Archaeology South-East

ASE

ARCHAEOLOGICAL EXCAVATION

PHASE 5
CHANNELS
LITTLE WALTHAM, ESSEX

POST-EXCAVATION ASSESSMENT AND UPDATED PROJECT DESIGN

ASE Project No: 170849
Site Code: LWCG17

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May 2019

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Abstract

This report presents the results of an archaeological excavation carried out by Archaeology South-East on Phase 5 of the Channels development, Little Waltham, Essex, between 19th February and 18th May 2018. The fieldwork was commissioned by the Hill Partnership in advance of residential development of this part of the former Channels Golf Course.

Preceding evaluation of the c.10.53ha site, in 2017, comprised the investigation of forty-nine trenches, which established the presence of Late Iron Age/Early Romano-British and medieval remains, including ditches, gullies, pits and post-holes. An excavation area, totalling 1.22ha, was subsequently targeted upon archaeological remains identified in the south of the site.

The recovery of a small quantity of residual worked flint of broadly prehistoric date provides evidence of a limited and perhaps transitory presence in the landscape during the earlier prehistoric period. The first clear evidence of more permanent land use is dated to the Early to Middle Iron Age and is represented by a small number of gullies and pits in the southeast of the excavation area. In the Late Iron Age (early/mid 1st century AD) a partially open sided rectangular enclosure and an L-shaped boundary ditch were constructed for agricultural purposes. The presence of an apparent quarry pit suggests clay extraction was also taking place.

Intensity of land use increases substantially in the Early Roman period with three phases of development identified. Phase 3.1 consists of four east/west aligned ditches defining two separate trackways and adjacent open fields. In Phase 3.2 the trackways become blocked with the imposition of a new, largely north/south aligned, field system. Phase 3.3 is represented by two new ditches in the north cutting through part of the older field system. A number of pits, hollows and cobble surfaces, laid to consolidate the tops of infilled features, may date to this later phase. Agriculture would appear to be the main activity, along with further quarrying. There was no evidence of activity continuing into the later Roman or Saxon periods.

In the medieval period (later 12th to later 13th centuries) a new northwest/southeast aligned field system is created that cuts completely across the old Roman one. The landscape is divided into two open areas by a large ditch, perhaps forming part of a boundary zone together with a number of associated features. To the north are a number of parallel gullies associated with agricultural or drainage activity. A gap in the south of the boundary is blocked by a series of staggered ditches perhaps used for stock control along with a nearby U-shaped enclosure. Two large quarry pits suggest clay or gravel extraction was also taking place. In the post-medieval period a new field system is created formed by two perpendicular ditches dividing the landscape into three agricultural fields.

The report is written and structured to conform to the standards required of post-excavation analysis work as set out in the National Planning Policy Framework (DCLG 2012) and older documents Management of Research Projects in the Historic Environment (MoRPHE), Project Planning Notes 3 (PPN3): Archaeological Excavation (Historic England 2008). Analysis of the stratigraphic, finds and environmental material has indicated a provisional chronology and assessed the potential of the site archive to address the original research agenda, as well as assessing the significance of those findings.

The recorded remains are judged to be of moderate local significance and to have some potential to inform regional research agendas. There is some scope for further analysis and research. It is proposed that the excavation results are disseminated by means of the production of a short site report for inclusion in 'Essex Archaeology & History', the Transactions of the Essex Society for Archaeology and History. It is envisaged that such a report would in fact be subsumed into an article that collates the results of archaeological investigations from all phases of the Channels development.

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1.0 INTRODUCTION

1.1 Site Location

1.1.1 The overall Channels development site is located *c.*2.5km southwest of the centre of Little Waltham village and some 5km north of Chelmsford city centre and lies 800m east of Essex Regiment Way (A130). The River Chelmer is just over 1km to the west.

1.1.2 The Phase 5 development site consists of an L-shaped parcel of former Channels Golf Club land, measuring *c.*10.53ha, situated on either side of Belsteads Farm Lane (now Channels Drive), Little Waltham, Essex (NGR TL 7250 1100) (Figure 1).

1.1.2 The site initially identified for excavation was located in the south of the Phase 5 development area and covered *c.*1.4ha. However, due to the presence of a large topsoil stockpile and a live electricity cable, the extent of the investigated area was unavoidably reduced to 1.22ha. It was bounded by a new (un-named) road to the south, arable land to the east and residential development to the west.

1.2 Geology and Topography

1.2.1 The British Geological Survey (BGS Online 2018) shows the underlying bedrock geology of the site as the London Clay Formation (clay, silt and sand) with superficial deposits of Quaternary Period Diamicton (mixed clay, sand and gravel).

1.2.2 Much of the development area had been heavily landscaped and was formerly part of a golf course. Golf course features extant at the type of the evaluation included belts of young trees, bunkers, fairways, greens, raised tees and an open ornamental ditch. All of the trees were removed prior to the commencement of the excavation. The ornamental ditch was left *in situ* for the duration of the excavation to assist with drainage. Part of the golf course (beyond the evaluation/excavation area) was constructed on land that had been reinstated following mineral extraction.

1.3 Scope of the Project

1.3.1 A planning application (10/01976/OUT) was submitted to Chelmsford District Council (now Chelmsford City Council) in December 2010 for Land North, South and East of Belsteads Farm, Chelmsford Essex, comprising: Outline planning permission, with all matters reserved, for erection of a minimum of 650 and a maximum of 750 dwellings. Provision of open space and a community hub providing a maximum floor area of 3,500 m2 and comprising uses in class A1 (retail) and or A2 (financial and professional services) and or A3 (restaurants and cafes) and or A4 (drinking establishments) and or A5 (hot food and takeaways) and or D1 (non residential institutions). Provision of the northern section of the radial distributor road and junction improvement works to Essex Regiment Way.

1.3.2 As the site lies in an area highlighted by the Historic Environment Record as having some potential for archaeological deposits to be present, Essex County Council Place Services, in its capacity as archaeological advisor to the local planning authority, recommended that a full archaeological condition be attached to any grant of planning consent.

1.3.2 The archaeological condition (no.17) was based upon guidance contained in PPS 5: Planning for the Historic Environment, now replaced by the National Planning Policy Framework (DCLG 2012) and states that:

No development, or preliminary groundworks of any kind shall take place until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant, and approved by the planning authority.

Reason
To make provision for excavation and recording of sites of archaeological importance in advance of, and during, the development in accordance with Section 12 of the NPPF and Policies CP18 and DC21 of the Adopted Core Strategy and Development Control Policies Development Plan Document.".

1.3.3 This condition has subsequently been applied to all other applications for the site as it has been advanced in phases.

1.3.4 Phases 3c, 3d and 5 of the site were archaeologically evaluated by ASE in 2017. A low to moderate density of ditch, guly and pit remains of Late Iron Age/Early Roman date (1st century AD) was found across the southern half of the Phase 5 area (ASE 2017). Given the results of this evaluation, ECC Place Services, in their role as archaeological advisors to the LPA, requested that a further stage of archaeological mitigation works to be undertaken, comprising the full excavation of a *c.*1.4ha area in this part of the site.

1.3.5 Accordingly, ASE was commissioned by the Hill Partnership to undertake the required archaeological excavation. A Written Scheme of Investigation (WSI) detailing the programme and methodology of the necessary archaeological work was produced by ASE (2018) and approved by ECC Place Services prior to the commencement of the fieldwork. All works were carried out in accordance with the CIfA standards and guidance (CIfA 2014b).

1.4 Circumstances and Dates of Work

1.4.1 The preceding archaeological evaluation (trial-trenching) was undertaken by ASE between 25th July and 11th August 2017.

1.4.2 The subsequent excavation within Phase 5 was undertaken by ASE from 19th February to 18th May 2018. The site was staffed by ASE archaeologists, directed in the field by Trevor Ennis, and project managed by Gemma Stevenson. The project was monitored by Alison Bennett of ECC Place Services on behalf of the local planning authority.

1.5 Archaeological methodology

1.5.1 As specified in the WSI (ASE 2018a), the methodology agreed with ECC Place Services comprised the machine excavation under archaeological supervision of an area, totalling 1.4ha, targeted on the results of the 2017 evaluation (Figure. 2). However due to the presence of a large topsoil stockpile and a live electricity cable the investigation extent was unavoidably reduced in area to 1.22ha. Excavation commenced in the northwest of the site, along the footprint of a new access road required first by the site contractors, and then was conducted from the south of the site northwards. The SW corner of the site was excavated last, due to the presence of standing water on the ground surface.

1.5.2 All work was carried out in accordance with Chartered Institute for Archaeologists (CIfA) *Code of Conduct* (CIfA 2014a) and *Standard and Guidance for Archaeological Excavation* (CIfA 2014b), and in compliance with *Standards for Field Archaeology in the East of England* (Gurney 2003). ASE is a Registered Organisation with CIfA.

1.5.3 Topsoil was machine stripped from the site, either by a 360° tracked mechanical excavator or bulldozer, and was either stockpiled on site or removed by dumper. In the northern half of the area this was undertaken by the site contractors and in the south of the area by a machine under direct ASE control. Machine removal of the underlying subsoil was all undertaken under archaeological supervision using a 360° tracked mechanical excavator fitted with a flat-bladed ditching bucket. Machine excavation continued down to the top of the archaeological deposits or top of the natural deposits whichever was sooner. Care was taken not to machine-off seemingly homogenous layers that may include the upper parts of archaeological features. The resultant surfaces were cleaned as necessary and a pre-excavation plan prepared using Global Positioning System (GPS) planning technology in combination with Total Station surveying. This was made available to the project manager, the supervisor and the ECC monitoring archaeologist and was ongoing being updated as new areas of the site were exposed

1.5.4 The pre-excavation plan was made available in AutoCAD and PDF format and printed at a suitable scale (1:20 or 1:50) for on-site use. The plan was updated by regular visits to site by Archaeology South-East surveyors who plotted excavated features and recorded levels in close consultation with the supervisor. Where necessary (for example detailed ditch intersections), features were hand planned at a scale of 1:20 and then digitised to be included on the overall plan.

1.5.5 After the cleaning and preliminary planning of the excavation areas, the following hand-excavation sampling strategy was employed:

- Linear features (ditches and gullies) were at minimum 10% sampled, usually by means of 1m-wide slots positioned every 10m along their length. Relationships were investigated, defined and recorded where possible. Most terminals were excavated.

- With the exception of modern disturbances, a minimum of 50% of contained/discrete features (pits and postholes) were excavated. Further investigation was a matter of on-site judgment, but as a minimum their extent, date, and function were sought.

- Large features (quarry pits, ditches etc.) and extensive layers, were initially investigated by hand to establish character and extent before they were carefully removed/further excavated under archaeological supervision by machine.

1.5.6 Soil horizons, excavated deposits and cut features were individually identified using a unique sequence of context numbers and recorded in accordance with current professional standards using standard ASE context record sheets. Contexts were numbered 1000–1540.

1.5.7 All excavated features were planned by GPS, with all sections being hand-drawn on sheets of gridded drawing film at scales of 1:20 or 1:10, as appropriate, and later digitised.

1.5.8 A full digital photographic record of all features was maintained. This illustrated the principal features and finds both in detail and in a general context. The photographic record also included working views to represent more generally the nature of the fieldwork.

1.5.9 All artefacts from all excavated contexts were collected and retained for specialist identification and study, in line with the ASE artefact collection policy and CIfA guidelines (CIfA 2014c). Metal detecting was carried out on excavated features (with minimal results).

1.5.10 On-site deposit sample collection, processing and recording was undertaken within the guidelines laid out by Historic England (2011) and in close consultation with the ASE environmental specialist (Dr Lucy Allott).

1.5.11 Samples were collected from suitable excavated contexts, such as dated/datable buried soils, well-sealed slowly silted features and sealed features containing evident carbonised remains, peats, waterlogged or cess deposits, to recover spatial and temporal information concerning the occupation of the site. Deposits with clear residual or intrusive material were avoided.

1.5.12 A standard bulk sample size of 40L (or 100% of small features) was taken from suitable contexts to recover environmental remains, such as fish, small mammals, molluscs and botanicals. Collected bulk samples were processed through tank flotation unless considered detrimental to the samples or recovery rate. Flots and residues were air dried prior to analysis.

1.6 Scope and Organisation of the Report

1.6.1 This post-excavation assessment (PXA) has been prepared in accordance with the guidelines laid out in Management of Research Projects in the Historic Environment (MoRPHE), Project Planning Notes 3 (PPN3): Archaeological Excavation (Historic England 2008).

1.6.2 The report seeks to place the results from the site within the local archaeological and historical setting; to quantify and summarise the results; to specify their significance and potential, including any capacity to address the original research aims and listing any new research criteria; and to lay out what further analysis work is required to enable their final dissemination and what form the latter should take.

1.6.3 Following on from previous the archaeological evaluation conducted by ASE in July/August 2017 (ASE 2017), work at the site ran as a single excavation, with the finds and environmental archives all recorded under a single site code: LWCG17.

1.6.4 Where pertinent, the results from the previous evaluation (ASE 2017) have been integrated and assessed with the results from the main excavation.

2.0 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 The following provides a summary of historical and archaeological background information largely drawn from the Essex Historic Environment Record (EHER) and an archaeological DBA previously prepared for the site (CAT 2010) as well as the results of the recent archaeological evaluation (ASE 2017). The locations of the most pertinent sites and find spots are indicated on Figure 1.

2.2 Undated

2.2.1 Cropmarks of potential archaeological origin have been identified in the vicinity of the development area, for example *c*.575m north-west of the site close to Little Belsteads Farm (EHER 6132).

2.3 Prehistoric and Roman

2.3.1 Small quantities of Late Neolithic, Middle Bronze Age, Iron Age and Roman artefacts, notably flint and pottery, have been recovered from the surrounding area through fieldwalking surveys and the removal of topsoil for gravel working (EHER 14445-6, 6072-3).

2.3.2 A large number of metal-detected finds of Late Iron Age and Roman date, including over 200 coins, a votive figurine, military objects, brooches and bracelets, have been found in the vicinity of Pratts Farm Roundabout, *c*.1.34km to the north of the site (EHER 46785). These finds imply the presence of a nearby settlement of some status; however, trenching to the north, in advance of the construction of the Park and Ride site, revealed only a few features of uncertain date and a post-medieval ditch (EHER 47192; ECC FAU 2010).

2.3.3 To the south of the site, several archaeological evaluations undertaken in recent years in advance of the Beaulieu Park housing development have revealed remains of prehistoric and Iron Age/Roman activity, suggestive of nearby settlement (EHER 47635; ECC FAU 2009; OAE 2011; 2013).

2.4 Medieval and Post-Medieval

2.4.1 The medieval landscape in the general area is considered to have been largely rural in character, set within a pre-18th-century field system (with later boundary loss) and with dispersed settlement of small farmsteads. Belsteads Hall (EHER 6038-9), is one such medieval settlement, comprising a moated site that may have its origins in the early medieval (Anglo-Saxon) period (ECC 2006, 179).

2.4.2 Both medieval and post-medieval land use are evidenced by the recovery of small quantities of artefacts, notably pottery and tile, through fieldwalking surveys undertaken in the vicinity of the site (EHER 14447-8).

2.4.3 Immediately to the south of the Channels development is the extensive Beaulieu Park development (EHER 47635) which lies within the former extensive medieval deer park associated with the manor of New Hall. The manor is first mentioned in documents dated AD1301, when it was part of the lands owned

by the Canons of Waltham Abbey and was used as the summer residence of the Abbott. It was later transferred to the Regular Canons under Henry II (Burgess and Rance 1988). Later in secular ownership, the hall was eventually acquired by Henry VIII, in 1516, who had the large courtyard palace of Beaulieu constructed and changed its name to the 'Palace of Beaulieu'. The much-altered and rebuilt north range of this residence survives as part of the extant New Hall. Archaeological investigations in advance of the housing development, conducted from 2009 to date by ECC FAU and then OAE, have identified medieval field systems, ditched enclosures containing Medieval and Tudor buildings, ponds, waterholes, deer park-related features and structures, pits, cobbled and metalled surfaces, quarries, Tudor brick and lime kilns, etc., across the development area (various ECC FAU and OAE reports). A significant component of these remains have been found in the vicinity of Belstead Farm Hall, to the south of the Channels development area, and presumably relate to its precursor settlement.

2.4.4 In the Second World War a tank trap (EHER 8893), part of the GHQ defensive line, was constructed *c.*1.2km to the west of the site alongside the River Chelmer and the American bomber airbase at Boreham constructed a similar distance to the north-east.

2.4.5 The mid- to late 20th century, has seen a considerable amount of change, particularly to the east of what is now the A130. Mineral extraction within the boundary of the Phase 4 area was being undertaken, on a small scale, in the 1870s, as evidenced by historic Ordnance Survey (OS) maps. Extensive extraction is shown in the area of the Channels development by the 1950s. Channels Golf Club was opened in the 1970s and occupies re-instated quarry land, particularly to the north-west of the development area. The Essex Regiment Way (the current A130 route) was established by the 1990s. New housing and road infra-structure has recently been built on previously investigated areas of both the Channels and neighbouring Beaulieu Park estates.

2.5 Previous Archaeological Investigations at Channels

2.5.1 Previous archaeological works undertaken as part of the Channels development, within the vicinity of the former Channels Golf Club, are shown on Figure 1 and comprise:

- Phase 1, evaluated by ASE in 2013 and 2014 (EHER 48335; ASE 2013; 2014a)
- Phase 2, evaluated by ASE in 2014 (EHER 48335; ASE 2014b)
- Phases 3a and 3b, evaluated and subsequently excavated by Oxford Archaeology East in 2016 (OAE 2016)
- Phases 3c, 3d and 5, evaluated by ASE in 2017 (ASE 2017)
- Phase 4, evaluated by ASE in 2018 (ASE 2018b)

2.5.2 Limited evaluation works were undertaken in 2013 and 2014 on the unquarried parts of the Phase 1 development area and a new access/spine road, which encountered no archaeological remains other than an undated and badly truncated gully (ASE 2013; 2014a and b).

2.5.3 Further evaluation works were undertaken in 2014 on the Phase 2 site, almost wholly within the unquarried part of the overall development site and showed that the area had been badly disturbed by the construction of the golf course and previously unmapped *ad hoc*/localised quarrying (ASE 2014b). Nevertheless, the excavation of eighteen trenches across the Phase 2 site revealed a small number of archaeological features, comprising a Late Iron Age/Early Roman ditch, as well as an undated sub-circular fire pit, two small undated pits and a single feature of probable natural origin, suggesting that some form of settlement activity was taking place nearby.

2.5.4 Evaluation and excavation of the Phase 3a and 3b sites, undertaken by OAE in 2016, recorded remains of prehistoric, Roman and medieval date (OAE 2016). Evidence of Late Bronze Age and Iron Age activity, indicated by a small number of pits and ditches, was recorded in the north of the site (Phase 3a). In the south of the site (Phase 3b), remains of an Early Roman trackway and ditch were recorded. Medieval remains were also recorded in the Phase 3a site and comprised ditches indicative of a field enclosure system.

2.5.5 Evaluation of the Phase 3c, 3d and 5 sites, by ASE in 2017, comprised the excavation of forty-nine trenches, thirty of which contained archaeological features (ASE 2017). A number of ditches, gullies and pits of Late Iron Age/Early Roman date (1st-century AD) were found across the south of the Phase 5 site, most likely indicating an area of agricultural and possible settlement land use. Several ditches and pits of medieval date (*c*.13th-century) were found in the west and south-west of the Phase 5 site, constituting the remains of agricultural and possible settlement activities. The Late Iron Age/Early Roman and medieval remains identified in the Phase 5 site are considered to have been related to those of similar date recorded in the previously investigated Phase 3a and 3b sites. The Phase 3c and 3d sites contained a low density of only undated remains.

2.5.6 The 2017 evaluation demonstrated that the southern part of the Phase 5 area contained significant archaeological remains and these are the subject of this report.

2.5.7 Recent evaluation work was undertaken in the Phase 4 area around the south and east sides of a lake occupying a former extraction site (ASE 2018b). Trenching revealed that much of the surrounding land was re-instated and that quarrying activities had extended slightly beyond the existing lake footprint.

3.0 RESEARCH AIMS

3.1 Research Aims and Objectives

3.1.1 The general aims for the archaeological investigation were set out in the WSI (ASE 2018a) and were as follows:

- To determine, as far as reasonably practicable, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains.

- To enable Essex County Council's Historic Environment Management Team to make an informed decision as to the requirement for any further work required in order to satisfy the archaeology condition.

3.1.2 More site-specific aims / questions posited were:

- Is there any evidence of other periods of activity on the site?

- Is there any further evidence for the features previously identified during the evaluation phase? Can they be fully characterised as agricultural?

3.1.3 With reference to the East Anglian research framework (Medlycott 2011), the excavation aimed to address the following regional research objectives:

- *How far can the size and shape of fields be related to the agricultural regimes identified, and what is the relationship between rural and urban sites? (Medlycott 2011, 47)*

- *The origins and development of the different rural settlement types need further research, also the dynamics of medieval settlement. Much of the region has primarily a dispersed pattern, not nucleated, and more small hamlets are being discovered all the time. More data will add to our understanding of the way places appear, grow, shift and disappear* (Medlycott 2011, 70).

- *Are there regional or landscape variations in settlement location, density or type?* (Medlycott 2011, 70).

3.2 Original Research Aims

3.2.1 In order to combine the above aims and objectives into a single comprehensive list of original research aims (ORs), the following have been prepared in an interrogative format. The extent to which they have been addressed by the excavation results is considered in Section 7.1.

OR1: What is the character of the Late Iron Age remains on site and can the evidence shed light on the Iron Age/Roman transition, is there a seamless switch or a change in use of the land or farmstead, or continued occupation of the site but a change in building-types or agricultural practice?

OR2: What is the character of the Early Roman evidence and can it inform on the relationship between the size and shape of fields and agricultural layouts and regimes.

OR3: What is the character of the medieval evidence and is it indicative of settlement and/or agricultural activities? Can it inform on regional variations in settlement location and form, and variations in agricultural practices?

4.0 ARCHAEOLOGICAL RESULTS

4.1 Summary

4.1.1 Subsequent to the 2017 evaluation (ASE 2017), a controlled strip, map and excavation of an area measuring *c*.1.22ha was carried out in the south of the Phase 5 development area (Fig. 2).

4.1.2 As part of the initial stratigraphic analysis, individual contexts, referred to thus [****], have been sub-grouped and grouped together; features are generally referred to by their group label (G**). In this way, linear features, such as ditches that may have numerous individual slots and context numbers, are discussed as single entities and other cut features, such as pits and postholes, are grouped together by structure, common date and/or type. Environmental samples are listed within triangular brackets <**>, and registered finds as: RF <*>. References to sections within this report are referred to thus: (4.8).

4.1.3 Past land use entities (as opposed to modern imposed excavation areas) are provisionally identified. Primarily defined by the archaeological remains of boundaries (e.g. ditches, gullies, etc.), these entities are termed and numbered sequentially (e.g. 'Open Area' – OA1, OA2, etc.) for ease of reference to given parts of the landscape exposed within the site in any given period.

4.1.4 Archaeological remains were present across the whole excavation area. Six broad periods of activity have been identified, primarily through assessment of the dateable artefacts, predominantly the pottery, and secondarily through the creation of relative chronologies where stratigraphic relationships exist or similarities in orientation and/or profiles suggest a relationship. The majority of the remains encountered on site date to the Late Iron Age, Early Roman or medieval period. Only a few archaeological features are undated (Period 0) and the majority have been provisionally assigned to one of the following periods:

- Period 1: Early/Middle Iron Age
- Period 2: Late Iron Age (1st century AD)
- Period 3: Early Roman
- Period 4: Medieval
- Period 5: Post-medieval
- Period 6: Modern

4.1.5 The recorded archaeological remains are described and discussed under these provisional period headings. Where stratigraphic and artefactual dating evidence indicate distinct episodes of use and/or development, periods are divided into phases. Additional context data is presented in Appendix 1 and a list of allocated groups and their contents in Appendix 2. All recorded features are shown on a multi-phase plan (Figure. 3), with context numbers labelled and excavation extents indicated. Group numbers and land use entities are marked on subsequent period and phase plans for the excavation areas (Figures 4-10).

A selection of section drawings and photographs are incorporated into the various plan figures, as appropriate. Where pertinent, evaluation results have been integrated into stratigraphic narrative descriptions and discussions. Evaluation contexts are identified by the format: [0/000] (trench number / context number), as opposed to the four-digit excavation context numbers (i.e. [0000]).

Prehistoric

4.1.6 A small quantity of residual finds, comprising flintwork, of broadly prehistoric date (Neolithic to Late Bronze Age / Early Iron Age) suggests a limited, and presumably transient, presence in the landscape at this time.

Period 1

4.1.7 The first clear evidence of more permanent land use at the site is dated to the Early to Middle Iron Age. This is represented by a small number of gullies and pits in the SE of the site.

Period 2

4.1.8 Land use increases during the Late Iron Age (1st century AD) period, chiefly evidenced by the construction of a partially open-sided rectangular enclosure and an L-shaped boundary ditch probably for agricultural purposes in the south of the site. The presence of a large quarry pit suggests clay extraction was also taking place at this time.

Period 3

4.1.10 Intensity of land use increases further in the Early Roman period with three component phases of activity identified. Phase 3.1 consists of four E/W aligned ditches forming two separate trackways and adjacent open areas. In Phase 3.2 the trackways become blocked with the imposition of a new largely N/S aligned field system. Phase 3.3 is represented by two new ditches in the north cutting through part of the old Phase 3.2 system and possibly merging with a surviving part of it in the south. Agriculture would appear to be the main activity along with further quarrying. Flint cobbles may have been laid in places to firm up the tops of infilled features.

4.1.11 No evidence for later Roman or Saxon features were identified on site. One intrusive pottery sherd in an Early Roman context is dated to the second half of the 2nd century AD and one sherd of Saxon pottery was found residual in a medieval context.

Period 4

4.1.12 The medieval field system largely dates to the later 12th to later 13th centuries. It is aligned NW/SE and cuts completely across the old Roman one. The landscape is divided into two open areas by a large boundary ditch. To its NE are a number of parallel gullies associated with agricultural or drainage activity. A gap in the south of the boundary is blocked by a series of staggered ditches perhaps used for stock control along with a nearby U-shaped enclosure. Two large quarry pits suggest clay or gravel extraction was also taking place.

Period 5

4.1.13 A new and distinct field system is imposed in the post-medieval period. This consists of two major field boundaries, arranged perpendicular to each other, which divide the area into three large agricultural fields.

Period 6

4.1.14 A small number of modern features were noted spread across the site. In particular, large modern disturbances were noted in the NE and SE of the site both possibly associated with golf course construction.

Period 0

4.10.1 A relatively small number of undated features were present across the site. Some are of indeterminate archaeological origin, possibly agriculture related, others may be of natural origin.

4.2 Topography and Deposit Sequence

4.2.1 The excavation area was relatively flat, varying in topsoil height from a minimum of 51.44 AOD in the SW of the site to 52.92 AOD in the NE but with some localised undulations.

4.2.2 Excavations across the site revealed a typical stratigraphic sequence of darkish grey sandy silt topsoil/turf over generally a light greyish-brown silty clay subsoil. These deposits varied from *c.*0.30-0.70m in depth, more typically 0.30-0.50m. The underlying natural deposit consisted of mid orange-brown compact clay with occasional flint inclusions.

4.2.3 The construction of the golf course had led to alteration to general ground levels in the south of the site. In some places, particularly close to the southern site boundary, the ground had been artificially raised by up to *c.*1m in order to create raised tee-off areas and in others the ground had been stripped down to natural clay (and perhaps slightly lower) to create bunkers. A large number of buried plastic pipes were encountered cut into the tops of features. These were for electricity cables and water pipes related to the golf course sprinkler system and a few larger pipes were for drainage purposes.

4.2.4 No archaeological features were visible in the topsoil or subsoil during the closely-monitored machining. Feature legibility was moderate once the overburden was removed with some features clearly visible, others difficult to see, obscured or disturbed. The site was subject to snow and heavy rain which led to several low-lying areas being flooded and the remainder of the site being extremely sticky to work. Some rutting (from the dumper) occurred either side of the causeway across the open Golf Course Ditch and in the NW quadrant of the site, where topsoil was stock-piled, and subsequently removed by site contractors. In addition, part of the north-western edge of the site (on the line of a new roadway) was stripped to natural clay prior to the commencement of the excavation.

4.2.4 Although the site had suffered from the above disturbance and truncation, the survival of archaeological remains was generally good. Archaeological remains were overlain by topsoil and subsoil deposits and were cut into the natural clay. A range of remains were uncovered including pits, postholes, numerous gullies

and ditches, cobble surfaces and hollows. Most of the ditches represent field boundaries whilst some of the gullies may be evidence of cultivation or drainage. A number of large quarry pits were present. The majority of the features belonged to either the early Roman or medieval periods and were spread right across the site. Late Iron Age remains were less extensive and restricted to the southern half of the site. A reasonably high level of intercut stratigraphic complexity was observed with some relationships quite obvious and others difficult to determine due to similarity in fill composition. In some instances the stratigraphic relationship could be resolved by the recovered dating evidence.

4.2.5 The overall artefact assemblage recovered during the excavation was large, with the majority of features containing dating evidence. Most dateable pottery belonged to the Late Iron Age, Early Roman and medieval periods. Most linear features contained single, light brownish grey silty clay fills with gravel and occasionally chalk inclusions, indicative of natural infilling during use. Notable deposits are described in more detail below, particularly where pertinent to the understanding of the nature/function of a deposit or feature.

4.3 Residual Prehistoric Material

4.3.1 No archaeological features or deposits of demonstrably pre-Middle Iron Age date were identified within the excavation area. A small amount (46 pieces) of prehistoric worked flint, broadly ranging in date from the Neolithic to Late Bronze Age / Early Iron Age, was recovered from across the site (5.2). This material was recovered from both the evaluation and excavation phases of work and is all judged to be residual in later features. In addition, a few sherds of Late Bronze Age/ Early Iron Age pottery, also residual in a later feature, were recovered during the evaluation (Trench 50).

4.4 Period 1: Early Iron Age / Middle Iron Age (Figure 4)

4.4.1 The first tangible phase of activity evidenced within the site occurred towards the end of the Early Iron Age and beginning of the Middle Iron Age, around the later 5th to 4th centuries BC. Archaeological remains from this period were all located within the south-west part side of the site and comprise a number of short, fragmentary, lengths of ditch and gullies and a small cluster of pits and post-holes. The pottery assemblage retrieved from these features consisted of a limited range of flint-tempered and quartz rich fabrics and forms and is typical of the Early/Middle Iron Age transition. A few undated features (within pit/posthole cluster G7) have been assigned to this period based on their spatial relationship.

4.4.2 Given the absence of any substantive land division features during the Early/Middle Iron Age transition period, the site is regarded as being located within a single unenclosed land use entity, Open Area 1 (OA1). However, it should be noted that this may be a factor of poor survival rather than Iron Age reality as it is possible, for example, that ditch G2 was a boundary feature but so little of its route could be traced to substantiate this.

Open Area 1 (OA1)

4.4.3 Two short lengths of ditch (G1 and G2) were dated on the presence of single sherds of E/MIA pottery. Ditch G1 was aligned NE/SW and was 0.62m wide by 0.21m deep with 40-50° sides and a concave base. It was filled with greyish brown silty clay [1090] and could be traced for just over 10m before disappearing beyond the edge of the site to the south and being truncated by the extant Golf Course Ditch (GCD) to the north. Ditch G2 was aligned ENE/WSW and was larger, at 1.72m wide by 0.6m deep, though had similar shaped sides and base. This ditch had a brownish grey silty clay fill [1231] and was disturbed by a cut for a ceramic drain pipe. This ditch was visible for some 9m before being truncated by the GCD to the east and obscured by silty deposits within evaluation Trench 36 to the west. Neither ditch could be traced very far and are therefore assumed to be relatively minor sub-divisions within a largely open landscape.

4.4.4 To the SE of ditch G2 were two lengths of slightly curving gully (G4 and G5). Gully G4 (Segments [1218 / 1450]) was mostly aligned E/W but curved slightly to the ENE and WSW at its ends. It was *c.*5m long with apparent rounded ends, though these could have been the result of truncation particularly as the immediate area was very root disturbed and a thick root ball was located just west of segment [1450]. The gully was up to 0.6m wide by 0.3m deep with 45-50° sides and a concave profile. The fill varied from mid grey to mid greyish brown silty clay and included occasional flint and charcoal inclusions and a few body sherd fragments of E/MIA pottery.

4.4.5 Gully G5 (Segments [1222 / 1448]) was roughly NNW/SSE aligned, *c.*3.5m long and Y-shaped in plan. It had two apparent rounded ends to the SE and was truncated by a later ditch to the north. The gully was quite shallow, varying in depth from 0.03m to 0.13m with variable 35-60° sides and a flattish base to the north and more gradual sides and a concave base to the south. It was filled with greyish brown silty clay with occasional flint inclusions and contained four small sherds of E/MIA pottery. It is possible that Gully G5 in conjunction with Gully G4 form part of a heavily truncated semi-circular structure.

4.4.6 To the east was another short length of gully G6 (Seg. [1305]) aligned NW/SE. This was 4m long by 0.8m wide and 0.4m deep and had a rounded end to the NW and was truncated by a later ditch to the SE. The gully had 50-60° and was V-shaped in profile. It was filled with dark grey silty sandy clay [1304] and contained occasional charcoal flecks, small flints and four sherds of E/MIA pottery.

4.4.7 Located 12m to the SE was a further length of gully G3 (Seg. [1317]) again truncated at one end by a later feature and possibly just petering-out at the other. The gully was aligned WNW/ESE, some 6.5m long by 0.56m wide and 0.13m deep. It had 45° sides and a flattish base and was filled with light grey clay silt. Finds consisted of five sherds of E/MIA pottery and two sherds of Roman pottery believed to be intrusive.

4.4.8 A number of contained features of E/MIA date were also present, with the main concentration (G7) located close to the SE corner of the site. These consisted of four dated features (pits [1266], [1269] and post-holes [1283], [1311]) and two

undated but adjacent features (pit [1309/1315 and post-hole [1307]). Pits [1266] and [1269] were intercutting, with sub-circular pit [1269] most probably the earlier. Pit [1269] was some 2m long by 0.64m deep and contained four fills ([1267], [1268], [1269] and [1299]) (Figure 11). E/MIA pottery was recovered from the mottled mid orange brown / greyish orange silty clay primary fill [1299] and from the charcoal-rich dark grey silty clay third fill [1268]. The latter also contained animal bone (some possibly burnt), fired clay and fire-cracked flint and was bulk soil sampled <22> for environmental analysis. Pit [1266] was oval in plan, 1.91m long by 1.09m wide by 0.41m deep with 20-30° sides and a concave base. It contained a mottled mid greyish brown and yellowish brown silty clay lower fill [1265] and a brownish grey silty clay upper fill [1264] containing fired clay, charcoal and iron slag. Soil sample <21> was collected for environmental analysis. Both fills contained E/MIA pottery.

4.4.9 Post-hole [1283] was located immediately south of pit [1266] but had no discernible relationship. This was oval in plan, 0.41m long by 0.15m deep and filled with mid to dark brownish grey clay silt [1283]. One sherd of E/MIA pottery was recovered. The second dated post-hole [1311] was sub-circular in plan with a length of 0.41m and a depth of 0.34m. It had steep 50-70° sides and a flat base and was filled with mottled greyish yellow and greyish brown silty clay. Inclusions included occasional medium-sized flints, flecks of charcoal and one sherd of E/MIA pottery.

4.4.10 Undated oval post-hole [1307] was 0.45m long by 0.12m deep and filled with dark grey silty clay [1306] containing an abundance of charcoal which was sampled (<23>) for environmental analysis. Pit [1309 / 1315] was elongated in plan, measuring 3.4m in total length by 0.80m wide and up to 0.23m deep. Both rounded ends of the pit were excavated, with sides sloping gradually to a concave base. It was filled with mottled mid grey and orange brown silty clay [1308 / 1314] with occasional small flint inclusions.

4.4.11 The three soil samples retrieved from G7 features (<21>, <22> and <23>) produced a small assemblage of charred plant macrofossils within which were occasional cereal caryopses of wheat, a possible brome grass seed and some unidentified buds. Some uncharred organic material including a few goosefoot seeds was present in sample <23>; however, given the lack of waterlogging this material is perhaps more likely to be of modern origin.

4.4.12 The final E/MIA feature (G8) was situated some distance to the north of its contemporary features. This was a poorly defined oval pit [1538] some 3.3m long by 1m wide and 0.42m deep. It was steep sided with a flat base and filled with mid greyish brown silty clay [1379]. Occasional charcoal flecks and fragments of fired clay were noted within the fill and three sherds of E/MIA pottery were recovered.

4.5 Period 2: Late Iron Age (Figure 5)

4.5.1 No evidence was identified for continued use of the landscape from the Middle Iron Age through to the later Iron Age. The resurgence in activity is dated by pottery evidence to the very Late Iron Age and took place in the early to mid 1st century AD. Dating of this period is, however, slightly problematic as there is little to separate Late Iron Age (Period 2) remains from Early Roman (Period 3)

remains, other than the presence of a few sherds of diagnostic Roman pottery. On balance, however, some form of Late Iron Age activity pre-conquest seems likely.

