	2	fill	pit fill	backfill	1	2.84	0.2		mid brown red	silty clay
254	232	1	2	fill	pit fill	backfill	1	2.56	0.32		light grey	silty clay
255	232	1	2	fill	pit fill	kiln waste	0.5	3.4	0.1		dark grey black	silty clay
256	232	1	2	fill	pit fill	waste dump	0.2	0.97	0.1		dark brown grey	silty clay
257	242	1	2	fill	kiln fill	backfill	13.62	0.9	0.55		mid red brown	silty clay
258	241	1	2	fill	kiln fill	backfill	13.05	0.9	0.55		mid red brown	silty clay
259	259	1	2	cut	pit	extraction/quarry	9.11	5.26	1.8	sub-circular		
260	259	1	2	fill	pit fill	backfill	2	1.5	0.2		mid grey brown	sandy clay
261	259	1	2	fill	pit fill	backfill	2	2.15	0.3		dark grey black	coke
263	259	1	2	fill	pit fill	backfill	12	5.02	1.52		mid grey brown	sandy clay
264	259	1	2	fill	pit fill	backfill	2	1.5	0.1		mid grey brown	sandy clay

Context	Cut	Area	Phase	Category	Feature Type	Function	Length	Breadth	Depth	Shape In Plan	Colour	Fine Component
265	259	1	2	fill	pit fill	backfill	2	3.7	0.7		light brown grey	sandy clay
266	259	1	2	fill	pit fill	backfill	2	2.8	0.6		mid red	brick dust
267	259	1	2	fill	pit fill	backfill	2	1.5	0.14		light brown grey	sandy clay
268	259	1	2	fill	pit fill	backfill	2	2.3	0.3		mid red	brick dust
269	259	1	2	fill	pit fill	backfill	2	0.7	0.08		light grey brown	sandy clay
270	259	1	2	fill	pit fill	backfill	2	1.4	0.3		mid red	brick dust
271	271	1	2	cut	pit	extraction	8.45	3.7	0.54	indeterminate		
272	271	1	2	fill	pit fill		8.45	3.4	0.3		dark grey brown	sandy clay
273	271	1	2	fill	pit fill		8.45	3.7	0.42		light grey brown	clay
274	271	1	2	fill	pit fill		1.8	0.76	0.32		dark grey	clay
275	275	1	2	cut	pit fill	industrial	1.8	1.3	0.4	irregular		
276	275	1	2	fill	pit fill	disuse	1.8	1.32	0.26		dark brown grey	clay
277	275	1	2	fill	pit fill	disuse	1.8	1.16	0.05		mid yellow brown	clay
278	275	1	2	fill	pit fill	disuse	1.8	1.2	0.16		dark brown grey	clay
279	279	1	2	cut	pit	quarry	2	3.9	0.98	sub-circular		
280	279	1	2	fill	pit fill	rubbish tip layer	2	3.9	0.56		dark grey	silty clay
281	279	1	2	fill	pit fill	refuse layer	2	1.4	0.51		light yellowish brown	silty sand
282	279	1	2	fill	pit fill	waster/refuse dump	2	2.8	0.5		mid yellow brown	silty sand
283	283	1	2	cut	pit	extraction	3.8	1.3	1.3	sub-oval		
284	283	1	2	fill	pit fill	dump layer	3.8	1.3	0.23		mid brown yellow	sandy clay
285	283	1	2	fill	pit fill	dump	3.8	1.3	0.2		mid to dark yellow brown	sand clay
286	283	1	2	fill	pit fill	dump	3.8	1.3	0.3		mid dark brown	sand clay
287	283	1	2	fill	pit fill	dump	3.8	1.3	0.6		mid yellow green	sand clay
288	288	1	2	cut	pit	extraction pit/waster dump	0.3	0.6	0.3	sub-circular		
289	288	1	2	fill	pit fill	dump	0.3	0.6	0.3		mid yellow brown	sand clay
290	42	1	2	fill	pit fill	backfill	1.2	0.8	0.2		mid brown grey	silt sand
291	42	1	2	fill	pit fill	backfill	0	1.58	0.48		mid red brown	sand silt
292	42	1	2	fill	pit fill	backfill	0	1.62	1.09		mid yellow brown	sand silt
293	293	1	2	cut	pit	extraction	1.55	1.2	0.8	sub-circular		
294	293	1	2	fill	pit fill	backfill	1.55	1.2	0.8		mid grey brown	silt sand
295	295	1	2	cut	pit	extraction	1.8	1.6	0.8	rectangular		
296	295	1	2	fill	pit fill	backfill	1.8	1.6	0.8		mid grey	sandy clay
297	297	1	2	cut	pit	extraction	1.7	1.5	1.2	sub-circular		
298	297	1	2	fill	pit fill	backfill	1.7	1.5	0.5		mid grey brown	silt clay

