IMBER COURT TRADING ESTATE, ORCHARD LANE, EAST MOLESEY, SURREY KT8 0BY

AN ARCHAEOLOGICAL ASSESSMENT

LOCAL PLANNING AUTHORITY: ELMBRIDGE BOROUGH COUNCIL

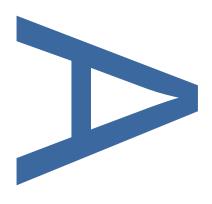
PCA REPORT NO: 13231

SITE CODE: SITC16

**JUNE 2018** 







PRE-CONSTRUCT ARCHAEOLOGY

# IMBER COURT TRADING ESTATE ORCHARD LANE EAST MOLESEY SURREY KT8 0BY

# EXCAVATION

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# Assessment of an Archaeological Excavation at Imber Court Trading Estate, Orchard Lane, East Molesey, Surrey KT8 0BY

Report Number:	R13231
Site Code:	SITC16
Central NGR:	TQ 14695 67143 (514695, 167143)
Local Planning Authority:	Elmbridge Borough Council
Commissioning Client:	CgMs Consulting on behalf of Wates Developments Limited / Cala Homes
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### June 2018

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## 1 ABSTRACT

- 1.1 This report presents the results and working methods of a three-phase evaluation and archaeological excavation carried out by Pre-Construct Archaeology Ltd at Imber Court Trading Estate, Orchard Lane, East Moseley, Surrey KT8 0BY. The site is centred at TQ 14695 67143. The study area was located immediately east of a mill leat fed by the River Ember at the west, delimited by Orchard Lane to the north and the Metropolitan Police Training School to the south and east.
- 1.2 The trenching strategy was designed to evaluate the potential for archaeological survival of all periods but with particular reference to the presence of the historically documented Ember Court manor and its associated formal gardens. The building was thought to date to the Tudor or post-medieval period and sited on, or near to, an earlier pre-Conquest manor house.
- 1.3 Archaeological work took place in three tranches over a 17-month period. The first phase of the archaeological evaluation was undertaken between the 15th and 29th February 2016 which consisted of five trenches in and around the existing buildings (Units A-G) on the Industrial Estate. A sixth planned trench was abandoned due the presence of asbestos in the latter industrial unit. At the same time, ten boreholes were monitored across the site.
- 1.4 Following the discovery of a series of palaeochannels containing prehistoric flint-work and the partial exposure of the formal gardens of Ember Court, a second series of trenches were proposed to take place post-demolition of the units. Between 24th February 2017 and 21st of April 2017 another five trenches were excavated. Of these, Trenches 1, 2, 7 and 8 were opened up into 'area' excavations to reveal features that had been found in the original evaluation trenches. As part of this phase a further five test pits were opened to inform the final phase which awaited the demolition of the units in the south of the site.
- 1.5 Finally, between the 24th of July and the 4th August 2017 three further evaluation trenches were excavated, two of which were further opened out to reveal features found in the original evaluation trenches.
- 1.6 The excavations uncovered a series of natural palaeochannels threading across the landscape, many of which contained either burnt or worked flint, suggesting an early occupation of the upper eastern slopes above the River Ember. This period of occupation is likely to coincide with seasonal hunting, wildfowling and fishing within a braided river wetland environment. The second phase of excavation uncovered a large, curvilinear ditched enclosure consisting of a number of concentric ditches, the main one of which displayed a number of re-cuts. Prehistoric pottery from the Late Bronze Age/ Early Iron Age and worked flint was recovered from the basal fill of the main ditch whilst the re-cuts and later ditches showed evidence pertaining to the Late Iron Age/Early Romano-British

period. Following this, the site was sealed by a thick layer of colluvium falling westwards towards the river, whose deposition was possibly exacerbated by ploughing occurring uphill to the east.

- 1.7 The results suggest the main period of occupation was from the Late Bronze Age into the Early Iron Age where a semi-marshland environment, initially exploited seasonally, was later defined by a ditched enclosure and (possible) settlement close to the valuable resources provided by the valley ecosystem. Possible re-occupation coinciding with a redefining of the course of the ditch occurred in the Late Iron Age/Early Romano-British period.
- 1.8 A single north-south aligned ditch in Area 7 produced a large cache of unabraded medieval pottery whilst residual medieval pottery occurred in a number of later features.
- 1.9 Although the initial evaluation trenches had revealed the vestiges of a post-medieval formal garden it was not until phase three of the operation (in the south of the site) that the north wall of the north wing of Ember Court was exposed, right on the southern limit of the excavation.
- 1.10 The vast majority of Ember Court lay outside the site boundaries to the south. However, the discovery of the formal gardens located to its north went some way to illustrating its layout with reference to the documentary evidence. At the southernmost area of the site, the north wall of the north wing of Ember Court was exposed. It demonstrated that an earlier 16th-17th-century wall (or foundation) had been strengthened through the addition of a later buttress and remedial construction dating to the 18th-19th centuries.
- 1.11 The assessment incorporates a summary of the original research questions and outlines the significance of the data as well as providing recommendations for further work and additional research questions.

## 2 INTRODUCTION

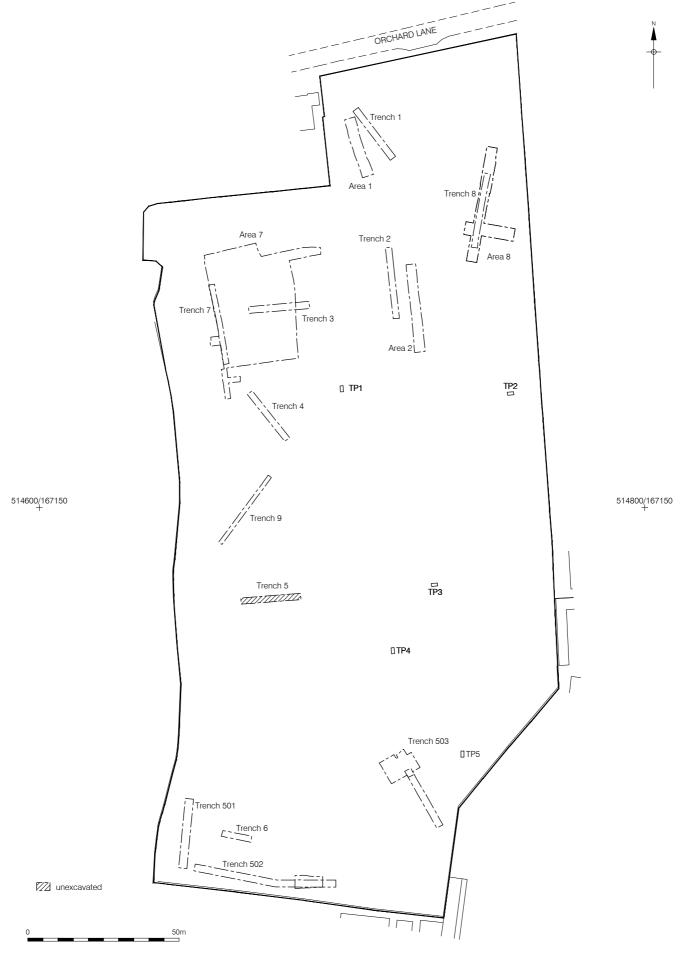
- 2.1 A three-phase archaeological evaluation was conducted by Pre-Construct Archaeology Ltd at Imber Court Trading Estate, Orchard Iane, East Molesey, Surrey KT8 0BY in the Borough of Elmbridge, Surrey. The proposed development will see the construction of 95 new residential units of which 38 are to be affordable housing. Prior to their construction, the existing industrial and work units on the site had to be demolished. The site comprises a rectangular parcel of Iand which is bounded to the north by residential housing along Orchard Lane, to the west by a stream or leat of the River Ember and to the south and east by the Metropolitan Police Training School and their grounds (Figure 1). The site measures c.3.058ha.
- 2.2 Archaeological work took place in three tranches over a 17-month period mainly constrained by the pace of the demolition of the existing industrial units. The first archaeological evaluation was undertaken between the 15th and 29th February 2016 which consisted of five trenches (Trenches 1-4 & 6) in and around the existing buildings (Units A-G) on the Industrial Estate. A sixth planned trench (Trench 5) was abandoned due to fears regarding the presence of asbestos in the latter industrial unit. At the same time ten boreholes were monitored across the site. Following the discovery of a series of palaeochannels containing prehistoric flint-work and part of the formal gardens of Ember Court a second series of trenches were proposed post-demolition of the units. Between 24th February 2017 and 21st of April 2017 another five trenches were excavated (Trenches 8 & 9 & Areas 1-2 & 7). Of these, Trenches 1, 2, and 7 were opened up into 'area' excavations to reveal features that had been found in the original evaluation trenches, while Trench 8 was opened up immediately to become Area 8. As part of this phase a further five test pits (TPs 1-5) were opened to inform the final phase which awaited the demolition of the units in the south of the site. Finally, between the 24th of July and the 4th August 2017 three further evaluation trenches (Trenches 501-3) were excavated, two of which were further opened out to chase features found in the original evaluation trenches (Figure 2).
- 2.3 The works were supervised by Wayne Perkins and managed by Chris Mayo, of Pre-Construct Archaeology Limited. The archaeological works were monitored by the archaeological advisor to the Surrey Borough of Elmbridge, Nigel Randall. All work was undertaken following the appropriate Historic England (GLAAS) guidance (2014).
- 2.4 The site had previously been the subject of a Desk Based Assessment carried out by CgMs in 2015 which revealed that the Surrey Historic Environment Record (HER) contained no records for the prehistoric, Roman or medieval periods in relation to the study site. However, the lack of evidence was thought to reflect an almost complete absence of archaeological fieldwork within the study area. Therefore, the lacuna in the current