4.5.2 Period 2 represents the earliest demonstrable division of the landscape, likely constituting agricultural enclosures (FS1). In the SE of the area ditch groups G9, G10, G13, G15, along with pit group G14, may form a part open-sided rectangular enclosure (OA2) covering an area of approximately 2,500sq m. Beyond the edge of the excavation area, it is feasible that ditch 52/009 (in Evaluation Trench 52) might form part of the eastern boundary to this enclosure, thus perhaps adding another *c.*900sq m to the total area. This ditch did not obviously continue into adjacent Trench 53, but this may have coincided with the position of an access gap through the boundary. Further division of land in the SW of the excavation area, into additional open areas (OA3 and OA4), is provided by L-shaped ditch G11. Few discrete features occupy these land use entities from which their functions can be discerned.

4.5.3 The northern side of the enclosure was defined by ditches G10 and G9. Ditch G10 was a large, 35m-long, poorly-defined ditch, aligned WNW/ESE, that appeared to have a bulbous terminal to its west and continued beyond the edge of the site to the east. It was investigated in two places (Segments [1509] and [1369]) and in both was over 3m wide and in excess of 1m deep. Both had variable 30-50° sides, segment [1509] had a flat base, but segment [1369] was not fully bottomed. Each contained four silty clay fills broadly varying in colour from yellowish brown through brown to greyish brown and grey. Inclusions included occasional flints and flecks of charcoal and baked clay. Recovered finds consisted of 85 sherds of Late Iron Age pottery and a few fragments of animal bone, some of which had been burnt. Bulk soil sample <25> was taken from charcoal-rich intermediate fill [1367]. To the immediate west of ditch G10 was a short length of gully [44/012], 0.7m wide by 0.13m deep, excavated in Evaluation Trench 44. The gully appeared to continue west of the evaluation trench but was obscured. It may indicate at least part-blocking of an entrance gap between G10 and G9.

4.5.4 L-shaped ditch G9 continued the northern side of the enclosure and turned southwards to form part of the western side. This ditch had a rounded east end and was up to 2m wide by over 1.1m deep, with steep 55-60° sides. The base was not fully revealed. Where investigated (Segments [1461] and [1526]) it contained up to four silty clay fills with a mix of charcoal, flint and chalk inclusions. Soil sample <30> was taken from intermediate fill [1458] in ditch segment [1461].

4.5.5 Analysis of soil samples <25> and <30> from ditches G9 and G10 forming the north side of the enclosure revealed the presence of charred grains of wheat and barley, bean/pea and possible grass culm fragments. It is also noteworthy that evaluation ditch [52/009] (outside, east, of the excavation area), postulated to define the east side of the enclosure (see 4.5.2), was found to contain a significant quantity of charred cereal remains (6.4.4).

4.5.6 To the south, ditch G9 may have continued a few metres further as G58 [1516]. This ditch was *c.*1.6m wide by 1.15m deep and contained three fills from which both Middle Iron Age and Late Iron Age pottery was recovered. To the east of

[1516] a short length of possibly contemporary ditch [1513] (G57) was recorded to run on a parallel course, but which could not be traced beyond this point. South of ditch segment [1516], the potential course of the western enclosure boundary was obscured by later activity but did not appear to be continuous as it was not observed in an exposed stretch of natural ground just north of the position of Evaluation Trench 36. The boundary did re-emerge south of the evaluation trench as [1472] (G15). This N/S aligned ditch was visible for some 4m, truncated to north and obscured by later deposits to the south. It was 1.4m wide by 0.39m deep and its single silty clay fill produced a small quantity of Late Iron Age pottery.

4.5.7 It is likely that ditch G15 formed a right angle with E/W ditch G13. This slightly curving ditch was approximately 40m long and varied in width, being narrower (1.9m) at each end and wider (up to 3.9m) in the centre. Three segments ([1244], [1257] and [1263]) were excavated across it and the ditch had also been part-excavated as [37/011] in Evaluation Trench 37. The ditch contained up to three, mainly silty clay, fills with inclusions of chalk, charcoal and flint. Retrieved finds included fired clay, animal bone, Late Iron Age and Early Iron Age pottery and a copper alloy object (RF<11>). Ditch G13 stopped *c.*10m short of potential enclosure boundary feature G14 – perhaps defining an access point.

4.5.8 Feature G14 [1281] was over 5m in length by 5.2m in width and 0.75m in depth. Although, of contemporary date and situated on the projected course of the enclosure boundary, excavation suggested that this feature was more likely to be a quarry pit rather than the rounded end of a large ditch. Although undulations in the base of the pit suggest more than one episode of extraction activity, the consistent presence of the four fills ([1258], [1259], [1260] and [1280]) throughout the excavated extent of the pit suggests that they were all open at the same time. The primary fill of the pit consisted of light yellowy grey clayey silt [1280] and no doubt resulted from initial weathering of the base and sides of the pit. Animal bone and a few sherds of Late Iron Age pottery were recovered from this deposit. Above was a fill of dark grey clay silt [1260] up to 0.13m thick containing flecks of baked clay and charcoal along with a further Late Iron Age sherd and animal bone. Bulk soil sample (<20>) was taken from this dark silt. Above was a further deposit of yellow clayey silt [1259], perhaps deliberately deposited natural clay rather than an accumulated erosion product, from which a few pieces of residual worked flint were recovered. The top of the pit was infilled with a thick (up to 0.5m) deposit of mid-dark grey clay silt [1258] that contained over 220 sherds of Late Iron Age pottery, including continental imports, and a fragment of ceramic metalworking mould (RF<14>). A further soil sample (<19>) was taken from this top fill.

4.5.9 Analysis of the two soil samples (<19> and <20>) from the G14 quarry pit provided evidence of wheat and barley, pea/bean, possible flax and sedge seeds. In addition, small fish bones were recovered from sample <20>.

4.5.10 The second element of Late Iron Age land division (FS1) is represented by L-shaped ditch G11 in the west of the site. This measured some 12m N/S by 27m E/W, continuing beyond the edge of the site to the west and becoming unclear to the north, though a sketch on a context sheet implies a bulbous rounded end. Three segments ([1352], [1358] and [1383]) revealed the ditch to be a maximum of 1.25m wide by 0.5m deep and to have consistent 40-50°sides and a flat to

concave base. The fill was a fairly standard looking mid greyish brown silty clay probably derived from natural erosion and silting from which four sherds of Late Iron Age pottery were retrieved. The ditch was not dissimilar to the surrounding natural clay and had not been observed In Evaluation Trench 24.

Open Area 2 (OA2)

4.5.11 Two pits (G20 and G21) were located within the rectangular enclosure (OA2). Pit G20 [1236] was sub-circular in plan, *c.*1.3m long by 1m wide by 0.18m deep, with a heavily root-disturbed single dark brownish grey silty clay fill. Pit G21 [1273] was smaller, pear-shaped in plan, measuring 0.7m by 0.53m by 0.10m deep, with a charcoal-flecked dark brown silty clay fill. Both pits contained a few sherds of Late Iron Age pottery.

Open Area 3 (OA3)

4.5.12 Open area OA3 occupied the northern half of the excavation area, essentially encompassing all of the land north of enclosure ditch G9 and G10 and L-shaped ditch G11. Pits G17, G19 and G22 were located within OA3. All contained sherds of Late Iron Age pottery, with over 50 sherds present in pit [1356]. Group G17 consisted of a cluster of three pits (1356], [1362] and [1364]) located *c*. 5–15m north of ditch G11. These were oval to sub-circular in plan and varied in length from 0.85m to 1.3m and depth from 0.24m to 0.27m. Pits [1356] and [1362] were filled with similar light greyish brown sandy clay silt with flint and charcoal inclusions, whilst pit [1364] had a darker brown clay silt fill. Pits G18 and G19 were both located in the north of the area. Pit G19 [1142] was small and sub-circular with a diameter of 0.67m and a depth of 0.14m and contained a single dark grey silty clay fill. Pit G22 [1390] was located in the south of the area in a gap between ditches G9 and G11. This was circular in plan with a diameter of 0.94m and a depth of 0.25m. It contained two fills, a primary fill of mottled yellowish grey and grey brown silty clay and an upper of dark grey silty clay containing frequent charcoal flecks. A soil sample (<28>) taken from this fill provided further evidence of the presence of wheat and bean/peas.

Open Area 4 (OA4)

4.5.13 To the south of ditch G11, and west of the G9/G10/G13/G15/G58 enclosure, was a third open area (OA4), perhaps in part constituting a routeway between OA3 to the north and OA2 to the east. Within OA4 were a short gully (G12) and an elongated pit (G16). Gully G12 [1083] was aligned NW/SE, over 3.5m long, and had a rounded terminal to the north and continued beyond the edge of the site to the south. It was 0.65m wide by 0.2m deep, had *c.*40° sides, a concave base and was filled with dark grey silty clay. Pit G16 was located to the immediate south of ditch G13, but this relationship could not be investigated due to the presence of a large puddle. The pit was approximately 5m long and 0.6m deep where investigated. It is possible that pit G16 represents a widening of the corner or creation of a pond at the right-angled junction between G13 and N/S ditch G15.

4.6 Period 3: Early Roman (Figures 6 and 7)

4.6.1 As stated previously, the difference between deciding whether features belong to the Late Iron Age or Early Roman periods was only on the basis of the presence of a few sherds of diagnostic Early Roman pottery amongst the 'native' Late Iron Age pottery which largely continued in use into the post-conquest period. The Early Roman period constitutes a distinct increase in intensity of land use, with three phases of development/activity (Periods 3.1-3.3) identified on stratigraphic, stylistic and dating evidence (Figure 6).

Period 3.1

4.6.2 The earliest phase of Early Roman landscape development (FS2) consists of a series of four E/W aligned boundary ditches effectively dividing the site into five open areas (OA5 to OA9). Ditches G23 and G24 form a parallel pair, *c.*15-20m apart, in the north of the site, and ditches G27/G28 and G29/G30 form a second parallel pair, *c.*9-10m apart, in the south of the site. Both sets of boundaries may possibly indicate the position of E/W trackways. Little seems to survive of the preceding Late Iron Age field system (FS1) into this mid/late 1st-century period, other than ditch G10 which, as a substantial and perhaps half-open feature, might possibly have been utilised as an eastwards continuation of ditch G23.

4.6.3 Ditch G24 was over 110m long and generally aligned E/W, though bending towards the SE at its eastern end with an apparent dog-leg back to the east close to its very end. Ditch G24 was investigated in eleven separate segments ([1070], [1107], [1120], [1123], [1126], [1155], [1175], [1196], [1202], [1360] and [1375]) and also in Evaluation Trench 44 as [44/006]. It varied in width from 1.2m to 2.45m and depth from 0.4m to 0.82m. It had variable sides with most being in a 40-60° range and a flat, or occasionally concave, base. The ditch was generally filled with one or two fills, the only exception being deep ditch segment [1070], which contained three. The fills usually consisted of sandy clay silt often with a light to mid brownish grey upper fill and a yellowish brown lower fill. Finds consisted of animal bone, baked clay, a ceramic spindlewhorl (RF<10>), a residual 1st century BC amphora sherd and a large quantity of Late Iron Age and Early Roman pottery, the latter being particularly prevalent in the western half of the ditch (over 500 sherds). Bulk soil sample <12> taken from the charcoal-flecked upper fill [1068] of ditch [1070] contained charred grains of wheat and barley.

4.64 Ditch G23 was 114m long and also mostly aligned E/W with a comparable bend to that of G24 towards its eastern end. It was investigated in six places during the excavation (segments [1152], [1179], [1193], [1216], [1387] and [1503]) and twice during the evaluation ([23/006] and [35/006]). Coincidentally the ditch also varied in width from 1.2m to 2.45m and had a similar depth range of 0.4m to 0.8m. Sides generally sloped gradually (30-60°) to a usually flat base. One or two clay silt fills were present, generally a mix of mid grey to brown in colour with occasional inclusions of flint and charcoal flecks. Finds consisted of animal bone, baked clay and Late Iron Age and Early Roman pottery. To the immediate south of G23 was a short length of parallel ditch G36 (Seg [1224]), presumed to be contemporary but with no firm dating. This was visible for about 7m, being obscured in root disturbance to the west and lost in a ditch junction to the east. The ditch was 1.3m wide by up to 0.18m deep with *c.*50° sides and a flat to

concave base [1224]. It had a single light greyish brown silty sandy clay fill. It had previously been excavated as [35/009] during the evaluation stage of work (Trench 35).

4.6.5 Ditch G27/G28 was the more northerly of the two southern ditches, was approximately 100m long and was investigated, in full or in part, in 10 places (Segments [1081], [1095], [1234], [1279], [1295], [1303], [1322], [1391], [1436] and [1441]). The ditch varied in width from 0.58m to 1.2m and in depth from 0.14m to 0.50m, though averaging around 0.30-0.40s m. Sides were mostly in the region of 40-50°, with only one [1234] more steeper at 60-80° and the base varied from flat to concave. All excavated segments contained a single silty sandy clay fill of grey or greyish brown in colour and contained occasional flint, chalk and charcoal inclusions. Finds included animal bone and Early Roman pottery, along with residual Late Iron Age and Middle Iron Age material.

4.6.6 The more southerly ditch G29/G30 was *c*.75m long and investigated in seven places during the excavation (Segments [1213], 1230], [1240], [1337], [1349], [1407] and [1411] and once during the evaluation as [37/005]. The ditch varied in width from 0.7m to 2.16m, generally becoming broader towards the east, and in depth from 0.37m to 0.65m. Sides were quite variable, sometimes steep (60-80°) and sometimes more gradual (15-50°), down to a flat or slightly concave base. It contained one or two clay silt fills, the former being the more common. Colours were for the most part the usual greys and browns, though purplish grey and greyish blue were also recorded. Inclusions consisted of occasional flint gravel and charcoal flecks; iron pan was also present.

Open Areas 5 to 9 (OA5 – OA9)

4.6.7 The Period 3.1 landscape has been divided into five open areas. Land in the north labelled as OA5, the northern trackway between ditches G23 and G24 as OA6, the area in the middle of the site as OA7, the southern trackway as OA8 and land in the south of the site as OA9. No definite contemporary features were evident in any of these areas. It seems unlikely that any of the unphased Period 3 features belong to Period 3.1, as many of them would effectively block trackway OA6 (if indeed a trackway). It is assumed that the two trackways are contemporary and land to the north, south and centre are open fields. It is interesting to note that a large quantity of Roman pottery was recovered from the western end of track boundary ditch G24, perhaps implying that the track may lead to a nearby settlement from which the pottery is derived. Two sides of an apparent early Roman trackway were identified in the Phase 3B excavations (OAE 2016), further to the west, but these do not particularly align with those in the current excavation area.

Phase 3.2

4.6.8 In a second phase of landscape alteration (FS3) the E/W trackways appear to become redundant, being disrupted by two differently aligned and joining ditches (G26/G33/G34 and G31/G32). With the addition of two further, roughly perpendicular ENE/WSW and NNW/SSE, ditches (G25 and G37) several new open areas (OA10 – OA14) were created.

4.6.9 In the centre of the site was a N/S aligned ditch (G26/G33/G34), approximately 74m in length, continuing beyond the edge of the site to the north and forming a T-junction with potentially contemporary E/W ditch G32 at its south. The ditch was investigated in eight places (Segments [1024], [1134], [1157], [1119], [1454 / 1456], [1470], [1532], [1537]) during the excavation and in Trench 34 [34/008] during the evaluation. The ditch was wider in the south, at up to 3.4m wide, narrowing to just over 1m in width in the north. G34 was a particularly narrow part (0.45m wide) in the centre of the ditch, some 4m long by 0.14m deep, possibly slightly truncated, that might indicate the position of an entrance-way. To the immediate north of the entrance way was an un-investigated protuberance in the ditch that might be a contemporary feature (e.g. a pit) or could be associated with later (Phase 3.3) activity. Elsewhere ditch depths varied from 0.6m to 0.9m, sides generally sloped between 40-60° and bases were flat to slightly concave with the exception of [34/008] which was recorded as V-shaped. The ditch was filled with one or two silty clay fills, usually mid to dark grey or mid to dark brownish grey in colour, but occasionally more orange brown. Inclusions included varying amounts of flint and occasional flecks of charcoal and chalk. Finds consisted of varying amounts of Late Iron Age and Early Roman pottery (over 100 sherds in two segment fills), animal bone and a fragment of copper alloy steelyard (RF<12>).

4.6.10 The south end of N/S ditch G26/G33/G34 appeared to meet E/W ditch G32 at a T-junction. Ditch G32 was some 55m long, continuing beyond the edge of the site to the west and merging with pit G60 to the east. The ditch varied in width from 1.35m to 1.8m and in depth from 0.25m to 0.5m. Sides varied in slope from 20-60° to often around 40-45°, with two segments having concave bases and two with a more V-shaped profile. All contained single fills of grey to greyish brown silty clay with fairly frequent flint inclusions. Finds consisted of Late Iron Age and Early Roman pottery and one intrusive sherd of early post-medieval CBM. Ditch G32 probably continued beyond pit G60 as NW/SE aligned ditch G31. This ditch may have been up to 30m in length and continued beyond the edge of the site to the south. Where investigated, in segment [1249], it was 1.7m wide by 1.02m deep with variable sides, more moderate 45-60° at the top and steeper *c.*80° towards the base, which was flat. It had two fills; a primary of mid brown silty clay [1253] and an upper, of mid greyish brown silty clay [1248] containing occasional small to medium flints and rare chalk flecks. Early Roman pottery was recovered.

4.6.11 Ditch G25 was aligned ENE/WSW and was over 50m long, continuing beyond the edge of the site both to west and east where it may have joined with N/S ditch G26. The ditch was excavated in seven places (Segments [1004], [1008], [1011], [1013], [1018], [1026] and [1038]) and contained a series of single grey or greyish brown silty clay fills with occasional gravel, chalk and charcoal inclusions. The ditch varied in width from 0.6m to 1.35m and depth from 0.23m to 0.42m. Sides varied in slope from 30-70° with most around 50-60°down to a concave or flat base. Finds consisted mainly of pottery, with over 800 Late Iron Age to Early Roman sherds being recovered.

4.6.12 Ditch G37 was aligned NW/SE and was 60m long, seemingly petering out to the south. It was arranged roughly perpendicular to G25 and perhaps could also have met it beyond the limits of the excavation area. Ditch G37 was investigated in six places (Segments [1132], [1159], [1163], [1166], [1204] and [1396]) and

had variable but moderate 30-60° sides and a concave base. It had a single brown to greyish brown clay silt fill with occasional flint and charcoal inclusions. Finds consisted only of a few sherds of Early Roman pottery. Given that ditch G25 and ditch G37 are seemingly arranged perpendicular to each other, and this alignment is at odds with the other phase 3.2 ditches, it is feasible that they belong to a separate sub-phase within phase 3.2. This will be considered further at the analysis and publication stage.

4.6.13 Pit G60 was a large sub-circular feature [1493], *c.*7.5m long by 5m wide, located beneath Evaluation Trench 36 and obscured by later deposits. This part of the site was constantly under water and only dried out at the very end pf the project when limited machine exploration took place. Stratigraphically, the pit was later than the Period 3.1 trackway and earlier than a Period 3.3 surface thus implying that it was broadly contemporary with Period 3.2 ditch G32. In plan, the fills of ditch G32 and pit G60 merged together and, although not investigated, it is possible that they were contemporary. To the east, the relationship between pit G60 and ditch G31 was obscured by a later deposit. Pit G60 could represent the widening of the ditch into a pond-like feature on the ditch corner. A small segment of its silty clay fill [1492] was hand-excavated and a few sherds of Early Roman pottery were recovered.

4.6.14 The phase 3.2 field system (FS3) divided the site area into five new land entities (OA10-OA14). Area OA10 was a small slither of land located at the edge of the site north of ditch G25. To the south of ditch G25 was a well-defined rectangular enclosure, OA11, bounded to the east by ditch G26/G33/G34 and to the south by ditch G32. To the east of ditch G26/G33/G34 was a funnel-shaped area of land, that narrowed to the north, and was bounded on its other side by ditch G37. The fifth area, OA14, was located east of ditch G37. No specific features could be associated with these open areas, though it is possible that some of the broadly dated Period 3 features are contemporary.

Phase 3.3

4.6.13 Phase 3.3 activity is largely geographically limited to the north of the site. This phase is represented by two new ditches (G38 and G39) and a possible southwards continuation (G98) of the latter. These form a less coherent field system (FS4) and vaguely divide the landscape into new open areas OA15 and OA16. Discrete features G44, G45, G46 and G54 are definitely associated with this phase, along with several potential others.

4.6.14 Ditches G38 and G39 both contained Early Roman pottery and clearly truncated earlier phased ditches. Ditch G38 truncated Phase 3.1 ditch G24/G48 and in addition contained one pottery sherd from a Samian vessel made *c.*70AD on the continent, but probably not thrown away and deposited in a ditch in Essex until many years later. Ditch G39 also truncated Phase 3.1 ditch G24/G48, and in addition Phase 3.2 ditch G37. Ditch G37 has clearly gone out of use by this time and probably also at least the northern part (G26) of N/S ditch G26/G33/G34 if new ditch G39 is seen as a realigned replacement for it. This alteration of the Phase 3.2 landscape appears largely localised to the north of the area, although a short length of ditch (G98) in the south might represent a southwards continuation of the G39 boundary.

4.6.15 Ditch G38 was over 20m in length, truncated by modern disturbance to the south and continuing beyond the edge of the site to the north. It was excavated in two places ([1097] and [1104]) and had also been investigated in Evaluation Trench 44 as [44/008]. The ditch was 0.85m to 1.04m wide and shallow at between only 0.10m and 0.20m in depth. It had gradual 25-30° sides and a flat to concave base and had a single dark brown to mid greyish brown silty clay fill with flint inclusions.

4.6.16 Ditch G39 was aligned NNE/SSW and was some 33m in length. It continued beyond the edge of the site to north and merged with ditch G26/G33/G34 to the south. The ditch was investigated in four places (Segments [1100], [1161], [1173] and [1535]) in which it was recorded to be a fairly substantial feature up to 2.35m wide by a maximum of 0.9m deep. Sides were typically moderate (30-60°) and it had a flat, sometimes concave, base. Each segment contained two silty clay fills, both usually mid to dark grey or greyish brown, though those in segment [1100] were recorded as being lighter. Inclusions consisted of occasional flecks of chalk and charcoal and varying amounts of flint gravel. Finds consisted of Early Roman pottery, animal bone and baked clay.

4.6.17 Ditch G98 was a 6m+ long length of ditch cut into the top of phase 3.2 ditch G33. Beyond its illustrated extent the ditch was poorly defined but it may have continued further north at least perhaps to the GCD. Ditch G98 is regarded as a new phase 3.3 feature but could just as easily be regarded as a late phase 3.2 re-vamp of an existing ditch. Where excavated as seg [1462], the ditch was 1.6m wide by 0.29m deep with 20-30° sides and a concave base. It was filled with mid to dark brownish grey silty clay [1451] with frequent charcoal inclusions and occasional baked clay. Finds consisted of animal bone and Early Roman pottery. Bulk soil sample <29> taken from this deposit contained charred grains of barley and indeterminate cereals.

Open Areas 15 and 16 (OA15-OA16)

4.6.18 Essentially, the Period 3.3 landscape is divided into two by ditch G39 and its possible southwards continuation G98. Area OA15 is located east of this boundary and area OA16 to the west. Ditch G38 appears to form the eastern boundary to OA15 with another (un-assigned) open area beyond. Several features dated on stratigraphic evidence to Period 3.3 are located within OA15. Only one dated feature is located in OA16, though it is possible that some broadly dated Period 3 features are contemporary.

Open Area 15 (OA15)

4.6.19 Dumbbell-shaped feature G44 was 7.4m long by 3.2m wide and was investigated in two places (segs [1168] and [1170]). It appeared to consist of one, possibly two, depressions. In both interventions it had gradual sides and a flat base, but varied slightly in depth from 0.12m in the north to 0.19m in the south. It was filled with light grey to light brownish grey clay silt and contained occasional flecks of baked clay, charcoal and CBM. Over 70 sherds of Early Roman pottery were recovered. Its north end appeared to clip the fill of Period 3.2 ditch G37, thus implying that it may be a later feature.

4.6.20 To the south of G44 two irregular hollow features [1177/1539] and [1200] (G45) overlay the top of infilled Period 3.1 ditch G23. Feature [1177/1539] was an irregular 'boot-shape' in plan and measured *c.*7.5m by 4m. On excavation it was found to be up to 0.18m deep and have variable (20-70°) sides and a flat base. It was filled with light brownish grey to mid grey clay silt with occasional charcoal pebble inclusions. Hollow [1200] was similar, being 0.2m deep and flat-based with near identical fill and inclusions. Finds included Early Roman pottery and animal bone. Although both features contained pebbles neither seemed to be in sufficient quantity to constitute a tangible surface.

4.6.21 A more convincing flint cobble surface (G46) was, however, identified 3-4m to west of G44, also overlying infilled ditch G23. The surface measured *c.*3.5m long by 2.15 wide and consisted of frequent small to medium sub-angular to rounded flints in a mid-greyish brown clay matrix [1194]. This was about 0.08m deep and contained animal bones, sherds of Early Roman pottery and a few of residual Middle Iron Age pottery. The surface was probably laid down to provide a firm access point across the former ditch.

4.6.22 Arranged roughly to north and south of the cobble surface were two pits (G47). The more northerly pit [1138] was oval in plan, 1.38m long by 0.28m deep with steep 70° sides and a flat base. It was filled with light brown clay silt contained occasional flecks of charcoal, baked clay and oyster shell in addition to 45 sherds of Early Roman pottery. A soil sample <14> taken from this deposit contained charred cereal grains. Pit [1150], to the south, was of comparable length (1.4m), but shallower at 0.14m deep, with more gradual sides and a concave base. It did have a similar fill but with far fewer inclusions.

4.6.23 Feature G35 (seg. [1501]) was part aligned NE/SW turning more NNE/SSW at its eastern end. It was an odd feature, *c.*10m long by *c.*2m wide (1.58m where excavated) but very shallow at between 0.03m to 0.09m deep. It had a flat, slightly irregular base and had a mid-brownish grey silty clay fill containing frequent small flints and occasional medium to large flints. Finds included animal bone, oyster shell and a small quantity of early Roman pottery. Not really a ditch, unless heavily truncated (which seems unlikely), it seemed to be more of a wear depression or path; though there was not enough gravel to make a convincing surface. Interestingly, this feature seemed to align between cobble surface G46 and hollow G55 and might be regarded as evidence of a routeway between the two. To the east of G35 was a short *c.*6m length of possible contemporary drainage gully G52, 0.37m deep, that in plan appeared to merge with feature G35 to the north, and to the south and east appeared to splay out perhaps draining into a depression on the top of largely infilled earlier ditch G9/G58.

4.6.24 Hollow G55 overlay Phase 3.2 N/S ditch G33 and was represented by an apparent layer of mid orangey grey clay with flint pebbles and charcoal inclusions [35/010]. Of variable 0.15-0.3m thickness, this 4.56m-wide deposit directly overlay the natural deposit, having possibly accumulated in a slight hollow, and was sealed by subsoil. Early Roman pottery, animal bone and fired clay were retrieved from it.

4.6.25 Masked by a later deposit in the south of the site was a truncated layer of flint cobbles G93 [1494]. The layer extended *c.*5m (N/S) by just over 3m (E/W) and

varied in thickness from 0.09-0.15m thick. It consisted of abundant small, medium and large flints, both angular and sub-rounded, in an orangey grey silty clay matrix. The layer overlay Period 3.2 pit G60 and Period 2 ditch G15 and may represent a working hollow and/or was laid down to consolidate another perpetually damp area.

Open Area 16 (OA16)

4.6.26 Open Area 16 replaced Phase 3.2 OA11 in the western half of the site. One occupying feature, hollow G54, is confidently assigned to Phase 3.3. This comprised a 0.10m deep flat-bottomed depression [1439], 1.7m wide by 1.3m+ long, containing mid greyish brown silty clay with frequent poorly sorted rounded to sub-angular flints. Finds consisted of 67 sherds of Early Roman pottery, one piece of Roman CBM and one sherd of potentially intrusive Middle Roman pottery.

Period 3 (non-phased)

4.6.27 A number of features could be broadly assigned to Period 3 (Early Roman) on dating evidence, but lacked any stratigraphic or spatial relationships to allow their allocation to a specific land use phase within it. The majority of these were located in the west of the south with only a few in the east and south.

4.6.28 In the west of the area were two shallow depressions (G40). The more northerly of the depressions [1484] was oval in plan, *c.*9m long by 6.2m wide and 0.3m deep. It had gradual sides (10-15° to E, 30° to W) and a flat base and was filled with dark brownish grey clay silt containing occasional flint inclusions, rare charcoal flecks and 9 sherds of Early Roman pottery. To the SE, depression [1486] was more irregular in plan, some 13m long by 9m wide and 0.28m deep. It too had gradual sides, a flat base and a similar fill. Twenty-four sherds of Early Roman pottery were retrieved from it.

4.6.29 To the north, group G41 consisted of two nearby pit or quarry features ([1398/1413/1415] and [1444/1211]), both containing small amounts of Early Roman pottery. The larger of the two features [1398/1413/1415] was irregular in plan and measured *c.*7m N/S by *c.*4m E/W and was up to 0.72m deep where excavated. It was allocated three cut numbers in the field, but essentially may be all one feature. The fill consisted of light to mid greyish brown silty clay with flint and chalk fleck inclusions. Pit [1444], to the north, was more oval in plan and measured 5m long by 2.9m wide and 0.60m deep. It had gradual 20-30° sides that steepened to 40° towards the bottom to form a concave profile at its base. It was mostly filled with light greyish brown silty clay [1442] that became slightly darker, with more frequent flint inclusions [1443], towards the base. Protruding from the southern edge of the pit was a short length of gully or elongated post-hole [1211], just over 1m long by 0.40m deep, that would appear to be contemporary.

4.6.30 To the east of G41 were two oval pits, [1198] and [1385] (G42), both filled with charcoal-rich dark grey clay silt. The pits were similar sized at 0.9m in length but varied in depth from 0.09m [1198] to 0.55m [1385]. Pit [1198] had gradual sides and a flat, slightly uneven, base whilst the sides of pit [1385] were steeper and its base was concave. Neither showed any sign of *in situ* burning. Traces

of possible iron slag were present in the fill of pit [1198] and fragments of baked clay in that of pit [1385]. Soil samples were taken from both deposits (<16> and <27>); that from pit [1385] (fill [1384], sample <27>) was particularly productive, containing charred remains of pea/bean, bread-type wheat, oat, barley, dock, grass seed and possibly stinking chamomile.

4.6.31 Further east, G43 consists of three pits ([1182], [1371] and [1401]) and a gully [1207] located close together and all well-dated, with over 50 sherds of Early Roman pottery found in pit [1182] and over 300 sherds in pit [1371]. In addition, these particular features also contained pieces of Roman CBM. Pit [1182] was 4m long by 2.7m wide by 0.65m deep with gradual (*c.*30°) sides and a concave base. The size and depth if this pit suggests it may have been initially dug for quarrying purposes. It contained a main fill of mid greyish brown silty clay [1180] and a slightly darker basal fill [1181]. By contrast, pit [1401] was a much smaller feature, roughly oval in plan, 1.75m long by only 0.12m deep, with a flat base and 50-60° sides. It contained a 0.02-0.04m thick basal fill of dark grey silty clay with a thicker light brownish clay silt upper fill. Pit [1371] was a poorly-defined feature, vaguely V-shaped in plan, over 4.5m long by 2.15m wide, but only 0.10m deep with a flat base. It contained a single mid brownish grey silty clay fill with frequent rounded to sub-angular flint inclusions, possibly deliberately deposited. Gully [1207] was aligned ENE/WSW and was extremely shallow at only 0.05m deep. It was visible for a length of about 3m before petering out to the east and was filled with light grey clay silt. In plan, gully [1207] and part of pit [1371] look to be aligned, though on excavation they were clearly differing types of feature.

4.6.32 Located to the west of pits G40 was an isolated small gully or elongated pit [1528] (G53), only partly exposed within the excavation area. This feature was 1.8m long by 0.72m wide, narrowing to 0.45m before being truncated to south by a later ditch. It was 0.23m deep and filled with mid to grey silty clay with occasional chalk and flint inclusions. Finds included Early Roman pottery, animal bone and oyster shell.

4.6.33 In the south of the area, two elongated features (G50) appeared to be cut into the top of infilled Late Iron Age ditch G13. Pit [1242] was approximately 4m long by 1.14m wide by 0.24m deep, with its limited length suggesting it was something other than a ditch re-cut. It had variable sides, near vertical to the north and gradual to the south, and a near flat base. The fill consisted of dark greyish brown silty clay with common flint inclusions, occasional chalk and charcoal flecks. Finds included Early Roman pottery and fired clay. Feature [1247] was approximately 14m long by 2.6m wide by up to 0.32m deep with variable 20-50° sides and a flattish base. It was filled by dark grey silty clay with frequent charcoal flecks, particularly to the base of the fill, and occasional gravel inclusions. Finds included fire cracked flint, animal bone and pottery. The feature was recorded in Evaluation Trench 37 as a 0.2m deep cut with a flat to irregular base, [37/013]. Its fill comprised dark bluish grey clay with frequent charcoal flecks [37/010], though soil sample <6> taken from it did not produce any significant charred plant remains.

4.6.34 Two poorly defined large pit-like features (G56 and G59) were also present in the south of the area. Both were excavated and initially perceived to be part of a long linear feature; however, further investigation ascertained that they were

separated by definite strips of natural clay and therefore almost certainly were two distinct features. G56 ([1291]) was over 5m wide, 1.45m deep and was perhaps 8 or 9m long. It contained three fills from which 21 sherds of Early Roman pottery were retrieved. Pit G59 [1320] was similarly indistinct, being just 4.5m wide, by 1.10m deep and a maximum of 7m long. This contained two fills and contained Late Iron Age to Early Roman pottery.

4.6.35 In the east of the area was a solitary pit [1380] (G51), some 0.9m long by *c.*0.60 wide and 0.15m deep. It had gradual sloping sides, a concave base and was filled with dark grey silty clay with frequent charcoal and fired clay inclusions. Eighty sherds of Early Roman pottery were recovered. A soil sample <26> was taken but analysis revealed no charred macrofossil remains, though charcoal fragments (from hazel/alder, oak and Maloideae) were present.

4.6.36 Two further groups of poorly dated, though probable Period 3, features (G48 and G49) were located in the NE of the area. Group G48 consisted of two nearby pits ([1102] and [1116]), both with single silty clay fills containing a small amount of Early Roman pottery. Group G49 consisted of three geographically close pits ([1130], [1136] and [1140]) only one of which, pit [1130], contained Early Roman pottery.

4.7 Period 4: Medieval (Figure 8)

4.7.1 There is no evidence of land exploitation beyond the Early Roman period and the land appears to have been little used, other than perhaps for hunting or animal grazing, up until the medieval period. The medieval field system (FS5) largely dates to the later 12th to later 13th centuries and cuts completely across the Early Roman field system on a new NNW/SSE alignment. All of the medieval features are clustered within 25m of major ditch G61, most are linear and all are similarly aligned. It is possible that all of these features should be regarded as integral parts of a wider boundary zone rather than as being adjacent to a single boundary ditch. No contemporary features were found to east or west of this zone and it is probable that these empty spaces represent open fields (OA17 and OA18).

4.7.2 Possibly the most significant feature within the boundary zone was NNW/SSE aligned ditch G61. This ditch was *c.*80m long continuing beyond the edge of the site to the north but not obviously extending beyond the modern Golf Course Ditch to the south. Ditch G61 was of variable width, being narrowest (0.8m excavated, 0.6m in plan) towards the north and widest (3.2m) in its central area. It was investigated in four separate places (Segments [1046/48], [1228], [1446] and [1477]) and was similarly shallower to the north (0.19m) and deeper (0.74m) to the south where excavated. The sides were usually fairly moderately sloping (mostly *c.*30-50°), with a concave base where visible. The shallower segments had one silty clay fill, grey to greyish brown in colour, whilst deeper segment [1477] had two fills, comprising a lower greyish brown and an upper brownish grey silty clay. Inclusions consisted of occasional flints and some re-deposited chalky clay natural. Six sherds of medieval pottery were recovered, along with a similar number of residual Early Roman and Middle Iron Age pottery sherds.

4.7.3 Located alongside and parallel with the north end of G61, *c.*1m to its east, was a 5m-length of NNW/SSE aligned gully (G62) with a rounded terminus to the

south and which seemingly petered out to the north. The gully [1056] was 0.65m wide by 0.26m deep and had 40-60° sides and a concave base and was filled with mid yellowish brown silty clay with frequent flint inclusions. Extending out from the southern half of the gully was a stubby ENE/WSW arm *c.*2m long by 0.67m wide by 0.22m deep with similar sides and base, though this had a darker grey silty clay fill.