Context	Cut	Area	Phase	Category	Feature Type	Function	Length	Breadth	Depth	Shape In Plan	Colour	Fine Component
299	297	1	2	fill	pit fill	backfill	1.7	1.5	0.7		mid yellow brown	silt clay
300	300	1	2	cut	pit	waste pit	2.85	1.26	0.24	irregular		
301	300	1	2	fill	pit fill	waste dump	2.85	1.26	0.24		mid red	clay
302	302	1	2	cut	pit	extraction	2.5	2.1	0.24	sub-circular		
303	302	1	2	fill	pit fill	disuse	2.5	2.1	0.24		mid brown grey	sandy silt
304	304	1	2	cut	pit	extraction	1.2	0.4	0.14	sub-rectangular		
305	304	1	2	fill	pit fill	disuse	1.2	0.4	0.14		dark brown grey	sandy clay
306	306	1	2	cut	pit	extraction	2	1.7	0.3	irregular		
307	306	1	2	fill	pit fill	disuse	2	1.7	0.3		dark grey	silty clay
308	308	1	2	cut	pit	disuse	2.15	1.36	0.28	sub-circular		
309	308	1	2	fill	pit fill	disuse	1.06	1.06	0.16		mid grey brown	silty clay
310	308	1	2	fill	pit fill	disuse	2.15	1.36	0.14		light grey yellow	clay silt
311	311	1	2	cut	pit	extraction	5.18	4.21	0.5	amorphous		
312	311	1	2	cut	pit fill	backfill	5.18	4.21	0.38		dark grey brown	sandy clay
313	311	1	2	fill	pit fill	disuse	0.5	2.7	0.3		mid yellow brown	sandy clay
314	311	1	2	fill	pit fill	backfill	0.5	0.9	0.25		mid yellow brown	sandy clay
315	311	1	2	fill	pit fill	backfill	0.5	3.5	0.2		mid grey	sandy clay
316	311	1	2	fill	pit fill	backfill	0.5	3.6	0.1		dark yellow brown	clay
317	317	1	2	cut	pit	extraction	2	1.66	1.04	sub-rectangular		
318	318	1	2	cut	pit	extraction	3.52	1.51	0.2	sub-rectangular		
319	319	1	2	fill	pit fill	disuse	3.52	1.51	0.2		mid grey brown	silty clay
331	331	1	2	cut	pit	extraction	5.3	4.2		oval	Charcoal lenses	

APPENDIX B ARTEFACT ASSESSMENTS

B.1 Metal objects

By Denis Sami

Introduction

B.1.1 Thirteen iron artefacts were recovered from the archaeological excavation. The small assemblage is composed of incomplete hand-forged nails (eight in total), a fitting, the base of a large vessel and a pair of shears dating to the post-medieval or modern periods.

Methodology

B.1.2 The metalwork was assessed according to the Oxford Archaeology East metalwork finds standard, based guidance by the Historical Metallurgy Society (HMS, Datasheets 104 and 108), the *Archaeometallurgy Guidelines for best practice* (Historic England 2015) and the 2013, *Guidelines for the Storage and Display of Archaeological Metalwork* (English Heritage 2013).