understanding of the area was the result of research and/or development bias rather than a real absence of archaeological remains (Roberts 2015). Potential for the prehistoric period was initially rated to be low and the nearest Roman road, Staines Road, was located 8km north of the study site. Furthermore, it was found that the HER contained no records for archaeological finds from the Anglo-Saxon, early medieval or medieval periods either. However, a post-medieval manor house, Ember Court, which may have originated in the medieval period was known to have occupied the area with part of the main building shown on the site on both the 1843 Tithe Map and 1864 Estate Plan with ancillary buildings and grounds occupying much of the site to its north (Roberts 2015).

- 2.5 In tandem with the first phase of evaluation trenches a bore-hole survey was also carried out and monitored archaeologically. They confirmed the stratigraphic sequence of 1.2-1.4m of modern made ground under the concrete slabs that sealed layers of alternating silty sand and brickearth which was found to be up to 2m thick. Gravels were thus found beyond 3.4m below ground level (BGL) (Perkins 2016, 28).
- 2.6 The primary objectives of the evaluation were:
  - To determine the natural topography and geology of the site, and the height at which it survives.
  - To establish the presence or absence of prehistoric activity if present, its nature and (if possible) date.
  - To establish the presence or absence of Roman activity if present, its nature and (if possible) date.
  - To establish the presence or absence of medieval activity if present, its nature and (if possible) date.
  - To establish the presence or absence of post-medieval activity at the site.
  - To attempt to ascertain whether remains of the post-medieval mansion survive within the site, particularly within the southern area as suggested by the desk-based assessment.
  - To establish the nature, date and survival of activity relating to any archaeological periods at the site.
  - To establish the extent of all past post-depositional impacts on the archaeological resource.
- 2.7 Following the completion of the project the site archive will be deposited in its entirety with the Surrey History Centre under the unique site code SITC16.



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Figure 2 Trench Location 1:1,250 at A4

## 3 PLANNING BACKGROUND

## 3.1 National Guidance: Planning Policy Framework NPPF

- 3.1.1 In March 2012, the government published the National Planning Policy Framework (NPPF). More recently (March 2014), Planning Practice Guidance (PPG) has been published online.
- 3.1.2 Section 12 of the NPPF, entitled Conserving and Enhancing the Historic Environment provides guidance for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets. Overall, the objectives of Section 12 of the NPPF can be summarised as seeking the:
- Delivery of sustainable development;
- Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment;
- Conservation of England's heritage assets in a manner appropriate to their significance; and
- Recognition of the contribution that heritage assets make to our understanding of the past.
- 3.1.3 Section 12 of the NPPF recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. Paragraph 128 states that planning decisions should be based on the significance of the heritage asset, and that the level of detail supplied by an applicant should be proportionate to the importance of the asset and should be no more than sufficient to review the potential impact of the proposal upon the significance of that asset.
- 3.1.4 Heritage Assets are defined in Annex 2 of the NPPF as: a building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions. They include designated heritage assets (as defined in the NPPF) and assets identified by the local planning authority during the process of decision-making or through the plan-making process.
- 3.1.5 Annex 2 also defines Archaeological Interest as a heritage asset which holds or potentially could hold evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
- 3.1.6 A Designated Heritage Asset comprises a: World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area.

- 3.1.7 Significance is defined as: The value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.
- 3.1.8 Setting is defined as: The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.
- 3.1.9 In short, government policy provides a framework which:
- Protects nationally important designated Heritage Assets (which include World Heritage Sites, Scheduled Ancient Monuments, Listed Buildings, Protected Wreck Sites, Registered Parks and Gardens, Registered Battlefields or Conservation Areas);
- Protects the settings of such designations;
- In appropriate circumstances seeks adequate information (from desk based assessment and field evaluation where necessary) to enable informed decisions;
- Provides for the excavation and investigation of sites not significant enough to merit in-situ preservation.

### 3.2 Local Policy

3.2.1 Elmbridge Borough Council adopted its Core Strategy in July 2011. The document contains Policy CS17 which provides a strategic framework for the consideration of development proposals affecting heritage assets:

CS17 LOCAL CHARACTER, DESIGN AND DENSITY NEW DEVELOPMENT WILL BE REQUIRED TO DELIVER HIGH QUALITY AND INCLUSIVE SUSTAINABLE DESIGN, WHICH MAXIMISES THE EFFICIENT USE OF URBAN LAND WHILST RESPONDING TO THE POSITIVE FEATURES OF INDIVIDUAL LOCATIONS, INTEGRATING SENSITIVELY WITH THE LOCALLY DISTINCTIVE TOWNSCAPE, LANDSCAPE, AND HERITAGE ASSETS, AND PROTECTING THE AMENITIES OF THOSE WITHIN THE AREA. INNOVATIVE CONTEMPORARY DESIGNTHAT EMBRACES SUSTAINABILITY AND IMPROVES LOCAL CHARACTER WILL BE SUPPORTED (SEE CS1-SPATIAL STRATEGY). NEW DEVELOPMENT SHOULD ENHANCE THE PUBLIC REALM AND STREET SCENE, PROVIDING A CLEAR DISTINCTION BETWEEN PUBLIC AND PRIVATE SPACES. PARTICULAR ATTENTION SHOULD BE GIVEN TO THE DESIGN OF DEVELOPMENT WHICH COULD HAVE AN EFFECT ON HERITAGE ASSETS WHICH INCLUDE CONSERVATION AREAS, HISTORIC BUILDINGS, SCHEDULED MONUMENTS, AND THE BOROUGH'S THREE HISTORIC PARKS AND GARDENS. 3.2.2 Elmbridge Borough Council adopted its Development Management Plan (DMP) in April
 2015. The Plan contains the following policies which provide a framework for the consideration of development proposals affecting archaeology at the site:

## DM12 HERITAGE

PLANNING PERMISSION WILL BE GRANTED FOR DEVELOPMENTS THAT PROTECT, CONSERVE AND ENHANCE THE BOROUGH'S HISTORIC ENVIRONMENT. THIS INCLUDES THE FOLLOWING HERITAGE ASSETS:

- LISTED BUILDINGS AND THEIR SETTINGS
- CONSERVATION AREAS AND THEIR SETTINGS
- PARKS AND GARDENS OF SPECIAL HISTORIC INTEREST AND THEIR SETTINGS
- SCHEDULED MONUMENTS AND THEIR SETTINGS

• AREAS OF HIGH ARCHAEOLOGICAL POTENTIAL AND COUNTY SITES OF ARCHAEOLOGICAL IMPORTANCE (CSAIS)

• LOCALLY LISTED BUILDINGS AND OTHER IDENTIFIED OR POTENTIAL ASSETS (INCLUDING NON-DESIGNATED LOCALLY SIGNIFICANT ASSETS IDENTIFIED IN THE LOCAL LISTS COMPILED BY THE COUNCIL).

D. SCHEDULED MONUMENTS AND COUNTY SITES OF ARCHAEOLOGICAL INTEREST (CSAIS)

I. DEVELOPMENT THAT ADVERSELY AFFECTS THE PHYSICAL SURVIVAL, SETTING OR OVERALL HERITAGE SIGNIFICANCE OF ANY ELEMENT OF A SCHEDULED MONUMENT OR CSAI WILL BE RESISTED.

II. ANY NEW DEVELOPMENT SHOULD BE SENSITIVE TO THESE CRITERIA AND POSITIVELY ACT TO ENHANCE THE MONUMENT OR CSAI OVERALL AND ENSURE ITS CONTINUED SURVIVAL.

E. AREAS OF HIGH ARCHAEOLOGICAL POTENTIAL

I. PROPOSALS FOR DEVELOPMENT SHOULD TAKE ACCOUNT OF THE LIKELIHOOD OF HERITAGE ASSETS WITH ARCHAEOLOGICAL SIGNIFICANCE BEING PRESENT ON THE SITE, PROVIDE FOR POSITIVE MEASURES TO ASSESS THE SIGNIFICANCE OF ANY SUCH ASSETS, AND ENHANCE UNDERSTANDING OF THEIR VALUE.