4.7.4 To the east of Gully G62 were a series of NNW/SSE aligned gullies (G63, G64, G65/G67 and G66) probably associated with agricultural or drainage activity. One continued beyond the edge of the site to the north, others petered out and one terminated, but all appeared to terminate in a rough line to the south. The gullies varied in length from 14m to 28m, in width from 0.4m to *c.*2m and depth 0.08m to 0.35m. Most were broadly straight, apart from G65/G67, which had a slight bend in it and G63, which appeared to split in two in the south, an affect that may have been caused by truncation. Numerous segments were excavated (G63 – [1058], [1062], [1064], [1377], G64 – [1020], [1066], [1474], G65/G67 – [1030], [1032], [1077], G66 – [1016], [1036], [1042], [1072]). Most of the gullies had moderate sides (30-40°), a concave base and a single clay silt fill varying in colour from light brown to dark grey to mid to dark greyish brown. Inclusions included occasional charcoal flecks, varying amounts of small to medium flints and rare flecks of manganese. Finds included residual Late Iron Age, Early Roman and Saxon pottery, medieval pottery, residual Roman CBM and baked clay. A soil sample taken from gully G64 [1066] fill [1065] contained charred grains of bread-type wheat, barley and possible oat, along with seeds of grasses, wild pea/bean and docks. Several charred twig fragments were also recorded and the small assemblage of well-preserved charcoal included possible alder, birch, oak and a fragment of bark.

4.7.5 A further series of parallel NNW/SSE ditches G71, G72, G74 and G75, were located in the southern half of the site, most situated to the south of boundary ditch G61. Ditch G75, some 9m long, continued beyond the edge of the site to the south, with an obscured terminal to the north. It was aligned with ditch G61 and may be a continuation of this boundary after a *c.*35m break. It was just over 1m wide by 0.40m deep and had 40° sides and a V-shaped profile. It had a root-disturbed mid greyish brown silty clay fill with frequent gravel inclusions from which one sherd of medieval pottery was recovered.

4.7.6 The *c.*35m gap between ditches G61 and G75 was blocked by a set of three staggered ditches (G71, G72 and G74), perhaps deliberately sited to help control the movement of livestock from one area to another. The middle ditch (G72) was c.28m long; it did not extend beyond the modern Golf Course Ditch to the north nor could it extend much more than 2m beyond its last plotted position to the south. The ditch was investigated in two places (Segments [1394] and [1426]) and was up to 1.16m wide by 0.35m deep with 30-50° sides and a concave base. The fill varied from yellowish brown to mid grey silty clay and contained occasional flint inclusions and fragments of baked clay. Finds from the two ditch segments included medieval pottery, animal bone and fired clay.

4.7.7 Ditch G71 to the NE was *c.*18m long, with a probable rounded terminus [35/012] in Evaluation Trench 35 at its north, and was not visible beyond the Golf Course Ditch to the south, thus potentially terminating roughly parallel with the ends of both ditch G61 and G72. One segment was excavated, establishing the ditch to

be 0.98m wide by 0.38m deep, with moderate to steep (50-70°) sides and a concave base. No finds were present in its single mid greyish brown clay silt fill. However, medieval pottery, residual Early Roman pottery, animal bone and fired clay were recovered from the fill of the terminus [35/011] during the evaluation.

4.7.8 Ditch G74, located in line with G71 and to the SE of ditch G72, was over 38m long, continuing beyond the edge of the site to the south and not visible within or beyond Evaluation Trench 36 in the north. As such, it probably terminated roughly alongside the southern end of ditch G72. Ditch G74 was investigated in four places (Segments [1238], [1275], [1287] and [1432]). It varied in width from 0.55m to 1.1m and depth from 0.33m to 0.49m with variable, fairly steep (*c.*50-80°) sides and a flattish base. It was filled by greyish brown silty clay with occasional flint chalk, and iron pan inclusions. Finds consisted of baked clay, one sherd of medieval pottery and a few sherds of residual Middle Iron Age and Early Roman pottery. Ditches G71 and G74 could also be construed to align with G65 in the north of the excavation area.

4.7.9 Located between G72 and G74 was a short length of curving gully (G76) *c.*6m long obscured by later deposits at each end. The gully was investigated in three segments ([1482], [1488] and [1490]) and was up to 1.1m wide by 0.37m deep to the west narrowing and shallowing to 0.55m wide by 0.23m deep in the east. All three interventions had variable *c.*30-60° sides and a flat to concave base. Cut [1482] contained two fills, a lower of mid brownish grey silty clay and an upper of darker greyish brown silty clay with occasional charcoal inclusions and which contained numerous sherds of medieval pottery. Single greyish brown fills with occasional flint inclusions were present in the other two segments.

4.7.10 Located SW of ditch G72 was ditch G73 that defined three sides of a small rectangular enclosure. Aligned NWW/SSE, this ditched enclosure was more-importantly positioned between boundary ditches G61 and G75, its eastern side effectively forming part of the same land division. As exposed, the enclosure was c.22m long by 11m wide and seemingly open at its southern end. The ditch was investigated in seven separate places (Segments [1085], [1087], [1093], [1326], [1405], [1409] and [1417]). It varied in width from 0.6m to 1.2m and in depth from 0.23m to 0.45m. Sides were relatively steep, varying from 45-80° down to a flat base. The sides of segment [1085] splayed out to 30° at the top and [1085] had a 10° sloping ledge at the top to the SW. All of the excavated segments contained a single silty clay fill, varying in colour from light grey to dark greyish brown. Gravel inclusions varied from occasional to frequent with occasional flecks of charcoal and Manganese. Twenty-three sherds of medieval pottery were recovered, along with smaller amounts of Middle Iron Age, Late Iron Age and Early Roman pottery. No contemporary features were present within the enclosed area, which may have been used for stock control.

4.7.11 A number of pits were located east of ditch G61. In the north of the area pit G69 ([1422]) was oval in plan, approximately 6m long by 3.9m wide and in excess of 1.2m deep (not bottomed for safety reasons). The size and depth of the pit may indicate its function as a quarry. It had reasonably steep (60-80°) sides and contained five fills ([1418, [1419], [1420], [1421] and [1437]). The earliest fill [1437] consisted of brown clay with rare flints and chalk flecks and may largely be an erosion product, though a few sherds of residual Late Iron Age pottery were retrieved from it. The second fill [1421] occupied much of the western half of the pit and comprised a mixed and mottled deposit of light grey and brown

clay and silt with occasional flint inclusions. Finds consisted of roughly equal numbers of medieval and residual Late Iron Age/Early Roman pottery sherds. Above were intermediate fills of brownish grey silty clay [1420] and dark grey silty clay [1419] containing occasional flecks of red baked clay and charcoal. The top of the pit was filled by mid brown silty clay [1418] with occasional flint inclusions. All three upper fills contained further sherds of medieval and residual earlier pottery.

4.7.12 Pit G78 located to the NE may also have been a quarry. This feature [1468] was about 6m long by *c.*3m wide and 1.9m deep. Part-excavated by machine, it was recorded from the surface for safety reasons. It had relatively steep (60-70°) slightly concave sides and a flat base. Two fills were identified: a main/lower fill of mid greyish brown silty clay [1467] and a more mixed southern upper fill [1466] containing both mid greyish brown and mid brown clay. The NW corner of this pit had been part investigated during the evaluation as [34/012] (Trench 34) from which two sherds of medieval pottery where recovered along with a few residual sherds of Early Roman pottery. Merging with the eastern side of pit G78, and not traced north of Evaluation Trench 34, was a short 4m+ length of NE/SW aligned gully (G77) [1332]. This had *c.*70° sides and a concave base and contained a single light brown blueish clay silt occasionally flecked with charcoal from which medieval and residual pottery was recovered. The ditch had been identified during the evaluation as [34/017], but had not been excavated.

4.7.13 In the far north of the area were two oval pits (G68). The smaller of the two, pit [1022], was 0.85m long by 0.70m wide by 0.14m deep with moderate 20-40° sides and a concave base. The larger, pit [1028], was 2m long by 1.90m wide by 0.11m deep with gradual 20° sides and a flat base. Both had similar single fills of light to mid greyish brown clay silt with occasional small flint inclusions and contained sherds of medieval pottery.

4.7.14 Two further pits (G70) were located to the SE of large quarry pit G69. The more easterly of the two, pit [1430] was sub-circular in plan, *c.*1.25m long by 1.20m wide by 0.20m deep with gradual 15-30° sides and a flat base. The more westerly, pit [1434], was oval in plan, 1.2m long by 0.75m wide by 0.10m deep with 20-30° sides and a flat base. Both had similar single fills of mid greyish brown clay with frequent rounded to angular flint inclusions and contained sherds of medieval pottery along with residual Late Iron Age material.

Open Areas 17 and 18 (OA17 and OA18)

4.7.15 It is notable that all of the demonstrably medieval discrete features were found in close proximity of the FS5 ditches (i.e. within the boundary zone). No other medieval features were present in OA17 or OA18 and these areas most likely represent open fields.

4.8 Period 5: Post-medieval (Figure 9)

4.8.1 There was no evidence of medieval activity extending beyond the late 13th century or occurring in the early post-medieval period. It is speculated that this reflects a change in land use associated with the creation of the New Hall estate, first documented in 1301, and the development of a deer park across the

surrounding landscape which continued in use until the 17th century. Post-medieval land use is therefore not demonstrated until the 18th/earlier 19th century.

4.8.2 Later post-medieval use of the site consists mainly of two large boundary ditches (G79 and G81) arranged broadly perpendicular to each other and two associated pits (G82). These are dated on clear stratigraphic evidence and by the presence of a variety of post-medieval finds including glass, brick, tile and pottery. The ditches form part of a field system (FS6) and divide the excavation site into three distinct entities (OA19–OA21), probably fields. These boundaries are not depicted on historic Ordnance Survey mapping and so would appear to have gone out of use prior to the later 19th century. There are few potential contemporary features within the three open areas and little can be surmised as to their function beyond that of general agricultural use.

4.8.3 Ditch G79 was aligned NW/SE and was 125m long and had a rounded terminus to the NW and continued beyond the edge of the site to the SE. It was investigated in seven segments ([1109] / [1146] / [1148] / [1184] / [1271] / [1328] and [1499]) and found to vary in width from 1.4m to 2.5m and in depth from 0.28m to 0.69m. It generally contained one or sometimes two fills of greyish brown to yellowish brown silty clay. Segment [1271] had a third dark grey fill [1300], probably an erosion product from an adjacent truncated pit. This ditch cut across all features in its path, though recovered post-medieval finds were limited to glass fragments from a late 17th to early 18th century wine bottle, a piece of medieval / post-medieval brick and several sherds of residual Late Iron Age pottery.

4.8.3 Ditch G81 was aligned NE/SW and also cut across all features in its path. It was some 80m in length and continued beyond the edge of the site to both north and south. It was investigated in five segments ([1074], 1226], [1330], [1373] and [1465]) and in Evaluation Trench 34 (as [34/005]). The ditch varied in width, being little more than 1m wide in the north but broadening out to well over 2m in the centre and south, and ranged in depth from 0.35m to 0.86m. For the most part it had moderately sloping sides (*c.*30-50°) and a concave base, and had similar fills, both in colour and composition, to contemporary ditch G79. Finds from the excavation included fragments of 16th/17th century brick and residual Roman and medieval pottery, whilst 19th century glass and 15th/16th century pottery was recovered during the evaluation.

4.8.5 Arranged perpendicular to ditch G79, and probably integral to it, was a *c.*21m length of ENE/WSW aligned ditch (G80) with a poorly-defined, probably rounded, end to the west. The ditch was investigated by means of one segment [1522] and was established to be 1.8m wide by 0.58m deep, with slightly suspect *c.*50° sides and a flat base. It was filled with mid to pale yellowish brown silty clay [1520] mixed with chalky yellow orange clay (redeposited natural) [1521]. Finds consisted solely of three small residual sherds of Roman pottery. Whilst this ditch has been assigned a post-medieval date, being tentatively assumed to define a sub-division within OA20, the mixed re-deposited nature of its fill is in some ways suggestive of a more recent date.

Open Area 19 (OA19)

4.8.4 At the NW end of ditch G79, and roughly arranged perpendicular to it, were two pit-like features [1186] and [1188] (G82). Pit [1186] was the smaller being vaguely oval in plan, *c.*1.2m long by 0.2m deep with gradual 20-30° sides and a concave base. Pit [1188] was sub-rectangular in plan, 3.6m long by 0.42m deep, with steeper 40-70° sides and a flat, if undulating, base. Both pits were filled with mid greyish brown clay that, in the case of the deeper pit [1188], was speckled with iron pan. A variety of early post-medieval finds (tile, brick, nails) were recovered from the latter feature. The relationship between the pits was uncertain, though the two seemingly merged, suggesting a degree of contemporaneity.

4.8.6 A possible access/exit point between OA19 and OA20 is indicated by a *c.*2m gap between the end of ditch G79 and the side of ditch G81. This may have been blocked or severely constricted, perhaps at a slightly later date, by the construction of the G82 features, in-particular that of pit [1188].

Open Area 21 (OA21)

4.8.7 One solitary pit was present in OA21. This pit, G18 [1006], was irregular in plan, *c.*2m long by 0.20m deep, and contained two silty clay fills. The presence of brick was noted, suggesting this feature was probably of post-medieval date.

4.8.8 No post-medieval features were found to occupy the exposed extent of OA20.

4.9 Period 6: Modern (Figure 10)

4.9.1 A number of modern features and deposits were present across the development area; most are likely to be of later 20th century date.

4.9.2 In the east of the area was a poorly defined oval pit [1324] (G83) that cut the top of undated ditch G87. It was 0.78m long by 0.26m deep and had a mixed light greyish brown silty sandy clay fill [1323] with darker staining. Although it contained residual 1st century AD pottery, this feature appeared to be of recent date.

4.9.3 Located in disturbed ground at the southern edge of the site was a large pit or ditch end [1342] (G85), 5.5m long by over 3m wide and 0.66m deep. This contained three fills ([1338], [1340] and [1341]), the upper of which [1338] contained residual single sherds of Late Iron Age and Middle Iron Age pottery. However, underlying intermediate fill [1340] contained redeposited natural clay, traces of decayed vegetation and modern gravel aggregates and clearly was of recent date. This fill also obscured the eastern edge of the feature. Lower fill [1341] was cleaner without any obvious modern intrusions but was heavily root disturbed.

4.9.4 In the NW corner of the site sinuous gully [1054] (G84) was most probably of modern date. This was *c.*10m in length by 0.44m wide, but shallow at only 0.10m deep where investigated. It cut an Early Roman ditch to the north and a medieval ditch to the south. It was filled with light grey clay silt containing possible organic material. Finds consisted of one sherd of post-medieval pottery

along with numerous sherds of Middle Iron Age pottery perhaps deriving from an earlier feature truncated by the gully.

4.9.5 In the NE of the site a large elongated area of modern disturbance (not context numbered) was located to the immediate east of ditches G38 and G48 in Evaluation Trench 44. This consisted of a large sub-circular cut *c.*20m+ in diameter filled with a mixed deposit of re-deposited clay.

4.9.6 A potential modern deposit (G92) also sealed a large number of pits and ditch intersections of Late Iron Age, Early Roman and Medieval date in the south centre of the site. This elongated deposit was up to 0.3m deep/thick where investigated and was situated in a low-lying position in the local topography that for much of the duration of the excavation was occupied by standing water.

4.10 Undated and Natural features (Figure 10)

4.10.1 A comparatively small number of entirely undated features were spread across the excavation area. These consisted of gully and post-hole groups G86, G87 and G88, pit groups G89 and G90 and single pits G91, G94 and G96. Some of these features may be of archaeological origin whilst others may be natural. One pit [1040] in the north of the site was identified as a possible tree throw.

5.0 FINDS

5.1 Summary

5.1.1 A large assemblage of finds was recovered during the investigations of the Phase 5 excavation area at The Channels development site, Little Waltham. All finds were washed and dried or air dried as appropriate. They were subsequently quantified by count and weight and bagged by material and context. The hand-collected bulk finds are quantified in Appendix 3; material recovered from the residues of environmental samples is quantified in Appendix 5. Seven objects were assigned unique registered finds numbers, detailed in section 5.16 and Table 15. All finds have been packed and stored following CIfA guidelines (2014).

5.2 **Flintwork** by Karine Le Hégarat

5.2.1 In total, 46 pieces of struck flint weighing 758g were recovered during the evaluation and excavation (Table 1). They were hand-collected and subsequently retrieved from five bulk soil samples. A small quantity of unworked burnt flint (1801g) was also found. The artefacts were thinly spread across the site. The burnt flint fragments came from 18 numbered contexts, and the pieces of struck flint came from 28 contexts. No diagnostic pieces were found, and based on morphological and technological grounds only a broad Neolithic to Late Bronze Age / Early Iron Age date can be proposed for the small assemblage.

Category	Flakes	Blade-like flake	Cores	Irregular waste	Cores	Retouched form	Total
No. Eval	13	2	-	-	-	2	17
No. Exc	18	2	3	3	2	1	29
Total	*31*	*4*	*3*	*3*	*2*	*3*	*46*

Table 1: Flintwork quantification

Methodology

5.2.2 The pieces of struck flint were individually examined and classified using a standard set of codes and morphological descriptions (Butler 2005, Ford 1987 and Inizan *et al.* 1999). Basic technological details as well as further information regarding the condition of the artefacts (evidence of burning or breakage, degree of cortication and degree of edge damage) were recorded. Dating was attempted when possible. The assemblage was catalogued directly onto a Microsoft Excel spreadsheet.

The assemblage

5.2.3 The assemblage consists mainly of unretouched pieces of flint débitage. Flakes predominate (Table 1). No characteristics such parallel lateral edges, parallel ridges on the dorsal surface or platform preparation were noticed on the four blade-like flakes. The flakes display irregular morphologies. Where present, platforms are principally unprepared, mostly plain and occasionally cortical. A flake with a small Herzian cone was also noted. Thin flake removal scars on the dorsal face are uncommon, and, overall the flakes provides little evidence for

careful reduction strategy, and they are unlikely to predate the Middle Neolithic period. A multiplatform flake core (115g) and a fragmentary core (186g) were used to remove flakes. They are both crudely worked. Three modified pieces were also present; an end scraper and two miscellaneous retouched pieces. The end scraper is in a poor condition and a broad Neolithic to Middle Bronze Age date is most likely for it. The other two modified pieces could be later.

5.3 Prehistoric Pottery by Anna Doherty

5.3.1 A small assemblage of Iron Age pottery was recovered from the site, totalling 152 sherds, weighing 1150g. Most of this material was recovered in relatively small stratified groups which were not individually very closely datable; however, taken as a whole, the assemblage appears relatively coherent in terms of the range of fabrics and forms represented. It probably suggests activity towards the end of the Early Iron Age and in the early part of the Middle Iron Age.

Methodology

5.3.2 The pottery was examined using a x20 binocular microscope and recorded according to a site-specific fabric type-series in accordance with the guidelines of the Prehistoric Ceramics Research Group (PCRG 2010). Fabric descriptions are provided in Table 2. The pottery was quantified by sherd count, weight and estimated vessel number (ENV) on pro forma records and in an Excel spreadsheet.

Fabric	Description
FLIN1	A very silty matrix with flint of 0.5-1.5mm
FLIN2	Moderate ill-sorted flint of 0.5-4mm in a slightly silty matrix
FLQU1	Sparse flint, mostly of 1-3mm though very rarely 5mm or more. Flint can be calcined and angular but in some cases, it comprises rounded pebbles. Matrix contains common rounded quartz mostly of 0.6-0.8mm and rarely up to 2mm
FLQU2	Rare/sparse flint of 0.5-2mm with common quartz of 0.6-0.8mm
FLQU3	Moderate/common flint of 0.5-3mm with sparse/moderate quartz of 0.6-0.8mm
QUAR1	Moderate/common quartz of 0.4-0.6mm; v. rare flint of <1mm may occur in some cases
QUAR2	Common quartz of 0.6-0.8mm; very rare flint of up 3mm may occur in some cases
QUAR3	A silty matrix with rare/sparse larger quartz to 0.6mm; rare linear organic matter and rare flint of up to 3mm can occur
QUAR4	A fine silty matrix with sparse black iron rich inclusions to 1mm

Table 2: Site-specific pottery fabric definitions

Context of deposition

5.3.3 The assemblage was predominantly stratified in Period 1 ditches and pits, but only four features produced more than 10 sherds. The assemblage lacks any substantial stratified assemblages. In fact the largest group comprising 42 fairly fragmentary sherds, mostly from a single vessel, are considered residual in Period 2 ditch [1516] (G58).

Fabrics

5.3.4 As shown in Table 3, the assemblage comprises three main fabric groupings. The first of these are non-sandy flint-tempered wares (FLIN1, and FLIN2). In general, flint-tempered fabrics lacking coarse quartz sand are more characteristic of the Late Bronze Age/earliest Iron Age. Certainly the coarsest fabric variant of this type (FLIN2), with inclusions ranging up to 4mm in size, could pre-date the rest the assemblage, though given that very fragmentary bodysherds were found without any other pottery in evaluation fill [50/004] of ditch [50/005], they are not considered conclusively dated. A few other finer non-sandy flint-tempered wares (fabric FLIN1) were also predominantly found in isolation in evaluation trenches outside the main excavation area. These too, could conceivably be a little earlier than the rest of the pottery but equally their date range could extend into well into the Iron Age.

Fabric	Sherds	Weight (g)	ENV
FLIN1	4	68	3
FLIN2	6	14	1
FLQU1	38	391	12
FLQU2	11	47	5
FLQU3	1	14	1
QUAR1	28	182	20
QUAR2	16	174	11
QUAR3	47	257	6
QUAR4	1	3	1
Total	152	1150	60

Table 3: Quantification of Iron Age pottery fabrics

5.3.5 More generally, the assemblage comprises about one third sandy flint-tempered wares and about two thirds quartz rich fabrics, where flint is very rare or absent. The first grouping is predominantly made up by fabrics (FLQU1) which are quite sparsely tempered with flint but which include some surprisingly coarse inclusions of up to 5mm. The remainder of the sandy flint-tempered wares are a little finer but still tend to include some flint of up to 2-3mm (fabrics FLQU2 and FLQU3).

5.3.6 The remaining quartz-rich fabrics mostly contain fairly coarse quartz in varying frequencies (QUAR1, QUAR2 and QUAR3) with a single sherd in a finer, siltier fabric variant (QUAR4).

Forms

5.3.7 A small number of diagnostic rims were recovered, most of which were too fragmentary to give a clear sense of the precise form, although all come from jars with necked profiles. In the few instances where more substantial vessel profiles are present, the material appears in keeping with a transitional Early/Middle Iron Age attribution. For example, in fill [1459] of ditch [1461] (G9), a jar with a well-defined rounded shoulder and flaring flattened rim was decorated with light finger-tipping along the rim top. In fills [1304] and [1515] of ditches [1305] (G6) and [1516] (G58), jars with sinuous profiles but fairly long necks and slightly flattened

rim profiles were recorded, the latter again, finger-tipped along the rim. Lastly, in fill [1233] of ditch [1234] (G28), a shorter necked jar with a sinuous shoulder and rounded rim profile was recovered.

Discussion

5.3.8 Although the assemblage is small and lacking in large diagnostic stratified groups, the limited range of fabrics and forms encountered is entirely typical of the Early/Middle Iron Age transition, with a likely emphasis around the later 5th to 4th centuries BC. When compared with local type-sites for the Late Bronze Age/Early Iron Age Post Deverel-Rimbury tradition like Lofts Farm, Springfield Lyons or Windmill Field, Broomfield (Brown 1988; 1995; 2013), the current assemblage is clearly much less dominated by flint-tempered fabrics. Firmly Early Iron Age forms with strongly carinated tripartite profiles or very extensive use of finger-tipping on shoulders *and* rims are also less in evidence. Nevertheless, the assemblage retains some elements of Early Iron Age origin, like light finger-tipped decoration (on rims only) and flattened rim profiles.

5.3.9 While the dominance of quartz rich fabrics is suggestive of a date range extending into the Middle Iron Age, the fairly substantial component of flint-tempered wares marks this assemblage out as probably slightly earlier than well-developed Middle Iron Age assemblages such as that from Howell's Farm, Great Totham (Brown 1998, 139). The assemblage appears to bear fairly close comparison to some of the earlier (Period II) material from Little Waltham (Drury 1978), which tended to be more decorated and more often associated with flint temper than that from that from the succeeding period (Period III). Current understanding of pottery chronology might however, place material of this type slightly earlier than the *c*.3rd-century inception suggested in the original Little Waltham publication (ibid, 118).

5.4 Late Iron Age and Roman Pottery by Isa Benedetti-Whitton

5.4.1 A large assemblage of Late Iron Age and Roman pottery totalling 5,196 sherds, weighing 62,170g, was collected during the Channels Phase 5 excavation. The pottery included a broad range of fabrics and forms, including imported fabrics Terra Rubra, Terra Nigra and Gaulish colour-coated and white wares, in addition to samian. An unusually diverse range of amphora fabrics were also present in the assemblage and may demonstrate links to urban or military supply networks. The full range of fabrics and the respective quantities and weight of the pottery found in each is shown below in Table 4.

Fabric	Fabric description	Sherd quantity	ENV	EVE	Weight (g)
Amphorae					
ABAET	Baetian amphora	7	3		197
AMISC	Miscellaneous amphora fabrics	1	1		56
CAM AM 1*	Campanian (Black sand) amphorae 1	5	2		219
CAM AM 2*	(Northern) Campanian amphorae 2	3	3		505
GAL AM 1*	Gaulish amphora 1	7	2		137
P&W AM 7*	Peacock & Williams Class 7 amphorae	1	1		64
P&W AM 9*	Peacock & Williams Class 9 amphorae	2	2		87
Coarse wares					
BSW 1	Unsourced black surface wares (sand-tempered)	427	74	2.225	3880
BSW 2	Unsourced black surfaced wares (grog-tempered)	1462	424	7.645	13404
BUF	Unsourced buff wares	71	17	0.725	541
COLB	Colchester buff wares	8	1		12
ESH	Early shelly wares	13	5		161
GROG	Unsourced grog-tempered wares	1748	713	8.34	21883
GROG RS	Unsourced oxidised grog-tempered wares	386	150	1.915	7381
GRS	Unsourced sandy grey wares	486	167	1.875	3548
RED	Unsourced oxidised wares	123	59	0.345	982
VRM	Verulamium region white ware	237	6	0.25	1611
Imported wares					
CGCC	Central Gaulish colour coated wares	3	1		4
CGSW	Central Gaulish samian ware	1	1		8
EGSW	Eastern Gaulish samian ware	1	1		59
GAB TR 1C*	Gallia-Belgica Terra Rubra 1C	4	1		8
NGWF	North Gaulish white fine wares (fine)	16	4		58
NGWFS	North Gaulish white fine wares (with sand)	3	3	0.175	40
TN	Terra Nigra	1	1		15
TR	Terra Rubra	1	1		5
SGSW	South Gaulish samian ware	13	6	0.185	52
Miscellaneous					
MWSRF	Miscellaneous white- or cream-slipped sandy red wares (fine)	3	3		4
MWSRS	Miscellaneous white- or cream-slipped sandy red wares (with sand)	1	1		5
STOR	Storage jar fabrics	161	55		7237
UPOT	Unknown (vitrified)	1	1		7
Totals:		*5196*	*1709*	*23.68*	*62170*
*National Roman Reference Collection fabric (Tomber and Dore 1998)					

Table 4: Quantification of pottery by fabric, ENV, EVE

Methodology

5.4.2 The pottery was examined using a x20 binocular microscope and quantified by sherd count, weight, Estimated Vessel Number (ENV) and by Estimated Vessel Equivalent (EVE). Fabric were recorded using fabric codes developed for Elms Farm, Heybridge (Biddulph *et al* 2015) supplemented by The National Roman Fabric Reference Collection (Tomber and Dore 1998) and amphorae forms as classified by Peacock and Williams (Peacock and Williams 1986). Forms were catalogued using codes devised for Camulodunum (Hawkes and Hull 1947) and Chelmsford (Going 1987).

Fabrics

5.4.3 A wide range of fabrics were identified within the pottery assemblage. Coarse, grog-tempered wares dominate (GROG; GROG RS; BSW 2) and indicate a Late Iron Age/Early Roman date. Black-surfaced vessels (both grog-tempered BSW 2 and sand-tempered BSW 1) are traditionally associated with the 'Romanising' period of Roman occupation, after *c*.AD50. There was also a lesser, but still large, quantity of grey sandy wares (GRS) and oxidised wares (RED) that cannot be closely dated and are fabrics used throughout the Roman period; although, found alongside so much very early Roman pottery would suggest a coeval date within the 1st century AD.

5.4.4 Regionally traded wares were rare, and comprised only Colchester buff (COLB) and Verulamium region white ware (VRM), which are amongst the earliest wares to be traded within Roman Britain. Some unsourced white-slipped wares (MWSRF/MWERS) were also present.

5.4.5 Many of the imported wares, for example the small quantities of Terra Rubra (GAB TR 1C*; TR) and Terra Nigra (TN) and the Gaulish white (NGWF/S) and colour coated wares (CGCC) also indicate an early date, potentially before the Conquest, and also demonstrate wealth and status within the populations using these imported 'Gallo-Belgic' vessels. Samian wares were also recovered, most commonly in earlier, south Gaulish fabrics (SGSW) although single sherds of central and eastern Gaulish fabrics were also present (CGSW; EGSW).

5.4.6 Trade between Britain and the mainland of the Roman Empire is also shown by the amphora sherds recovered from site. With the exception of the rim sherds of Baetian amphora, amphora fabrics were identified using the images and written descriptions provided in the NRFRC (Tomber and Dore 1998), which preliminarily indicated an unusually diverse range of amphorae were present on site. However, in order for this to be properly established the amphorae sherds from site would need to be compared with firmly identified examples of the amphora fabrics to check the verity of the fabric identifications.

5.4.7 Based on the provisional fabric identifications, amphorae sherd found on site were imported from Spain (ABAET), Italy (CAM AM 1, CAM AM 2, P&W AM 7), and a single sherd of Rhodian amphora (P&W AM 9) wall also recorded. Given the proximity of this site to Chelmsford (~6km) the settlement producing the pottery recovered could have been more urban in character or associated with a military site; this would explain the greater range amphorae types present.

Forms

5.4.8 The assemblage was fairly well preserved and 28% of the pottery in terms of sherd count and ~33% in terms of weight could be identified as a particular form type. Of these, the majority were jars, particularly CAM 254 and CAM 255 although sherds of CAM 260, CAM231-33, and CAM 229 were also present, several of which display the cordoned decoration that is common to Late Iron Age/early Roman pottery. Cordoned Going G16 jars were also numerous, but many of the most common jar types identified, e.g. Going G3, G19-20, G24, G44 and G45 are less closely dateable on form alone.

5.4.9 A large number of Verulamium white ware fragments suggested a form with both flagon and amphora characteristics; these were very thin walled, but with an usually thick rim and at least one handle. More typical flagon sherds, also made from Verulamium white ware were also present.

5.4.10 Other vessels associated with dining were also recovered, including imported Gallo-Belgic platters and close imitations in grog-tempered wares (e.g. CAM 3A, CAM 5A, samian dishes (ADR18/31), butt-beakers (CAM 113, CAM 115), globular beakers (H1), carinated bowls (CAM 210-212, 215, 217) and early bead and flange mortaria (D1). One fragment of possible central Gaulish samian mortaria was recorded based on the abraded grits, but was very poorly preserved. The CAM 113 butt beaker present was an imported North Gaulish white ware vessel, and less diagnostic beaker sherds in Central Gaulish colour-coated ware were also found. Other sherds of Going H1 (ENV: 3) were made from sandy grey wares.

5.4.11 Dishes were significantly less common, with only one base sherd of a Dragendorff 18/31 samian dish identified across the whole assemblage (B DR 18/31). A single example of samian bowl was also identified, a Dragendorff 37, one sherd of which included part of the decorated zone. Cups were rare across the assemblage as well, and represented by one samian Dragendorff 27 cup (F DR 27) and three imitation samian cups, all of which appeared based on the Dragendorff 27. The imitation samian vessels were made from grog-tempered fabrics indicating their 1st century date.

Distribution of pottery by phase

5.4.12 The pottery was nearly all of 1st-century date; however, some refinement in dating is possible based on those sherds that could date prior to the Conquest *c*.AD10-70/80 (Period 2) and that which is more typical of the post-Conquest period, *c*.AD50-70/80 (Period 3). Roman pottery was also recovered from post-Roman contexts, but this only makes up a small proportion of the overall assemblage.

Period 2

Form class	Sherd count	ENV	EVE	Weight (g)
Amphora	1	1		191
Bowl	3	3	0.42	98
Jar	101	19	1.655	1303
Platter	5	2		23
Urn	1	1		48
Unknown	416	197	0.525	5007
Total	*527*	*223*	*2.6*	*6670*

Table 5: Quantification of pottery from Period 2 features

5.4.13 A total of 527 sherds of Late Iron Age and Roman pottery weighing 6670g were collected from Period 2 features; a summary of the forms identified within this group is shown in Table 5. Approximately 52% of the Period 2 pottery in terms of sherd count comprised grog-tempered and black-surfaces sherds. A large number of CAM forms were present, including the jars and bowls detailed above, the occasional platter and amphora sherd and the pedestaled base sherd of a CAM 204 urn. Going G16 and G19/20 jars were also common.

5.4.14 A small quantity of possible pre-Conquest imported fabrics were present across the Period 2 pottery, often only represented by a single sherd. These include platter sherds made from Terra Nigra (TN) and Terra Rubra (GAB TR 1C), and one undiagnostic sherd of North Gaulish white ware, all recovered from pit [1281] (G14).

5.4.15 The largest quantity of Period 2 pottery was found in pit [1281] (G14), totalling 239 sherds weighing 3308g. In addition to the platter fragments, this group included a number of CAM and Going jar and bowl sherds and sherds of a Dressel 2-4 amphora in a Campanian fabric (CAM AM 2). None of the other Period 2 features produced significant quantities of pottery, with the second and third largest groups consisting of the pottery recovered from ditch [1369] (G10) and pit [1356] (G17), respectively totalling 76 sherds weighing 626g and 54 sherds weighing 482g. Most of the Period 2 features produced less than 20 sherds.

Period 3

Form class	Sherd count	ENV	EVE	Weight (g)
?Beaker	24	2		116
?Flagon	225	2		1293
?Lid	1	1		26
Amphora	13	6		734
Beaker	39	9	1.195	156
Bowl	27	9	0.9	570
Bowl jar	2	1	0.175	58
Cup	4	4	0.235	18

Dish	1	1		59
Flagon	6	1	0.25	131
Jar	955	128	15.66	13477
Lid	1	1		8
Mortaria	22	2		342
Narrow neck jar	48	2	1.25	1442
Platter	11	3		50
Unknown	3126	1181	1.265	35450
Total	*4505*	*1353*	*20.93*	*53930*

Table 6: Quantification of pottery from Period 3 features

5.4.16 The comparative quantities of different form types found in Period 3 features are shown in Table 6. The proportion of grog tempered wares actually increases during this time, with just over 67% of the pottery by sherd count being formed of grog-tempered wares (GROG, GROG RS and BSW 2). However, the range of other fabrics present also increases over the second half of the 1st century. The establishment of particular regional kilns can be seen by the presence of Verulamium Region white ware and Colchester buff ware, and the unsourced but most probably locally or regionally produced sherds of unsourced white-slipped ware (MWSRF/S) are also found in Period 3 features.

5.4.17 The occasional sherd of Terra Nigra is still found, but there is a clear increase in the amount of other imported wares such North Gaulish white ware sherds from ditches [1173] (G39) and [1462] (G33), including many fragments of the same beaker-like vessel from [1173] (Going H). Multiple sherds of another imported beaker make from Central Gaulish colour-coated ware were retrieved from ditch [1454] (G33). Fourteen of the fifteen sherds of samian ware collected from site were found in Period 3 features. A black-surfaced replica Dragendorff 27 cup rim was also found in pit [1439] (G54), as were various other non-diagnostic sherds in various unsourced coarse wares and a sherd of Verulamium region white ware.

5.4.18 Period 3 features produced much larger groups of pottery than those from Period 2. Fourteen features produced over one hundred sherds of pottery and over a kilogram in terms of weight, of which five features produced over 3kgs of pottery: cleaning layer [1014] (G25), ditches [1161] and [1173] (both G39), ditch [1070] (G24) and ditch [1004] (G25). Ditches [1008] and [1018] (both G25), and ditch [1371] (G43) also contained substantial amounts of pottery, each over 2kg. Nearly complete vessels were collected from ditch [1008] (G25) and ditches [1100] and [1173] (both G39). All were grog-tempered jars, respectively one Going G3, one G20 and one CAM 231/33.

Periods 4 and 5

5.4.19 Only a small amount of Roman pottery was collected from post-Roman features dating to the medieval and post-medieval periods; respectively 117 sherds weighing 1036g and 33 sherds weighing 159g. Despite being recovered from later dating features, it is likely that this material originates in the Late Iron Age/Early Roman period. Much of the pottery, even from these later features,

was grog-tempered and largely replicated the same range of coarse wares found in Period 2 and 3 features.