B.1.3 The Portable Antiquities Scheme (PAS) database was used as reference in the description of the shears and Geoff Egan's volume about the medieval household (1998) was used as a main reference in the description of the metalwork generally.

B.1.4 All the metalwork excavated was quantified using an Access database. All artefacts were counted and classified on a context by context basis.

B.1.5 The catalogue is organised by small find (SF) number and feature, description and measurements are reported. Of the eight incomplete nails from SF 3 context **94**, only the average thickness of the shaft is reported in the catalogue.

B.1.6 Given its poor preservation and undiagnostic character, the chronology of the metalwork has been largely based on the date of the associated ceramic material.

Factual Data

B.1.7 Metal objects were recovered from pits, ditches and a kiln dating to the post-medieval periods (Phase 2).

B.1.8 The overall preservation of artefacts is poor, finds are incomplete, heavily encrusted and oxidised.

Statement of Potential

B.1.9 Given its size and preservation, this assemblage cannot offer a valid contribute to the discussion of the general site research objectives.

Recommendations

B.1.10 X-ray analysis is suggested for shears SF 1 and vessel SF 8, following it will be reviewed (with the pottery specialist initially) whether all metal finds can be dispersed.

Catalogue

SF	Context	Cut	Feature	Artefact	Description	Length	Width	Thickness	Date
1	17	16	ditch	Shears	Incomplete shears, only the two blades and part of the connector stem survive. The blades have a straight back and slightly curved cutting edge. Between the blade and the connecting loop of each blade is placed a sub-rectangular blade stopper.	92.4	13.2	3.3	PMED/ MOD
6	7	6	ditch	nail	An incomplete and very encrusted tapering shaft of a nail with sub-square cross-section	46.8	8.1		PMED/ MOD
3	94	21	kiln	nail	Eight incomplete hand-forged nails with sub-square tapering shaft and flat circular head	ND	ND	4.8	PMED/ MOD
7	282	279	Quarry pit	nail	A long and incomplete nail with sub-square cross-section tapering shaft and sub-square flat head	70.1	18.1	6.2	PMED/ MOD
8	43	42	Quarry pit	vessel	An incomplete large vessel heavily encrusted. Only part of the base and the wall are preserved	188.4	81.6	6.8	MOD
9	287	283	Quarry pit	fitting	An incomplete fitting with a tapering rectangular cross-section shaft	45.8	19.8	7.2	PMED/ MOD

Table 16. Catalogue of iron objects (all from Phase 2)

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 Phase 1 sinkhole feature **132**. The hand-collected flint assemblage is quantified by type and context in Table 17 whilst the burnt flint derived from the sampling of feature **132** is quantified separately, by weight alone, in Table 18.

B.2.2 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 ditch **151**. All are provisionally phased to Phase 1, although this will be reviewed during analysis.

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	
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 17. 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 18. Quantification (by weight) of unworked burnt flint recovered from bulk sampling of fill of sinkhole 132

Sinkhole features

B.2.3 Seven of the sinkholes investigated during the excavation produced flint assemblages; all of these produced small quantities of worked flint (between 1 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 over 4kg recovered during hand-collection and almost 1.5kg more deriving from wet sieving of a bulk sample of its fill (Tables 17 and 18).

B.2.4 The worked flint from these features (total 41) 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.2.5 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.2.6 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 feature **169**), and the proximal end of a regular tertiary flake which may have been deliberately broken (feature **141**). The only core recovered is a minimally worked piece with some a mixture of flake and narrow flake/blade-like scars (feature **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 (feature **145**).
- B.2.7 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.2.8 The burnt flint is made up 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.

Pits

- B.2.9 Five pits produced small quantities of flint; one or two pieces of worked flint were recovered from all five of these features, with two also producing small quantities of unworked burnt flint (Table 17). In terms of raw material and condition the worked flint is closely comparable from the material derived from the sinkholes, although one flake from pit **295** is heavily worn and edge-damaged. The flint from these features consists entirely of unretouched flakes/blade-like flakes and is closely comparable to the material from the sinkholes.