F. LOCALLY LISTED BUILDINGS AND OTHER NON-DESIGNATED HERITAGE ASSETS

I. THE COUNCIL WILL SEEK TO RETAIN THESE, WHERE POSSIBLE, AND WILL ASSESS PROPOSALS WHICH WOULD DIRECTLY OR INDIRECTLY IMPACT ON THE

IN THE LIGHT OF THEIR SIGNIFICANCE AND THE DEGREE OF HARM OR LOSS, IF ANY, WHICH WOULD BE CAUSED.

### Summary

- 3.2.3 In considering any planning application for development, the planning authority will be mindful of the framework set by government policy, in this instance the NPPF, by current Development Plan Policy and by other material considerations.
- 3.2.4 In terms of Designated Heritage Assets, no Scheduled Ancient Monuments, Registered Parks or Gardens or Registered Battlefields lie within the study site or its vicinity.

## 4 GEOLOGY AND TOPOGRAPHY

## 4.1 Geology

- 4.1.1 The site at Imber Court, Orchard Way, East Molesey KT8 0BY (NGR 514695 167143) is situated on the east bank of a leat fed by the River Ember 224m to the west. It is bound to the north by Orchard Way and to the south and east by the Metropolitan Police Training School (Figure 1).
- 4.1.2 The modern ground level of the car park in the northern area of the site was recorded at c.10.19m OD rising to c.10.69m OD at the south of the site outside Unit F to the south.
- 4.1.3 The British Geological Survey records the bedrock geology of the area to be London Clay deposits and the superficial drift deposits to be the Langley Member Clay and Silt, characterised as wind-blown rocks depositing silt and sand erosional deposits in the Quaternary period (Roberts 2015, 8). The Langley Silt Member rests on sand and gravel River Terrace Deposits above the London Clay (British Geological Survey online 2018). This sequence was proven through both excavation and the borehole survey.
- 4.1.4 During the archaeological fieldwork a borehole survey of the site was executed which retrieved a great deal of information about the sequence and deposition of the archaeological and geological layers. The borehole survey concurs with the observations made through evaluation and detailed in the trench descriptions that follow. In particular the boreholes picked up 'made ground' of mixed, re-deposited natural and building materials as being between 1.2-1.4m thick below the concrete (or tarmac) surfaces (c.0.20m thick). Furthermore, borehole evidence generally upheld the view that the site was underlain by the Langley Member of clay and silt to a depth of around 3.5m before reaching underlying gravel beds. The work thus tied the relatively small environs of the development area into the larger, regional geological framework as outlined by the BGS (Roberts 2015).
- 4.1.5 The evaluation revealed brownish mid-orange clayey sand deposits at a height of between 8.64m OD in Area 1 at the north of the site and at 9.54m OD in Trench 503 at the south of the site. A gentle fall was noted from the east of the site towards the north-west. This was overlain by a layer of made ground up to 1.2m thick capped by reinforced concrete slabs c.0.2m thick. The specifics of each layer are discussed in its relevant section below.

## 4.2 Topography

4.2.1 The topography of the site was a subtle slope, with a gentle undulating fall from the east to west down towards the River Ember. The drift geology of brickearth and sandy clays is riven with multiple palaeochannels of varying size. The natural was recorded at 9.94m OD in Area 8 at the east of the site and at 8.87m OD on the western edge of Trench 7 – a fall of 1.07m across the site (c.120m from east to west).

## 4.3 Geotechnical Investigations (Test pits)

4.3.1 Test pits excavated at the site revealed differential survivals of the drift geology which was recorded as high as 9.81m OD in Test Pit 4 (on the east side of Unit G) and as low as 8.97m OD in Test Pit 5 (east of Unit E to the south of the site) which had been subject to truncation. The underlying sand and gravels were located at c.7.18m OD in Test Pit 1 which had been truncated to this depth by the foundations on the west side of Unit C.

## 5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 5.1 The archaeological and historical background to the site is covered in detail within the DBA (Roberts 2015). In summary of that document:
- 5.2 The Surrey Historic Environment Record (HER) contains no records for the prehistoric periods within the study area. The lack of evidence reflects an almost complete absence of archaeological fieldwork within the study area.
- 5.3 The nearest Roman road, Staines Road, is located approximately 8km to the north. The HER contains no records for the Roman period within the study area; the lack of evidence reflecting the almost total absence of archaeological fieldwork within the study area.
- 5.4 The Domesday Survey of 1086 mentions the Manors of Weston and Thames Ditton in the vicinity of the study site. These are recorded as plough-land, meadow and woodland.
- 5.5 Archives recording the owners and tenants of Ember Court reach back to 1086, although it is not clear from the records when the mansion house recorded in later sources was built.
- 5.6 The archives suggest the possibility that a pre-conquest original mansion house may have been located in or near the study area, and subsequently demolished.
- 5.7 The HER contains no records for the Anglo-Saxon, early medieval and medieval periods within the study area.
- 5.8 Since the late post-medieval mansion lay partly in the southern portion of the study site, it is likely that any pre-conquest original buildings would have been sited adjacent or nearby. The position of any earlier buildings is unclear, but they may have lain in the southern part of the site.
- 5.9 The map regression and written sources demonstrate that the site was the location of Ember House mansion from the Tudor period until its demolition in 1919, after which the study area became the site of the Ember Concrete & Engineering Works.
- 5.10 The potential for archaeological remains relating to the post-medieval mansion house is greatest in the southern part of the site, in the area currently occupied by the southernmost trading estate buildings (Units E and F). Several 18th- and 19th-century outbuildings and landscaped gardens associated with the mansion house fall within the remainder of the study site.

## 6 ARCHAEOLOGICAL METHODOLOGY

- 6.1 The evaluation was conducted according to an approved Written Scheme of Investigation prepared by Pre-Construct Archaeology Ltd (Mayo 2016). The fieldwork was designed to assess the presence or absence of archaeological remains.
- 6.2 Phase 1 of the evaluation had to take place in and around the standing units prior to demolition. Six trenches were proposed both within and outside vacant units. However, due to the discovery of asbestos within Unit G (Trench 5), only five trenches could be achieved (Trenches 1-4 & 6). These were opened by mechanical excavator following the breaking out of reinforced concrete floors as appropriate.
- 6.3 Phase 2 took place after the demolition of Units A-G. Area 1 was excavated close to the original evaluation Trench 1 to better understand the course of the palaeochannels and to 'chase' any features uncovered. A similar strategy was pursued with Area 2 (around Trench 2); Area 7 was opened up into a large area to the east of Trench 7 as archaeological features were uncovered. Area 8 (around Trench 8) was also extended. Trench 9 was found to have one possible planting bed so was not extended. Proposed Trenches 10 and 11 were not excavated due to logistical reasons.
- 6.4 Phase 2 also included the excavation of five test pits (TP 1-5) to inform the final phase.
- 6.5 Phase 3 was undertaken post demolition of the remaining units (E & F) consisting of three trenches, Trenches 501-503. Trench 502 was extended northwards to uncover the north wall of the north wing of Ember Court whilst Trench 503 was extended slightly to the northwest.
- 6.6 After breaking-out, the mechanical excavator switched to a flat-bladed ditching bucket 1.8m wide and continued under archaeological supervision to remove homogenous soils down to the highest archaeological horizon or natural level. Trenches 1, 2 and 3 were 20m long; Trench 4, provisionally to be 20m long, was shortened due to the presence of concrete debris from the Concrete Works found to be at a depth of 1.2m; Trench 5 was aborted due to the presence of asbestos in Unit G; Trench 6 in Unit F was only 10m long due to height and width restrictions within the Unit itself. In Phase 2 Area 1 was 20m long, Area 2 29m long, Trench 7 was 27m long (prior to extension), Trench 8 was 24m long (prior to extension) and Trench 9 was 28m long. Two proposed trenches, Trenches 10 and 11, were not excavated. In Phase 3 Trenches 501 and 503 were 25m long whilst Trench 502 was 50m in length. Trenches 501 and 503 were extended following the discovery of archaeological remains.

- 6.7 Following the opening of the trenches the vertical sections were cleaned and all features identified were investigated by hand. Investigation was intended to identify the extent and nature of the deposits and to recover dating evidence. The deposits, fills, and features were assigned individual context numbers.
- 6.8 All recording systems adopted during the investigations were fully compatible with those most widely used elsewhere in the area; that is those developed out of the Department of Urban Archaeology Site Manual and presented in PCAs Fieldwork Operations Manual 1 (Taylor and Brown 2009). Individual descriptions of all archaeological and geological strata and features excavated and exposed were entered onto pro-forma recording sheets. All plans and sections of archaeological deposits were recorded on polyester based drawing film, the plans generally being at scale of 1:20 and the sections at 1:10. The OD heights of all principle strata were calculated and indicated on the appropriate plans and sections.
- 6.9 A photographic record of the investigations was made using digital formats.
- 6.10 A Temporary Bench Mark was installed on the site via GPS surveying equipment; this equipment was also used to record the trench location to the OS grid. The TBM was located on the entrance road immediately east of Trench 1 with a value of 10.19m OD whilst a second, located just outside the door of Unit F was 10.78m OD.
- 6.11 Upon the completion of the archaeological work the trenches were backfilled under archaeological supervision.
- 6.12 The site archive was compiled using a site code devised by PCA, SITC16.