5.4.20 There were no clearly later dating fabrics that would indicate mid- or later-Roman activity, and the latest dating sherd was a piece of central Gaulish samian ?mortarium found in pit [1422] (G69), which would have been produced during the second half of the 2nd century AD. It was not well-preserved, but the pitting on one surface suggested the presence of grits, since worn away.

5.5 Post-Roman Pottery by Helen Walker

5.5.1 A total of 264 sherds of medieval and post-medieval pottery weighing 2651g was excavated from 32 contexts. The pottery has been catalogued according to Cunningham's typology of post-Roman pottery in Essex (Cunningham 1985, 1-16; expanded by Drury et al.1993 and Cotter 2000). Some of Cunningham's rim-forms are quoted in this report and the pottery is quantified by ware, sherd count and weight in Table 7. All percentages quoted are calculated by weight.

Pottery by ware	**Sherd Nos**	**Wt (g)**
?Saxon pottery	1	5
Shell-tempered ware	3	46
Shell-and-sand-tempered ware	3	26
Sand-with-shell-tempered ware	14	51
Early medieval ware	2	53
Early glazed ware	2	8
Hedingham fineware	9	152
Hedingham coarseware	23	255
Medieval coarseware	177	1890
Mill Green coarseware	20	106
Greyware	2	22
Buff ware	1	2
Sandy orange ware	5	26
Post-medieval red earthenware	1	7
Unidentifiable	1	2
Total	*264*	*2651*

Table 7: Post-Roman pottery quantification by ware, shown in approximate chronological order

5.5.2 Virtually all the material is medieval, spanning the 12th to 14th centuries. Looking at the assemblage overall, early medieval fabrics, which span the 11th to early 13th centuries account for just 7% of the total assemblage. These fabrics comprise the coarse, sand-tempered, early medieval ware and the various early medieval shelly fabrics (itemised in Table 7). Out of these fabrics, sand-with-shell-tempered ware accounts for the largest component. Also of interest is the presence of an early glazed ware.

5.5.3 Hedingham products, manufactured from the mid-12th to early/mid-14th centuries, are very much in evidence and together comprise 15% of the total assemblage. Also present are examples of Mill Green ware. Like Hedingham ware this is another major Essex industry producing both fine and coarsewares, but has a somewhat later start date of mid-13th century. In Chelmsford there is some evidence that Mill Green ware superseded Hedingham ware during the later 13th century (Walker 2016, 203) and this may also be the case at sites close to Chelmsford, such as here at Channels. Surprisingly, no definite examples of Mill Green fineware occurred at this site, although some very abraded sherds of sandy orange ware may actually be examples of Mill Green ware with a sandy fabric. Mill Green coarseware is, however, present but is less abundant than Hedingham coarseware, accounting for 4% of the total. The most abundant ware is medieval coarseware comprising 71% of the total. This is a general category for coarsewares that cannot be attributed to a particular industry, that span the later 12th to the end of the 14th centuries. Medieval coarseware can sometimes be assigned a closer date by vessel form and by fabric as some is borderline early medieval ware, which it superseded around the beginning of the 13th century. Whether it is wheel-thrown or coil-built also indicates the date as wheel-throwing does not become common until the mid- to late 13th century (Cotter 2000, 107).

5.5.4 Some features appear earlier than others and a number may date to the later to 12th to earlier 13th centuries. These are dated by the presence of early medieval fabrics, early type medieval coarseware, early rim types and the absence of Mill Green coarseware and comprise: pit [1022] (G68) fill [1021], ditch [1056] (G62) fill [1055], ditch [1064] (G63) fill [1063], ditch [1072] (G66) fill [1071], ditch [1074] (G81) fill [1073], ditch [1077] (G65) fill [1076], ditch [1228] (G61) fill [1227], ditch [1297] (G75) fill [1296], ditch [1330] (G81) fill [1329], ditch [1332] (G77) fill [1331], ditch [1394] (G72) fill [1393], ditch [1405] (G73) fill [1404], ditch [1409] (G73) fill [1408], cut [1411] (G30) fill [1410], pit [1430] (G70) fill [1429], ditch [1432] (G74) fill [1431], gully [1482] (G76) fills [1480] and [1481]. Diagnostic material from these features comprises:

- Thick-walled H2 rim in Hedingham coarseware from a storage jar or large cooking-pot datable to the early to mid-13th century, from ditch [1077] (G65)
- An H2 cooking-pot rim in medieval coarseware, datable to the early to mid-13th century, from ditch [1394] (G72)
- Part of a cooking-pot with a B4 rim in Hedingham coarseware, obviously coil-built and showing fire-blackening around rim and sides, datable to c.1200, from ditch [1409] (G73)
- Two body sherds of early glazed ware in a pale grey flinty fabric, showing a partial olive-green glaze, from either a jug or tripod pitcher, datable to the mid-12th to early 13th century, from ditch [1409] (G73)

5.5.5 The sherd of buff ware listed in Table 7 occurred in the primary fill of gully [1482] (G76) fill [1481], beneath sherds of sand-with-shell-tempered ware in the upper fill, and given its context is perhaps more likely to be Roman. Similarly the sherds of greyware listed Table 7 are from ditch [1394] (G72) and may also be Roman.

5.5.6 There are other features that appear to be later, and can be dated by the presence of Mill Green coarseware, sandy orange ware and more developed rim

types, to the mid-13th to 14th centuries. These features comprise: ditch [1016] (G66) fill [1015], pit [1028] (G68) fill [1027], gully [1032] (G67) fill [1031], ditch [1042] (G66) fill [1041], ditch [1066] (G64) fill [1065], pit [1422] (G69) fills [1418], [1419], [1420], [1421], pit [1434] (G70) fill [1433], and ditch [1488] (G76) fill [1487]. These features also contain earlier pottery including a shell-tempered ware H2 rim belonging to either a bowl or cooking-pot, from ditch [1042] (G66). This is the only diagnostic piece in an early medieval fabric, and is a late form for this ware providing a date of early 13th century. Also of interest (from pit [1028], G68) is part of a Hedingham fineware jug with a strap handle showing 'cat's claw' decoration as found on early rounded jugs datable to the mid-12th to earlier 13th century (cf. Cotter 2000, fig.49.13). The sherd of possible Saxon pottery noted in Table 7, was residual in ditch [1066] (G64). Diagnostic material which dates these features comprises:

- Cooking-pots with H1 rims, current throughout the 13th century, in Mill Green coarseware and medieval coarseware, as with the earlier rim types, several show fire-blackening around the rim and sides, from pit [1028] (G68), ditch [1042] (G66), ditch [1066] (G64), and pit [1422] (G69) fill [1418]
- Cooking-pot rims in medieval coarseware that are mid-way between H1 rims and the later E5 rims and probably date to the later 13th century, from ditch [1042] (G66)
- A horizontal flanged rim in medieval coarseware perhaps from a bowl, 13th to 14th century, from pit [1422] (G69)
- Flat bases (as opposed to sagging bases) indicating a 14th century date in medieval coarseware and Mill Green coarseware, from ditches [1016] (G66) and [1066] (G64)

5.5.7 Ditches [1046] (G61) fill [1045], [1093] (G73) fill [1092], and [1409] (G73) fill [1408] produced only one or two sherds of undiagnostic medieval coarseware and could belong in either of these two groupings.

5.5.8 Only one feature, ditch [1054] (G84) fill [1053], produced post-medieval pottery comprising a single sherd of post-medieval red earthenware. It consists of an abraded rim fragment with reduced surfaces and no trace of glaze and may date to the 16th century, although a later date cannot be precluded.

Discussion

5.5.9 The pottery spans the later 12th to later 13th centuries, with the flat base fragments the only examples continuing into the 14th century. The medieval assemblage appears entirely domestic and typical in that it comprises mainly medieval coarsewares and only a few finewares. It is also typical in that most of the coarseware vessels are cooking-pots. Other coarseware vessel forms comprise only possible storage jars, and a possible bowl. No coarseware jugs were identified. Some of the cooking-pots show fire-blackening around the rim and sides, and this is also typical and shows they were stood in or by a wood-burning hearth.

5.5.10 The pottery supply appears in entirely local; Hedingham ware comes from production sites in and around Sible Hedingham in north-central Essex and Mill Green ware was made at Mill Green and other centres to the south of Chelmsford.

Both types are common in central Essex. There is not enough Mill Green ware present to determine whether, as at Chelmsford, this ware superseded Hedingham ware in the later 13th century, but it has to be said that no later types of Hedingham ware are present, none is later than the early to mid-13th century. The one sherd of post-medieval red earthenware is not enough to constitute evidence of activity during the post-medieval period.

5.6 Ceramic Building Material by Isa Benedetti-Whitton

5.6.1 A small assemblage of only forty pieces of ceramic building material (CBM), weighing 4,879g, was hand-collected from fourteen contexts. A summary of the CBM by form is shown below in Table 8. In terms of weight, the CBM was mostly Roman in date. There was also a smaller quantity of post-medieval CBM pieces present, but these were not particularly well-preserved or significant.

Form	Frag count	% of total	Weight (g)	% of total
Roman				
Roman brick	10	24.4	2969	58.9
?tegula	2	4.9	140	2.8
Tegula	1	2.4	234	4.6
Imbrex	1	2.4	22	0.4
Undiagnostic	3	7.3	44	0.9
Subtotal:	17	41.5	3409	67.6
Post-Roman				
?floor	11	26.8	117	2.3
Brick	6	14.6	1045	20.7
Tile	6	14.6	353	7.0
Land drain	1	2.4	116	2.3
Total:	*41*	*100*	*5040*	*100.0*

Table 8: Quantification of CBM, by type

Methodology

5.6.2 All the material was quantified by form, weight and fabric and recorded on standard recording forms. This information was entered into a digital Excel table. Fabrics were identified with the aid of a x20 binocular microscope and where possible catalogued using Museum of London Archaeology's (MOLA) fabric reference codes. In those instances the MOLA equivalent was unknown site specific codes have been applied and use the following conventions: frequency of inclusions (sparse, moderate, common, abundant); the size of inclusions: fine (up to 0.25mm), medium (0.25-0.5mm), coarse (0.5-1.0mm) and very coarse (larger than 1.0mm). Fabric descriptions are provided in Table 9.

The Roman material

5.6.3 Roman material was collected from seven contexts: cleaning layer [1014] (G25), metalling layer [1194] (G46), fill [1071] of ditch [1072] (G66), fill [1370] of ditch [1371] (G43), fill [1458] of ditch [1461] (G9), fill [1180] of pit [1182] (G43) and fill

[1438] of pit [1439 (G54). Tegula and imbrex roof tiles were present, as were several examples of Roman brick. Three Roman CBM fabrics were identified but none could be used to help date the CBM any further than generically Roman, although the Roman pottery recovered from this site indicates a 1st-century date, c.AD50-80.

5.6.4 Much of the Roman CBM was collected from the fills of various ditches and pits. The only CBM potentially found *in situ* was the Roman brick recovered from metalling surface [1194] (G46).

The post-Roman material

5.6.5 Post-medieval brick, roof and floor tile and a fragment of field drain were all present in the post-Roman assemblage. Most contexts only produced a very small quantity of CBM, for example a single fragment of roof tile or several large crumbs of brick. All the roof tile collected was in the same fabric, T2. Two brick fabrics were identified: MOLA fabric 3033 and the site-specific B1.

5.6.6 Roof tile pieces were collected from ditches [1074] and [1226] (both G81), ditch [1271] (G79) and pit [1188] (G82). As a CBM form, roof tile is not inherently dateable, and many fabrics were used throughout the medieval and post-medieval periods. However, the brick pieces found on site, alongside T2 roof tile in pit [1188], or as single items from ditches [1354] (G32) and [1373] (G81), suggest an early post-medieval date, *c*.16th-early 17th century. This dating is supported by the many extremely fractured pieces of a floor tile collected from ditch [1330] (G81). One fragment displayed square puncture holes suggesting this to be a 16th-century Low Countries import.

5.6.7 The fragment of T1 field drain collected from site cuts through earlier features and is also most probably of post-medieval date although, like roof tile, field drain cannot be dated with any accuracy.

Fabric	**Description**
Roman	
R1	Fine red-orange fabric with sparse quartz.
R2	More common quartz than R1, close to vitrification, reduced surfaces and core.
R3	Micaceous orange fabric with occasional sparse quartz.
Roof tile	
T1	Gritty, micaceous, fairly low-fired orange/brown fabric.
T2	Clean looking orange fabric, dense with sparse mica, occasional sparse quartz (including rose quartz).
Brick	
B1	Pink and cream-toned fabric with common very coarse quartz.
MOLA 3033	Fine fabric with scatter of quartz, sparse calcareous inclusions and black iron oxide, both up to 1.5mm. Occasional flint fragments and small pebbles up to 7mm.
Floor tile	
FT1	Powdery and micaceous orange fabric with occasional quartz.

Table 9: Fabric descriptions for CBM

5.7 **Fired Clay** by Elke Raemen

5.7.1 A medium-sized assemblage comprising 346 fragments (weight 4886g) was recovered from 62 individually numbered contexts. No large groups were present, with none of the contexts containing more than ten fragments. Material was recovered from Period 1 through to Period 4 contexts, but the majority of pieces derive from contexts dated to Period 3.

Fabrics

5.7.2 A total of eight fabrics were recorded (Table 10). The majority of fragments are in sandy fabrics F1a-d (primarily F1a), followed by fabric F2a. This appears to be the case across all periods. Raw clay would have been sourced locally.

Fabric	Description
F1a	Orange fabric with common fine to medium quartz, moderate coarse quartz and rare very coarse quartz to 2mm.
F1b	Orange fabric with common fine to medium quartz and rare medium black iron oxides.
F1c	Orange fabric with moderate fine quartz, rare very coarse quartz to 3mm, rare coarse chalk and rare very coarse calcinated flint to 11mm.
F2a	Orange fabric with common fine to medium quartz, rare to moderate coarse quartz, moderate chalk to 1.7mm and rare very coarse quartz to 1.5mm.
F2b	Orange fabric with sparse fine quartz, rare pockets of chalk to 2mm (some burnt out) and moderate voids.
F2c	Silty orange to red orange fabric with medium to coarse chalk, moderate medium to coarse voids and rare fine to medium quartz.
F3	Silty orange clay.
F4	Moderate organic temper, rare fine quartz and rare coarse chalk.

Table 10: Summary of the fired clay fabrics

Forms

Period 1:

5.7.3 Just 24 fragments were recovered from three contexts dated to this period. Most are amorphous, with just three fragments retaining one flat surface. All pieces are in Fabric F1b, apart from three amorphous fragments from fill [1379] of pit [1578] (G8) which are in fabric F1a.

Period 2:

5.7.4 A total of 91 fragments are from contexts attributed to Period 2. Included are mostly amorphous fragments and pieces with one flat surface. The presence of pieces with wattle impressions (i.e. from fill [1258] of pit [1281], G14 and fill [1363] of pit [1364], G17) suggests that at least some of those derive from daub. Wattle imprints range in diameter between 6 and 21mm, with one imprint measuring 31+mm in diameter.

Period 3:

5.7.5 A total of 194 fragments are from contexts dating to the second half of the 1st century AD. Again, the vast majority are amorphous or retain one flat surface. Wattle impressions were noted in fill [1289] of pit [1291] (G56) and fill [1512] of ditch [1513] (G57). Ditch [1191], G26 (fill [1190]) contained three fragments which could either represent daub, or may derive from a triangular loomweight. Fragments (in fabric F1a) are insufficiently diagnostic.

5.7.6 Fragments from a slab or block were found in fill [1174] of ditch [1175] (G24), fill [1192] of ditch [1193] (G23) and fill [1248] of ditch [1249] (G31). None survive sufficiently to provide measurements or a sense of size.

Period 4:

5.7.7 A small group of 34 fired clay fragments derives from medieval contexts. Fragments are all either amorphous or have one surviving surface. A few have a corner or edge surviving. Pieces could derive from daub or lining.

5.8 Glass by Elke Raemen

5.8.1 A small assemblage comprising six fragments weighing 47g was recovered from ditch [1184] (G79, fill [1183]). Just one green bottle is represented. Fragments are from the neck and shoulder of a wine bottle dating to *c*.1680-1720.

5.9 Geological Material by Luke Barber

5.9.1 The archaeological work recovered 48 pieces of stone, weighing 5244g, from 24 individually numbered contexts. All of this material consists of finds hand-collected in the field – at the time of writing no stone from environmental residues was present in the assemblage. The assemblage has been fully listed on geological record sheets by stone type for the archive, with the resultant information being used to create an Excel table as part of the digital archive. The assemblage is characterised in Table 11 by type and site period.

5.9.2 The assemblage is dominated by cobble fragments in dolerite (igneous), coarse-grained igneous types, quartzite and various sandstones. Although the original source of these is often uncertain, they were almost certainly locally available/natural to the site following glacial transportation from the north or north-west. None have any signs of deliberate modification, though several show signs of having been scorched. The limestones are all well-rolled and likely to have arrived in the area through similar processes. The exception to this is the small piece of carboniferous limestone from the upper fill (context [1160]) of Period 3 ditch [1161] (G39) that, although worn, is covered with bitumen and is probably intrusive modern aggregate.

5.9.3 Stone deliberately brought to the site forms a small assemblage and is solely composed of small fragments of German lava rotary querns. The stone is typically friable and the pieces usually amorphous with no surviving dimensions or features. Only two pieces have a complete thickness – one 40mm, the other, probably a lower stone, 70mm (from Period 3 ditches [1095], fill [1094] G27 and [1191], fill [187], G26 respectively). Undoubtedly, the German lava quern

fragments in post-medieval deposits are residual. Whether these are early Roman or medieval fragments is uncertain, though the former is considered most likely.

Period / type	***1: Early/Mid Iron Age***	**2: Late Iron Age**	**3: Early Roman**	**4: Medieval**	**5: Post-medieval**	**6: Modern**
Number of contexts	*1*	*4*	*13*	*2*	*3*	*1*
Probably available from glacial/alluvial deposits in general area						
A1 Off-white fine sast (Yorkshire)	1/34g	2/234g	3/118g	2/1168g	-	-
A2 Red fine sast (Yorkshire)	-	-	1/306g	-	1/10g	-
A3 Dull orange fine Carboniferous sast	-	-	1/270g	-	-	-
B1 Dolerite	-	-	1/224g	1/126g	-	-
D1 Microgranite	-	-	1/294g	-	-	-
E1 Carboniferous limestone	-	-	1/8g	-	-	-
F1 Oolitic limestone (Lincs/?)	-	-	1/12g	-	-	-
G1 Quartzite	-	-	1/178g	-	-	1/62g
H1 Ferruginous sast (Lincs/ Northants)	-	-	-	1/10g	-	-
H2 Ferruginous sast (dense) (Lincs/ Northants)	-	-	-	1/88g	-	-
I1 Chert	-	-	1/34g	-	-	-
J1 Cretaceous sponge fossil	-	1/42g	-	1/206g	-	-
K1 Coarse-grained igneous (Tuff?)	-	-	1/20g	-	-	-
Humanly imported to site						
C1 German lava	-	2/116g	10/1474g	-	12/160g	-
Totals	*1/34g*	*5/392g*	*22/2938g*	*6/1648g*	*13/170g*	*1/62g*

Table 11: Summary of stone assemblage

5.10 Metallurgical Remains by Luke Barber

5.10.1 The archaeological work recovered just 13 pieces of slag, weighing 262g, from seven individually numbered contexts. These totals do not include any material that may derive from the environmental residues. The assemblage has been fully listed by context and type on slag *pro forma* recording sheets, which are housed with the archive. The information from these has been used to create an Excel table for the digital archive. The assemblage is summarised in Table 12.

Type/Period	1: E/MIA	2: 10-70/80	3: 50-70/80 AD	4: Medieval
Number of contexts	*1*	*1*	*3*	*2*
Fuel ash slag	1/16g	-	-	2/44g
Hearth Lining	-	-	3/6g	-
Undiagnostic iron	-	1/72g	6/124g	-
Total	*1/16g*	*1/72g*	*9/130g*	*2/44g*

Table 12: Summary of slag assemblage by period

5.10.2 The fuel ash slag is not diagnostic of process and indeed may not be of industrial origin at all – this lightweight slag is formed by the reaction between alkalis (from fuels) and silicates (including clays) when heated and can be formed by any high temperature event, including domestic hearths. It was only recovered from Phase 1 and 4 deposits.

5.10.3 The remaining slag clearly suggests very low-level domestic iron working in the Late Iron Age/Early Roman period. Although the material is not diagnostic of process, it is suspected the waste relates to iron smithing activity.

5.11 **Bulk Metalwork** by Elke Raemen

5.11.1 A small assemblage comprising just four fragments of ironwork weighing 38g was recovered from four different contexts. All four comprise general purpose nail fragments. The most complete example was recovered from Late Iron Age/ Early Roman ditch [1516] (fill [1514]; G58; Period 2). The fragment has a rectangular head measuring 18.5 by 13.5mm.

5.11.2 Two nail fragments were found in Roman contexts (Period 3), i.e. metalling [1194] (G46) and fill [1452] of ditch [1454] (G33). The latest fragment was recovered from pit [1188] (G82, fill [1187]), which is of post-medieval date (Period 5).

5.12 **Human Bone** by Lucy Sibun

5.12.1 A single fragment of human bone was recovered from Roman fill [1099] of ditch [1100] (G39) during the processing of environmental sample <13>. This is the partial crown of a deciduous mandibular canine, consistent with a foetal/new born infant and is the only human bone recovered from the site.

5.13 **Animal Bone** by Emily Johnson

5.13.1 An assemblage of approximately 4000 animal bones, weighing 7,628g in total, was analysed from the excavation. Material derived from both hand-collected and bulk-sampled contexts, although the latter made up the vast majority of the assemblage in terms of fragment count (Table 13). Approximate counts were often used for large assemblages of indeterminate environmental animal bone and burnt bone under 8mm in maximum dimensions – the bone from environmental samples is quantified by weight in Appendix 4. The preservation of the assemblage was generally moderate, with some well- and poorly-preserved specimens.

Period		N	HC	ENV	NISP	Preservation %		
						Poor	Moderate	Good
1	Early/ Middle Iron Age	734	23	711	37	33.0	66.9	0.1
2	Roman 10-70/80	1787	359	1428	258	9.0	73.5	17.5
3	Roman 50-70/80	1243	656	587	465	22.1	74.3	3.5
4	Medieval	77	28	49	21	0.0	75.3	24.7
5	Post-medieval	2	2	0	2	0.0	100.0	0.0
0	Undated	79	0	79	0	0.0	100.0	0.0
Total		*3922*	*1068*	*2854*	*783*	*17.3*	*73.1*	*9.6*

Table 13: Quantification of zooarchaeological assemblage by period, showing total fragment count (N), the number of hand-collected (HC) and bulk-sampled (ENV) specimens, the number of identifiable specimens (NISP) and the proportion of bones displaying varying preservation levels.

Method

5.13.2 The assemblage has been recorded onto an Excel spreadsheet. Where possible, bones were identified to species and element (Schmid 1972; Hillson 1999) and the bone zones present noted (Serjeantson 1996). Determination of sheep and goat specimens used criteria outlined in Halstead and Collins (2002), Zeder and Lapham (2010) and Boessneck (1969); where this was not possible a combined ovicaprid class was used. Elements that could not be confidently identified to species, such as long bone, rib, cranial and vertebral fragments, have been categorised by taxa size (large/ medium/ small) and type (mammal/ bird/ fish).

5.13.3 Mammalian age-at-death data was collected where possible. The state of epiphyseal bone was recorded as fused, unfused and fusing, and any determinations of age made using Silver (1969). Dental eruption and attrition was recorded on teeth within mandibles and maxilla using Grant's (1982) wear codes on cattle, ovicaprid and pig teeth, with age determinations following Halstead (1985) and Jones and Sadler (2009) for cattle, Payne (1973) for ovicaprids, and Hambleton (1998) for pigs. Specimens have been studied for signs of butchery, burning, gnawing, non-metric traits and pathology. Whole long bones of domestic mammals were measured using standards set out in von den Driesch (1976).

Results

5.13.4 The vast majority of specimens from this site were indeterminate, largely due to the high levels of fragmentation in the environmental burnt and unburnt bone. A total of 310 bones were identifiable to taxa, 473 to taxa size (Table 14). Cattle dominated the identifiable specimens, followed by ovicaprids, pigs and horse. Dogs and roe deer were present in small numbers and a specimen identified as species of vole was also recorded. Material is discussed below by period, with interesting specimens highlighted. A full species quantification by context can be found in Appendix 4.

Taxa	NISP	Period					
		1	2	3	4	5	0
Cattle	217	8	93	115	1	0	0
Ovicaprid	42	0	24	18	0	0	0
Pig	33	2	25	6	0	0	0
Horse	12	0	3	9	0	0	0
Dog	3	0	3	0	0	0	0
Roe deer	1	0	1	0	0	0	0
Vole species	2	0	2	0	0	0	0
Large mammal	267	1	61	197	7	1	0
Medium mammal	202	26	44	120	11	1	0
Microfauna	2	0	2	0	0	0	0
Bird	2	0	0	0	2	0	0
Indeterminate	3139	697	1529	778	56	0	79

Table 14: Taxa abundance in the overall and phased assemblages by NISP

Period 1: Early/ Middle Iron Age

5.13.5 Three contexts were dated to Period 1, all fills of G7 pits. This included [1265] and [1264], the primary and upper fills of pit [1266] and the intermediate fill [1268] of pit [1269].

5.13.6 Pit primary fill [1265] contained one cattle second phalanx, which was fully fused and refitted from two fragments. Pit upper fill [1264] <21> contained fragments of cattle and pig teeth, a medium mammal long bone fragment, and large amounts of burnt and unburnt bone from fractions under 8mm. The majority of bone was burnt at high temperatures (calcined white, or approaching calcined grey). One of the cattle teeth, a mandibular third molar, had evidence of hook mouth as the posterior cusp was much lower than the anterior two.

5.13.7 Pit intermediate fill [1268] including environmental sample <22> contained fragments of cattle teeth, a large mammal long bone fragment and several medium mammal cranial, diaphyseal, rib and tooth fragments. All of these identifiable and partially identifiable fragments were burnt at high temperatures (calcined and approaching calcined). Large numbers (>300) of highly burnt indeterminate fragments also derived from this context.

Periods 2 and 3: Late Iron Age/Early Roman AD10 – 70/80

5.13.8 The zooarchaeological assemblages from Periods 2 and 3 were the largest from the site, representing material from 60 different contexts and 31 different groups. Given the similarities in period and the generally indeterminate nature of the assemblages, these two periods are discussed together by taxa (see Table 14).

5.13.9 Cattle were the most commonly identified taxa from the Late Iron Age/early Roman period. They were largely represented by loose teeth and highly fragmented mandibles, although the whole skeleton was represented with

cranial, diaphyseal, vertebral and rib fragments likely among the specimens partially identified as large mammals. The majority of bones with fusion information were fused, save one proximal calcaneum in fill [1459] of ditch [1461] (G9). There was consistent repeated butchery on the humerus in the form of multiple, deep cuts to medial surface of the medial condyle, found on three separate humerus fragments representing at least two individuals from fill [1258] of pit [1281] (G14) in Period 2 and fills [1245] of ditch [1247] (G50) and [1151] of ditch [1152] (G23) in Period 3. A further humerus from fill [1178] of ditch [1179] (G23) had evidence of peri-mortem fracture, suggesting marrow extraction. Fragments of mandible, pelvis, radius and metapodia were also affected by butchery. In terms of pathology, some mild calculus was identified on a maxillary molar from fill [1452] of ditch [1454] (G33), periosteal new bone was identified on the anterior surface of a proximal metatarsal from fill [1366] of ditch [1369] (G10) and a further tooth with evidence of possible hook mouth was recovered from primary fill [1512] of ditch [1513] (G57).

5.13.10 Like cattle, ovicaprid specimens were largely represented by fragments of dentition, including loose teeth. Postcranially, the scapula, humerus, radius and metacarpals were represented, and also the femur, tibia and metatarsals. The humerus and tibia were the best represented. Three humerus fragments from fill [1258] of pit [1281] (G14) in Period 2 and fills [1233] of ditch [1234] (G28) and [1245] of ditch [1247] (G50) in Period 3 had the same butchery tradition as cattle humeri. Of seven bones with fusion surfaces just one, a distal tibia from fill [1160] of ditch [1161] (G34) in Period 3, was unfused. All loose teeth were worn and no pathologies were identified.

5.13.11 Pigs were occasionally identified in both periods, represented largely by fragments of dentition including loose teeth. The appendicular skeleton extremities such as tarsals, metapodia and phalanges were fairly common and some bones of the upper fore- and hindlimb were present. Of seven bones with fusion surfaces only one (a proximal calcaneum from fill [1258] of pit [1281], G14, from Period 2) was unfused, although no other late-fusing bones were identified. One pig mandible from fill [1178] of ditch [1179] (G23) was aged at 7-14m at death (Hambleton 1998). Two metacarpals from fill [1258] of pit [1281] (G14) were measured after von den Driesch (1976). One pig maxilla from the same context had a caries lesion on the third molar.

5.13.12 Horse specimens were recovered from three Late Iron Age/Early Roman contexts. Intermediate fill [1255] of ditch [1257] (G13) from Period 2 contained a radius diaphysis and a whole tibia, refitting from two fragments. The tibia was fully fused and had a series of cuts perpendicular to the long bone length surrounding the distal diaphysis, perhaps indicative of tendon use or skinning rather than filleting. From Period 3, upper fill [1248] of ditch [1249] (G31) contained a partial horse axis, and fill [1192] of ditch [1193] (G23) contained two fragments of probably the same left fully fused metatarsal and a fully fused pelvis. The metatarsal had possible joint disease, manifesting as a roughening of the proximal surface that may have affected ankle movement.

5.13.13 Two dog specimens were recovered from the Late Iron Age/Early Roman period assemblages – a mandible fragment from intermediate fill [1367] of ditch [1369] (G10) and a femur diaphysis from fill [1258] of pit [1281] (G14), both from Period 2.

5.13.14 One roe deer left tibia shaft was identified in fill [1367] of ditch [1369] (G10), in Period 2. Two teeth identified as species of vole were recovered the same context.

5.13.15 Butchery marks were identified on 47 specimens, consisting of both knife (cut) and cleaver (chopping and splitting) butchery. The repeated butchery techniques on cattle and ovicaprid humeri is interesting as the same technique was being used to disarticulate carcasses of very different sizes. Evidence for heat exposure was particularly clear on environmental samples from both periods, all of which indicated burning at high temperatures (carbonised black, approaching calcined grey and calcined white). Identifiable specimens affected included an ovicaprid distal metapod and naviculocuboid fragment, and pig teeth. For quantification of burnt bones see the environmental quantification table (Appendix 5).

5.13.16 Canid gnawing was identified on 23 specimens from Periods 2 and 3, largely on cattle bones (n=11). This suggests that either bones were given to dogs intentionally, or were disposed of, perhaps temporarily, in locations that dogs had access to – and further documents the presence of domestic dogs on site in this period. Dry (n=21) and mineralised (n=24) fracture on marrow bearing bones suggests that marrow was not an intensively exploited resource, and that refuse practices may have included the secondary deposition of animal bones.

Period 4 Medieval

5.13.17 Material from Period 4 was largely indeterminate. A fused cattle proximal radius with evidence of canid gnawing, root etching and recent breakage was recovered from fill [1425] of ditch [1426] (G72). Fill [1429] of pit [1430] (G70) and fill [1393] of ditch [1394] (G72) contained large and medium mammal diaphysis fragments and indeterminate specimens. Fill [1057] <9> of ditch [1058] contained only indeterminate fragments exposed to high temperature burning, as did primary fill [1065] <11> of ditch [1066] (G64) although including two bird specimens.

Period 5 Post-medieval

5.13.18 One large mammal rib fragment and one medium mammal diaphysis fragment were recovered from fills [1147] of ditch [1148] (G79) and [1327] of ditch [1328] (G79) respectively.

Period 0 Undated

5.13.19 Approximately 100 fragments of indeterminate bone exposed to high-temperature burning were recovered from fill [1339] <24> of pit [1343] (G94).

5.14 Fish Bone by Hayley Forsyth-Magee

5.14.1 Archaeological excavations produced a small assemblage of fish bone containing just one identifiable specimen retrieved through bulk sampling.

5.13.2 A single herring vertebrae was recovered from Iron Age-Roman (AD 10-70/80) fill [1260] of pit [1281] (G14) recovered from sample <20>. The vertebrae has been burnt (black), there is no evidence of butchery, consumption or pathologies.

5.15 **Shell** by Elke Raemen

5.15.1 A small assemblage comprising 55 fragments (total weight 322g) was recovered from nine individually numbered contexts. Apart from a common cockle valve from fill [1452] of ditch [1454] (G33, Period 3), all pieces comprise common oyster (*Ostrea edulis*). A summary of the latter is given below.

Period 2

5.15.2 A single left valve was recovered from fill [1427] of pit [1428] (G16). The fragment is abraded but low level parasitic activity (Polydora ciliate) is still noticeable.

Period 3

5.15.3 A total of 17 individual oysters are represented, spread over six different contexts. Right valve fragments are slightly more common than left valves. Two of the latter from fill [1451] of ditch [1462] (G33) show signs of overcrowding. Parasitic activity was noted on five fragments and include low levels of *Cliona celata* and *Polydora ciliata*. A fossilised fragment was found in fill [1527] of gully [1528] (G53) and may have been curated.

Period 4

5.15.4 Just five shell fragments are from medieval contexts. Two oysters are represented. A left valve found in fill [1487] of ditch [1488] (G76) shows minor traces of parasitic activity (*Cliona celata*).

5.16 **Registered Finds** by Elke Raemen

5.16.1 A small assemblage comprising seven different objects was assigned registered finds numbers (Table 15). Included are fragments in iron, copper-alloy and fired clay. Most are in reasonable condition; however, active bronze disease was noted on RF <3>, which will require stabilizing. X-radiography is recommended for RF <2>, <3> and <17>. A small number of finds were recovered during the evaluation and have been reported on elsewhere.

Context	Period	RF No	Object	Material	Wt (g)	Notes
1125	3	10	SPINDLE WHORL	CERA	1	
1261	2	11	Sheet	COPP	1	
1536	3	12	STEELYARD	COPP	11	
1012	3	13	LOOMWEIGHT	CERA	131	
1258	2	14	MOULD	CERA	53	Metalworking
1359	3	15	LOOMWEIGHT	CERA	436	
1264	1	17	?TOOL	IRON	18	

Table 15: Summary of Registered Finds

Period 1

5.16.2 Pit [1266] (G7, fill [1264]) contained an iron strip fragment with rounded terminal and with rectangular section. The fragment measures 54+mm long, 17mm wide and 12.44mm thick. It may represent a tool fragment,; however, too little survives to identify the object with any certainty.

Period 2

5.16.3 Two objects are from Late Iron Age to Early Roman contexts. Three copper-alloy sheet fragments (RF <11>; 0.4mm thick) were recovered from ditch [1263] (G13, fill [1261]). They all derive from the same strip (width 13.2 to 13.4mm) and include a rectangular terminal with rounded corners and piercing. The strip may represent a binding or decorative strip, e.g. from a box or furniture.

5.16.4 Of interest is a ceramic mould fragment (RF <14>), recovered from pit [1281] (G14, fill [1258]). The fragment, in a fabric with moderate coarse to very coarse chalk to 2mm and moderate medium coarse quartz, shows the characteristic oxidised outer surface and well-defined reduced inner surface. This type of moulds were used to cast copper-alloy objects. At present, the type of object that would have been manufactured with this specific mould cannot be established. Ceramic moulds are uncommon finds as they have a poor survival rate.

Period 3

5.16.5 Four objects are of Early Roman date. Textile working is testified by a ceramic spindle whorl (RF <10>) recovered from ditch [1126] (G24, fill [1125]). The fragment is in a reduced fabric with sparse medium quartz. Just 45% of the object survives. The fragment is biconical, of Walton-Rogers (2007) long-lived Type C2.

5.16.6 Two triangular loomweights are also represented. RF <13>, from fill [1012] of G25 ditch [1013], comprises two non-conjoining fragments, including part of a corner or apex with perforation (diameter 11 to 15mm). They are in an orange fabric with common fine to medium quartz, moderate coarse quartz and rare very coarse quartz to 2mm (fired clay fabric 1a). The second weight RF<15> (from fill [1359] in G24 ditch [1360]) is represented by 27 non-conjoining fragments, including one with partial perforation (diameter 18mm). The fabric is orange with moderate fine to medium quartz, rare calcinated flint to 24mm and rare chalk to 2mm. This type of weight appears from the Middle Iron Age to the Early Roman period. There is no conclusive evidence that they are loomweights and a number of other hypotheses circulate. None of the latter have been convincing however, and the consensus is still that of an identification as loomweight.