Ditches

B.2.10 A single secondary flake was recovered from ditch **151**.

Discussion

B.2.11 The small assemblage of worked flint from the excavations is made up almost exclusively of unretouched flake-based material and exhibited very few chronologically diagnostic features. Nonetheless, the technological traits of the material suggest 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.2.12 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.2.13 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-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).

Statement of potential

B.2.14 The relatively small worked flint assemblage from the excavations provides evidence for prehistoric activity at the site but has very little potential to provide more detailed

information on the date and nature of this activity. The large assemblage of burnt flint from sinkhole **132** is of some interest and if it could be dated would make a small but useful addition to the record of the use of heated flint in the region.

Recommendations

B.2.15 The assemblage has been fully catalogued and classified and no further analytical work is required. This report provides a full record of the assemblage and further work should be restricted to minor updating of the catalogue/report in light of the final dating/phasing of features; it would be especially useful if the likely date of the accumulation of burnt flint from sinkhole **132** could be established.

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 (Phase 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 coalfield from	unburnt
20	18	pit with demolition rubble incl kiln brick	3	30 + 55 + 65	31	coal	imported Carboniferous coalfield from	fully burnt cinders
39	38	plough scar (gully)	1	32	9	coal shale	imported Carboniferous coalfield from	accomp coal + burnt with fuel
287	283	pit assoc with extraction pit dump	1	75x60x55	177	coal (anthracite?)	imported Carboniferous coalfield from	unburnt – only slightly worn

Table 19: Catalogue of stone and fuel residues (all from Phase 2 features)

Discussion and statement of potential

B.3.3 There is little that can be said of 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, which as in Area 2, may well be Iron Age.

B.3.4 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 kiln. 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.

Recommendations for further work

B.3.5 No further work is required on this assemblage.

Retention, dispersal and display

B.3.6 All this material can be discarded.

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 20.

Factual data

- B.4.3 Archaeological works 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 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-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. From **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], and below which is a 6-pointed star (made up of lines); the curvature of the surviving glass suggests the bottle may not have been cylindrical. If parallels for these seals can be found, a date may be established.

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

Table 20: Assemblage by Phase 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-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-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.

Statement of potential

- B.4.9 The fragmentation of the assemblage and its redeposited nature mean it has limited potential to aid local, regional and national research priorities. However, the bottle seal could be examined and compared with other Norwich assemblages to enable more refined dating.

Recommendations for further work

- The bottle seals should be examined and if possible, parallels found.
- For the bulk of the assemblage, no further work is recommended, beyond preparing a statement for publication and the catalogue acts as a full archival record.

Retention, dispersal and display

- B.4.10 The complete bottle and the bottle seal should be retained. The remainder of the glass may be deselected prior to archive deposition.

Task list

The bottle seal should be looked at and if possible, parallels found, and report written	Glass Specialist	0.25
Prepare a statement for publication for the rest of the glass, with the catalogue acting as a full archival record	Glass specialist or main author	0.25

B.5 Prehistoric pottery

By Nick Gilmour

Introduction

- B.5.1 The excavation yielded 32 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 21).
- B.5.2 The pottery dates from the Early Neolithic, Late Neolithic and Early Late 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.
- 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.

Cut	Context	No sherds	Wt (g)	Feature Type	Spot Date
18	19	1	12	pit	ENEO
123	125	13	55	pit	EIA
132	134	1	2	sinkhole	prehist
142	141	16	42	sinkhole	LNEO
151	152	1	3	ditch	Prehist
Total		32	114		

Table 21: 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' (29 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 on an Excel data sheet held with the site archive.

Factual data

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, two sherds (5g) 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 22.