## 7 ARCHAEOLOGICAL SEQUENCE

#### 7.1 Phase 1a: Natural Sand and gravels

7.1.1 The underlying geology of the study area is river-terrace derived sand and gravels, acting as an interface between the brickearth silts and clays of the drift geology and the London Clay bedrock beneath. This stratigraphy was observed in Test Pit 1 at 7.18m OD, c.3.36m below ground level where it had been truncated to this depth by the foundations of Unit C.

### 7.2 Phase 1b: Brickearth silts and clays (Figures 10 & 11)

7.2.1 Two natural deposits or variations of clayey-sand were revealed during excavation. They appeared to have a slightly different character: The basal of the two was a clayey-sand, having the appearance of brickearth and being exposed at the bottom of several cut features. In Trench 6 a sondage was cut with a narrow bucket which demonstrated that the sand [42] was at least 1.2m thick with no sign of the underlying gravel beds. The top of it was recorded at 9.05m OD in Trench 1, 9.62m OD in Trench 3 and 9.59m OD in Trench 4, so it appeared to fall slightly towards the north. It was higher to the south in Trenches 501-503, as high as 10m OD at the north of Trench 503 in its untruncated state. The deposit encountered accords well with the description of the Langley Member Clay & Silt formation.

Trench/Area	Context	Upper Level (m OD)	Lowest Level (m OD)
Tr.1	25	9.05	8.99m
Area 1	161	8.73	8.64
Tr.2	44	9.64	9.62
Area 2	157	9.89	9.84
Tr.3	39	9.62	9.49
Tr.4	52	9.59	9.57
Tr.6	42	9.58	9.56
Tr.7	102	9.33	8.86
Area 7	200	9.63	9.10
Tr.8	137	9.94	9.92
Tr.9	119	9.79	9.46
Tr.501	502	9.96	9.18
Tr.502	524	9.44	9.34
Tr.503	549	10.00	9.63
TP 1	344	8.18	8.02
TP 2	346	9.73	9.73

#### Natural

Trench/Area	Context	Upper Level (m OD)	Lowest Level (m OD)
TP4	341	9.90	9.81
TP5	348	8.97	8.78

7.2.2 The clayey sand was overlain in places by another similar deposit, a mid-orange brownish silty-sand which contained occasional flint inclusions [24], [44], [46] and [38], the thickness of which was on average c. 0.32m. It was into this layer that the later palaeochannels had been formed. The flint inclusions in this layer were studied but none were found to be worked and none bore any diagnostic traits. They may have been carried by water action in a 'high energy' environment (such as flooding and inundation). An additional layer of darker, silt-rich sand [45] was recorded in Trench 2 and variations occurred across the site.

#### 7.3 Phase 2: Palaeochannels, land clearance and bioturbation (Figures 3, 4, 7, 10 & 11)

7.3.1 All features interpreted as palaeochannels shared similar characteristics and diagnostic qualities. They were, however, restricted to the higher ground to the east and none were identified in Area 7 on the lower ground to the west. They appear to represent water run-off which had eroded irregularly shaped, meandering channels into the soft, sandy brickearth natural geology.

Area 1 (Figures 3 & 11)

7.3.2 A number of palaeochannels were recorded across the site. In Area 1 a possible palaeochannel [185] was investigated and found to contain both burnt and stuck flint. It appeared to widen towards the west. It was irregular in profile and was oriented roughly west-north-west to east-south-east, apparently following the slight fall from south to north in a curvilinear or meandering fashion. It contained a complex series of fills perhaps reflecting numerous inundations of water. Fills [160] and [186-189] appear to show a series of diffuse, water-lain deposits capped by layer [184] which was a colluvium which capped all the prehistoric features on the site composed of a firm, brownish mid-grey silty-clay. The top of the channel was recorded at 8.50m OD (Figures 3 and 11 Section 29; Plate 1). The final fill of the palaeochannel was cut by a later ditch [183] seen in section although it was not clear in plan. Ditch [183] possessed a regular, flat-bottomed profile and is discussed in Phase 3 as a prehistoric cut feature.

Trench 2 & Area 2 (Figures 4 & 10)

7.3.3 In Trench 2 the vestige of another channel was seen in section but not in plan as it had been partially machined away when the overlying made ground deposits were removed.

The edges and fills of [55] were indistinct but had the same hue as the palaeochannels in Trench 1 and contained fragments of burnt flint.

7.3.4 In Area 2 which opened up a larger area around the original Trench 2, a further pair of meandering channels were recorded as [153] and [155] (Figures 4 and 10 Section 27; Plate 2). Light grey, fire-reddened flint fragments were recovered from both fills but there was an absence of worked flint in this instance. The fills were both a friable, greenish mid-grey silty-sand with occasional small stones and charcoal fleck inclusions. Channel [155] was 1.10m wide (at its widest point as it tapered to the east) with sloping sides and an undulating base. Channel [153] possessed the same profile and was 0.84m wide at its widest point. They were recorded at 9.89m OD, gently falling a few centimetres towards the west side of the trench. They had the appearance of rivulets cut into the natural brickearth by water action.

Trench 502 (Figure 7)

7.3.5 One large feature [511] (c.10m wide) in Trench 502 was identified as a palaeochannel although it was not investigated as it showed signs of contamination (Figure 7). It was also located mid-trench where the ground was unstable as it was made ground composed of redeposited material. The combination of (possible) contamination and the surrounding unstable ground meant that no further work was undertaken on this feature. No finds were recovered from fill [510] which was a friable, greyish mid green silty sand.

## 7.4 Phase 3: Prehistoric 1: Late Bronze Age to Early Iron Age (Figures 5, 10 & 11)

Area 7

7.4.1 The main feature in Area 7 was a series of linear ditches following the course of a larger, wider original ditch; Ditch 1 (Figures 5, 10 Section 45 and 11 Section 30; Plates 3 & 4). The ditches appear to represent the western arc of an enclosure situated further to the east on higher ground. Although broadly aligned north-south the ditches curve to the north-east at the northern end of the study area. Ditch 1 is the earliest of six possible later ditches; the number is uncertain because the course of some of the later ditches were difficult to trace on the ground as their edges were diffuse and definition poor in the sandier areas.

Ditch 1

Cut	Fills	Section	Width	Depth	Height (m OD)
222	220, 221	30	1.78m	0.82m	9.13
270	254, 255	45	1.49	0.68	9.34

Cut	Fills	Section	Width	Depth	Height (m OD)
356	335	51	1.52	0.71	9.21
307	315	52	1.46	0.60	9.19
351	224	46	1.12	0.50	9.02
290	225	47	1.52	0.71	9.24
354	253	42	1.74	0.79	9.40

- 7.4.2 Ditch 1 was numbered as cut [222] at the south LOE, recorded at a height of 9.13m OD. Here it was 1.78m wide and 0.82m deep with gently sloping sides leading to a gently pointed 'U' shape profile. The basal fill [221] was a firm, greyish light brown sandy silt from which LBA/EIA pottery and struck flint was recovered.
- 7.4.3 Another slot was excavated 7m to the north and recorded the ditch as cut [270], measuring 1.49m wide and 0.68m deep at 9.34m OD. Section 45 shows the gradual, barely concave ditch walls running down to a gently pointed 'U' shaped profile (Figure 10 Section 45). It contained fill [255]; a friable, greyish light brown sandy silt from which struck flint was recovered. This had been re-cut by [263], presumably for cleaning or re-definition, and cut by [269] of Ditch 4 on its western edge. These cuts both belong to the later Phase 4 of Late Iron Age/Early Romano-British date. Ditch 1 was recut along its entire length (see Phase 4 below).
- 7.4.4 A further 6m to the north Ditch 1 was recorded as cut [356] whose basal fill [355] was a compact mid orange brown sandy silt which did not contain any dating material.
- 7.4.5 A further 3m to the north another slot recorded the ditch as [307] and illustrated that this stretch of ditch remained similar in profile (Figure 11 Section 52). It was 1.46m wide by 0.64m deep. Fill [315] was a friable, orangey mid-brown sandy silt with little variation from the previous section. The ditch fill was re-cut by [352] and cut on its western edge by [309] of Ditch 4 (both Phase 4). A further 6m to the north Ditch 1 was recorded as [351] maintaining the 'U' shaped profile with the sides becoming gradually steeper. It measured 1.2m wide and was 0.50m deep and was recorded at 9.02m OD. Fill [224] remained consistent with rare gravel inclusions and occasional iron-pan mottling. No finds came from this basal fill.
- 7.4.6 Ditch 1 was subject to two more investigations towards the north of the site. A further 4m to the north, Section 47 recorded Ditch 1 as [290], almost identical to the previous section with the exception of the east side being less vertical than that on the western edge; possibly due to localised erosion. The basal fill [225] remained similar to the previous ones in that it possessed an orangey hue from the erosion of the sandy brick-earth natural from the ditch walls. Inclusions included rare rounded pebbles, burnt flint fragments and

charcoal flecks. However, no finds were recovered from this slot intervention. A final slot was made at the northern baulk which presented a slightly oblique profile [354] where the ditch was measured at 1.74m wide and 0.79m deep, recorded at a height of 9.40m OD. Fill [253] remained consistent with the previous recorded slots and contained finds of struck flint.