5.16.7 Of particular interest is the recovery of a copper-alloy steelyard fragment (RF<12>), found in G26 ditch [1537] (fill [1536]). The fragment comprises the end of a steelyard arm, with broken suspension hooks and loops. Transverse grooves divide the scale, with further subdivision by punched dots on the opposite face. Roman numerals mark the scales. A combination of these three

has been noted, e.g. at Colchester and Richborough (Crummy 1983, 99; no. 2508, 100).

6.0 Environmental Samples by Lucy Allott

6.1 Introduction

6.1.1 Twenty-one soil samples were taken during the Channels Phase 5 excavation, for the recovery of environmental remains such as plant macrofossils, wood charcoal, faunal remains and Mollusca, as well as to assist finds recovery. Samples <10> to <30> derive from a series of pits and ditches dated to Periods 1-4; the Middle Iron Age, Late Iron Age, Early Roman, and Medieval landuses. The following report assesses the preservation of charred plant macrofossils and wood charcoal and considers their significance and potential to inform on the diet, arable economy, fuel selection and use, and the local vegetation environment of the site.

6.2 Methodology

6.2.1 Bulk samples (ranging from 10 to 40L in volume) were processed in their entirety by flotation using a 500µm mesh for the heavy residue and a 250µm mesh for the retention of the flot before being air dried. The residues were passed through 8, 4 and 2mm sieves and each fraction sorted for environmental and artefactual remains (Appendix 5a). Artefacts recovered from the samples were distributed to specialists, and are incorporated in the relevant sections of this volume where they add further information to the existing finds assemblage. The flots were scanned under a stereozoom microscope at 7-45x magnifications and their contents recorded (Appendix 5b). Provisional identifications of macrobotanical remains, based on observations of gross morphology and surface cell structure, are made through comparison with published reference atlases (Cappers *et al*. 2006; Jacomet 2006; NIAB 2004) and modern reference specimens. Nomenclature follows Stace (1997), for wild plants, and Zohary and Hopf (2000), for cereals. Flots measuring more than 100ml were sub-sampled and 100ml scanned.

6.2.2 Up to 10 fragments of charcoal were extracted from the heavy residues and/or flots, of each sample containing more than 50 fragments in the >4mm fractions, and fractured along three planes (transverse, radial and tangential) according to standardised procedures (Gale and Cutler 2000; Hather 2000; Leney and Casteel 1975). Specimens were viewed under a stereozoom microscope for initial grouping, and an incident light microscope at magnifications up to 500x to facilitate identification of the woody taxa. Taxonomic identifications were assigned by comparing suites of anatomical characteristics visible with those documented in reference atlases (Hather 2000; Schoch *et al.,* 2004; Schweingruber 1990). Genera, family or group names have been given where anatomical differences between taxa are not significant enough to permit more detailed identification. Taxonomic identifications of charcoal are recorded in Appendix 5a and nomenclature follows Stace (1997). Notes have also been made on the presence of round wood and state of preservation. Latin names are given at first mention and, with the exception of the Maloideae group taxa are subsequently referred to by their English common names.

6.3 Results

Period 1: MIA

6.3.1 Samples <21>, <22> and <23> from pits [1266], [1269] and [1307] in pit group G7 date to the Middle Iron Age landuse. Samples <21> [1264] and <22> [1268] from pits [1266] and [1269] produced small assemblages of charred plant macrofossils including occasional cereal caryopses of wheat, a possible brome grass seed and some buds (see Appendix 5b). While processing sample <23> [1306] from pit [1307], uncharred organics comprising woody fragments, possible plant remains and unidentifiable humic detritus were noted as abundant and the sample was therefore retained wet. Assessment revealed a few goosefoot seeds, fungal sclerotia, uncharred wood and roots and small charcoal fragments; however, no other charred or uncharred plant macrofossils were present. Features in G7 were not waterlogged at excavation, although their close proximity to a currently wet area was noted. It is possible the pits have been affected by intermittent waterlogging, allowing the preservation of some uncharred organics as seen in sample <23>. Uncharred rootlets that are more likely of modern origin were common in each of the three samples, contributing up to 90% in sample <22>, for example.

6.3.2 Wood charcoal fragments >4mm and 2-4mm were moderately common in samples <21> and <22>. Oak, Maloideae group taxa and cherry/blackthorn were identified in sample <21> and the assemblage included occasional roundwood fragments of oak and cherry/blackthorn. Sample <22> contained oak, including some possible roundwood, hazel/alder and field maple. Sample <23> was recorded as rich in charcoal during excavation Small charcoal fragments were common although no larger fragments suitable for identification were noted. Sediment percolation was a common component in each of these assemblages resulting in poor to moderate preservation. Such conditions are likely to result from fluctuations in groundwater, lending further support to the evidence for intermittent waterlogging.

6.3.3 With the exception of bone fragments, including some burnt bone in samples <21> and <22>, no other environmental remains were evident.

Period 2: 10-70/80 AD

6.3.4 Quarry pit [1281] (G14) was represented by samples <19> [1258] and <20> [1260]. Charred plant remains and charcoal were scarce in the upper fill [1258], sample <19>. Sample <20> produced a notably larger assemblage of charred plant macrofossils including wheat and barley cereal caryopses, pea/bean, possible flax and sedge seeds. Several of the wheat caryopses, particularly in sample <20>, are consistent with bread-type wheat (*Triticum* cf. *aestivum* sl.), although in the absence of diagnostic chaff these identifications remain tentative.

6.3.5 Oak and hazel/alder were recorded in sample <20> [1260], the intermediate fill of quarry pit [1281]. Small oak round wood fragments were moderately common in the identifications undertaken for assessment. Both samples from pit [1281] produced assemblages of bone including some burnt bone. Fish bones were also recorded in sample <20> and the smaller residue fractions have been

retained and could be refloated to maximise recovery of both charred plant macrofossils and small bones.

6.3.6 Samples <25> and <30> from ditches [1369] G10 and [1461] G9 and sample <28> from pit [1390] G22 produced small quantities of charred plant macrofossils including wheat and barley caryopses, bean/pea and possible grass culm fragments. Wood charcoal fragments were uncommon in each of the samples although oak, including round wood in <28>, hazel/alder and cherry/blackthorn round wood were recorded. Charcoal in sample <30> was moderately well preserved with very little evidence for sediment encrusting or percolation and further identification work could be undertaken on this small assemblage. Faunal remains including some burnt bone fragments were recovered in each of the samples.

Period 3: 50-70/80 AD

6.3.7 Samples <10>, <12>, <13>, <15> and <29> from ditch groups G26, G24, G39 and G33 (see Appendix 5a) produced small to moderate quantities of charred plant macrofossils. Wheat, barley and oat (*Avena* sp.) caryopses were recorded although many of the remains, particularly in samples <10> and <15>, were too poorly preserved to assign taxonomic identifications. Wild and cultivated bean/pea (*Vicia/Pisum* sp. and *Vicia/Lathyrus* sp.), knotweed (*Persicaria* sp.), hazel (*Corylus avellana*) nutshell and carrot (Apiaceae) family taxa and grass (Poaceae) seed were infrequently noted. Charcoal preservation was highly variable with larger assemblages noted in samples <10>, <12> and <15>. Taxa identified include oak, from large stem/branch wood and smaller roundwood, Maloideae group taxa and ash (*Fraxinus excelsior*).

6.3.8 Pits dated to this period are represented by samples <14>, <16>, <26> and <27> from pit groups G47, G42 and G51 (see Appendix 5a). Low quantities of charred cereal caryopses, including oat and barley were evident in samples <14> [1137], pit [1138] and <16> [1197], pit [1198]. Sample <27> [1384] from pit [1385] G42 produced a larger, more diverse assemblage (with 51-250 seeds), comprising wild and possibly cultivated pea/bean (*Vicia/Lathyrus/Pisum* sp.), bread-type wheat, oat and barley as well as dock (*Rumex* sp.), grass seed and possible stinking chamomile (cf *Anthemis cotula*). Charred plant macrofossils were moderately well to well preserved in this assemblage. No plant macrofossils were evident in sample <26> [1378] from pit [1380] although the sample produced a small quantity of charcoal including hazel/alder, oak (with roundwood) and Maloideae group taxa. With the exception of small fragments <2mm in size charcoal fragments were infrequent in all other pit samples.

Period 4: Medieval

6.3.9 Sample <11> [1065] from G64 ditch [1066] is the only sample dated to the Medieval period. A small assemblage of charred plant macrofossils comprised cereal caryopses of bread-type wheat, barley and possible oat; unidentifiable cereal caryopses and weed/wild seeds of grasses, wild pea/bean and docks. Several charred twig fragments were also recorded in the flot and residue. A small assemblage of well-preserved charcoal contained possible alder (cf. *Alnus* sp.), birch (cf. *Betula* sp.), oak and a bark fragment.

Undated Features

6.3.10 Three samples, <17> [1219], <18> [1250] and <24> [1339], derive from undated pit features [1220] (G97), [1252] G91 and [1343] G94. Charred plant macrofossils were infrequent, comprising a wheat caryopsis, some poorly preserved cereal caryopses and fragments of unidentified plant remains in sample <24> only.

6.3.11 Wood charcoal fragments were more abundant and were primarily retained in the residues (see Appendix 5a). Oak from mature, slow grown branch/stem wood was the only taxon recorded in each deposit. Sample <17> contained a fragment of distorted oak and wood that may derive from root wood was noted. Sediment encrusting and percolation with possible iron staining was common in the assemblage from sample <18> [1250] suggesting pit [1252] may have been subject to fluctuating groundwater conditions. The 2-4mm residue has been retained from this sample and could be refloated to maximise recovery of charcoal fragments if the feature is of particular interest for charcoal analysis.

6.4 Discussion and Significance

6.4.1 The majority of flots contained high percentages of uncharred, modern plant remains, primarily rootlets with occasional seeds that suggest some degree of bioturbation within the site. Some of the charred botanicals and other archaeological remains may have been subject to post depositional movement. Samples originate from a range of ditch and pit features with no evidence for primary deposits associated with *in situ* burning or clear association with features of significance for preservation of plant remains such as grain stores. As such, they are likely to contain amalgams of material deriving from multiple and potentially varied burning episodes.

Charred Plant Macrofossils

6.4.2 Low frequencies of charred plant macrofossils were present in almost all samples with a few larger concentrations preserved, particularly in features dated to the LIA and Early Roman landuses such as samples <20>, <27> and <10>. Similar assemblages were noted during earlier evaluation phases of work at the site (Mooney 2014; Vitolo 2017). These larger assemblages contained some well-preserved specimens although they were atypical of the majority of samples which represent a background scatter of poorly preserved remains. Cereals of wheat, barley and oat predominate and although emmer/spelt may be prominent there is limited scope for refining these identifications due to the absence of diagnostic chaff. The absence of associated chaff is not uncommon as free-threshed cereals are less likely to come into contact with fire than glume wheats which require parching to separate the grains from the husks. This is further compounded by loss of surface detail either through puffing during charring or abrasion. Of interest, however, is the occurrence of small, short, rounded grains in samples <27> and <20> that are more characteristic of bread-type wheat rather than glume wheats, more commonly prevalent in Roman assemblages. Boardman and Hunter (2015) record small quantities of free threshing-type wheat grains at Hobbs Hole and Passingford Bridge in Middle Iron Age, Late Iron Age and Roman, particularly Later Roman, assemblages.

Such occurrences have also been noted (in some instances with chaff) at Stansted Airport sites and along the A120 (Murphy 2004; Carruthers 2007 and 2008) in Roman assemblages. Early Roman assemblages recorded by Vitolo (2017), in samples <7> [52/012] and <8> [52/014], are also of interest as these assemblages contained large quantities of wheat, hulled barley and large grass seeds.

6.4.3 Non-cereal crops such as peas, beans and flax are poorly represented although this may reflect bias in preservation as noted above for chaff rather than a true rarity. Sample <27> [1384] from pit [1385] provides an exception with a higher concentration of legumes recorded, perhaps notably with concentrations of possible bread-type wheat grain. Weed seeds are infrequent in all of the samples and where present they are indicative of a broad range of habitats including waste and cultivated land. A possible stinking chamomile (*Anthemis cotula*) may imply cultivation of heavier clay soils (preferred by this species) although this suggestion is tentative.

6.4.4 Taxa represented compare well with those from local, broadly contemporary sites such as the Ivy Chimneys, Witham, Essex (Murphy 1999), Passingford Bridge and Hobbs Hole (Boardman and Hunter 2015), Stansted (Murphy 2004; Carruthers 2008) and the A120 route sites (Carruthers 2007). The predominance of grain with little chaff or weeds suggest the presence of cleaned grain although due to the scarcity of remains in the majority of samples preservation bias cannot be ruled out. Although the majority of LIA/Early Roman assemblages have little scope for contributing further information regarding the arable economy, land under cultivation or the vegetation environment the moderate assemblages in samples <20>, <10> and <27>, as well as those from the wider Phase 5 evaluation, <7> and <8> (Vitolo 2017), provide exceptions to this and are considered of local significance, especially if confirmed through dating as Early Roman.

6.4.5 Assemblages from the MIA and Medieval samples are small and, although these periods are less well documented in the region than the Roman period, the current assemblages are too limited to provide meaningful information and are therefore of low significance.

Charcoal

6.5.6 Charcoal preservation was highly variable between samples. A high degree of sediment infiltration that is associated with fluctuating ground water levels was particularly notable in MIA samples <21 – 23> located in close proximity to an area of waterlogged ground. Wood charcoal fragments were recorded in almost all of the samples in low concentrations and on the whole these assemblages were dominated by small fragments <2mm and 2-4mm. Moderate quantities of charcoal >4mm were recorded in only nine of the 21 excavation samples (<10, 12, 15, 17, 18, 20, 21, 22 and 24>) and none of the evaluation samples were significantly large for further analysis. Taxa represented suggest fuel may have been sourced from a range of habitats, including mixed deciduous woodland, the woodland margins, more open scrub and possibly hedgerow vegetation. The current data implies continued use of oak throughout the occupations with some variations in the accompanying taxa such as the occurrence of field maple in Period 1 and ash in Period 3. Roundwood is also represented throughout the

MIA and LIA/Early Roman occupations in low quantities but across many of the different taxa. This replicates patterns observed in previous evaluation work at the site (Mooney 2014; Vitolo 2017). The occurrence of roundwood in assemblages is of interest because it implies that some of the charcoal derives from smaller elements of the tree that may have been cut for fuel, hurdles or wattle for example rather than representing larger mature wood favoured for timber. Roundwood may have been sourced from woodland managed using techniques such as coppicing or it could derive from the upper branches of trees destined for several purposes. These samples compare well with contemporary assemblages from other sites in the region such as along the route of the A120 (Challinor 2007) and at Stansted (Gale 2008). As the features are likely to contain amalgams of burning waste and there is no evidence for primary deposits from features such as hearths, kilns or ovens they are of low significance for discussing fuel selection associated with particular activities. They have local significance in providing an indication of the range of fuel taxa and types utilised with particular focus on the MIA, LIA/Early Roman periods. Undated features provided some of the largest and best preserved assemblages while the Medieval assemblage is small and therefore of low significance.

7.0 SIGNIFICANCE AND POTENTIAL OF RESULTS

7.1 Realisation of the original research aims

7.1.1 The original research aims (ORs) for the project are stated in Section 3 and are discussed here in light of the excavation results.

OR1: What is the character of the Late Iron Age remains on site and can the evidence shed light on the Iron Age/Roman transition, is there a seamless switch or a change in use of the land or farmstead, or continued occupation of the site but a change in building-types or agricultural practice?

7.1.2 The Late Iron Age (Period 2) remains are located in the southern half of the site and include a rectangular enclosure (OA2) covering an area of at least 2,500sq m. The enclosure was mostly formed by a series of wide, deep ditches that were often poorly defined or obscured by later features and/or deposits. However, in the SE the boundary seemed to be formed by a large quarry pit (G14) rather than a ditch. A slight dip in the base in the south of the quarry might indicate the position of an original E/W ditch which may have had its north side quarried away not long after its construction, given the contemporaneity of the fills. All three sides of the enclosure had an apparent gap in them; that to the south, was about 11m wide and that to the north, about 6m wide, the latter possibly partly blocked by a short length of gully. The west side of the enclosure was largely obscured by later deposits, particularly in its central area, though a strip of natural observed 6–7m north of ditch G15 implied the presence of a further gap here. The east side of the enclosure was possibly located in evaluation Trench 52, outside the excavation area. Evidence of activity within OA2 was largely absent other than the presence of two small pits, the lack of internal features suggesting an agricultural use, perhaps as a stock-enclosure, rather than an area used for human occupation. To the west of the enclosure was an L-shaped ditch dividing the land into two additional open areas (OA3 and OA4) within which were a few further pits a shallow gully.

7.1.3 Analysis of the Period 2 environmental samples revealed the presence of a variety of crops including wheat, barley, pea/bean, possible flax and sedge. As much of this evidence comes from the OA2 enclosure ditch it perhaps implies that the surrounding landscape was used for arable farming. Animal bone evidence shows cattle as the pre-dominant domesticated species followed by ovicaprid and pig. Horses and dogs were also present as was limited evidence for wild species such as roe deer and vole.

7.1.4 The change from Late Iron Age (Period 2) to Early Roman (Period 3) appears to be quite distinct with a markedly different replacement field system being imposed on the landscape. The initial field system (Phase 3.1) is distinctly E/W orientated and consists of two possible route- or trackways with open areas to either side. The Late Iron Age enclosure would appear to have gone out of use except, perhaps, for ditch G10 which, if not completely infilled at this time, may have been incorporated into the boundary of the more northerly trackway. It is probable that this field system is associated more with animal husbandry than arable farming. Animal bone evidence indicates that cattle were still the most common species on site followed by ovicaprids, then to a lesser extent pig and

horse. Period 3 environmental samples provided evidence of bread-type wheat, oat, barley and possibly cultivated pea/bean, though these may not necessarily have been grown within the excavated area. Although there would appear to be continuity in land use and agricultural practices either side of the conquest, a marked change does occur with wholesale re-organisation of the landscape with, perhaps, an emphasis for a time on animal husbandry

OR2: What is the character of the Early Roman evidence and can it inform on the relationship between the size and shape of fields and agricultural layouts and regimes?

7.1.5 The Early Roman period is characterised by the creation of a series of new field systems which vary in shape and form over a comparatively short space of time (i.e. within the second half of the 1st century AD) from Period 3.1 (FS2) to Period 3.3 (FS4). In Period 3.1 the initial field system (FS2) is distinctly E/W orientated and consists of two possible route or track ways with open areas to either side. No internal features were evident and it is likely that the field system was designed for the movement of livestock (and people) across the landscape. As stated above, cattle were the most common species on site in the Early Roman period followed by ovicaprids, then to a lesser extent pig and horse. An abundance of pottery in the west of the site might suggest the presence of a nearby settlement.

7.1.6 A revised field system (FS3) in Period 3.2 is more N/S orientated with now redundant FS2 trackways being discupted by three N/S to NW/SE aligned ditches. With the addition of two roughly E/W aligned ditches five new land entities (OA10 – OA14) are created. Other than the occasional potential pit on the boundaries there are no definite internal features and more traditional agricultural use is assumed. Area OA13 was funnel shaped, narrowing to the north, perhaps hinting at the control of livestock movement.

7.1.7 The final Period 3.3 field system (FS4) is far less coherent and mainly consists of two field boundaries and possible southern continuation that divide the landscape into two open areas (OA15 and OA16). It is possible that these boundaries might form part of a larger rectilinear field system that extends beyond the extent of the excavation area. Several features dated on stratigraphic evidence to Period 3.3 are located within OA15. These include a variety of pits, post-holes, hollows and flint surfaces. One dated pit is located in OA16. Given the preponderance of features in area OA15 it is likely that many of the only broadly dated Period 3 features (hollows, pits and quarries) located within OA16 are contemporary. This final system appears of different character to the preceding two and is generally more open, though it is perhaps possible that part of the FS3 field system in the south of the site might continue in use into this later period. Overall, the size of the excavation area may not be sufficiently large enough to expose enough field extents to allow meaningful study.

OR3: What is the character of the medieval evidence and is it indicative of settlement and/or agricultural activities? Can it inform on regional variations in settlement location and form, and variations in agricultural practices?

7.1.8 The medieval evidence consists of a NNW/SSE aligned field system (FS5) that cuts completely across the old Roman one. The landscape is divided by a large ditch and a number of associated features into a boundary zone between two open areas (OA17 and OA18). Within this zone to the NE area a number of parallel gullies in may be associated with cultivation or drainage activity. Similar gullies, interpreted as bedding trenches or drainage features, were recently excavated at Mill Lane, Cressing, Essex (ASE 2018c). These differ from more parallel complexes of strip gullies often found on other medieval sites in Essex (Clarke 1998; Timby *et al* 2007, etc.).

7.1.9 To the south of the gullies were two large pits, both probably originally dug as quarries to extract clay. The gullies do appear to head towards the quarry pits and, if a drainage option for the gullies is preferred, it could be that they drained into these pits after quarrying had ceased. Further south, a gap in the main boundary ditch was blocked by a series of staggered ditches perhaps used as stock control. To the west, a U-shaped enclosure ditch may have had a similar function.

7.1.10 The medieval evidence is indicative of agricultural activity perhaps with arable activity in the north and more pastoral activity in the south, although the absence of an E/W boundary would suggest that this did not take place at the same time. The two open areas beyond the boundary zone appear devoid of features but presumably were used as fields. It is likely that the field system is related to a near-by farmstead located beyond the excavation area.

7.2 Significance and potential of the individual datasets

Stratigraphic Sequence

7.2.1 The stratigraphic dataset has provided a corpus of evidence from five main periods of landscape activity, Period 1: Early/Middle Iron Age, Period 2 Late Iron Age (mid 1st century AD), Period 3: Early Roman (mid/late 1st century AD), Period 4: Medieval and Period 5: Post-medieval. No features were dated prior to the Iron Age, although a small quantity of flintwork of broadly prehistoric date was recovered from later features as residual finds. This small assemblage attests to a limited, and presumably transient, prehistoric presence in the landscape.

Period 1: Early/Middle Iron Age

7.2.2 Archaeological remains from this period comprise a number of short lengths of ditch and gullies and a cluster of pits and post-holes. These remains are somewhat truncated and piecemeal and originally may have been more widespread as hinted at by the recovery of Middle Iron Age pottery from later features in other parts of the site. The surviving Period 1 remains perhaps provide evidence of the first settled use of the landscape. The landscape would appear to be unenclosed at this time, although this is not entirely certain given the truncated nature of the remains and the relatively confined extent of the excavation area. It is possible that two short lengths of curving gully G4 and G5 might form part of a heavily truncated semi-circular structure. Overall, these remains are of relatively low local significance by themselves, but in the wider landscape may provide evidence of Early/Middle Iron Age exploitation

of land in the upper Chelmer valley that pre-dates the earliest phase of Iron Age settlement at near-by Little Waltham (Drury 1978) by a couple of hundred years. These remains have no potential for further analysis.

Period 2: Late Iron Age

7.2.4 Late Iron Age remains consist of a rectangular enclosure and an L-shaped boundary ditch. There were very few associated features and nothing to suggest that the land was used for anything other than agriculture. Part of the boundary included a quarry pit that may have expanded out from the side of the ditch. The remains have local significance in that they provide evidence of Late Iron Age activity in the Chelmer valley and can be used in wider landscape studies taking into account the results of excavations at Little Waltham, Boreham Airfield (Bulls Lodge quarry) and on the Channels and Beaulieu Park developments. A key factor of the Late Iron Age remains is that, in conjunction with the Early Roman features, they allow examination of the nature of the Iron Age/Roman transition period, which is an important objective identified in the regional research framework (Medlycott 2011, 47).

Period 3: Early Roman

7.2.5 The Early Roman field systems are completely different to that of the preceding Late Iron Age. Three phases of field system were identified: the first (FS2) E/W orientated and consisting of two parallel track ways with open areas to either side; the second (FS3) N/S orientated and consisting of more regular open areas (fields) with a funnel shaped enclosure for the movement of livestock; and the third a simpler two area system (FS4) within which were numerous hollows, pits and surfaces. The Early Roman remains are significant for two reasons. First they provide evidence for study of the Iron Age/Roman transition and secondly the distinct difference between each phase may allow some comment to be made on the relationship between size and shape of fields and agricultural layouts and regimes, which is also an important regional research objective (Medlycott 2011, 70).

Period 4: Medieval

7.2.6 The medieval remains consist of a NW/SE field system (FS5) on a new alignment. A number of parallel gullies may be associated with cultivation or drainage activities and are likely to be related to arable activity. To the south, a series of staggered ditches were perhaps used for stock control through a field boundary as was a near-by U-shaped enclosure. It is possible that further study of the medieval remains and a search for more parallels may help place this example within the wider pattern of regional variations in medieval agricultural practices (Medlycott 2011). The late 12th- to later 13th-century date for the medieval remains is locally significant as it fits in with dating from other medieval in the vicinity sites (e.g. Bulls Lodge, Clarke 1996) which appear to have been abandoned when the New Hall deer Park was created.

Period 5: Post-medieval

7.2.7 The post-medieval evidence mainly consists of two perpendicular ditches defining three open fields. Finds evidence suggests that the field system (FS6)

dates to the later 17th or 18th century and certainly had gone out of use prior to the late 19th century, as it is not shown on historic Ordnance Survey mapping. The post-medieval remains are of local significance only.

Flintwork

7.2.8 The flintwork assemblage is small (46 pieces) and provides limited evidence for prehistoric presence at the site. The pieces were thinly spread over the site with no context producing more than three pieces. No diagnostic pieces were recovered, and the small assemblage does not allow particularly confident dating. Nonetheless, the dominance of flakes suggests a flake-orientated industry, and general morphological and technological traits imply a late prehistoric date (Middle Neolithic to Late Bronze Age /Early Iron Age). Most pieces are likely to be residual in later contexts. The condition of the material varies, but the majority of the pieces display some edge damage implying some degree of post-depositional disturbance. This small assemblage is not considered to have any potential for further analysis.

Prehistoric Pottery

7.2.9 The Prehistoric pottery assemblage is relatively small and lacking in diagnostic stratified groups; however it does represent a period in the Early/Middle Iron Age transition, which is fairly sparsely represented in the published record from central Essex. It therefore has local and perhaps even some limited regional significance, though there is no potential for further analysis beyond some additional research into fabric and form parallels. It is therefore suggested that a brief publication report should be prepared, largely based on the above text.

Roman Pottery

7.2.10 The size of the Roman pottery assemblage and number of large, well stratified groups make this assemblage one of enough regional significance to merit publication. The early/transitional Roman ceramic period in Essex is one well-represented within archaeological publications, but should continue to be added to.

7.2.11 The significance of the assemblage would increase if the amphora sherds present are demonstrated to be real examples of the currently only provisionally-identified amphorae fabrics. The paucity of existing examples of some of these amphorae from elsewhere, for example P&W Class 7 (Dressel 21-22), which to date have only been found in limited quantities in London and Colchester, would be an extremely interesting discovery. Others amongst the amphora, for instance a sherd of P&W Class 9 Rhodian amphorae, could indicate this site as having links to an urban or military supply. Checking the amphora fragments against physical examples would allow firmer fabric identifications to be made, and is included within the further analysis tasks for this assemblage.

7.2.12 In addition to the amphora sherds, this assemblage includes a diverse range of fabric types revealing Gallo-Belgic and later imports, e.g. samian ware. However, none of these were present in any significant quantity, with the range of imported fine wares equating to only nearly 1% of the assemblage, which is

fairly standard. This said, the assemblage has further potential for the consideration of pottery supply to, and consumption at, the site. The relationship of rural hinterland sites such as this with Roman Chelmsford could be investigated.

Post-Roman Pottery

7.2.13 Because Channels Place is close to Chelmsford, this assemblage may be significant when looking at the hinterlands of the town, and could also be used in any studies on rural settlement in the county.

Ceramic Building Material

7.2.14 The CBM assemblage provides some indication of Roman and early post-medieval activity on site, but neither the Roman or post-Roman groups are particularly significant or provide any basis for further research. Examples of fabrics and forms have been retained for the physical archive but the bulk of the assemblage has been discarded.

Geological Material

7.2.15 The stone assemblage mainly consists of well-known types that would have been natural to the site and of these none have been utilised/modified by man with the exception of some unintentional burning. The imported stone consists solely of somewhat nondescript pieces of German lava rotary querns – the most common type in the region during the Early Roman period. As such, the assemblage is not considered to hold any potential for further analysis beyond that undertaken for this report.

Metallurgical Remains

7.2.16 The slag assemblage is very small and suggests very small-scale iron smithing activity in the Early Roman period in the general area. This is not unexpected for the period. As such the slag assemblage is not considered to hold any potential for analysis beyond that undertaken for this report.

Animal Bone

7.2.17 The animal bone assemblage has very limited archaeological significance, due to the highly fragmented and largely indeterminate nature of the assemblages. The level of fragmentation is partly due to poor preservation, but perhaps mainly as a result of exposure to high-temperature burning. This burning likely relates to deposition practices that involved incineration, or may derive from hearth sweepings that bones may have intentionally or accidentally been thrown into.

7.2.18 The assemblage most likely represents domestic refuse. The taxa diversity suggests that cattle were being exploited in the Early/ Middle Iron Age and Late Iron Age/early Roman periods at the site, with pigs and ovicaprids also contributing, particularly in the Roman phases. It is also probable that wild species such as roe deer were being hunted in the Late Iron Age/early Roman period (Period 2). Vole teeth may also represent the consumption of wild small

mammals, although could also be an accidental inclusion. There is no potential for further analysis.

Registered Finds

7.2.19 The assemblage is small, especially when viewed by period. However, despite its small size, it represents a relatively wide range of activities being undertaken in Period 3, including textile working and metalworking, suggesting the vicinity of a settlement. The presence of the steelyard may indicate commercial activity, although it could also have been used for ordinary household weighing. Further research on the mould fragment has limited potential for identifying the type of object cast.

Other Finds Assemblages

7.2.20 The following finds assemblages are considered to lack significance and potential to merit further analysis beyond that done for this assessment.

- Fired clay
- Glass
- Bulk metalwork
- Human bone
- Fish bone
- Shell

Environmental Samples

Charred Plant Macrofossils:

7.2.21 Possible bioturbation, variable preservation and the absence of cereal chaff limit the potential of these assemblages for detailed further analysis. It is however recommended that a summary of the assessment data is incorporated into any publication report regarding the site. As a part of this, samples <20> (Period 2), <10> and <27> (Period 3) and <7> and <8> (eval samples) are sufficiently large to merit sorting, identification and quantifying to fully document the taxa present. This will also enable further investigation of the range of wheat grains, of the possible occurrence of bread type wheat verses the more typical glume wheat and of the range of legumes present. These samples therefore have potential to inform on the nature of LIA/Early Roman cultivation regimes.

Charcoal:

7.2.22 Charcoal assemblages dated to the MIA and LIA/Early Roman periods have potential to provide information regarding the composition of the woodland landscape, the range of taxa used (primarily for fuel), whether roundwood was a prominent component of this and whether there was any change in wood selection through the different occupations. Establishing evidence for quick grown roundwood with very few growth rings verses slower more mature roundwood may assist in adding depth to the data and interpretations of the current assemblages and shedding light on woodmanship practices.

8.0 FURTHER ANALYSIS, DISSEMINATION AND ARCHIVING

8.1 Further Analysis and Dissemination

8.1.1 This assessment report will be made available via the ADS grey literature library and the Essex HER.

8.1.2 The preceding Section 7 has identified that the excavated remains have some local and regional significance and that the results warrant wider dissemination. It is proposed that a short excavation report is produced for inclusion in *Essex Archaeology and History,* the Transactions of the Essex Society for Archaeology and History.

8.1.3 It is envisaged that targeted further analysis of elements of the stratigraphic, finds and environmental data sets will be undertaken as part of this publication project. For several elements of the finds assemblage no further work is required. The various further analytical and reporting tasks required to produce the publication are identified below and summarised in Table 16, which includes proposed time allocations.

8.1.4 Although expressed here in terms of the production of a Phase 5-specific excavation report, it is anticipated that the Phase 5 results will in fact be amalgamated with those from other construction phases in order to present an integrated account of discoveries across the Channels development site, as and when all such archaeological works are completed.

Stratigraphic: Further Work

8.1.5 Review stratigraphic dating/phasing/feature interpretation (2 days)
Further research into local and regional parallels for the LIA/Roman and medieval field systems (2 days)
Report preparation (5 days)
Selection/preparation of relevant plans, photo's, figures etc. (1 day)

Total: 10 days

Prehistoric Pottery: Further Work

8.1.6 Prepare publication text largely based on above report (0.5 days)
Extract material for illustration, prepare catalogue (0.5 days)

Total: 1 day

Roman Pottery: Further Work

8.1.7 Select items for illustration (1.5 days)
Organise physical archive (0.5 days)
Conduct research of local sites for comparative examples (2 days)
Write archive report & publication summary for Roman pottery (3 days)
Consult amphora reference collection, e.g. LAARC (1 day)

Total: 7 days

Post-Roman Pottery: Further Work

8.1.8 Prepare publication text largely based on above report (1 day)

Registered Finds: Further Work

8.1.9 A summary publication report will be prepared largely based on the above assessment report. Further research is required on the mould fragment (this may include time by an external specialist, depending on their opinion whether anything at all can be said about the cast object from the surviving internal surface). In addition, the steelyard requires conservation work (stabilising) and up to three objects require X-radiography.

Conservation of steelyard (1.5 days)
X-radiography of three objects (0.5 days)
Summary report, plus illustration catalogue (0.5 days)
Mould fragment research (0.5 days)

Total: 3.5 days

Other Finds Assemblages

8.1.10 No further analysis work is required on the following finds assemblages. Pertinent information from this assessment report will be integrated into the strat narrative text and/or briefly summarised in the published finds report text.

- Flintwork
- Ceramic Building Material
- Fired clay
- Glass
- Geological material
- Metallurgical Remains/Magnetic Material
- Bulk Metalwork
- Human Bone
- Animal Bone
- Fish Bone
- Shell

Production of summary text for publication (0.5 days)

Environmental Samples: further work

Charred Plant Macrofossils:

8.1.11 Prior to analysis it is recommended that some of the grains from samples <20> and <27>, specifically including those thought to be consistent with bread-type wheat are dated to verify the integrity of charred assemblages. Pending the dates, it is recommended that samples <20> (Period 2), <10> and <27> (Period 3) and <7> and <8> (eval samples, Vitolo 2017) are sieved and sorted to facilitate identification and quantification of taxa present. A short report summarising the findings of the assessment and the analysed samples is envisaged.

Sieving sorting and identification of 5 medium-sized samples (3.5 days)

Data entry, report writing and table production (1.5 days)

Total: 5 days

Charcoal:

8.1.12 It is recommended that charcoal fragments from samples <21> and <22> (Period 1), <20> (Period 2), <10>, <12> and <15> are analysed to provide further taxonomic identifications and information regarding the abundance and types of roundwood represented. Some of the undated samples may be added to this list if dating is forthcoming, however, the current charcoal assemblages of oak do not provide material suitable for dating. A short report which summarises the findings of the assessment together with the expanded analysis data will be produced for publication.

Identification of up to 100 fragments per sample (prob. fewer for the MIA samples) for up to 6 samples (3 days)
Data entry, report and table production (1 day)

Total: 4 days

Illustration: further work

8.1.13 The following illustration tasks for publication are:

Site plans, sections, etc. (2 days)
Prehistoric pottery, *c*.4 sherds (0.5 days)
Late Iron Age/Roman pottery, *c*.30 sherds/vessels (3 days)
Registered finds, 5 objects (1 day)

8.1.14 The tasks required to complete the site analysis and to produce the publication note are summarised in Table 16.

Tasks	**Days**
Stratigraphic analysis & reporting:	
Review of dating/phasing/landuse & feature interpretation	2 days
Further research into local & regional parallels	2 days
Report preparation	5 days
Selection of relevant plans, photo's, figures etc.	1 day
Finds & enviro analysis & reporting:	
Prehistoric pottery	1 day
Roman pottery	8 days
Medieval & post-medieval pottery	1 day
Registered finds	1 day
Misc. other finds	0.5 days
Conservation & X-radiography	2 days
Environmental remains	9 days
Illustration:	
Site plan/section illustrations	2 days
Finds Illustrations	4.5 days
Editing & publication	
Internal edit of draft article	1.5 days
Internal amendments to draft article	1 day
EAH editor/reader comment amendments	0.5 days

Page print cost (fee per page)	cost
Archiving:	
Collation of project archive	1 day
Deposition of archive at museum	0.25 days
Museum box fees	Fee
Project management:	
Project admin and management	2 days

Table 16: Tasks for completion of dissemination and archiving

8.2 Artefacts and Archive Deposition

8.2.1 The site archive is currently held at the offices of ASE. Following completion of all post-excavation work, including any publication work, the site archive will be deposited with Chelmsford Museum. This will be subject to the agreement of the legal landowner.

8.2.2 The finds and environmental samples ultimately deposited as part of the archive are dependent on specialist recommendations and regional archive requirements. Some discard may be carried out.