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	ENE0
F2	12	52	EIA
F3	1	2	prehistoric
F3	1	3	EIA
G1	16	42	LNE0

Table 22: Quantification of prehistoric pottery by fabric

Early Neolithic pottery

B.5.8 A single sherd (12g) of Early Neolithic pottery was recovered from deposit 19, within post-medieval (Phase 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 so this sherd it likely to be from a simple rounded bowl. This sherd was recovered from a feature containing post-medieval material and so is likely to be residual.

Late Neolithic pottery

B.5.9 A total of 16 sherds (42g) of Late Neolithic pottery was recovered. All of this was found within natural (Phase 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.

B.5.10 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

B.5.11 A total of 13 sherds (55g) of pottery is of Early Iron Age date. All of this pottery was recovered from deposit 125, within Phase 1 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 in, are typical of Early Iron Age finewares across this region.

Discussion

B.5.12 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.

Statement of Potential

B.5.13 The assemblage has little potential to aid the regional or local research objectives.

Recommendations for further work

B.5.14 This statement acts as a full record of the prehistoric pottery for the archive and no further work is required beyond summarising the information for publication and incorporating any evaluation data or that from nearby relevant sites.

Task list

Description	Performed by	Days
No further work is required on the prehistoric pottery, unless the site is published, then the information should be summarised for the publication	Author of publication	0.2

Retention, dispersal and display

B.5.15 The prehistoric pottery should be retained and deposited with the archive.

B.6 Post-medieval pottery

By Sue Anderson

Introduction

B.6.1 A total of 5237 sherds of pottery and kiln furniture (198.666kg) was recovered from 32 contexts. A further c.110kg (including some CBM) was discarded on site (C. Fletcher, pers. comm.). Table 23 provides a quantification by fabric. A summary catalogue is included in this appendix.

Fabric	Code	Date range	No	Wt/g	eve	MNV
Glazed red earthenware	GRE	16th-18th c.	3359	128627	104.45	2548
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-18th c.	154	5363	5.38	81
Speckle glazed ware	SPEC	17th-18th c.	88	2663	1.02	62
Tin glazed earthenware	TGE	16th-18th c.	86	1035	1.67	68
Frechen stoneware	GSW4	16th-17th c.	2	26		2
Westerwald stoneware	GSW5	L.17th-19th c.	2	26		2
North Italian marbled slipware	NIMS	E-M.17th c.	4	43	0.11	1
English stoneware	ESW	17th-20th c.	15	779	0.90	2
Late slipped redware	LSRW	L.18th-19th c.	14	308	0.58	2
<i>Total pottery</i>			<i>3925</i>	<i>147585</i>	<i>117.91</i>	<i>2915</i>
Kiln furniture (redwares)	KF	16th-18th c.	1187	43791	16.70	554
Kiln furniture (whiteware)	KF TGE	16th-18th c.	125	7290	1.24	98
<i>Total kiln furniture</i>			<i>1312</i>	<i>51081</i>	<i>17.94</i>	<i>652</i>
Total			5237	198666	135.85	3567

Table 23. Pottery quantification by fabric.

B.6.2 The assemblage is dominated by post-medieval material which spans the 16th to 18th centuries. A few sherds of potentially later pottery were also recovered.

Methodology

B.6.3 The pottery was sampled on site prior to recording, carried out by Carole Fletcher and based on strategy agreed between the present author, the OAE 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. Unfortunately the presence of tin glazed earthenware wasters and kiln furniture was not recognised until after the site had been returned to the developer, so the quantity is small and all sherds of this material were retained as a result.

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. Unfortunately it was not possible to lay out the two largest contexts (43 and 286) in their entirety, and it is likely that the MNVs recorded for these two contexts are too high. A full

quantification by fabric, context and feature is available in archive. All fabrics were identified based on the Norwich post-Roman fabric series (Jennings 1981). The results were inputted directly onto an MS Access database.