### 7.4.7 Ditch 2

Cut	Fill	Width (m)	Depth (m)	Height (m OD)
227	226	0.80	0.14	9.45
229	228	0.66	0.16	9.34
231	230	1.04	0.19	9.22
235	234	1.07	0.29	9.33
233	232	0.46	0.04	9.02
243	242	0.72	0.20	9.10
333	332	0.73	0.51	9.63

7.4.8

Ditch 2 was devoid of finds so it is included in this phase on morphological grounds and on the basis that it is the only other ditch of the six on the ground that follows the same course of Ditch 1. It can be seen very gradually curving around to the north-east at its northern end but is much more superficial than Ditch 1 (Figure 5). Ditch 2 was shallow for much of its course with sharp sides with a flat (if rounded) base in profile. Width varied from around a metre to as little as 0.46m. It was generally no deeper than 0.20m except at its northernmost end where it was recorded at 0.51m deep. Fills [226], [228], [230], [234], [242], [232] and [332] were a firm, orangey mid-grey clayey-sand. Fill [332] contained both a struck flint of either the Mesolithic or Bronze Age and a sherd of 18th-century pot; the former residual and the latter intrusive from the features above which were parallel planting beds. The ditch cut an earlier, short section of ditch [239/237] which was oriented NW-SE but probably belonged to the same period. A narrow gully [241], which was probably contemporary with Ditch 2, was aligned east-west and connected to Ditch 1 although fill [240] did not contain any dateable finds.

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Cut	Section	Diameter	Depth	Height (m OD)
101	-	0.40m	0.31m	8.87m
121	-	0.30m	60mm	8.81m
245	32	0.40m	0.31m	9.08m
247	33	0.40m	0.14m	9.04m
249	34	0.31m	0.25m	9.06m

Posthole Group 1

251 35	0.76m/0.32m	0.38m	9.04m
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- 7.4.9 Posthole Group 1 was located on the north-west LOE of Area 7 (Figure 5). It consisted of six postholes [101], [121], [245], [247], [249] and [251]. Each posthole displayed a slightly different profile but each one possessed vertical sides and flat bases (with some variation). Diameters varied between 0.30-0.40m, with one, exceptionally, 0.81m (the latter perhaps possessing a 'ramp' on one side or having been deformed following the removal of the post). Depths varied between as little as 0.14m to 0.06m deep. In general, the fills were a firm, yellowish mid-brown sandy silt containing small gravel inclusions However, it was not possible to either date the postholes or form a coherent structure from their plan. Some of the posts may form a gently curving animal corral or pen although this is conjectural. They are included in this phase purely on morphological grounds. Struck and burnt flint was recovered from the fill of posthole [101] only.
- 7.4.10 Posthole [101] was sub-oval in plan and, due to its profile being heavily sloped on one side may have either held a post at an angle or possessed a 'ramp' to aid its insertion. The central, rounded hole for the post was off-set to one side. It was 0.44m across the long axis, 0.40m wide and 0.31m deep, recorded at 8.87m OD. Fill [100] was a firm yellowish mid-brown sandy-silt from which both burnt and struck flint was recovered. Posthole [121] was located less than a metre south-west of [101] along the western L.O.E. and may be associated with the afore-mentioned posthole [101]. It was circular in plan with sloping sides and a flat base, 0.30m in diameter but only 60mm deep, recorded at a height of 8.87m OD. Its fill [120] was a firm, pale-yellow sandy silt. No finds were recovered.
- 7.4.11 Posthole [245] was located 3m to the north-east of postholes [101] and [121] on the same north-east to south-west alignment although the gap between them may obviate the possibility of them creating a coherent timber structure. The posthole was circular in plan with vertical sides and a concave base measuring 0.40m in diameter and was 0.20m deep. It was recorded at a height of 9.08m OD. Unfortunately, no finds were recovered from the firm, yellowish mid-grey sandy silt fill [244]. Posthole [247] was 2m north of [245], circular in plan with vertical sides and a concave base, measuring 0.40m in diameter and 0.14m in depth. It was recorded at 9.04m OD but no finds came from fill [246]. Directly to the east posthole [249] was sub-circular in plan with vertical sides and a concave base, it measured 0.31m in diameter and was 0.25m deep. No finds were recovered from fill [248] whose composition echoed that of the afore-mentioned postholes. It was recorded at a height of 9.06m OD. The postholes shared a similar diameter and depth, save for posthole [251]. It was a lozenge shape in plan as it represented a sub-circular posthole with either a 'ramp' (for the insertion of a large timber) or a deformation (caused by the removal of a post) to its south edge. It was 0.76m on the long axis (around 0.32m diameter for just the posthole

itself) and 0.42m at its deepest, recorded at a height of 9.04m OD. No finds were recovered from the fill [250] which was similar in composition to the foregoing.

## Pits (Figure 5)

- 7.4.12 A large oval pit, [103], 2.2m along the long axis, 1.5m wide and 0.93m deep was recorded in Area 7 close to the western limit of excavation. It had two fills; fill [104] was a firm, pinkish mid-brown clayey-silt – the pink nature of the fill was not fully understood but may have related to some sort of chemical reaction. The second fill [122] was a compact, greenish mid-brown silty-clay which may have been surface bioturbation as opposed to a genuine fill. The pit was recorded at 9.03m OD and appeared to have been sealed by colluvium layer [126]. As there were no finds recovered from either fill it has been placed in the prehistoric phase as it was sealed by the colluvium as had the other prehistoric features nearby.
- 7.4.13 The fills of the pit described above had been cut by three small oval stakeholes, [105], [107] and [109], which all shared the same profile of being vertically sided tapering to a sharp 'V' shape. Both [105] and [107] had the same dimensions of being 0.17m on the long axis, 0.11m wide and 600mm in depth. Stakehole [109] was considerably smaller, 600mm in diameter and 600mm deep. Fills were uniformly friable, greyish mid-brown sandy clay but contained no finds. They were recorded at a height of c.9.10m OD.
- 7.4.14 An oval pit [283], measuring 2.18m on the long axis, 1.5m wide and 0.26m deep was cut by [267] of north-south aligned Ditch 6 in the north of the site. No finds were recovered from the firm, yellowish mid-grey sandy silt fill. It was recorded at a height of 9.25m and was chronologically earlier than the ditch although remained undated and could belong to any of the pre-medieval phases.

Area 8 (Figure 6)

7.4.15 Area 8 was opened up around the original Trench 8 to expose a curvilinear ditch or gully [136]/[139] which formed a 'Y' junction with an east-west oriented ditch [141] (Figures 6 and 10 Sections 15 and 16; Plate 5). These two ditches were likely to be contemporary with each other and part of the same drainage/boundary ditch system. Cut [139] was exposed to a length of 5m (roughly aligned north-south) and was 0.84m wide, 0.35m deep and recorded at a height of 9.30m OD. It contained a single, homogenous fill [135]/[140] of a friable, yellowish mid brown silty-sand heavily mottled with iron panning. Finds of burnt and struck flint as well as pottery sherds have dated the fill of the ditch to the Late Bronze Age/ Early Iron Age period. As with many of the features in this area, the edges were

diffuse and poorly defined and the profiles appeared to show either several episodes of erosion caused by fluvial action or of having been deformed by bioturbation.

7.4.16 The aforementioned ditch [141] was aligned roughly east-west although, again, curvilinear. It was unclear whether it had been cut by [136]/[139] but they are likely to have been contemporary. It was slightly wider at 1.25m and 0.24m deep, it was recorded at a height of 9.31m OD. It also contained a friable, mid brown silty-sand fill [142] from which burnt flint and fragmentary pottery (or daub) was recovered. It was traced for 3m from its junction with [136]/[139] towards the east before becoming increasingly diffuse and undetectable.

Two postholes 1.6m apart were located roughly midway along Area 8. Posthole [145] was sub-circular in plan with near vertical sides and a flat base measuring 0.36m in diameter and was 0.15m, the top of which was recorded at 9.29m OD. It displayed a 'post pipe' (where the timber is believed to have rotted *in situ*) [146] within the backfill [147]. The latter was a friable, mid brown silty-sand heavily mottled with iron panning. No dating material was recovered from either fill but the antiquity of the post pipe suggests it belongs to the prehistoric period. Its companion, [148] was to the west partially under the western baulk and recorded at 9.37m OD. This was also sub-circular in plan with near-vertical sides but the base was more of a pointed 'U' shape. Its single fill [149] was the same as its companion and was also devoid of dating evidence.