8.2.3 The contents of the archive are tabulated below (Tables 17 and 18).

	Evaluation	*Excavation*
Context sheets	297	539
Drawing sheets	12	23
Digital photos	*218*	c.500
Trench Record forms	49	-

Table 17: Quantification of site paper archive

Bulk finds (quantity e.g. 1 bag, 1 box, 0.5 box)	20 boxes
Registered finds (number of)	7
Flots and environmental remains from bulk samples	21
Wet sieved environmental remains from bulk samples	1

Table 18: Quantification of artefact and environmental samples

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Appendix 1: Context Register

Context	Type	Interpretation	Parent	Group	Land Use	Period
1000	Layer	Topsoil	1000	-	-	-
1001	Layer	Subsoil	1001	-	-	-
1002	Layer	Natural	1002	-	-	-
1003	Deposit	Fill, single	1004	25	FS3	3.2
1004	Cut	Ditch	1004	25	FS3	3.2
1005	Deposit	Fill, secondary	1006	18	OA21	2
1006	Cut	Pit	1006	18	OA21	2
1007	Deposit	Fill, single	1008	25	FS3	3.2
1008	Cut	Ditch	1008	25	FS3	3.2
1009	Deposit	Fill, primary	1006	18	OA21	2
1010	Deposit	Fill, single	1011	25	FS3	3.2
1011	Cut	Ditch	1011	25	FS3	3.2
1012	Deposit	Fill, single	1013	25	FS3	3.2
1013	Cut	Ditch	1013	25	FS3	3.2
1014	Deposit	Cleaning layer	1014	25	FS3	3.2
1015	Deposit	Fill, single	1016	66	OA17	4
1016	Cut	Ditch	1016	66	OA17	4
1017	Deposit	Fill, single	1018	25	FS3	3.2
1018	Cut	Ditch	1018	25	FS3	3.2
1019	Deposit	Fill, single	1020	64	OA17	4
1020	Cut	Ditch	1020	64	OA17	4
1021	Deposit	Fill, single	1022	68	OA17	4
1022	Cut	Pit	1022	68	OA17	4
1023	Deposit	Fill, single	1024	26	FS3	3.2
1024	Cut	Ditch	1024	26	FS3	3.2
1025	Deposit	Fill, single	1025	25	FS3	3.2
1026	Cut	Ditch	1026	25	FS3	3.2
1027	Deposit	Fill, single	1028	68	OA17	4
1028	Cut	Pit	1028	68	OA17	4
1029	Deposit	Fill, single	1030	67	OA17	4
1030	Cut	Gully	1030	67	OA17	4
1031	Deposit	Fill, single	1032	67	OA17	4
1032	Cut	Gully	1032	67	OA17	4
1033	Deposit	Fill, single	1034	89		0
1034	Cut	Pit	1034	89		0
1035	Deposit	Fill, single	1036	66	OA17	4
1036	Cut	Ditch	1036	66	OA17	4
1037	Deposit	Fill, single	1038	25	FS3	3.2
1038	Cut	Ditch	1038	25	FS3	3.2
1039	Deposit	Fill, single	1040	95		0

Context	Type	Interpretation	Parent	Group	Land Use	Period
1040	Cut	Tree throw	1040	95		0
1041	Deposit	Fill, single	1042	66	OA17	4
1042	Cut	Ditch	1042	66	OA17	4
1043	Deposit	Fill, single	1044	63	OA17	4
1044	Cut	Ditch	1044	63	OA17	4
1045	Deposit	Fill, single	1046	61	FS5	4
1046	Cut	Ditch	1046	61	FS5	4
1047	Deposit	Fill, single	1048	61	FS5	4
1048	Cut	Ditch	1048	61	FS5	4
1049	Deposit	Fill, single	1050	89		0
1050	Cut	Posthole	1050	89		0
1051	Deposit	Fill, single	1052	62	OA17	4
1052	Cut	Ditch	1052	62	OA17	4
1053	Deposit	Fill, single	1054	84		6
1054	Cut	Ditch	1054	84		6
1055	Deposit	Fill, single	1056	62	OA17	4
1056	Cut	Ditch	1056	62	OA17	4
1057	Deposit	Fill, single	1058	63	OA17	4
1058	Cut	Ditch	1058	63	OA17	4
1059	Deposit	Fill, single	1060	89		0
1060	Cut	Ditch	1060	89		0
1061	Deposit	Fill, single	1062	63	OA17	4
1062	Cut	Ditch	1062	63	OA17	4
1063	Deposit	Fill, single	1064	63	OA17	4
1064	Cut	Ditch	1064	63	OA17	4
1065	Deposit	Fill, primary	1066	64	OA17	4
1066	Cut	Ditch	1066	64	OA17	4
1067	Deposit	Fill, upper	1070	24	FS2	3.1
1068	Deposit	Fill, intermediate	1070	24	FS2	3.1
1069	Deposit	Fill, primary	1070	24	FS2	3.1
1070	Cut	Ditch	1070	24	FS2	3.1
1071	Deposit	Fill, single	1072	66	OA17	4
1072	Cut	Ditch	1072	66	OA17	4
1073	Deposit	Fill, single	1074	81	FS6	5
1074	Cut	Ditch	1074	81	FS6	5
1075	Deposit	Fill, upper	1066	64	OA17	4
1076	Deposit	Fill, single	1077	65	OA17	4
1077	Cut	Ditch	1077	65	OA17	4
1078	Deposit	Fill, single	1079	88		0
1079	Cut	Ditch	1079	88		0
1080	Deposit	Fill, single	1081	27	FS2	3.1
1081	Cut	Ditch	1081	27	FS2	3.1

Context	Type	Interpretation	Parent	Group	Land Use	Period
1082	Deposit	Fill, single	1083	12	OA4	2
1083	Cut	Ditch terminus	1083	12	OA4	2
1084	Deposit	Fill, single	1085	73	OA18	4
1085	Cut	Ditch	1085	73	OA18	4
1086	Deposit	Fill, single	1087	73	OA18	4
1087	Cut	Ditch	1087	73	OA18	4
1088	Deposit	Fill, single	1089	86		0
1089	Cut	Ditch	1089	86		0
1090	Deposit	Fill, single	1091	1	OA!	1
1091	Cut	Ditch	1091	1	OA!	1
1092	Deposit	Fill, single	1093	73	OA18	4
1093	Cut	Ditch	1093	73	OA18	4
1094	Deposit	Fill, single	1095	27	FS2	3.1
1095	Cut	Ditch	1095	27	FS2	3.1
1096	Deposit	Fill, single	1097	38	FS4	3.3
1097	Cut	Ditch	1097	38	FS4	3.3
1098	Deposit	Fill, upper	1100	39	FS4	3.3
1099	Deposit	Fill, primary	1100	39	FS4	3.3
1100	Cut	Ditch	1100	39	FS4	3.3
1101	Deposit	Fill, single	1102	48		3
1102	Cut	Pit	1102	48		3
1103	Deposit	Fill, single	1104	38	FS4	3.3
1104	Cut	Ditch	1104	38	FS4	3.3
1105	Deposit	Fill, upper	1107	24	FS2	3.1
1106	Deposit	Fill, primary	1107	24	FS2	3.1
1107	Cut	Ditch	1107	24	FS2	3.1
1108	Deposit	Fill, single	1109	79	FS6	5
1109	Cut	Ditch	1109	79	FS6	5
1110	Layer	Surface	1110			
1111	Deposit	Fill, single	1112	90		0
1112	Cut	Pit	1112	90		0
1113	Deposit	Fill, single	1114	90		0
1114	Cut	Pit	1114	90		0
1115	Deposit	Fill, single	1116	48		3
1116	Cut	Pit	1116	48		3
1117	Deposit	Fill, single	1118	90		0
1118	Cut	Pit	1118	90		0
1119	Deposit	Fill, upper	1120	24	FS2	3.1
1120	Cut	Ditch	1120	24	FS2	3.1
1121	Deposit	Fill, upper	1123	24	FS2	3.1
1122	Deposit	Fill, primary	1123	24	FS2	3.1
1123	Cut	Ditch	1123	24	FS2	3.1

Context	Type	Interpretation	Parent	Group	Land Use	Period
1124	Deposit	Fill, intermediate	1126	24	FS2	3.1
1125	Deposit	Fill, primary	1126	24	FS2	3.1
1126	Cut	Ditch	1126	24	FS2	3.1
1127	Deposit	Fill, primary	1120	24	FS2	3.1
1128	Deposit	Fill, upper	1126	24	FS2	3.1
1129	Deposit	Fill, single	1130	49		3
1130	Cut	Pit	1130	49		3
1131	Deposit	Fill, single	1132	37	FS3	3.2
1132	Cut	Ditch	1132	37	FS3	3.2
1133	Deposit	Fill, single	1134	26	FS3	3.2
1134	Cut	Ditch	1134	26	FS3	3.2
1135	Deposit	Fill, single	1136	49		3
1136	Cut	Pit	1136	49		3
1137	Deposit	Fill, single	1138	47	OA15	3.3
1138	Cut	Pit	1138	47	OA15	3.3
1139	Deposit	Fill, single	1140	48		3
1140	Cut	Pit	1140	48		3
1141	Deposit	Fill, single	1142	19	OA3	2
1142	Cut	Pit	1142	19	OA3	2
1143	Deposit	Fill, single	1144	90		0
1144	Cut	Pit	1144	90		0
1145	Deposit	Fill, single	1146	79	FS6	5
1146	Cut	Ditch	1146	79	FS6	5
1147	Deposit	Fill, single	1148	79	FS6	5
1148	Cut	Ditch	1148	79	FS6	5
1149	Deposit	Fill, single	1150	47	OA15	3
1150	Cut	Pit	1150	47	OA15	3
1151	Deposit	Fill, single	1152	23	FS2	3.1
1152	Cut	Ditch	1152	23	FS2	3.1
1153	Deposit	Fill, upper	1155	24	FS2	3.1
1154	Deposit	Fill, primary	1155	24	FS2	3.1
1155	Cut	Ditch	1155	24	FS2	3.1
1156	Deposit	Fill, single	1157	26	FS3	3.2
1157	Cut	Ditch	1157	26	FS3	3.2
1158	Deposit	Fill, single	1159	37	FS3	3.2
1159	Cut	Ditch	1159	37	FS3	3.2
1160	Deposit	Fill, upper	1161	39	FS4	3.3
1161	Cut	Ditch	1161	39	FS4	3.3
1162	Deposit	Fill, single	1163	37	FS3	3.2
1163	Cut	Ditch	1163	37	FS3	3.2
1164	Deposit	Fill, primary	1161	39	FS4	3.3
1165	Deposit	Fill, single	1166	37	FS3	3.2

Context	Type	Interpretation	Parent	Group	Land Use	Period
1166	Cut	Ditch	1166	37	FS3	3.2
1167	Deposit	Fill, single	1168	44	OA15	3.3
1168	Cut	Depression	1168	44	OA15	3.3
1169	Deposit	Fill, single	1170	44	OA15	3.3
1170	Cut	Depression	1170	44	OA15	3.3
1171	Deposit	Fill, upper	1173	39	FS4	3.3
1172	Deposit	Fill, primary	1173	39	FS4	3.3
1173	Cut	Ditch	1173	39	FS4	3.3
1174	Deposit	Fill, single	1175	24	FS2	3.1
1175	Cut	Ditch	1175	24	FS2	3.1
1176	Deposit	Fill, single	1177	45	OA15	2
1177	Cut	Depression	1177	45	OA15	2
1178	Deposit	Fill, single	1179	23	FS2	3.1
1179	Cut	Ditch	1179	23	FS2	3.1
1180	Deposit	Fill, upper	1182	43		3
1181	Deposit	Fill, primary	1182	43		3
1182	Cut	Pit	1182	43		3
1183	Deposit	Fill, single	1184	79	FS6	5
1184	Cut	Ditch	1184	79	FS6	5
1185	Fill	Fill, single	1186	82	OA19	5
1186	Cut	Ditch	1186	82	OA19	5
1187	Deposit	Fill, single	1188	82	OA19	5
1188	Cut	Pit	1188	82	OA19	5
1189	Deposit	Fill, upper	1191	26	FS3	3.2
1190	Deposit	Fill, primary	1191	26	FS3	3.2
1191	Cut	Ditch	1191	26	FS3	3.2
1192	Deposit	Fill, single	1193	23	FS2	3.1
1193	Cut	Ditch	1193	23	FS2	3.1
1194	Layer	Metalling	1194	46	OA15	3.3
1195	Deposit	Fill, single	1196	24	FS2	3.1
1196	Cut	Ditch	1196	24	FS2	3.1
1197	Deposit	Fill, single	1198	42		3
1198	Cut	Pit	1198	42		3
1199	Deposit	Fill, single	1200	45	OA15	3
1200	Cut	Depression	1200	45	OA15	3
1201	Deposit	Fill, single	1202	24	FS2	3.1
1202	Cut	Ditch	1202	24	FS2	3.1
1203	Deposit	Fill, single	1204	37	FS3	3
1204	Cut	Ditch	1204	37	FS3	3
1205	Deposit	Fill, single	1539	45	OA15	3
1206	Cut	Fill, single	1207	43		3
1207	Cut	Gully	1207	43		3

Context	Type	Interpretation	Parent	Group	Land Use	Period
1208	Deposit	Fill, single	1209	88		0
1209	Cut	Ditch	1209	88		0
1210	Deposit	Fill, single	1211	41		3
1211	Cut	Gully	1211	41		3
1212	Deposit	Fill, single	1213	30	FS2	3.1
1213	Cut	Ditch	1213	30	FS2	3.1
1214	Deposit	Fill, upper	1216	23	FS2	3.1
1215	Deposit	Fill, primary	1216	23	FS2	3.1
1216	Cut	Ditch	1216	23	FS2	3.1
1217	Deposit	Fill, single	1218	4	OA1	1
1218	Cut	Ditch terminus	1218	4	OA1	1
1219	Deposit	Fill, single	1220	97		0
1220	Cut	Pit	1220	97		0
1221	Deposit	Fill, single	1222	5	OA1	1
1222	Cut	Ditch	1222	5	OA1	1
1223	Deposit	Fill, single	1224	36	FS2	3.1
1224	Cut	Ditch	1224	36	FS2	3.1
1225	Deposit	Fill, single	1226	81	FS6	5
1226	Cut	Ditch	1226	81	FS6	5
1227	Deposit	Fill, single	1228	61	FS5	4
1228	Cut	Ditch	1228	61	FS5	4
1229	Deposit	Fill, single	1230	29	FS2	3.1
1230	Cut	Ditch	1230	29	FS2	3.1
1231	Deposit	Fill, single	1232	2	OA1	1
1232	Cut	Ditch	1232	2	OA1	1
1233	Deposit	Fill, single	1234	28	FS2	3.1
1234	Cut	Ditch	1234	28	FS2	3.1
1235	Deposit	Fill, single	1236	20	OA2	2
1236	Cut	Pit	1236	20	OA2	2
1237	Deposit	Fill, single	1238	74	OA17	4
1238	Cut	Ditch	1238	74	OA17	4
1239	Deposit	Fill, single	1240	29	FS2	3.1
1240	Cut	Ditch	1240	29	FS2	3.1
1241	Deposit	Fill, single	1242	50		3
1242	Cut	Pit	1242	50		3
1243	Deposit	Fill, single	1244	13	FS1	2
1244	Cut	Ditch	1244	13	FS1	2
1245	Deposit	Fill, single	1247	50		3
1246	Deposit	Fill, upper	1263	13	FS1	2
1247	Cut	Ditch	1247	50		3
1248	Deposit	Fill, upper	1249	31	FS3	3.2
1249	Cut	Ditch	1249	31	FS3	3.2

Context	Type	Interpretation	Parent	Group	Land Use	Period
1250	Deposit	Fill, upper	1252	91		0
1251	Deposit	Fill, primary	1252	91		0
1252	Cut	Pit	1252	91		0
1253	Deposit	Fill, primary	1249	31	FS3	3.2
1254	Deposit	Fill, upper	1257	13	FS1	2
1255	Deposit	Fill, intermediate	1257	13	FS1	2
1256	Deposit	Fill, primary	1257	13	FS1	2
1257	Cut	Ditch	1257	13	FS1	2
1258	Deposit	Fill, upper	1281	14	FS1	2
1259	Deposit	Fill, intermediate	1281	14	FS1	2
1260	Deposit	Fill, intermediate	1281	14	FS1	2
1261	Deposit	Fill, intermediate	1263	13	FS1	2
1262	Deposit	Fill, primary	1263	13	FS1	2
1263	Cut	Ditch	1263	13	FS1	2
1264	Deposit	Fill, upper	1266	7	OA1	1
1265	Deposit	Fill, primary	1266	7	OA1	1
1266	Cut	Pit	1266	7	OA1	1
1267	Deposit	Fill, upper	1269	7	OA1	1
1268	Deposit	Fill, intermediate	1269	7	OA1	1
1269	Cut	Pit	1269	7	OA1	1
1270	Deposit	Fill, upper	1271	79	FS6	5
1271	Cut	Ditch	1271	79	FS6	5
1272	Deposit	Fill, single	1273	21	OA2	2
1273	Cut	Pit	1273	21	OA2	2
1274	Deposit	Fill, single	1275	74	OA17	4
1275	Cut	Ditch	1275	74	OA17	4
1276	Deposit	Fill, single	1277	87		0
1277	Cut	Gully	1277	87		0
1278	Deposit	Fill, single	1279	28	FS2	3.1
1279	Cut	Ditch	1279	28	FS2	3.1
1280	Deposit	Fill, primary	1281	14	FS1	2
1281	Cut	Pit	1281	14	FS1	2
1282	Deposit	Fill, single	1283	7	OA1	1
1283	Cut	Pit	1283	7	OA1	1
1284	Deposit	Fill, single	1285	32	FS3	3.2
1285	Cut	Ditch	1285	32	FS3	3.2
1286	Deposit	Fill, single	1287	74	OA17	4
1287	Cut	Ditch	1287	74	OA17	4
1288	Deposit	Fill, upper	1291	56		3
1289	Deposit	Fill, intermediate	1291	56		3
1290	Deposit	Fill, primary	1291	56		3
1291	Cut	Pit	1291	56		3

Context	Type	Interpretation	Parent	Group	Land Use	Period
1292	Deposit	Fill, single	1293	87		0
1293	Cut	Gully	1293	87		0
1294	Deposit	Fill, single	1295	28	FS2	3.1
1295	Cut	Ditch	1295	28	FS2	3.1
1296	Deposit	Fill, single	1297	75	FS5	4
1297	Cut	Ditch	1297	75	FS5	4
1298	Deposit	Fill, intermediate	1269	7	OA1	1
1299	Deposit	Fill, primary	1269	7	OA1	1
1300	Deposit	Fill, intermediate	1271	79	FS6	5
1301	Deposit	Fill, primary	1271	79	FS6	5
1302	Deposit	Fill, single	1303	28	FS2	3.1
1303	Cut	Ditch	1303	28	FS2	3.1
1304	Deposit	Fill, single	1305	6	OA1	1
1305	Cut	Ditch	1305	6	OA1	1
1306	Deposit	Fill, single	1307	7	OA1	1
1307	Cut	Pit	1307	7	OA1	1
1308	Deposit	Fill, single	1309	7	OA1	1
1309	Cut	Ditch terminus	1309	7	OA1	1
1310	Deposit	Fill, single	1311	7	OA1	1
1311	Cut	Posthole	1311	7	OA1	1
1312	Deposit	Fill, single	1313	87		0
1313	Cut	Posthole	1313	87		0
1314	Deposit	Fill, single	1315	7	OA1	1
1315	Cut	Ditch terminus	1315	7	OA1	1
1316	Deposit	Fill, single	1317	3	OA1	1
1317	Cut	Gully	1317	3	OA1	1
1318	Deposit	Fill, upper	1320	59		3
1319	Deposit	Fill, primary	1320	59		3
1320	Cut	Ditch	1320	59		3
1321	Deposit	Fill, single	1322	28	FS2	3.1
1322	Cut	Ditch	1322	28	FS2	3.1
1323	Deposit	Fill, single	1324	83		5
1324	Cut	Pit	1324	83		5
1325	Deposit	Fill, single	1326	73	OA18	4
1326	Cut	Ditch	1326	73	OA18	4
1327	Deposit	Fill, single	1328	79	FS6	5
1328	Cut	Ditch	1328	79	FS6	5
1329	Deposit	Fill, single	1330	81	FS6	5
1330	Cut	Ditch	1330	81	FS6	5
1331	Deposit	Fill, single	1332	77	OA17	4
1332	Cut	Ditch	1332	77	OA17	4
1333	Deposit	Fill, single	1334	32	FS3	3.2

Context	Type	Interpretation	Parent	Group	Land Use	Period
1334	Cut	Ditch	1334	32	FS3	3.2
1335	Deposit	Fill, upper	1337	29	FS2	3.1
1336	Deposit	Fill, primary	1337	29	FS2	3.1
1337	Cut	Ditch	1337	29	FS2	3.1
1338	Deposit	Fill, upper	1342	85		6
1339	Deposit	Fill, single	1343	94		3.3
1340	Deposit	Fill, intermediate	1342	85		6
1341	Deposit	Fill, primary	1342	85		6
1342	Cut	Pit	1342	85		6
1343	Cut	Pit	1343	94		3.3
1344	Deposit	Fill, single	1345			
1345	Cut	Pit	1345			
1346	Deposit	Fill, single	1347	32	FS3	3.2
1347	Cut	Ditch	1347	32	FS3	3.2
1348	Deposit	Fill, single	1349	29	FS2	3.1
1349	Cut	Ditch	1349	29	FS2	3.1
1350	Layer	Metalling	1350	94		0
1351	Deposit	Fill, single	1352	11	FS1	2
1352	Cut	Ditch	1352	11	FS1	2
1353	Deposit	Fill, single	1354	32	FS3	3.2
1354	Cut	Ditch	1354	32	FS3	3.2
1355	Deposit	Fill, single	1356	17	OA4	2
1356	Cut	Pit	1356	17	OA4	2
1357	Deposit	Fill, single	1358	11	FS1	2
1358	Cut	Ditch	1358	11	FS1	2
1359	Deposit	Fill, single	1360	24	FS2	3.1
1360	Cut	Ditch	1360	24	FS2	3.1
1361	Deposit	Fill, single	1362	17	OA4	2
1362	Cut	Pit	1362	17	OA4	2
1363	Deposit	Fill, single	1364	17	OA4	2
1364	Cut	Pit	1364	17	OA4	2
1365	Deposit	Fill, upper	1369	10	FS1	2
1366	Deposit	Fill, intermediate	1369	10	FS1	2
1367	Deposit	Fill, intermediate	1369	10	FS1	2
1368	Deposit	Fill, primary	1369	10	FS1	2
1369	Cut	Ditch	1369	10	FS1	2
1370	Deposit	Fill, single	1371	43		3
1371	Cut	Ditch	1371	43		3
1372	Deposit	Fill, single	1373	81	FS6	5
1373	Cut	Ditch	1373	81	FS6	5
1374	Deposit	Fill, upper	1375	24	FS2	3.1
1375	Cut	Ditch	1375	24	FS2	3.1

Context	Type	Interpretation	Parent	Group	Land Use	Period
1376	Deposit	Fill, single	1377	63	OA17	4
1377	Cut	Ditch terminus	1377	63	OA17	4
1378	Deposit	Fill, single	1380	51	OA14	3.2
1379	Deposit	Fill, single	1538	8	OA1	1
1380	Cut	Pit	1380	51		3
1381	Deposit	Fill, primary	1375	24	FS2	3.1
1382	Deposit	Fill, single	1383	11	FS1	2
1383	Cut	Ditch	1383	11	FS1	2
1384	Deposit	Fill, single	1385	42		3
1385	Cut	Pit	1385	42		3
1386	Deposit	Fill, single	1387	23	FS2	3.1
1387	Cut	Ditch	1387	23	FS2	3.1
1388	Deposit	Fill, upper	1390	22	OA3	2
1389	Deposit	Fill, primary	1390	22	OA3	2
1390	Cut	Pit	1390	22	OA3	2
1391	Cut	Gully	1391	27	FS2	3.1
1392	Deposit	Fill, single	1391	27	FS2	3.1
1393	Deposit	Fill, single	1394	72	OA17	4
1394	Cut	Ditch	1394	72	OA17	4
1395	Deposit	Fill, single	1396	37	FS3	3.2
1396	Cut	Ditch	1396	37	FS3	3.2
1397	Deposit	Fill, single	1398	41		3
1398	Cut	Pit	1398	41		3
1399	Deposit	Fill, upper	1401	43		3
1400	Deposit	Fill, primary	1401	43		3
1401	Cut	Pit	1401	43		3
1402	Deposit	Fill, single	1403	86		0
1403	Cut	Gully	1403	86		0
1404	Deposit	Fill, single	1405	73	OA18	4
1405	Cut	Ditch	1405	73	OA18	4
1406	Deposit	Fill, single	1407	30	FS2	3.1
1407	Cut	Ditch	1407	30	FS2	3.1
1408	Deposit	Fill, single	1409	73	OA18	4
1409	Cut	Ditch	1409	73	OA18	4
1410	Deposit	Fill, single	1411	30	FS2	3.1
1411	Cut	Ditch	1411	30	FS2	3.1
1412	Deposit	Fill, single	1413	41		3
1413	Cut	Pit	1413	41		3
1414	Deposit	Fill, single	1415	41		3
1415	Cut	Pit	1415	41		3
1416	Deposit	Fill, single	1417	73	OA18	4
1417	Cut	Ditch	1417	73	OA18	4

Context	Type	Interpretation	Parent	Group	Land Use	Period
1418	Deposit	Fill, upper	1422	69	OA17	4
1419	Deposit	Fill, intermediate	1422	69	OA17	4
1420	Deposit	Fill, intermediate	1422	69	OA17	4
1421	Deposit	Fill, intermediate	1422	69	OA17	4
1422	Cut	Pit	1422	69	OA17	4
1423	Deposit	Fill, single	1424	63	OA17	4
1424	Cut	Ditch	1424	63	OA17	4
1425	Deposit	Fill, single	1426	72	OA17	4
1426	Cut	Ditch	1426	72	OA17	4
1427	Deposit	Fill, single	1428	16	OA3	2
1428	Cut	Pit	1428	16	OA3	2
1429	Deposit	Fill, single	1430	70	OA!7	4
1430	Cut	Pit	1430	70	OA!7	4
1431	Deposit	Fill, single	1432	74	OA17	4
1432	Cut	Ditch	1432	74	OA17	4
1433	Deposit	Fill, single	1434	70	OA!7	4
1434	Cut	Pit	1434	70	OA!7	4
1435	Deposit	Fill, single	1436	28	FS2	3.1
1436	Cut	Ditch	1436	28	FS2	3.1
1437	Deposit	Fill, primary	1422	69	OA17	4
1438	Deposit	Fill, single	1439	54	OA16	3.3
1439	Cut	Pit	1439	54	OA16	3.3
1440	Deposit	Fill, single	1441	28	FS2	3.1
1441	Cut	Ditch	1441	28	FS2	3.1
1442	Deposit	Fill, upper	1444	41		3
1443	Deposit	Fill, primary	1444	41		3
1444	Cut	Pit	1444	41		3
1445	Deposit	Fill, single	1446	61	FS5	4
1446	Cut	Ditch	1446	61	FS5	4
1447	Deposit	Fill, single	1448	5	OA1	1
1448	Cut	Gully	1448	5	OA1	1
1449	Deposit	Fill, single	1450	4	OA1	1
1450	Cut	Gully	1450	4	OA1	1
1451	Deposit	Fill, single	1462	33	FS3	3.2
1452	Deposit	Fill, upper	1454	33	FS3	3.2
1453	Deposit	Fill, primary	1454	33	FS3	3.2
1454	Cut	Ditch	1454	33	FS3	3.2
1455	Deposit	Fill, single	1456	33	FS3	3.2
1456	Cut	Ditch	1456	33	FS3	3.2
1457	Deposit	Fill, upper	1461	9	FS1	2
1458	Deposit	Fill, intermediate	1461	9	FS1	2
1459	Deposit	Fill, intermediate	1461	9	FS1	2

Context	Type	Interpretation	Parent	Group	Land Use	Period
1460	Deposit	Fill, primary	1461	9	FS1	2
1461	Cut	Ditch	1461	9	FS1	2
1462	Cut	Ditch	1462	33	FS3	3.2
1463	Deposit	Fill, upper	1465	81	FS6	5
1464	Deposit	Fill, primary	1465	81	FS6	5
1465	Cut	Ditch	1465	81	FS6	5
1466	Deposit	Fill, upper	1468	78	OA!7	4
1467	Deposit	Fill, primary	1468	78	OA!7	4
1468	Cut	Pit	1468	78	OA!7	4
1469	Deposit	Fill, single	1470	34	FS3	3.2
1470	Cut	Gully	1470	34	FS3	3.2
1471	Deposit	Fill, single	1472	15	FS1	2
1472	Cut	Ditch	1472	15	FS1	2
1473	Deposit	Fill, single	1474	64	OA17	4
1474	Cut	Ditch terminus	1474	64	OA17	4
1475	Deposit	Fill, upper	1477	61	FS5	4
1476	Deposit	Fill, primary	1477	61	FS5	4
1477	Cut	Ditch	1477	61	FS5	4
1478	Deposit	Fill, single	1479			
1479	Cut	Ditch	1479			
1480	Deposit	Fill, upper	1482	76	OA!7	4
1481	Deposit	Fill, primary	1482	76	OA!7	4
1482	Cut	Gully	1482	76	OA!7	4
1483	Deposit	Fill, single	1484	40		3
1484	Cut	Depression	1484	40		3
1485	Deposit	Fill, single	1486	40		3
1486	Cut	Depression	1486	40		3
1487	Deposit	Fill, single	1488	76	OA!7	4
1488	Cut	Ditch	1488	76	OA!7	4
1489	Deposit	Fill, single	1490	76	OA!7	4
1490	Cut	Ditch	1490	76	OA!7	4
1491	Layer	Levelling deposit	1491	92		6
1492	Deposit	Fill, single	1493	60	OA12	3.2
1493	Cut	Unknown	1493	60	OA12	3.2
1494	Layer	Metalling	1494	93	OA15	3.3
1495	Deposit	Fill, single	1496	52	OA15	3.3
1496	Cut	Ditch	1496	52	OA15	3.3
1497	Deposit	Fill, upper	1499	79	FS6	5
1498	Deposit	Fill, primary	1499	79	FS6	5
1499	Cut	Ditch	1499	79	FS6	5
1500	Deposit	Fill, single	1501	35	OA15	3.3
1501	Cut	Depression	1501	35	OA15	3.3

Context	Type	Interpretation	Parent	Group	Land Use	Period
1502	Deposit	Fill, single	1503	23	FS2	3.1
1503	Cut	Ditch	1503	23	FS2	3.1
1504	Layer	Levelling deposit	1504	10	FS1	2
1505	Deposit	Fill, upper	1509	10	FS1	2
1506	Deposit	Fill, tertiary	1509	10	FS1	2
1507	Deposit	Fill, secondary	1509	10	FS1	2
1508	Deposit	Fill, primary	1509	10	FS1	2
1509	Cut	Ditch	1509	10	FS1	2
1510	Layer	Levelling deposit	1510			
1511	Deposit	Fill, upper	1513	57	FS1	2
1512	Deposit	Fill, primary	1513	57	FS1	2
1513	Cut	Ditch	1513	57	FS1	2
1514	Deposit	Fill, upper	1516	58	FS1	2
1515	Deposit	Fill, intermediate	1516	58	FS1	2
1516	Cut	Ditch	1516	58	FS1	2
1517	Deposit	Fill, primary	1516	58	FS1	2
1518	Deposit	Fill, single	1519	96		0
1519	Cut	Pit	1519	96		0
1520	Deposit	Fill, upper	1522	80	FS6	5
1521	Deposit	Fill, primary	1522	80	FS6	5
1522	Cut	Unknown	1522	80	FS6	5
1523	Deposit	Fill, upper	1526	9	FS1	2
1524	Deposit	Fill, intermediate	1526	9	FS1	2
1525	Deposit	Fill, primary	1526	9	FS1	2
1526	Cut	Pit	1526	9	FS1	2
1527	Deposit	Fill, single	1528	53		3
1528	Cut	Gully	1528	53		3
1529	Deposit	Fill, single	1530	71	OA17	4
1530	Cut	Ditch	1530	71	OA17	4
1531	Deposit	Fill, single	1532	33	FS3	3.2
1532	Cut	Ditch	1532	33	FS3	3.2
1533	Deposit	Fill, upper	1535	39	FS4	3.3
1534	Deposit	Fill, primary	1535	39	FS4	3.3
1535	Cut	Ditch	1535	39	FS4	3.3
1536	Deposit	Fill, single	1537	26	FS3	3.2
1537	Cut	Ditch	1537	26	FS3	3.2
1538	Cut	Pit	1538	8	OA1	1
1539	Cut	Depression	1539	45	OA15	3.3

Appendix 2: Group List

Group	Group Description	Contents	Land Use	Period
1	Ditch	1091	OA1	1
2	Ditch	1232	OA1	1
3	Gully	1317	OA1	1
4	Gully	1218, 1450	OA1	1
5	Gully	1222, 1448	OA1	1
6	Ditch	1305	OA1	1
7	Feature group	1266, 1269, 1283, 1307, 1309/1315, 1311	OA1	1
8	Pit	1538	OA1	1
9	Ditch	1461, 1526	FS1	2
10	Ditch	1369, 1504, 1509	FS1	2
11	Ditch	1352, 1358, 1383	FS1	2
12	Ditch	1083	OA4	2
13	Ditch	1244, 1257, 1263	FS1	2
14	Quarry pit	1281	FS1	2
15	Ditch	1472	FS1	2
16	Pit	1428	OA4	2
17	3 pits	1356, 1362,1364	OA3	2
18	Pit	1006	OA21	5
19	Pit	1142	OA3	2
20	Pit	1236	OA2	2
21	Pit	1273	OA2	2
22	Pit	1390	OA3	2
23	Ditch	1152, 1179, 1193, 1216, 1387, 1503	FS2	3.1
24	Ditch	1070,1170, 1120, 1123, 1126, 1155, 1175, 1196, 1202, 1360, 1375	FS2	3.1
25	Ditch	1004, 1008,1011, 1013, 1014,1018, 1025, 1026, 1038	FS3	3.2
26	Ditch	1024, 1134, 1157, 1191, 1537	FS3	3.2
27	Ditch	1081, 1095, 1391	FS2	3.1
28	Ditch	1234, 1279, 1295, 1303, 1322, 1436, 1441	FS2	3.1
29	Ditch	1230, 1240, 1337, 1349	FS2	3.1
30	Ditch	1213, 1407, 1411	FS2	3.1
31	Ditch	1249	FS3	3.2
32	Ditch	1285, 1334, 1347, 1354	FS3	3.2
33	Ditch	1462, 1454, 1456, 1462, 1532	FS3	3.2
34	Gully	1470	FS3	3.2
35	Ditch	1501	OA15	3.3
36	Ditch	1224	FS2	3.1
37	Ditch	1132, 1159, 1163, 1166, 1204, 1396	FS3	3.2

Group	Group Description	Contents	Land Use	Period
38	Ditch	1097, 1104	FS4	3.3
39	Ditch	1100, 1161, 1173, 1535	FS4	3.3
40	2 hollow features	1484, 1486		3
41	2 pit/quarry features	1211, 1398, 1413, 1415, 1444		3
42	2 pits	1198, 1385		3
43	3 pits and a gully	1182, 1207, 1371, 1401		3
44	2 joining pits	1168, 1170	OA15	3.3
45	2 hollow features	1177, 1200, 1539	OA15	3.3
46	Cobbles over ditch	1194	OA15	3.3
47	2 pits poss later ph	1138, 1150	OA15	3.3
48	2 pits N of G24	1102, 1116,		3
49	Pit group	1130, 1136, 1140		3
50	Features on G13	1242, 1247		3
51	Pit	1380		3
52	Gully	1496	OA15	3.3
53	Gully	1528		3
54	Pit with intrusive MR pot	1439, 1291	OA16	3.3
55	Hollow in Evaluation	35/010	OA15	3.3
56	Pit S of GCD	1291		3
57	Ditch	1513	FS1	2
58	Ditch	1516	FS1	2
59	Pit	1320		3
60	Pit under cobbles	1493	OA12	3.2
61	Ditch	1046, 1048, 1228, 1446, 1477	FS5	4
62	Ditch	1052, 1056	OA17	4
63	Ditch	1044, 1058, 1062,1064, 1377, 1424	OA17	4
64	Ditch	1020, 1066, 1474	OA17	4
65	Ditch	1077	OA17	4
66	Ditch	1016, 1036, 1042, 1072	OA17	4
67	Ditch	1030, 1032	OA17	4
68	2 pits	1022, 1028	OA17	4
69	Poss quarry pit	1422	OA17	4
70	2 pits	1430, 1434	OA17	4
71	Ditch	1530	OA17	4
72	Ditch	1394, 1426	OA17	4
73	Ditch	1085, 1087, 1093, 1326, 1405, 1409, 1417	OA18	4
74	Ditch	1238, 1275, 1287, 1432	OA17	4
75	Ditch	1297	FS5	4
76	2 gullies	1482, 1488, 1490	OA17	4
77	Ditch	1332	OA17	4
78	Pit possibly med	1468	OA17	4