Summary of the assemblage

- B.6.5 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 and related kiln furniture

- B.6.6 The redwares include a variety of forms which can be paralleled in the Norwich corpus (Jennings 1981). Bowls, handled bowls/porrings, jars, large storage vessels, platters, dishes, pipkins and chamber pots were the most frequent types, but other forms such as dripping pans, chafing dishes, colanders, jugs, lids, mugs, pancheons and skillets were also found. 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 varied from pale yellowish orange, through orange, reddish-brown, darker brown and black. Occasional examples were 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. 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, was 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.6.7 The most common blackware vessels were mugs (including both tall and short cylindrical types and large globular types), tygs and tankards, with a few jugs and jars also identified. Speckle glazed wares were also dominated by drinking vessels but also included jars, a jug and at least two puzzle jugs.
- B.6.8 Slipwares were generally plates or dishes, but two possible mugs were also present. 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 were variable and although they contained similar elements to those illustrated in the corpus, several will require illustration.
- B.6.9 A high proportion of the redware sherds were 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 were cracked, had glaze on the broken edges, or were warped and deformed.

- B.6.10 The redware kiln furniture comprised two main types: saggars and ring props. Two main characteristics enabled the identification of 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 were not specific to saggars, being mainly beaded or flat-beaded types which were also found on jars and large storage vessels. Body sherds, separated on the basis of overfiring and warping, 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 were complete and full-height in profile, although a few very warped examples with iron-glazed blackware or speckle-glazed mugs still inside were also recovered. A few examples of bases had 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 had a central hole, and one wall had a partial cut-out vent hole.
- B.6.11 A large number of ring stilts were found, all between c.45–80mm in diameter, although the majority were around 55–60mm. 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 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 scar, or in the form of three small stilt scars in the form of an equilateral triangle.
- B.6.12 In addition to these purpose-made items, plain roof tiles were also used as expedient props and these are summarised in the CBM report. Also in the assemblage were a few sherds which appeared to have rubbed curving edges, and had possibly been used as tools.

Tin glazed earthenwares and related kiln furniture

- B.6.13 Only a small quantity of tin glazed earthenware vessels was recovered, all of which were wasters. Sherds included examples of biscuit-firing, unfused glaze, drips on broken edges and warped fragments. Identifiable forms included drug jars, plates, jugs, jars, a dish, a mug and a porringer. A few had traces of handpainted decoration, mostly blue, but occasionally black or brown. Sherds were generally small and decorative schemes were not identifiable.
- B.6.14 The larger proportion of the evidence for TGE production at this site was in the form of saggars. These comprised two main types. One form was short (93–98mm high) with a flat base, thin walls, thickened flat-topped rim and 'corner' lip similar to the redware saggars. The other was taller with thicker walls, flat base, a knife-cut flat-topped rim, and was less well-finished with a rough outer surface and striations internally. Both types had triangular cut-outs in the walls, probably for triangular clay props used to support plates. Two examples of these props were also found. At least three saggar bases had central circular holes. There were also white-firing flat tiles (see CBM).

Other pottery

- B.6.15 Only a few sherds were certainly not made at the site. Small body and base fragments of Frechen and Westerwald stoneware were found in contexts 19, 43 and 284. Four sherds of a North Italian marbled slipware vessel with a cavetto rim were found in context 43. Three sherds of a late slipped redware bowl came from context 280, and there were 11 fragments of a small plate with two slip lines at the rim which were in a LSRW fabric; these latter came from 280 and 285.
- B.6.16 Fragments of English (?London) stoneware representing two vessels were found. Five sherds of a bottle with a collared rim and part of a Bellarmine face mask on the neck were found in 286. Ten sherds of a ?jug in a grey fabric were found in 281, 282, 284 and 285. This latter appeared to be a waster because it was unglazed. It had applied wavy line decoration either side of the handle attachment, with a vertical line running below. Scratched initials 'I P' were placed either side of the handle attachment.