### 7.5 Phase 4: Late Iron Age – Early Romano-British c.100 BC-AD 100

Area 1 (Figures 3 & 11)

7.5.1 At the north end of Area 1, ditch [183] ran north-west to south-east cutting a nearby palaeochannel [185] - although the relationship was seen clearly in the section as (Figures 3 and 11 Section 29) and was not visible in plan. The ditch was 0.73m at its widest point and 0.69m deep, possessing step sides and a flat, if rounded base. Fill [182] was a firm, greyish mid-brown silty-clay containing frequent flint and occasional manganese fleck inclusions. Burnt and struck flint and fragmentary pottery dating to the early Romano-British period were recovered from its fill.

Context	Section	Width	Depth	Height (m OD)
256	42	2.60	0.47	9.44m
262	46	1.00	0.32	9.10m
263	45	1.36	0.40	9.28m
264	47	1.40	0.51	9.24m
352	52	1.34	0.64	9.17m

# Area 7 (Figures 3, 10 & 11)

Ditch 1 (re-cuts)

353	30	1.90	0.38	9.48m

- 7.5.2 During the Late Iron Age or Early Romano-British period Ditch 1 was re-cut along its length possibly to re-define it as a land boundary or enclosure. Re-cuts [256], [262], [263], [264], [353], and [352] shared similar profiles and were mainly cut centrally to the original ditch sides and descended to about two-thirds of the way down (Figures 3, 10 Section 45 and 11 Section 29 & 52). None of the re-cuts attained the base of the original ditch, thus leaving the original basal fills partially intact. All re-cuts displayed gradual, gently sloping sides terminating in a broad 'U' shape profile. Fills [220] and [252] both contained pot sherds of the Late Iron Age/ early Romano-British period whilst fill [254] contained a residual sherd of Late Bronze Age/ Early Iron Age date. One intrusive sherd dating to the 13th century was found in the top of fill [306].
- 7.5.3 As well as the re-cutting of the main Ditch 1 during this period there were further ditch cutting episodes along the western flank of Ditch 1. Ditch 4 cut the two phases of Ditch 1, whilst Ditches 3 and 5 were both cut parallel to, and west of Ditch 4. It must be stated that each of these ditches are poorly served with dating material so there is an element of presumption that, even though they share a similar alignment and spatial proximity to Ditch 1, they could in fact be later and all pottery finds were residual. Furthermore, all the Romano-British pottery has been described as fragmentary and abraded hinting that, it too, may be residual and in a secondary context.

Cut	Section	Width	Depth	Height (m OD)
227	41	0.80	0.14	9.45m
229	39	0.66	0.16	9.34m
231	38	1.04	0.19	9.22m
235	52	1.07	0.29	9.33m
233	-	0.46	40mm	9.02m
243	37	0.72	0.20m	9.10
333	82	0.73	0.51m	9.63

#### Ditch 2

#### Ditch 3

Context	Section	Width	Depth	Height (m OD)
206	30	0.80	0.22	9.24m
272	45	0.65	0.14	9.38m
294	51	1.04	0.29	9.24m
311	52	1.07	0.29	9.33m

7.5.4 Ditch 3 consisted of cuts [206], [272], [294] and [311] being slightly narrower at the south but widening to its full extent to 1.07m midway across the site. It was oriented NNW-SSE and running parallel to the west of the main Phase 3 Ditch 1, which was 1m to the east. However, at about two-thirds along its length towards the north, Ditch 1 curves away to the north-east whilst Ditch 3 maintains its same straight NNW alignment. This may suggest that a general boundary was being observed but it may be in a much later period to Ditch 1. The profile remained similar over the four interventions, consisting of gradual sides sloping down to a broad 'U' shape. Fills [205], [271], [293] and [310] were a uniform friable, greyish mid-brown sandy-silt with the occasional sub-angular flint inclusions. Importantly, no finds were made from any of the archaeological slots made into the ditch so therefore it is included in this phase on morphological grounds and its relation to Ditch 4.

Context	Section	Width	Depth	Height (m OD)
204	30	0.49	0.21	9.24m
269	45	0.64	0.24	9.31m
292	51	0.68	0.22	9.22m
309	52	0.92	0.48	9.26m

7.5.5 Four investigative slots were excavated along the length of Ditch 4 which consisted of cuts [204], [269], [292] and [309]. It was oriented NNW-SSE and ran parallel (if a little less straight) than Ditch 3 located immediately to the west and ran from under the southern limit of excavation. It appeared to terminate towards the north where its edges had become diffuse and poorly defined c.13m from the north baulk. Its width was fairly consistent along its length, widest and deepest at the north end, recorded at 0.92m and 0.48m respectively. Its profile was relatively consistent comprising gradual, slightly concave sides with a rounded 'U' base. Of the fills [203], [268], [291] and [308], they were all a friable, greyish mid-brown sandy-silt with occasional burnt flint inclusions, the ditch showing little compositional change along its length. It was only fill [308] which contained pottery dating to the Romano-British period.

Context	Section	Width	Depth	Height (m OD)
296	51	0.74	0.21	9.24m
313	52	0.73	0.21	9.33m

7.5.6 Ditch 5 was a short section of ditch running for only 11.2m in the centre of the site which was only seen in two extended slot interventions. The location of both its north and south

termini are unknown. It was oriented on the same NNW-SSE alignment as both Ditches 3 and 4 located to its immediate east. Its profile possessed concave sides with a flat base unlike the other 'U' shaped ditches. Fills [295] and [312] were composed of a friable, orangey mid-brown sandy-silt containing occasional sub angular flint inclusions. The latter fill contained a struck flint dating to the Late Mesolithic/Early Neolithic period which was clearly residual in this context.

## Trench 503

7.5.7 An animal burial [519] was found in the NW end of Trench 503 (Figure 9; Plate 5). It had been placed in a sub-oval pit [520] measuring 1.18m (along the long axis) and 0.76m wide but which was only 100mm deep. The shallow nature of the fill was due to modern truncation which had damaged the cranium of the animal and removed its hind limbs. It was found with what appeared to be a struck flint flake trapped under its scapula but there was no other dating evidence within the deposit (Plate 6). However, it has been included in this phase as the skeletal material has been identified as a possible wild boar. This is discussed more fully below in the phased discussion chapter and animal bone specialist report in Appendix 10.

## 7.6 Phase 5: Colluvium

7.6.1 All the prehistoric activity across the site was sealed by a layer of collluvium of different thicknesses although, in general, it increased down slope to the west and north and was thinner towards the top of the slope at east and south. In most cases, prehistoric flint-work of different dates was present within it. The flint-work appears to have moved downhill as part of the process of gravity and soil creep, accumulating within this layer. The flint was slightly chipped, indicating that it had travelled some distance to its final resting place. No *in situ* knapping floors, hearths, surfaces or other features were observed, so the most satisfactory explanation for the flint is that it had been incorporated into the layer from uphill over time. As well as natural processes, early ploughing is likely to have exacerbated the movement of soil downhill. Interestingly, a 'mix' of flint industries from different periods was present, suggesting a long (if intermittent) period of settlement on the higher (and presumably drier) ground to the east. Unfortunately, the settlement or the source of the flint was not discovered during this phase of excavations.

Area 1

7.6.2 Colluvium were present as layers [160] and [184] sealing ditch [183] and palaeochannel
 [185] (Figure 11 Section 29). It was recorded as a firm, brownish, mid-grey clayey-silt with occasional flecks of manganese 0.29m thick

Area 7

7.6.3 Colluvium [126] were pronounced in Area 7 up to 0.38m thick in some areas, sealing the prehistoric features and ditches. It contained the highest level of flint work for any feature on the site although the flint was derived from different periods. Colluvium was also recorded as contexts [199], [202], [297], [314], [284] and [285] (Figure 11 Section 30).

Area 8

7.6.4 In Area 8 colluvium were recorded as [134] and [138].

Area 9

7.6.5 Area 9 recorded colluvium present as [112].

### 7.7 Phase 6: Medieval 12th-13th Centuries (Figures 3 & 5)

Trench 1 (Figure 3)

7.7.1 In Trench 1/Area 1 a row of stakeholes were seen to cut the fill of palaeochannel [8]. No Roman activity is recorded in the area so it is considered unlikely these the stakes originated in that period; however, both the nearby mill leat (fed by the River Ember) and its attendant mills were established in the medieval to late medieval period (Roberts 2015) whilst the Senex map of 1729 shows 'Iron Wire Mills' north of Ember Court and the leat fed by the River Ember is present. The origins of Ember Court are recorded in the Domesday Survey of 1086 making it a possibly a pre-Conquest building (or re-built upon an earlier structure) (Roberts 2015: 10). Therefore, water management of several types are likely to have been introduced into the area during this or the Saxon period. Stakeholes [11], [13], [15], [17], [19], [21] and [23] may represent a medieval fish or eel trap associated with the manor house or nearby mills. The holes themselves suggest a series of stakes, generally 10cm in diameter and around 20 cm deep.