Group	Group Description	Contents	Land Use	Period
79	Ditch	1109, 1146, 1148, 1184, 1271, 1328, 1499	FS6	5
80	Ditch	1522	FS6	5
81	Ditch	1074, 1226, 1330, 1373, 1465	FS6	5
82	Features at N end	1186, 1188	OA19	5
83	Pit	1324		6
84	Ditch	1054		6
85	Large pit	1342		6
86	u/d Ditch	1089, 1403		0
87	u/d Gully & P-H	1277, 1293, 1313		0
88	u/d Ditch and pit	1079, 1209		0
89	3 u/d pits in NW	1034, 1050, 1060		0
90	4 u/d pits in N	1112, 1114, 1118, 1144		0
91	u/d Pit in S	1252		0
92	Layer over cobbles (modern or earlier)	1491		6
93	Cobbles	1494	OA15	3.3
94	u/d pit in NE corner	1343, 1350		0
95	Natural features	1040		
96	Pit	1519		0
97	Pit – (not on plan?)	1220		0
98	Later ditch recut	1462	FS4	3.3

Appendix 3: Quantification of hand-collected bulk finds

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Bone	Weight (g)	Burnt Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Shell	Weight (g)
1003			147	3353																		
1005			5	52	1	8																
1007			284	2256																		
1010			99	902																		
1012	1	26	6	76													2	132				
1014			430	3780	3	614																
1015			2	30																		
1017	5	166	217	2216																		
1019			4	24																		
1021			1	18																		
1023			25	340																		
1025			55	558																		
1027			16	152																		
1031			7	134																		
1035			9	142																		
1037			44	278																		
1041	1	18	20	334													4	182				
1045			3	16																		
1047			3	32																		
1051			1	8																		
1053			34	140																		
1055			2	40																		
1057	1	4	3	22																		
1061	1	2	4	6																		
1063			5	48																		
1065			60	630													5	30				
1067			53	820																		
1068	1	14	67	1300			1	224									4	80				
1069			96	1480													1	52				
1071			5	40	1	20																
1073			5	28	2	52																
1076			1	36																		
1082			8	22																		
1084			4	24																		
1090			1	14																		
1092			1	18																		
1094							1	278														
1097	1	54	52	574													2	26				
1099	3	12	138	1688									30	240			7	74				
1101			18	156																		
1105			4	46																		

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Bone	Weight (g)	Burnt Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Shell	Weight (g)
1115			3	210																		
1119	1	4	53	1274			1	296														
1124	1	8	30	247									4	<2			16	152				
1125			105	1252													13	168				
1127			11	198													2	28				
1128			17	178																		
1129			5	106																		
1131			1	54																		
1137			45	420									1	<2			2	24				
1141			3	22																		
1147			1	10									1	4								
1149			2	10																		
1151													26	384			1	70				
1153	1	8	46	806									2	16								
1156			9	110																		
1158			3	28																		
1160	2	2	276	3854			1	10					8	56			6	70				
1162			1	20																		
1166			4	54																		
1167			33	230													1	20				
1169			45	615											2	12	12	132				
1171			82	1062																		
1172			136	2854									1	2								
1174			5	26													10	114				
1176			13	136			2	116														
1178			13	210									155	406			4	32			1	10
1180	1	40	59	1164	2	140											2	66				
1183																			6	48		
1187			2	4	6	392	4	112			1	6										
1189			8	134			5	1076														
1190			130	1204			2	26					2	6			3	54				
1192			70	782									41	458								
1194			30	574							1	6	22	274			3	184				
1195			1	10																		
1197			4	68					5	118												
1199			2	42																		
1205			2	4									5	36								
1206			15	98																		
1210			5	112													1	54				
1217			3	8																		
1219			2	24																		
1221			1	6																		
1225			10	64	1	32																

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Bone	Weight (g)	Burnt Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Shell	Weight (g)
1227			6	72											1	16						
1229			25	146									7	60	1	50	3	12				
1231			1	10																		
1233			26	336									1	8							3	4
1235	2	60	7	30											1	52						
1237			3	4													1	4				
1239			16	176			1	110					1	108	1	136						
1241	2	26	27	1028													7	30				
1243			9	132									4	36	1	18	2	6				
1245			137	826									121	758	2	4						
1248	1	14	54	720									50	456			4	60				
1255			16	330									8	688								
1258	1	2	221	3434			1	226					119	1140			42	1180				
1259	3	62																				
1260			1	2									8	6								
1261													1	60								
1264			18	112					1	16	1	20			2	14	7	18				
1265	2	26	5	36									2	18								
1268			13	200			1	36					21	22	1	4	13	152				
1270			1	6	1	14																
1272			2	62																		
1274			2	4																		
1279			5	20																		
1280			10	60									37	156								
1282			1	6																		
1284			31	582																		
1289			21	202									49	356			8	86				
1294			3	144																		
1296			1	28																		
1299			5	32																		
1302			4	24																		
1304			4	122																		
1310			1	6																		
1316			7	26																		
1318			13	152									8	34								
1319			22	464									25	244			1	28				
1323			7	44																		
1325			10	88																		
1327			9	30									1	4	1	18						
1329			2	10	11	118	9	48														
1331			14	50																		
1333			31	348																		
1335			6	64																		

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Bone	Weight (g)	Burnt Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Shell	Weight (g)
1338			2	22																		
1340	1	2			2	36	1	62					8	58								
1346			7	142																		
1351			1	6																		
1353			8	80	1	144											6	80				
1355			54	500																		
1359			82	774					1	8							26	542				
1361			6	114																		
1363			2	24													2	40				
1365			15	40											2	4						
1366			17	74									1	52	1	36						
1367			23	278									8	46	1	38	1	2				
1368			22	268									8	54								
1370			312	2848	10	1676	1	96					10	16								
1372			2	10	1	784																
1374	2	14	202	2312			1	34					1	<2			8	160				
1376			3	4																		
1378			80	330			1	180							9	208						
1379			3	28											2	56	3	58				
1381			9	142																		
1382			3	214																		
1384			6	14																		
1386			12	144									2	2								
1388			48	226									4	6								
1393			3	66			1	10					16	28								
1397			3	104																		
1399			33	314	1	118																
1404			8	76																		
1408			22	228																		
1410			2	34																		
1414			22	298			2	100									1	16				
1418			33	352													1	40				
1419			18	146													6	18				
1420			10	102													2	42				
1421	1	4	25	506			2	1374														
1423			2	24																		
1425			3	34									1	62			12	20				
1427			5	46					1	72											1	26
1429			4	46																		
1431			1	8																		
1433			11	44																		
1435			30	374			1	28														
1437	1	4	5	28			4	272	1	14												

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Bone	Weight (g)	Burnt Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Shell	Weight (g)
1438			67	1270	1	814																
1440													1	10								
1442			4	140																		
1447			3	6																		
1451	1	8	66	750									6	44	3	24	2	18			28	150
1452	1	10	56	754			1	312			1	6	3	34	1	150	2	26			7	64
1453			100	116											1	118						
1455			1	26																		
1458			19	234	2	26	1	40					75	296			3	32				
1459			3	58									11	76			2	42				
1469			5	20	3	12																
1471	1	6	16	138									5	54								
1480			14	44																		
1481			1	2													3	498				
1483			9	140																		
1485			24	348																		
1487			3	26																	5	60
1489			1	4																		
1492			3	18									1	<2							1	14
1495			28	104									10	70								
1500	1	12	12	138			1	272					3	6							1	4
1502			6	24													4	168				
1506			4	30																		
1508			8	96																		
1512	1	186	4	26									44	198			4	54				
1514			12	528							1	22	10	50								
1515			42	232									5	38								
1520			3	4			1	12														
1527			26	154									6	22							1	12
2015			9	356													1	96				
20/004	6	114	1	4																		
21/004			169	2676			1	26			1	3	6	26			2	8			3	18
23/004			32	100									9	40								
23/005													38	248			2	8				
26/004			8	98																		
30/004			1	28																		
31/004	2	1474	3	10																		
33/006	5	78			1	36																
33/009			5	199																		
34/004	11	110	11	76	52	1202					1	2	1	10					1	4		
34/006	2	22	5	144																		
34/007			7	19					12	54												
34/009			6	39																		

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Bone	Weight (g)	Burnt Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Shell	Weight (g)
34/011			8	65																		
35/004			60	578							4	6										
35/005	7	112	57	560							2	16	20	198							1	10
35/008	1	2																				
35/010	2	20	32	557									25	96			4	14				
35/011	1	44	15	72									11	82			1	16				
36/005			56	746													7	122				
36/006			5	583																		
37/004			24	238					1	12							2	14				
37/007			9	59			1	64	2	124												
37/010			10	73																		
37/012			7	115									2	24								
38/005			2	15																		
44/004			17	149									1	<2								
44/005			18	150																		
44/009			1	13			2	1008														
44/011			1	37																		
45/004	1	2	10	52																		
45/010			79	850																		
50/004			6	14	1	14																
50/006					3	44					1	146					2	16				
52/004			2	11													2	24				
52/012			17	167			1	166					12	104			3	14				
52/014			1	11																		
53/004			112	1577									7	56			25	428				
53/006			2	36																		
53/007			23	315									5	38			3	26				
54/004	1	2	12	16																		
Total	*80*	*2774*	*6564*	*77947*	*106*	*6296*	*52*	*6614*	*24*	*418*	*14*	*233*	*1137*	*8180*	*33*	*958*	*331*	*5962*	*7*	*52*	*52*	*372*

Appendix 4: Animal bone taxa abundance per context by Number of Identifiable Specimens

Context rows include both hand-collected and bulk sampled material, where bone derived from both. Includes approximate counts of environmental material where final column contains 'X' – see environmental quantification table for weights.

Context	Sample	Period	N	NISP	Cattle	Ovicaprid	Pig	Horse	Dog	Roe deer	Vole species	Large mammal	Medium mammal	Small mammal	Microfauna	Bird	Indeterminate	Approximate count
1023	10	3	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18	
1058	9	4	35	0	0	0	0	0	0	0	0	0	0	0	0	0	35	
1065	11	4	14	2	0	0	0	0	0	0	0	0	0	0	0	2	12	
1068	12	3	113	0	0	0	0	0	0	0	0	0	0	0	0	0	113	X
1099	13	3	125	16	16	0	0	0	0	0	0	0	0	0	0	0	109	X
1124		3	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	
1137	14	3	50	0	0	0	0	0	0	0	0	0	0	0	0	0	50	
1147		5	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	
1151		3	26	26	4	2	0	0	0	0	0	18	2	0	0	0	0	
1153		3	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	
1160	15	3	194	14	7	4	0	0	0	0	0	0	3	0	0	0	180	X
1172		3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
1178		3	159	120	4	0	4	0	0	0	0	5	107	0	0	0	39	
1190		3	2	1	0	1	0	0	0	0	0	0	0	0	0	0	1	
1192		3	47	42	1	0	0	7	0	0	0	34	0	0	0	0	5	
1194		3	25	17	8	0	0	0	0	0	0	8	1	0	0	0	8	
1197	16	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
1205		3	5	5	0	0	0	0	0	0	0	5	0	0	0	0	0	
1219	17	2	8	4	4	0	0	0	0	0	0	0	0	0	0	0	4	
1229		3	7	7	0	0	0	0	0	0	0	7	0	0	0	0	0	
1233		3	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
1239		3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
1243		2	5	5	0	1	2	0	0	0	0	0	2	0	0	0	0	
1245		3	132	108	26	2	0	0	0	0	0	78	2	0	0	0	24	
1248		3	50	29	15	1	0	2	0	0	0	11	0	0	0	0	21	
1255		2	8	7	4	0	0	3	0	0	0	0	0	0	0	0	1	
1258	19	2	141	98	13	10	14	0	1	0	0	42	18	0	0	0	43	
1260	20	2	608	16	0	5	2	0	0	0	0	0	8	0	1	0	592	X
1261		2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
1264	21	1	325	9	4	0	2	0	0	0	0	0	3	0	0	0	316	X
1265		1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	

Context	Sample	Period	N	NISP	Cattle	Ovicaprid	Pig	Horse	Dog	Roe deer	Vole species	Large mammal	Medium mammal	Small mammal	Microfauna	Bird	Indeterminate	Approximate count
1268	22	1	407	26	2	0	0	0	0	0	0	1	23	0	0	0	381	X
1280		2	38	7	5	0	0	0	0	0	0	0	2	0	0	0	31	
1289		3	50	16	7	1	1	0	0	0	0	7	0	0	0	0	34	
1318		3	8	8	0	0	0	0	0	0	0	8	0	0	0	0	0	
1319		3	25	16	7	2	0	0	0	0	0	5	2	0	0	0	9	
1327		5	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	
1339	24	0	79	0	0	0	0	0	0	0	0	0	0	0	0	0	79	X
1347		3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
1366		2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
1367	25	2	142	10	0	0	1	0	2	1	2	1	3	0	0	0	132	X
1368		2	8	7	0	0	0	0	0	0	0	6	1	0	0	0	1	
1370		3	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	
1378	26	3	99	1	0	1	0	0	0	0	0	0	0	0	0	0	98	
1386		3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
1388	28	2	449	16	0	0	5	0	0	0	0	0	10	0	1	0	433	X
1393		4	19	11	0	0	0	0	0	0	0	0	11	0	0	0	8	
1425		4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
1430		4	8	7	0	0	0	0	0	0	0	7	0	0	0	0	1	
1440		3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
1451	29	3	58	7	1	2	0	0	0	0	0	4	0	0	0	0	51	
1452		3	3	3	1	0	0	0	0	0	0	2	0	0	0	0	0	
1458	30	2	296	17	17	0	0	0	0	0	0	0	0	0	0	0	279	X
1459		2	17	10	1	8	0	0	0	0	0	1	0	0	0	0	7	
1471		2	6	2	1	0	1	0	0	0	0	0	0	0	0	0	4	
1492		3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
1495		3	10	3	0	1	1	0	0	0	0	1	0	0	0	0	7	
1500		3	3	3	0	0	0	0	0	0	0	0	3	0	0	0	0	
1512		2	44	44	44	0	0	0	0	0	0	0	0	0	0	0	0	
1514		2	10	10	0	0	0	0	0	0	0	10	0	0	0	0	0	
1515		2	5	3	2	0	0	0	0	0	0	1	0	0	0	0	2	
1527		3	6	4	0	0	0	0	0	0	0	4	0	0	0	0	2	

Appendix 5: Environmental Data

5a: Residue quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Period	P Desc	Sample Number	Context	Context / deposit type	Parent Context	Group	Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (other than charcoal)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)
1	MIA	21	1264	Pit	1266	7	40	***	12	**	20	Quercus sp. (4), Quercus sp. rw (2), Maloideae (2), cf. Prunus sp. rw (1), cf. Prunus sp. (2)	cf Triticum sp. (3)	***	56	*	4	**	8	**	2				
1	MIA	22	1268	Pit	1269	7	60	***	14	***	24	Quercus sp. (8) various sizes incl poss rw (3/8), Corylus/Alnus sp. (1), Acer campestre (1)		*	<1	*	22	**	18	**	6				
1	MIA	23	1306	Pit	1307	7	10																		
2	10-70/80	19	1258	Quarry Pit	1281	14	40	*	<1	**	<1		cerealia indet. (3)	*	<1			*	<1	**	<1				
2	10-70/80	20	1260	Quarry Pit	1281	14	40	***	14	***	14	Quercus sp. rw (6), Corylus/Alnus sp. (1), Quercus sp. (3)	Triticum sp., Triticum cf. aestivum, cerealia indet., Pisum/Vicia sp.	**	54	*	20	**	24	**	4	*	<1		

Period	P Desc	Sample Number	Context	Context / deposit type	Parent Context	Group	Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (other than charcoal)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)
2	10-70/80	25	1367	Ditch	1369	10	40							*	2	*	4	**	6	**	<1				
2	10-70/80	30	1458	ditch	1461	9	40	**	4	***	12	Quercus sp. (8), Corylus/Alnus sp. (1), Prunus sp. rw (1)	Hordeum sp. (1), Cerealia indet (2), cpr indet (2)	**	3			**	3	**	2				
2	10-70/80	28	1388	Pit	1390	22	40	**	<1	***	2	Quercus sp. (9), Quercus sp. rw (1).	Triticum cf. aestivum (1), Cerealia indet. (6)	***	58			*	<1	*	<1				
3	50-70/80	10	1023	Ditch	1024	26	40	***	34	*	10	Quercus sp. (8), Quercus sp. rw (1), Maloideae (1)	Cerealia indet (17), cf. Triticum sp. (3), cf Vicia/Pisum sp. (2)					**	<1	*	<1				
3	50-70/80	12	1068	Ditch	1070	24	40	***	12	***	8	Quercus sp. (5), Quercus sp. rw (1), Fraxinus excelsior (3), Maloideae (1)	cerealia (9), Triticum sp. (4), Hordeum sp. (2)	*	<1			**	<1	**	<1				
3	50-70/80	13	1099	Ditch	1100	39	40	**	<1	***	2		3 Cerealia indet (2), cf. Hordeum sp. (1)	*	1	*	<1	*	<1	**	<1				

Period	P Desc	Sample Number	Context	Context / deposit type	Parent Context	Group	Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (other than charcoal)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)
3	50-70/80	15	1160	Ditch	1161	39	40	***	14	***	12	Fraxinus excelsior (9), cf. Quercus sp. rw (1),	Cerealia indet (28)	*	<1	*	<1	***	8	***	<1				
3	50-70/80	29	1451	ditch	1462	33	40	*	<1	**	<1		Cerealia indet (2), Hordeum sp. (1)	**	26									**	76
3	50-70/80	14	1137	Pit	1138	47	40	**	<1	***	2		cerealia indet. (9)	*	<1			*	<1	*	<1				
3	50-70/80	16	1197	Pit	1198	42	40	**	<1	***	2					*	<1	*	<1						
3	50-70/80	27	1384	Pit	1385	42	20	*	<1	*	<1		Lathyrus/Vicia sp. (2), Cerealia indet. (5), cf. Hordeum sp. (1)												
3	50-70/80	26	1378	Pit	1380	51	40	**	2	**	6	Corylus/Alnus sp. (2), Quercus sp. (5), Maloideae (2), Quercus sp. rw (1)						*	<1	**	<1				

Period	P Desc	Sample Number	Context	Context / deposit type	Parent Context	Group	Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (other than charcoal)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)
4	Medieval	11	1065	Ditch	1066	64	40	**	2	**	2	cf Alnus sp. (1), cf. Betula sp. (2), Quercus sp. (7), 1 bark frag (in cpr bag)	poss root frags	*	<1			*	<1	*	<1				
		17	1219	Pit	1220		40	***	16	****	120	Quercus sp. (9), cf. Quercus sp. (1) distorted and possible root wood present.		*	8										
		18	1250	u/d Pit in S	1252	91	40	****	42	***	22	Quercus sp. (8), cf. Quercus sp. sed enc & perc high & Fe staining (2),													
		24	1339	pit in NE corner	1343	94	20	***	12	**	40	Quercus sp. (10)	cerealia indet (2)					*	2	**	<1				

5b: Flot quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

Period	P Desc	Sample Number	Context	Context / deposit type	Parent Cotext	Group	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred (modern/intrusive)	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanical charred	Identifications	Preservation
1	MIA	21	1264	Pit	1266	7	9	5	5	85	10				***	*	Triticum sp. (2), Cerealia indet (2)	+				*	cf. buds (2)	+
1	MIA	22	1268	Pit	1269	7	7	50	50	90	~10			*	****	*	Triticum sp. (1), cf. Triticum sp. (1)	+	*	cf. Bromus sp. (2)	+			
1	MIA	23	1306	Pit	1307	7	-	5 large bottles	100	60	30	*		**	****									
2	10-70/80	19	1258	Quarry Pit	1281	14	5	100	100	90	<5		*	*	***				*	Persicaria sp. (fractured)	+			
2	10-70/80	20	1260	Quarry pit	1281	14	16	90	90	85	5				**	**(*)	Triticum sp., Triticum cf aestivum, Hordeum sp.,	+/++	*	cf Linum sp., cf Carex sp.	++			
2	10-70/80	25	1367	Ditch	1369	10	16	70	70	95	<5			*	**	*	Triticum sp. (1)	+				*	stem frags (cf Poaceae?)	+
2	10-70/80	30	1458	Ditch	1461	9	30	160	100	98	<5	*			**									

Period	P Desc	Sample Number	Context	Context / deposit type	Parent Cotext	Group	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred (modern/intrusive)	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanical charred	Identifications	Preservation
2	10-70/80	28	1388	Pit	1390	22	4	15	15	95	<5				**	*	Vicia/Pisum sp. (1 in 2 halfs),	++						
3	50-70/80	10	1023	Ditch	1024	26	14	15	15	40	10	*	*	***	****	**	Triticum sp., cf. Hordeum sp., Avena sp., Indet cerealia	+/++	*	Vicia/ Lathyrus sp., cf. Persicaria sp.	++			
3	50-70/80	12	1068	Ditch	1070	24	3	10	10	95	<5		* (1)	*	**				*	Apiaceae (1internal part indet), Corylus avellana (1 frag)	+			
3	50-70/80	13	1099	Ditch	1100	39	17	80	80	90	5	**		*	***									
3	50-70/80	15	1160	Ditch	1161	39	9	50	50	85	~15	*		*	***	*	Triticum sp. (1)	+						
3	50-70/80	29	1451	Ditch	1462	33	5	5	5	15	80			*	**	*	Hordeum sp. (1)	+	*	Poaceae (1), Vicia/ Lathyrus sp. (2)	++			
3	50-70/80	14	1137	Pit	1138	47	24	160	100	95	<5				**	*	Avena sp. (1)	+						

Period	P Desc	Sample Number	Context	Context / deposit type	Parent Cotext	Group	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred (modern/intrusive)	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanical charred	Identifications	Preservation
3	50-70/80	16	1197	Pit (1 of 2)	1198	42	3	5	5	95	<5	*			***	*	cf. Hordeum sp. frag (1)	+						
3	50-70/80	27	1384	Pit (1 of 2)	1385	42	4	15	15	80	<5		*	*	****	** (*)	Vicia/Lathyrus /Pisum sp. (**), Triticum cf aestivum (**), Avena sp., Hordeum sp.	++/ +++	*	Rumex sp. (2)., Poaceae (1), cf. Anthemis cotula (1)	++			
3	50-70/80	26	1378	Pit	1380	51	10	50	50	70	<5	**		**	****									
4	Medieval	11	1065	Ditch	1066	64	36	210	100	90	<5		*	*	**	**	Cerealia indet. (7), cf Hordeum sp. (1), Triticum cf aestivum (6), cf Avena sp. (1)	+/ ++	*	Poaceae (2), Vicia/ Lathyrus sp. (2), Rumex sp. (2), indet seed (1)	+/ ++	*	twig frag - very small (1), indet cpr (3)	+
	Undated	17	1219	Pit	1220		7	30	30	70	<5	*		**	****									
	Undated	18	1250	u/d Pit in S	1252	91	3	5	5	95	<5	**			**									

Period	P Desc	Sample Number	Context	Context / deposit type	Parent Cotext	Group	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred (modern/intrusive)	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanical charred	Identifications	Preservation
	Undated	24	1339	pit in NE corner	1343	94	11	10	10	40	<5		**	**	****	*	Triticum sp. (1),	+				*	indet cpr	+

Appendix 6: HER Summary

Site name/Address: Phase 5, Channels, Little Waltham, Essex	
Parish: Little Waltham	***District:*** Chelmsford
NGR: TL 7250 1100	***Site Code:*** LWCG17
Type of Work: Excavation	***Site Director/Group:*** Trevor Ennis Archaeology South-East
Date of Work: 19 February – 18 May 2018	***Size of Area Investigated:*** 1.22ha
Location of Finds/Curating Museum: Chelmsford	***Funding source:*** Developer
Further Seasons Anticipated?: No	***Related HER No's:***
Final Report: EAH short article	***OASIS No:*** 347334
Periods Represented: MIA, LIA, ER, Med, P/M	

SUMMARY OF FIELDWORK RESULTS:

The recovery of a small quantity of residual worked flint of broadly prehistoric date provides evidence of a limited and perhaps transitory presence in the landscape during the earlier prehistoric period. The first clear evidence of more permanent land use is dated to the Early to Middle Iron Age and is represented by a small number of gullies and pits in the southeast of the excavation area. In the Late Iron Age (early/mid 1st century AD) a partially open sided rectangular enclosure and an L-shaped boundary ditch were constructed for agricultural purposes. The presence of an apparent quarry pit suggests clay extraction was also taking place.

Intensity of land use increases substantially in the Early Roman period with three phases of development identified. Phase 3.1 consists of four east/west aligned ditches defining two separate trackways and adjacent open fields. In Phase 3.2 the trackways become blocked with the imposition of a new, largely north/south aligned, field system. Phase 3.3 is represented by two new ditches in the north cutting through part of the older field system. A number of pits, hollows and cobble surfaces, laid to consolidate the tops of infilled features, may date to this later phase. Agriculture would appear to be the main activity, along with further quarrying. There was no evidence of activity continuing into the later Roman or Saxon periods.

In the medieval period (later 12th to later 13th centuries) a new northwest/southeast aligned field system is created that cuts completely across the old Roman one. The landscape is divided into two open areas by a large ditch, perhaps forming part of a boundary zone with a number of associated features. To the north are a number of parallel gullies associated with agricultural or drainage activity. A gap in the south of the boundary is blocked by a series of staggered ditches perhaps used for stock control along with a nearby U-shaped enclosure. Two large quarry pits suggest clay or gravel extraction was also taking place. In the post-medieval period a new field system is created formed by two perpendicular ditches dividing the landscape into three agricultural fields.

Previous Summaries/Reports:
ASE 2017, *Archaeological Evaluation: Channels 3c, 3d and 5, Land North, South & East of Belsteads Farm Lane, Little Waltham, Essex*. ASE Report 2017381

Author of Summary: T. Ennis	***Date of Summary:*** 17 April 2019

Appendix 7: OASIS Summary

OASIS ID: 347334

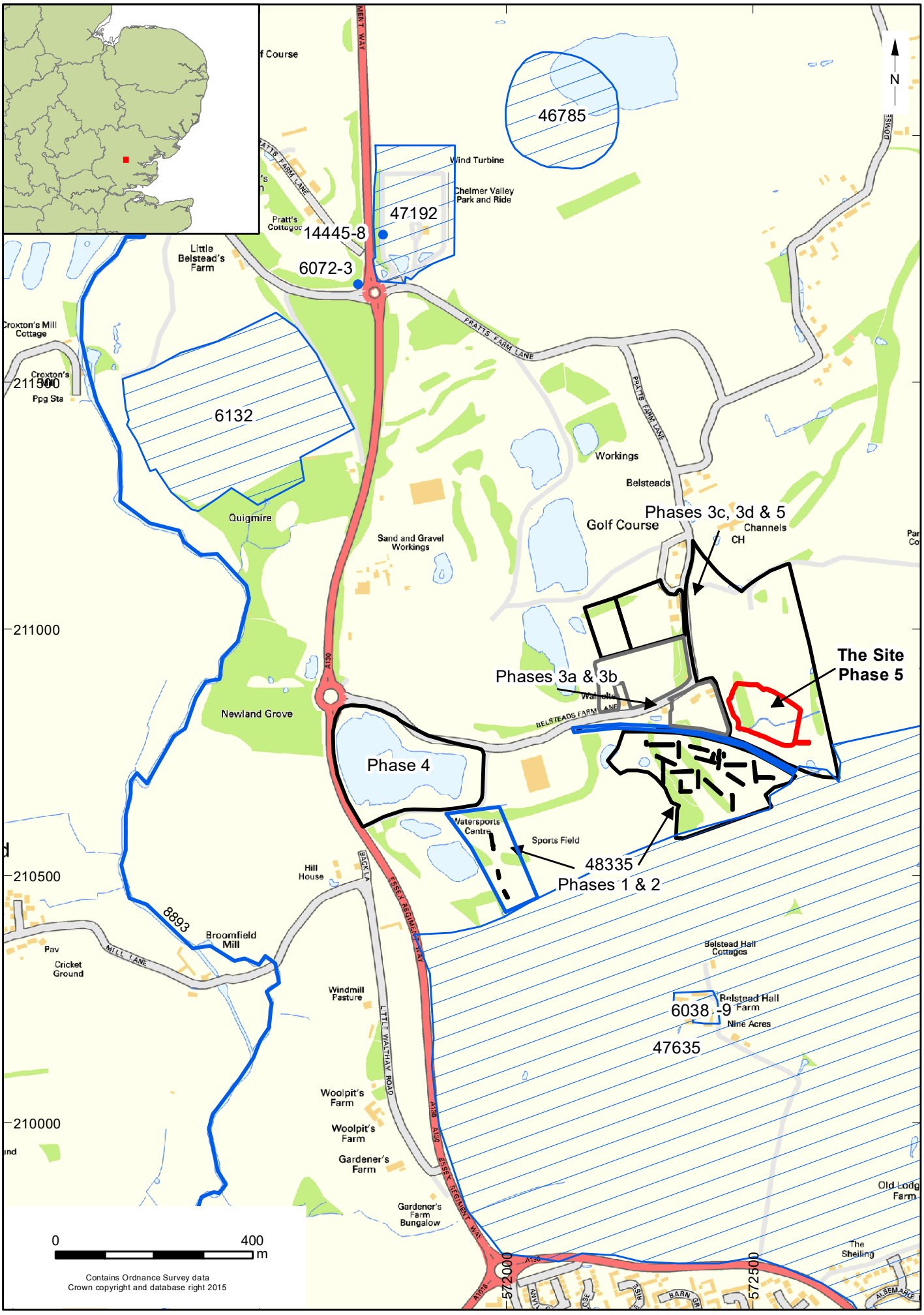
Project details

Project name	Archaeological Excavation: Phase 5, Channels, Little Waltham, Essex
Short description of the project	The recovery of a small quantity of residual worked flint of provides evidence of a limited presence in the landscape during the earlier prehistoric period. More permanent land use is represented by a small number of gullies and pits dated to the Early to Middle Iron Age. In the Late Iron Age a partially open sided rectangular enclosure and an L-shaped boundary ditch were constructed for agricultural purposes. The presence of a quarry pit suggests clay extraction was also taking place. Intensity of land use increases in the Early Roman period with three phases of development identified. Phase 3.1 consists of two separate trackways, in Phase 3.2 a new, largely north/south aligned, field system is imposed and in Phase 3.3, a wider more open field system takes shape. A number of pits, hollows and cobble surfaces may date to this later phase. In the medieval period a new NNW/SSE aligned field system is created. The landscape is divided into two open areas by a large ditch, perhaps forming part of a boundary zone with a number of associated features. To the north are a number of parallel gullies may be associated with agricultural or drainage activity and in the south a gap in the boundary ditch is blocked by a series of staggered ditches perhaps used for stock control along with a nearby U-shaped enclosure. Two large quarry pits suggest clay or gravel extraction was also taking place. A new field system is created in the post-medieval period.
Project dates	Start: 19-02-2018 End: 18-05-2018
Previous/future work	Yes / No
Associated project reference codes	LWCG17 – Site code
Type of project	Recording project
Monument type	DITCHES Late Iron Age DITCHES Roman DITCHES Medieval PITS Roman PITS Medieval DITCHES Post Medieval
Significant Finds	POTTERY Middle Iron Age POTTERY Late Iron Age POTTERY Roman POTTERY Medieval
Investigation type	'"Full excavation"'
Prompt	Direction from Local Planning Authority - PPS

Project location

Country	England
Site location	ESSEX CHELMSFORD LITTLE WALTHAM Phase 5, Channels, little Waltham
Study area	1.22 Hectares

Site coordinates	TL 7250 1100 51.770557620703 0.500394347468 51 46 14 N 000 30 01 E Point
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Essex County Council Place Services
Project design originator	ASE
Project director/manager	Gemma Stevenson
Project supervisor	Trevor Ennis
Type of sponsor/funding body	Developer
Project archives	
Physical Archive recipient	Chelmsford Museum
Physical Archive ID	LWCG17
Physical Contents	"Animal Bones", "Ceramics", "Environmental", "Glass", "Metal", "Worked stone/lithics"
Digital Archive recipient	Chelmsford Museum
Digital Archive ID	LWCG17
Digital Contents	"Animal Bones", "Ceramics", "Environmental" ,"Glass", "Metal" ,"Stratigraphic", "Worked stone/lithics"
Digital Media available	"Images raster / digital photography" ,"Survey", "Text"
Paper Archive recipient	Chelmsford Museum
Paper Archive ID	LWCG17
Paper Contents	"Animal Bones", "Ceramics", "Environmental", "Glass", "Metal", "Stratigraphic" ,"Worked stone/lithics"
Paper Media available	"Context sheet", "Drawing" ,"Miscellaneous Material", "Report", "Section" ,"Survey ","Photograph", "Plan"
Project bibliography	
Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Excavation: Phase 5, Channels, Little Waltham, Essex
Author(s)/Editor(s)	Ennis, T.
Other bibliographic details	Report No. 2019098
Date	2019
Issuer or publisher	ASE
Place of issue or publication	Witham, Essex
Description	A4, c.120 text pages + 14 illustrations
Entered by	Trevor Ennis (t.ennis@ucl.ac.uk)
Entered on	17 April 2019



© Archaeology South-East		Phase 5 Channels Golf Club, Chelmsford	Fig. 1
Project Ref: 170849	Mar 2019	Site location and selected HER references	
Report No: 2019098	Drawn by: APL		

© Archaeology South-East		Phase 5 Channels Golf Club, Chelmsford	Fig.2
Project Ref: 170849	March 2019	Location of excavation area and previous archaeological work	
Report No: 2019098	Drawn by: SM		

Track

T22

T34

T23

T35

T44

572560,210869

N

T36

T37

T52

T53

T45

572484,210787

0 20m

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Project Ref: 170849	March 2019	Excavation area and all features	
Report Ref: 2019098	Drawn by: SM		