Pottery by context

- B.6.17 A summary of the pottery by feature is provided in Table 24. Spotdates are based on the date ranges for the fabrics, as GRE in particular is currently not closely dateable. However the presence of other fabrics in some contexts suggests a 17th- or possibly 18th-century date for much of the waste. Disturbance with intrusive late 18th-century pottery occurred in at least two contexts.
- B.6.18 The majority of pottery was recovered from the fills of two Phase 2 pits: pit **42** (2542 sherds, 89,509g) and pit **283** (2054 sherds, 82,703g), with a relatively large group also recovered from Phase 2 pit **279** (287 sherds, 11,821g). Perhaps of note, given that all slipwares and tin glazed earthenwares were retained, is that pit **42** contained noticeably more of the former and pits **279** and **283** almost all of the latter.

Significance

- B.6.19 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. There is documentary evidence for potters working in the area in the 17th century (held at the NHER), and this will need to be reviewed during the analysis stage. None of the pottery from the fieldwalked area has been studied in detail.
- B.6.20 Currently, all GRE from Norwich is given a broad date-range of 16th–18th century, based on Jennings' work which suggested that it was in use in the city from soon after the fire of 1507 (Jennings 1981, 157). The present author's work on an assemblage from Dragon Hall (Anderson 2005) suggested that it might be possible to see some changes in forms from the earliest to the latest deposits, but the assemblage there was too small to be certain. Comparison of the Cringleford assemblage suggests that certain forms in the Norwich corpus were not made here, perhaps indicating either a date or a source difference. 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. Preliminary dates from the clay tobacco pipe assemblage appear to concur (C. Fletcher, pers. comm.).

- B.6.21 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 Fulmodestone (Wade Martins 1983). 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). All of these sites, together with others outside the region, will provide comparisons for the Cringleford assemblage at analysis.
- B.6.22 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). Of immediate interest in comparison with the Cringleford assemblage are two plate rims which show motifs (albeit in paint on a white background; *ibid*, figure 8) which are similar to those used on some of the Cringleford slipwares. Further study of the evidence for Ber Street production (which may also include redwares) in comparison with this site will be carried out at the analysis stage. If possible, it will be worth comparing samples from Ber Street with the Cringleford redwares and TGE to see if the fabrics are chemically distinct.

Context	Feature	Phase	Type	GRE	IGBW	PMRW	PMSW	SPEC	TGE	NIMS	GSW4	GWS5	LSRW	ESW	KF	KF TGE	Spotdate
7	6	2	ditch fill	2													16-18
8	-	2	dump	4											1		16-18
19	18	2	pit fill								1						16-17
20	18	2	pit fill	41											6		16-18
28	34	2	backfill	1													16-18
43	42	2	pit	1371	57	1	97	33		4	1				866		17
58	56	2	kiln	40	1												16-18
63	317	2	pit	9											9		16-18
64	317	2	pit	118	1		1	1							36		17
68	42	2	pit	5	1												16-18
69	42	2	pit	3			6								1		17
178	177	2	post-hole	1													16-18
238	231	2	kiln	1													16-18
265	259	2	pit fill	1											1		16-18
272	271	2	pit fill	2													16-18
280	279	2	pit fill	102	19		12	4	2				1		10	7	17 (L.18)
281	279	2	pit fill						27					6		65	M.17-18?
282	279	2	pit fill	18					5					1	2	6	17-18?
284	283	2	pit fill	53	9		7	7	9			2	3	2	11	11	L.18?
285	283	2	pit fill	113	6		5	8	29				10	1	13	30	L.18?
286	283	2	pit fill	841	53		18	27	5					5	120	5	M.17-18?
287	283	2	pit fill	513	51			8							79		17-18
289	288	2	pit fill	6											2		16-18
290	42	2	pit fill	38			5								21		17
291	42	2	pit fill	25			3								4		17
298	297	2	pit fill	1													16-18
299	297	2	pit fill	9													16-18
303	302	2	pit fill	10													16-18
307	306	2	pit fill		1												16-18
312	311	2	pit fill	31	1				1						4		17-18
99999	-	-	u/s finds						8							1	17-18

Table 24. Pottery fabrics present by context (sherd count).