Area 7 (Figure 5)

7.7.2 In the north-west corner of the site was an irregularly shaped tree throw [158] with sloping sides and an undulating base. It was recorded at a height of 9.11m OD. Its mixed fill was compact-to-friable, greyish dark brown sandy-silt containing occasional rounded stones and charcoal fleck inclusions. It was 4.10m at its longest, 0.42m wide and 0.25m deep. The fill contained pottery dating to the 12th-13th centuries.

Ditch 6

Cut Sect	ion Width	Depth	Height (m OD)
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267	48	0.44m	0.41m	9.00m
327	69	0.90m	0.32m	8.95m
337	-	0.70m	0.42m	9.33

7.7.3 Ditch 6 was located in the northern section of Area 7. A large quantity of pottery dated to 1150-1200 preserved in almost pristine, unrolled (or unabraded) condition was recovered from this feature (Figure 5; Plate 7). Feature [267] was thought to be a pit on initial inspection but once excavated turned out to be part of a longer ditch, Ditch 6, traced for 14.8m and projecting from the north LOE. Its southern end became indistinct and poorly defined, evading the excavators. It possessed steep sides with a concave or rounded base, 0.44m at its narrowest widening to a maximum of 0.90m and 0.42m at its deepest. In this instance the pottery appeared to have been deposited almost as whole pots with no sign of abrasion in a discrete 'single event' deposition.

#### 7.8 Phase 7: Post-Medieval 16th & 17th Centuries

7.8.1 This period is characterised by activities in and around the Tudor-era (and later) Ember Court Manor building. During the evaluation phase a series of regular planting beds separated by drainage (or irrigation) ditches were uncovered in Trenches 3 and 4. Fills of the planting beds included fragmentary CBM and animal bone, the latter probably introduced as fertilizer (Perkins 2016, 14). Both the cartographic sources (first recorded on the Rocque Map of 1768) and the archaeology uncovered on the ground confirmed that it was a period when the area north of the manor had been laid out as a 'formal' garden. This appears to have lasted until at least the mid-to-late 19th century before the gardens underwent a transformation to an open agricultural plot given over to the plough. A thick layer of plough-soil sealed and overlay the remnants of the formal planting beds indicating a change of land use (Perkins 2016, 14).

Area 1 (Figure 3)

- 7.8.2 A number of disparate features in the north of the site just south of Orchard Lane have been identified as relating to planting pits and 'formal' beds. Pits [165], [167], [169], [171], [173], [175], [177], and [181] were nearly all rectangular (or lozenge-shaped) features suggestive of tree planting. Fill of [167] contained residual pottery of the 12th or 13th century whilst fill [174] of rectangular planting bed [175] also contained residual Romano-British pot. However, a sub-rectangular pit [179] contained intrusive pottery of the 18th/19th century in its fill [178].
- 7.8.3 Feature [165] was sub-rectangular in plan, measured 0.65m by 0.35m and was 0.08m deep, located at the south end of Area 1 at 9.04m OD. It contained a soft, mid-brown silty fill [164] which contained fragmentary pottery sherds. Nearby planting pit [167] was 1m by 0.65m and 0.08m deep with a similar fill containing pottery and burnt/struck flint, the latter likely to have been residual in nature. Both features had virtually vertical sides and flat

bases. Planting pit [169] to the north-west measured 0.65m by 0.50m and was 0.27m deep. It contained a similar fill, [168] but no finds were recovered. A similar sub-rectangular feature, [175] measured 0.60m by 0.49m with the same depth of only 0.08m (located about 6m to the north of this initial concentration) contained an almost identical fill from which a sherd of residual Romano-British pottery was recovered.

- 7.8.4 A circular pit [171] was located on the western edge of the area, 0.90m in diameter, 0.22m deep with gradual sides and a flattened 'U' shaped base. No finds were recovered from its fill [170]. A rectangular pit [173] measured 0.50m by 0.50m appeared to have been cut by [171] on its southern edge but may have been contemporary (or possibly even the same feature). It was 0.30m deep whose reddish, mid brown sandy silt fill [172] contained small fragments of coal and residual burnt flint. They were recorded at 9.01m OD.
- 7.8.5 Two unusually-shaped features were located in the central part of Area 1. The first was a sub-circular pit [177] with steep, almost vertical sides and a concave base measuring 0.45m by 0.35m and was 0.30m deep. It had an unusual profile that may have been deformed by bioturbation. Immediately adjacent to the east was pit [179], sub rectangular in plan with straight sides and a flattened 'U' shaped base. It measured 0.50m by 0.30m and was 0.23m deep and may also have suffered the effects of bioturbation. Its fill [178], like that of its neighbour [176] was a soft, greyish mid –brown sandy silt. No finds were recovered from [177], but post-medieval glass and pottery dated 1700-1900 was recovered from [179]. They were recorded at 8.97m OD.

Area 7 (Figure 5)

## Planting Beds 1

Context	Section	Diameter (or long axis)	Depth	Height (m OD)
274	-	1.06m	0.23	9.06m
276	-	1.86m	0.09	9.10m
278	-	2.30m	0.19m	9.17m

7.8.6 A row of three planting pits, possibly for trees, were aligned north-south in the north-west corner of Area 7 (Figure 5). Although they measured a metre or more in diameter none were of any substantial depth.

Context	Section	Diameter (or long axis)	Depth	Height (m OD)
258	43	0.64m	0.10m	9.10m
260	44	1.50m	0.52mm	9.11m

7.8.7 Feature [258] was a shallow pit 0.64m in diameter with a depth of only 100mm next to a larger, sub-oval pit [260] which measured 1.60m on the long axis and was 0.52m deep.
Fills [257] and [259] were a firm, reddish, mid-brown sandy silt devoid of finds. Both have been interpreted as planting pits (Figure 5).

## Planting Beds 3

Context	Section	Diameter (or	Depth	Height (m OD)
		long axis)		
281	66	1.02	0.16m	9.13m
301	60	0.60	0.11m	9.32m
305	61	1.23	0.12m	9.35m
319	62	0.88	0.25m	9.33m
335	71	0.80	0.17m	9.11m

7.8.8 An arc of planting pits was composed of sub-oval (or irregularly shaped) pits [281], [319] and [335] and sub-rectangular pits [301] and [305] (Figure 5). Although there was variation in shape all were relatively shallow. Fills were a uniform loose-to-friable, greyish mid-brown sandy silt with occasional flecks of charcoal, fragmentary CBM and small, rounded pebble inclusions. A residual sherd of 12th/13th-century pottery was recovered from fill [334] of sub oval pit [335].

Context	Section	Diameter (o	r Depth	Height (m OD)
		long axis)		
289	50	1.37	0.52m	9.42m
303	55	0.40	0.30m	9.17m
317	56	0.81	0.10m	9.33m
322	64	1.44	0.17m	9.33m
323	65	0.40	0.15m	9.35m
325	67	1.40	0.32	9.29
331	70	1.52	0.20	9.29

## Planting Beds 4

7.8.9

The area of planting beds at the south of the site consisted of a variety of sizes and shape in plan but were uniformly quite shallow, the deepest, [289], being 0.52m in depth (Figure 5). Fills were a uniform, loose-to-friable orangey mid-brown sandy silt with occasional charcoal flecking and fragmentary lumps of coal suggesting that hearth scrapings and cinders were added for fertilizer. Fill [320] contained residual struck flint but otherwise no finds were made from these features. A number of such features including those to the east of the group remained unexcavated due to time constraints. However, surface inspection of their fills indicated a post-medieval date making them part of the larger Group 4.

7.8.10 Superimposed over Area 7 to the east was Trench 3 excavated during the earlier evaluation phase. Regularly spaced planting beds [28], [30], [32] and [34] were set perpendicularly to a possible irrigation channel [37]. Their fills included post-medieval material including clay tobacco pipe (CTP) and ceramic building material (CBM). However, these beds were cut into the layer of colluvium which sealed the prehistoric features and were located 0.30-0.40m higher than them. Once recorded and finds recovered, these were removed to reveal the earlier features beneath.

Area 8 (Figure 6)

7.8.11 A sub circular planting pit [143] was excavated in Area 8 which had steep sides and a near flat base, recorded at a height of 9.29m OD and measuring 0.90m (on the long axis) and 0.29m deep (Figure 6). The friable, yellowish, mid-brown sandy silt fill [144] contained no dateable finds.

Trench 9

7.8.12 A single planting bed [118] was recorded 1.80m long and 0.80m wide being 0.20m deep from which a residual sherd of medieval pottery was recovered (not illustrated).