Track

N

Period 1: Middle Iron Age

572560,210869

OA1

G8

T36

G2

Section 1

G1

Section 2

Section 5

G5

G4

G6

Section 3

OA1

572484,210787

Section 6

G3

Section 4

G7

0

20m

Project Ref: 170849	March 2019
Report Ref: 2019098	Drawn by: SM

Phase 5 Channels Golf Club, Chelmsford

Period 1 features plan

Fig.4

Track

N

Period 2: Late Iron Age

572560,210869

G19

OA3

T44

FS1

T24

Section 9

G9

Section 10

G22

Section 11

G10

G58

1513

G17

G11

Section 12

OA2

G21

T52

52/009

OA4

G15

T37

G12

572484,210787

G20

G16

Section 8

G13

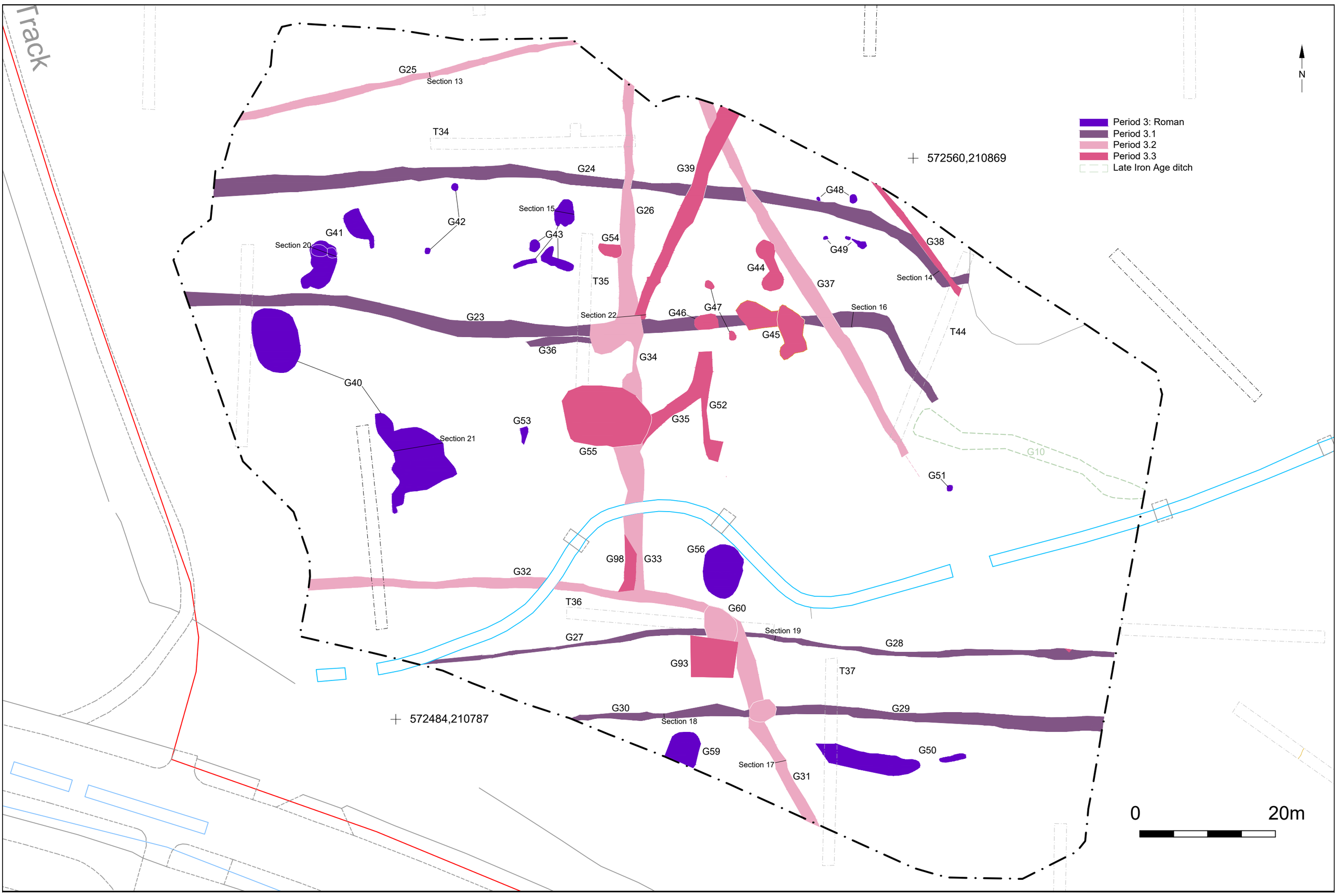
G14

Section 7

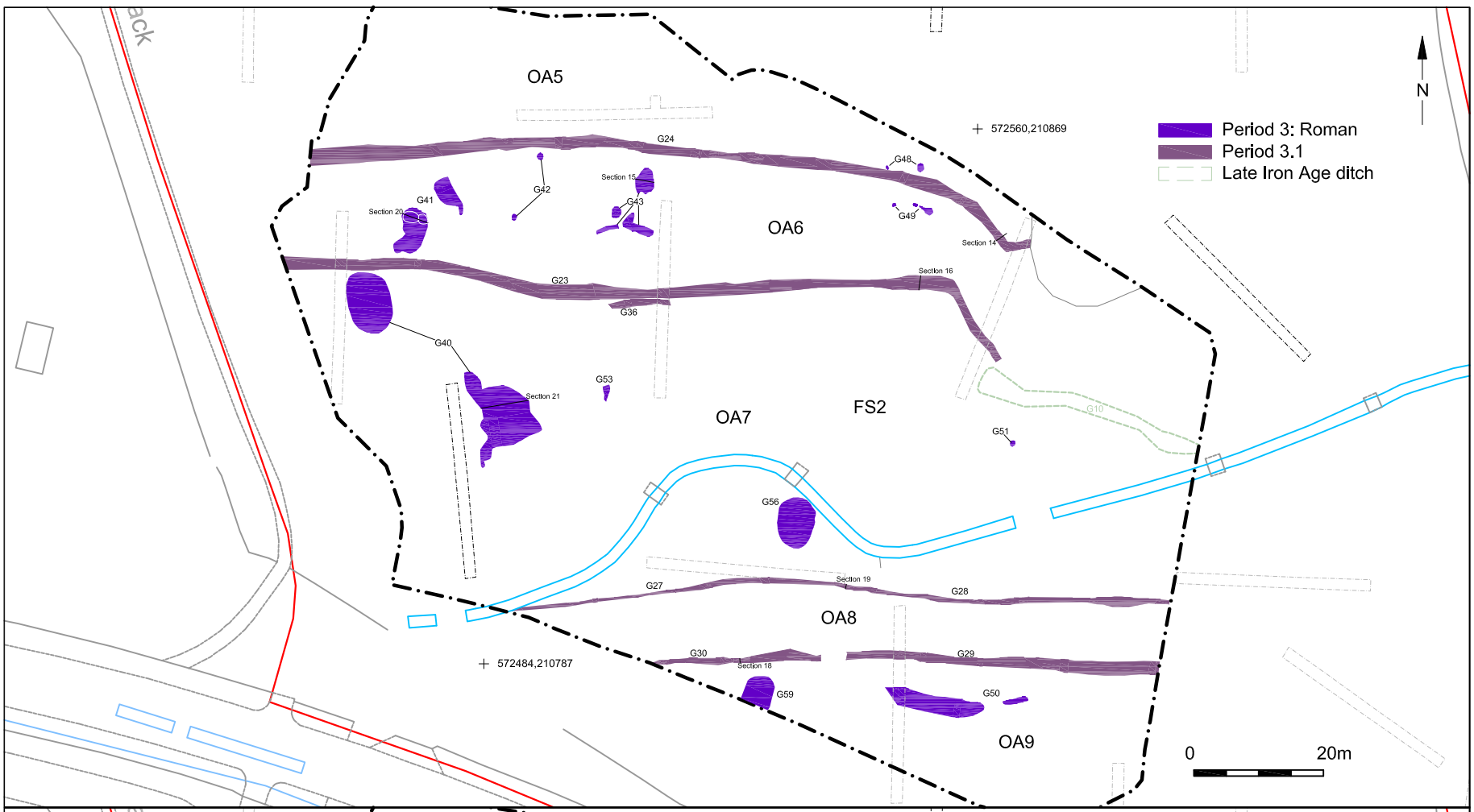
0

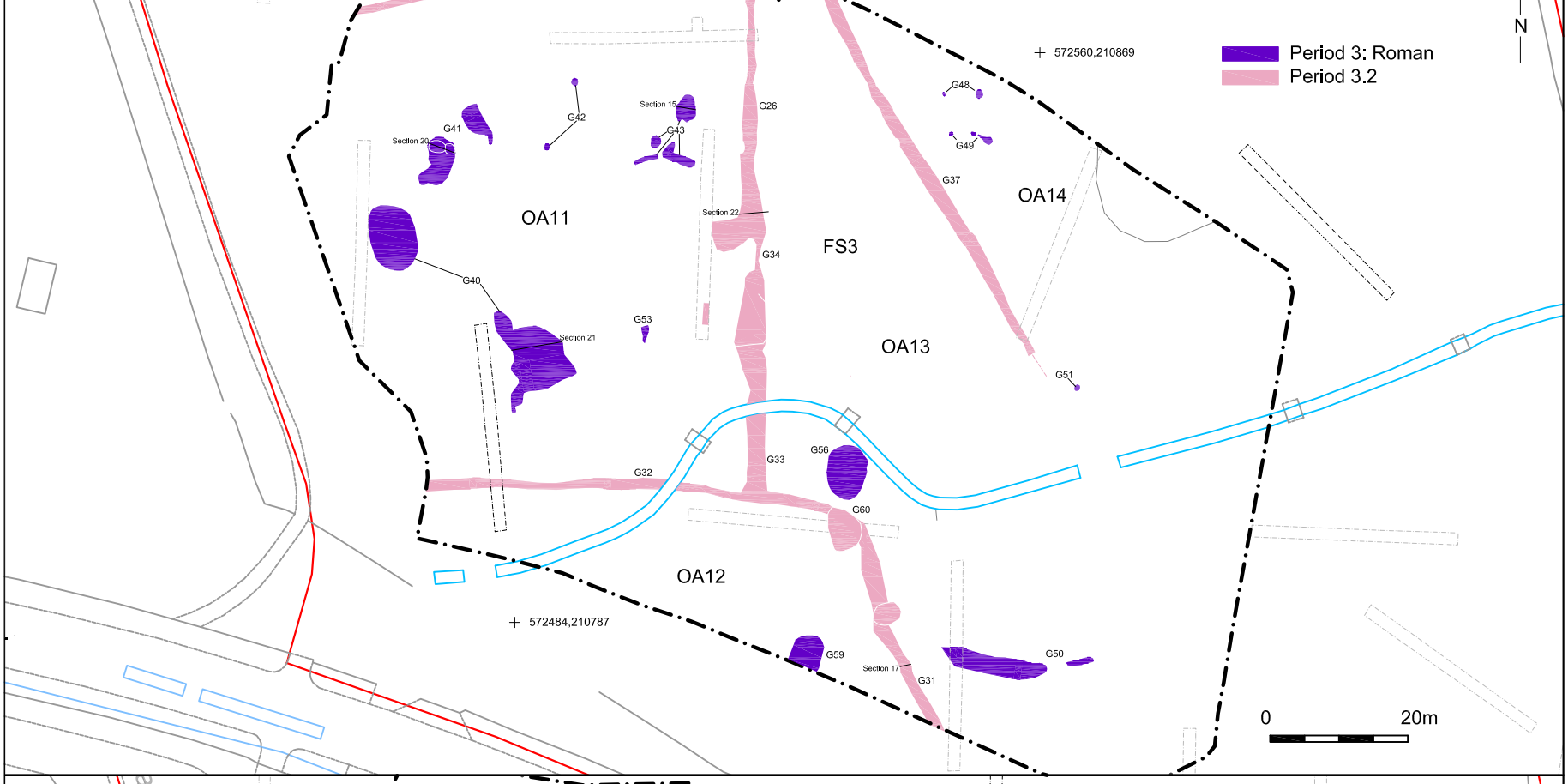
20m

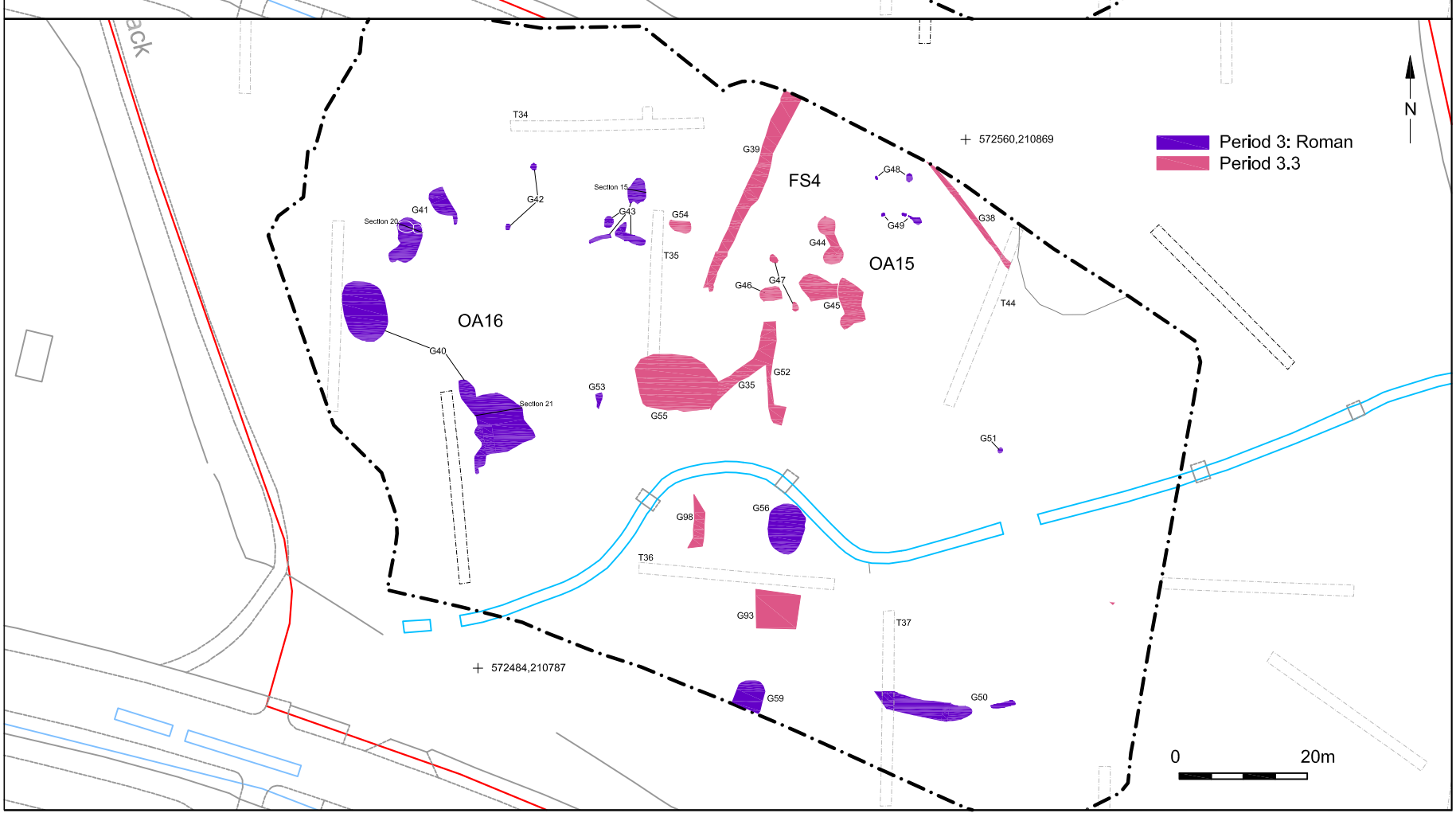
© Archaeology South-East		Phase 5 Channels Golf Club, Chelmsford	Fig.5
Project Ref: 170849	March 2019	Period 2 features plan	
Report Ref: 2019098	Drawn by: SM		



© **Archaeology South-East**		Phase 5 Channels Golf Club, Chelmsford	Fig.6
Project Ref: 170849	March 2019	Periods 3, 3.1, 3.2 and 3.3 features plan	
Report Ref: 2019098	Drawn by: SM		







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Project Ref: 170849	March 2019	Open areas periods 3, 3.1, 3.2 and 3.3 plan	
Report Ref: 2019098	Drawn by: SM		

Track

G67
G68
G62
G66
G64
G65
G77
Section 23
G63
G78
Section 29
Section 28
G69
G70
G61
FS5
OA17
OA18
Section 25
G71
Section 31
G72
Section 26
Section 27
G73
G76
G74
Section 30
G75

572560,210869

572484,210787

N

Period 4: Medieval
Roman pit 1493, shown in section 27

0 20m

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Project Ref: 170849	March 2019	Period 4 features plan	
Report Ref: 2019098	Drawn by: SM		

Track

G18

OA21

G82

572560,210869

Period 5: Post-medieval

N

Section 32

G81

FS6

Section 24

G80

OA19

OA20

G79

572484,210787

0

20m

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Project Ref: 170849	March 2019	Period 5 features plan	
Report Ref: 2019098	Drawn by: SM		

Track

1040

G89

G84

G90

572560,210869

Modern features
Undated features
Natural features

N

modern

G94

G96

G92

G87

G83

G86

572484,210787

G88

G85

G91

0 20m

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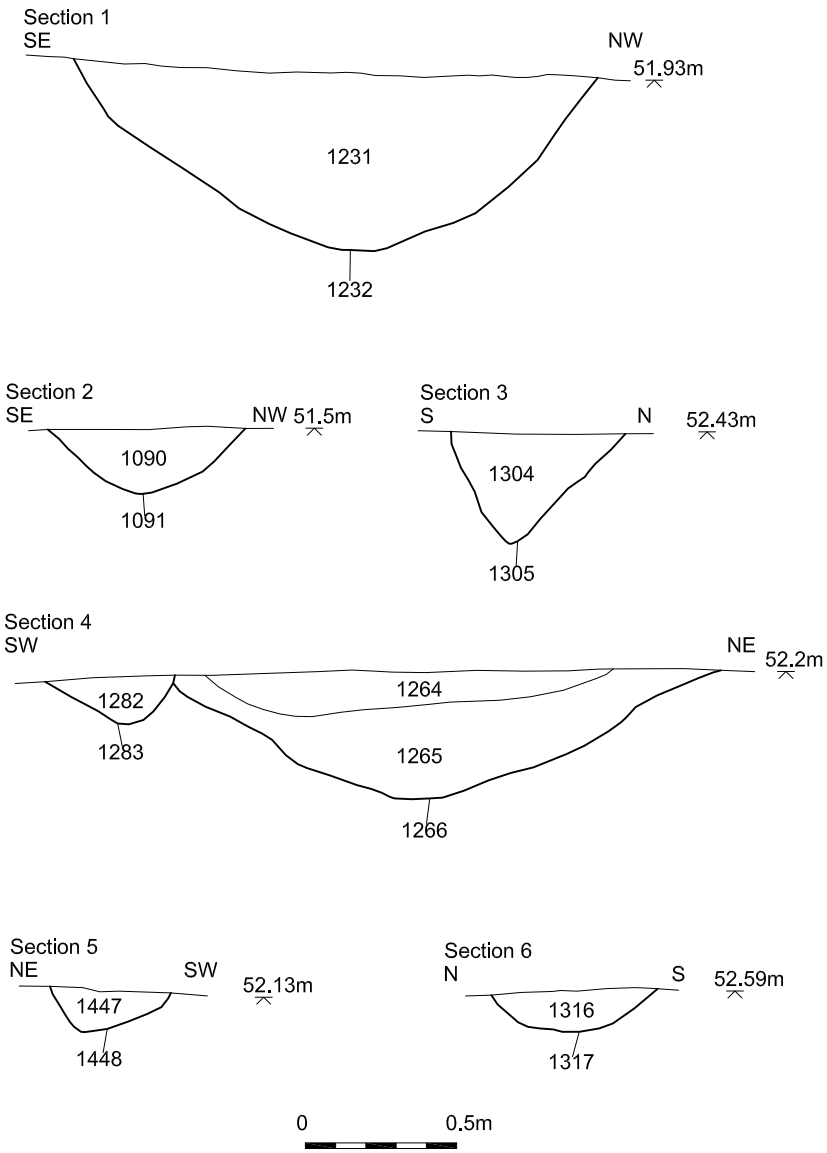
Project Ref: 170849	March 2019	Modern, undated and natural features plan	
Report Ref: 2019098	Drawn by: SM		



Section 3: Ditch 1305, looking south-east

Section 1: Ditch 1232, looking south-west

Section 4: Pit 1283 & ditch 1266, looking west

Section 2: Ditch 1091, looking south-west

Section 6: Terminus gully 1317, looking south-east

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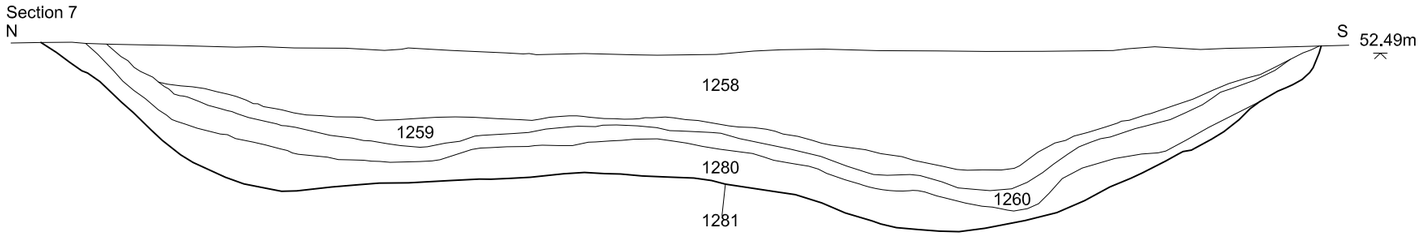
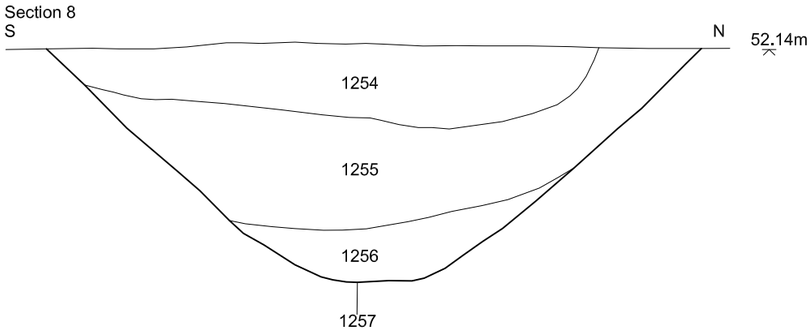
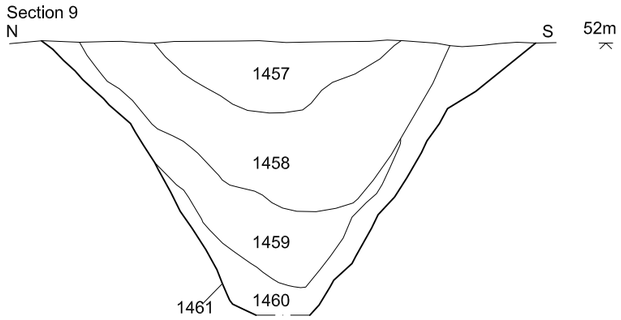
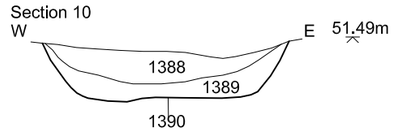
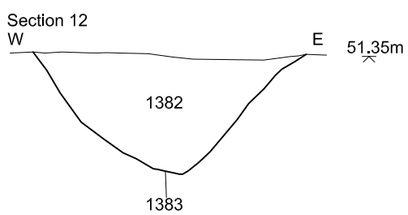
Project Ref: 170849	March 2019	Period 1: Sections and photographs	
Report Ref: 2019098	Drawn by: SM		

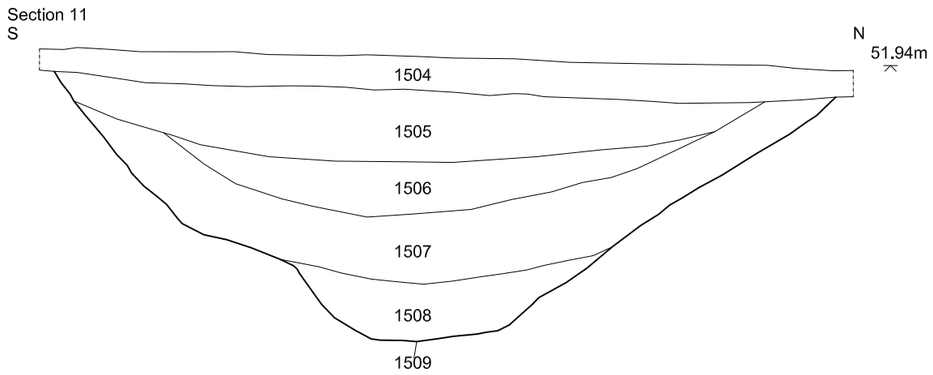












Section 9: Ditch 1461, looking east

Section 10: Pit 1390, looking north

Section 7: Ditch 1281, looking south

Section 11: Ditch 1509, looking west

Section 8: Ditch 1257, looking west

Section 12: Ditch 1383, looking north

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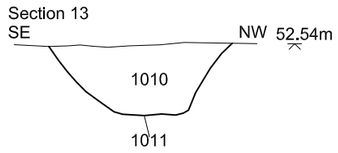
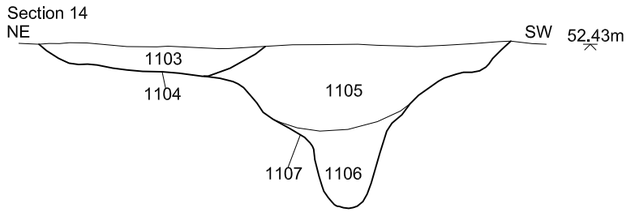
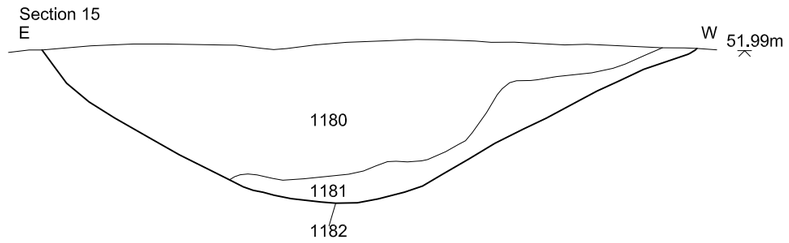
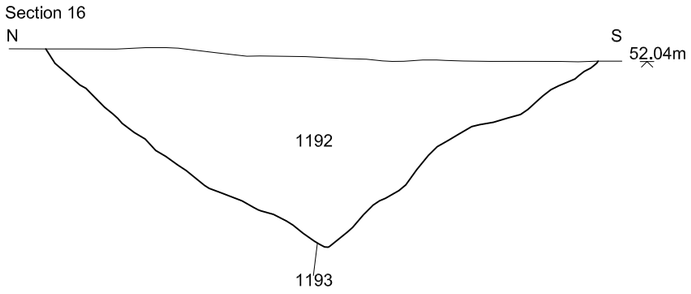
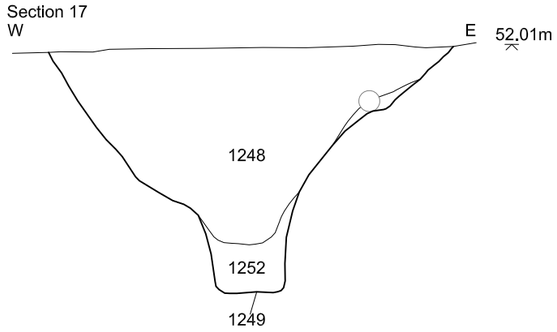
Project Ref: 170849	March 2019	Period 2: Sections and photographs	
Report Ref: 2019098	Drawn by: SM		

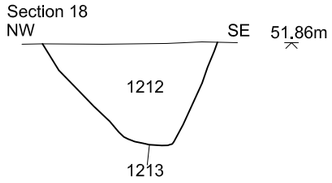


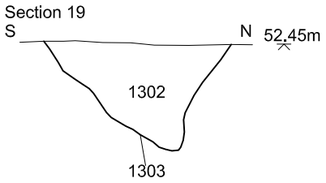


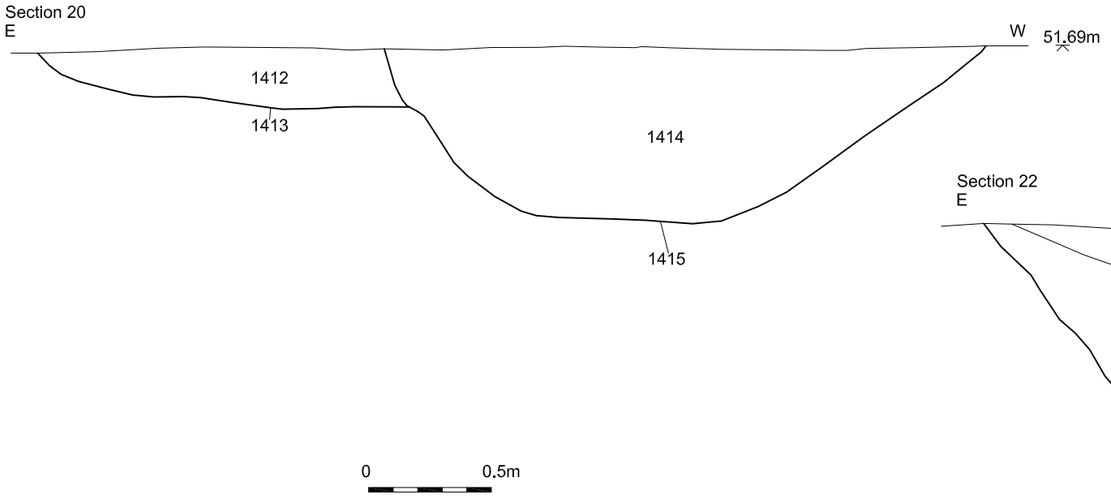


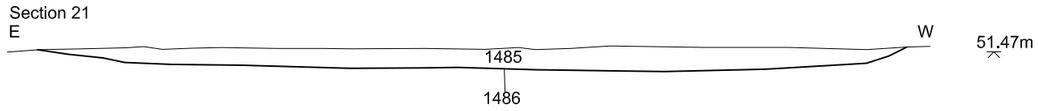


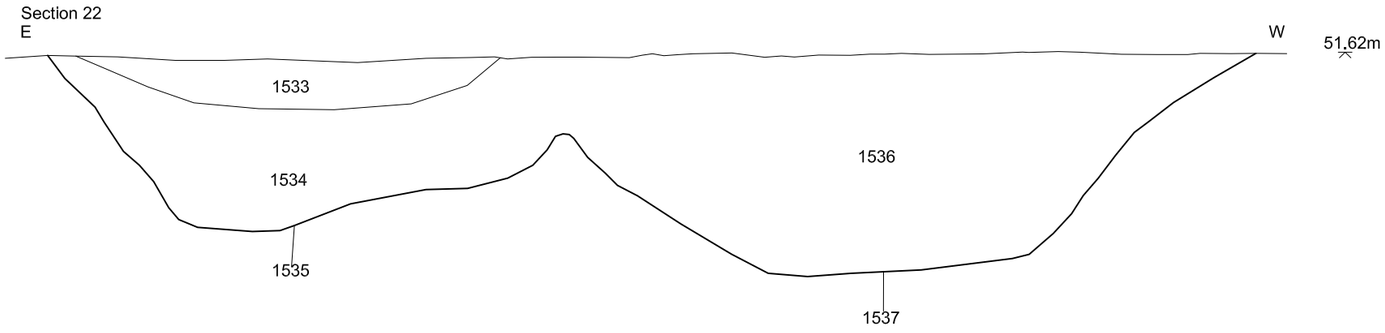












Section 13: Ditch 1011, looking south-west

Section 15: Ditch 1182, looking south-east

Section 16: Pit 1193, looking south

Section 18: Ditch 1213, looking north-east

Section 19: Ditch 1303, looking west

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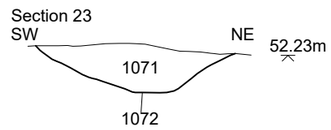
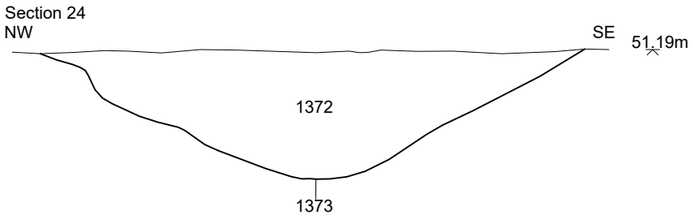
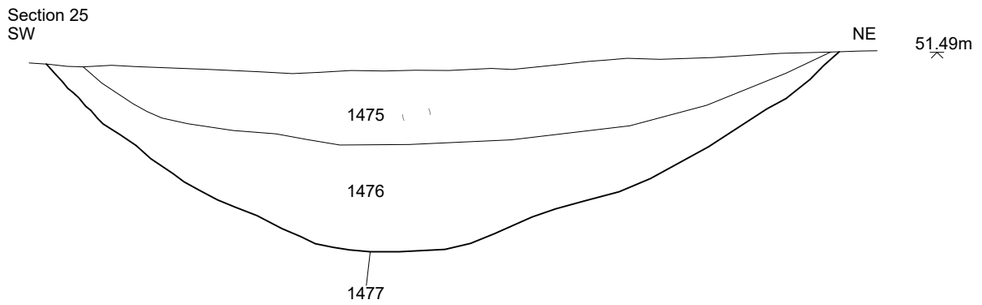
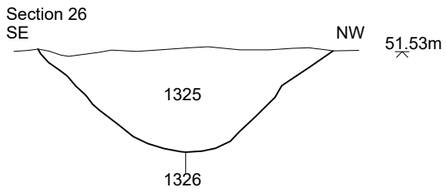
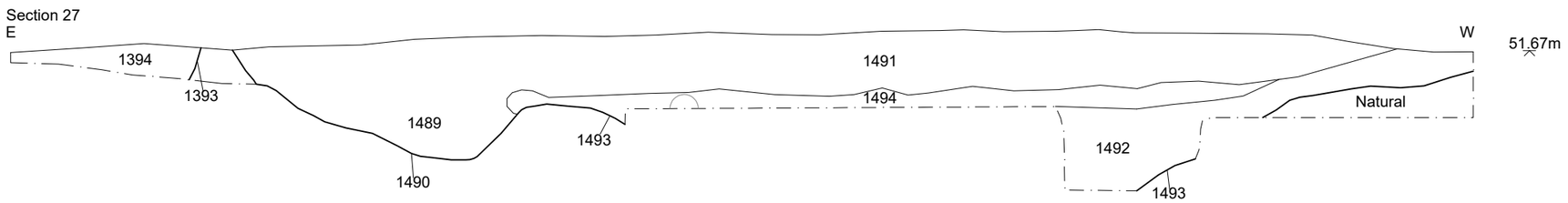
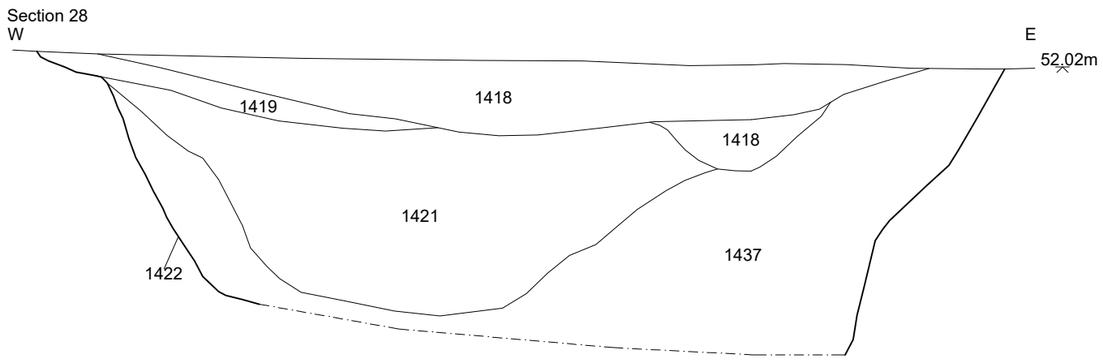


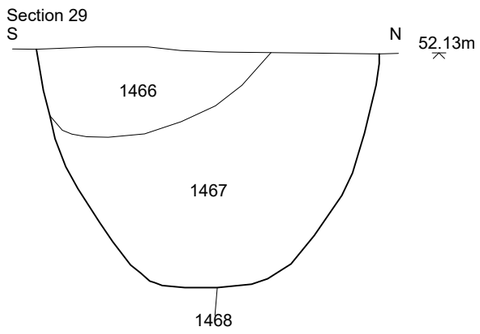


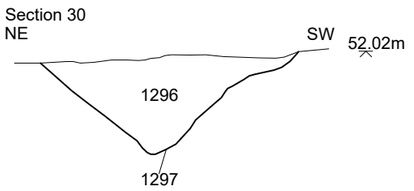


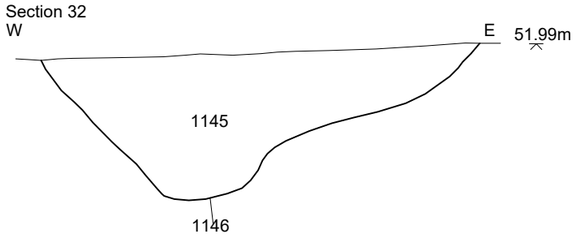


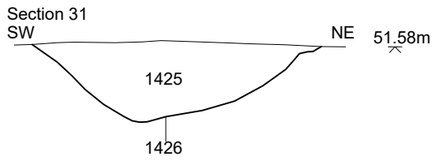


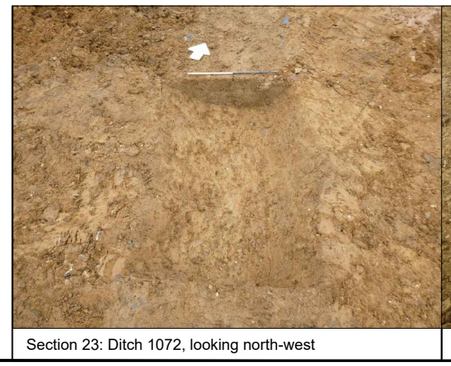




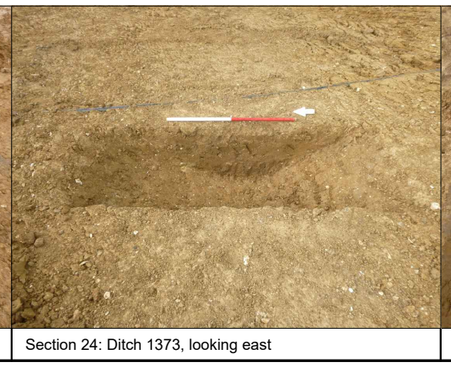






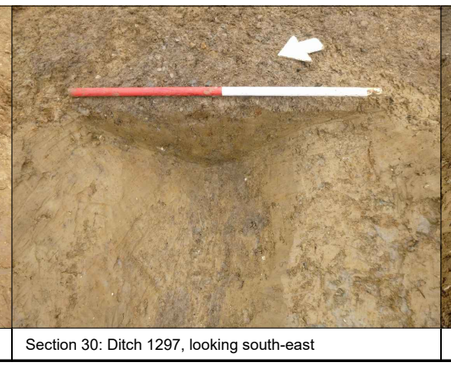


Section 23: Ditch 1072, looking north-west



Section 24: Ditch 1373, looking east

Section 26: Ditch 1326, looking south-west



Section 30: Ditch 1297, looking south-east

Section 31: Ditch 1426, looking north-west

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Phase 5 Channels Golf Club, Chelmsford

Periods 4 & 5: Sections and photographs

Fig.14

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