Trench 502 (Figure 7)

7.8.13 Trench 502 was so placed as to have the best chance of locating the remains of Ember Court depicted on the maps as being situated to the extreme south of the site. In the event the north wall of the north wing was exposed for over 4m from the south LOE forming a 'H' in plan with slightly projecting buttresses (Figures 7 and 8; Plate 9 & 10). It could not be further uncovered as a service main immediately south of the trench prevented it from being further enlarged or stepped. Unfortunately, modern truncation had damaged the remainder of the walls of Building 1 but separate sections and re-builds were visible.

Masonry	Component	Width	Length	Brick size (mm)	CBM spot-
		(m)	(m)		dating
526	North wall	0.62	5.12	240mm x 120mm x 80mm	1450-1700
540	West wall	0.60	2.34	230mm x 105mm x 65mm	1450-1700
537	East wall	0.88	0.80	230mm x 110mm x 95mm	1700-1900
538	NE corner	1.06	1.50	230mm x 100mm x 55mm	1450-1900
539	NW corner	0.62	1.06	220mm x 65mm x 95mm	1450-1900

Building 1 (Phase 1: 16th-17th Centuries)

7.8.14 The north wall [526] was oriented WNW-ESE with the western [540] and eastern walls

[537] running south on a NNE-SSW orientation. A small portion of the interior was uncovered but not fully investigated as it was located close the southern baulk. Although there is evidence of a number of repairs, small rebuilds and strengthening courses its construction sequence, for the purposes of this report, have been simplified into two phases.

- 7.8.15 During the 16th-17th centuries subsidence in Building 1 may have been a problem, as both the corners of the building seem to have been strengthened and then had buttresses added in a later phase. Angle [539] in the north-west corner was a separate build to the connecting walls, as was angle [538] in the north-east corner as breaks were clearly visible in the building materials. North wall [526] was constructed of red brick 240mm x 120mm x 80mm (of a type known to have been in production from 1450) and bonded with a yellowish white lime based mortar with chalk flecks and pea grit inclusions. Only the base course was exposed so the original coursing bond was not visible. It had been abutted at the west end by [539] whose red bricks were unfrogged with soft arrises.
- 7.8.16 The east wall of Building 1, [537], was made of similar materials with a little variation; the dimensions of a sample brick taken measured 230mm x 110mm x 95mm which may reflect shrinkage or distortion in the kiln. It had been abutted by repair [538] to support the northeast corner.
- 7.8.17 West wall [540] was composed of hand-made red brick, un-frogged with rounded arrises measuring 230mm x 105mm x 65mm abutted by [539] which is also a strengthening build of the north-west corner angle.

#### 7.9 Phase 8: Post-Medieval 18th-19th Centuries (Figures 6 & 7)

Area 8 (Figure 6)

7.9.1 A large pit [150] in Area 8 was 2m long and 0.45m deep contained backfill of 18th/19thcentury bricks and tiles (Figure 6).

Trench 501 (Figure 7)

7.9.2 At the south end of Trench 501 a short section of wall was uncovered, 1.20m long oriented NNE-SSW which had been truncated by the modern development on the site (Figure 7). It was 0.5m wide and stood 0.30m high. Bricks measured 230mm x 150mm x 80mm and were assigned to the 18th-19th centuries.

Trench 502 (Figure 7)

7.9.3 A short length of gully [508], 0.40m wide and 0.35m deep ran NE-SW for 2.4m across Trench 502 (Figure 7). It contained one fill [507] of compacted dark grey sandy silt which contained flecks of charcoal from which animal bone was recovered.

- 7.9.4 A short section of wall [509] oriented NE-SW made of red brick crossed Trench 502 covered by a spread of demolition rubble. The wall was exposed in plan and construction cut [522] identified. It was dated to the 18th-19th centuries (Figure 7).
- 7.9.5 A small fragment of brick yard surface [512] measuring around a metre square was found to survive in Trench 502 that had been laid on top of the fill [510] of palaeochannel [511] (Figure 7). It was un-mortared and appeared to have been constructed from re-used bricks laid edge-to-edge.

Masonry	Component	Width	Length	Brick size	Spot dating
		(m)	(m)		
530	Buttress	0.54	0.84	235mm x 110mm x 65mm	1700-1900
528	Buttress	0.55	0.90	230mm x 105mm x 65mm	1700-1900
529	Pier	0.46	0.48	225mm x 100mm x 65mm	1700-1900
527	Repair	0.30	0.90	230mm x 100mm x 65mm	1700-1900

Building 1 (Phase 2: 18th-19th Centuries)

- 7.9.6 A second phase of construction was recorded on Building 1, the north wing of Ember Court. Both the north-west and north-east angles were further strengthened by brick buttresses [530] and [528] (Figures 7 and 8; Plate 9). They were built as separate piers set diagonally to the existing walls to support the outward pressure. They may have been added either to support subsidence or, possibly, facilitate a further storey being built. They comprised an un-frogged, dark red post-Great Fire brick, measuring 235mm x 110mm x 65mm laid edge-to-edge to create a pier or buttress sunk into a separate construction cut. In addition, two areas of repair were evident, [527] and [529], consisting of bricks dating to 1700-1900 within the eastern corner of the wall.
- 7.9.7 On the re-builds and repairs, all brick samples fell into the sandy brick category bonded with a mortar type of the 18th century onwards.

#### 7.10 Phase 9: Modern 20th Century – Present

Area 1

- 7.10.1 Evidence for the 20th-century Ember Court Concrete Works was uncovered in the north of Trench 1 during the earlier evaluation phase. A set of parallel metal cart tracks [3] on wooden sleepers [4] were uncovered running for 4m on a NNE-SSW orientation. These were likely to have been hand pushed carts on a narrow-gauge rail to move materials around the work area.
- 7.10.2 A modern pit [163] had cut palaeochannel [185] at the northern end of Area 1 (Figure 3).

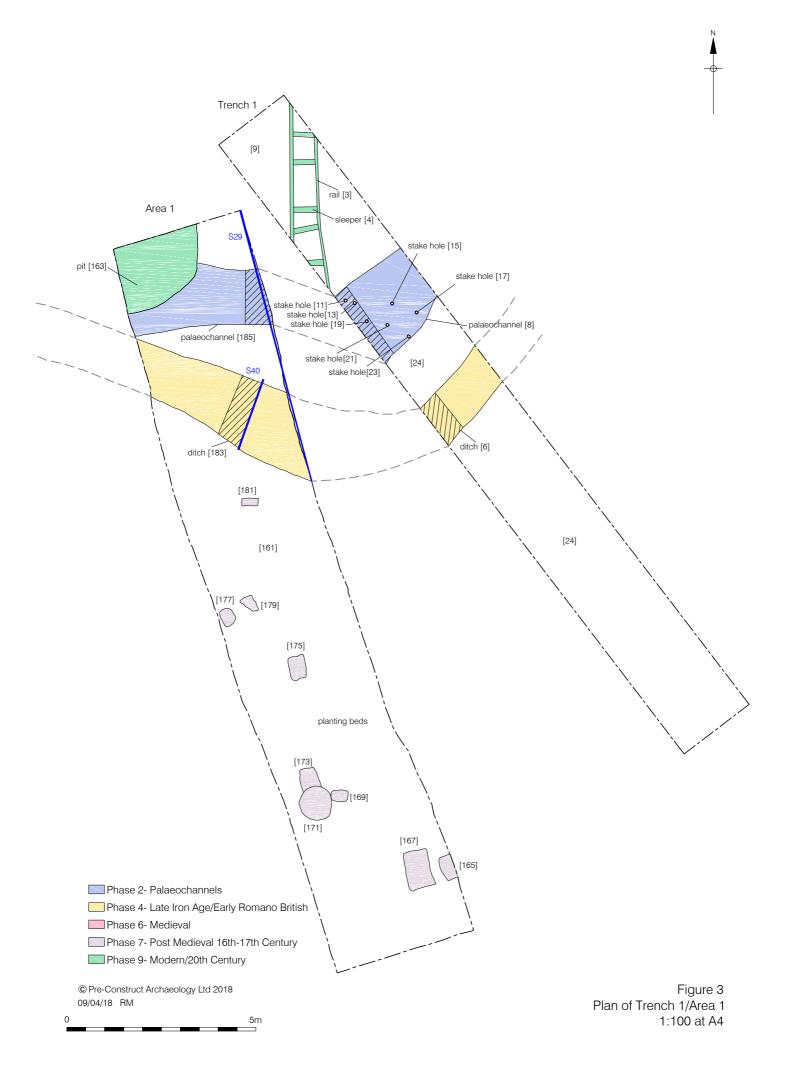
It was sub-oval in plan and measured 0.85m by 0.72m but remained unexcavated so the depth is unknown. It contained one fill [162] of loose, greyish mid-brown sandy silt containing modern building materials. The top of its cut was recorded at 8.54m OD.

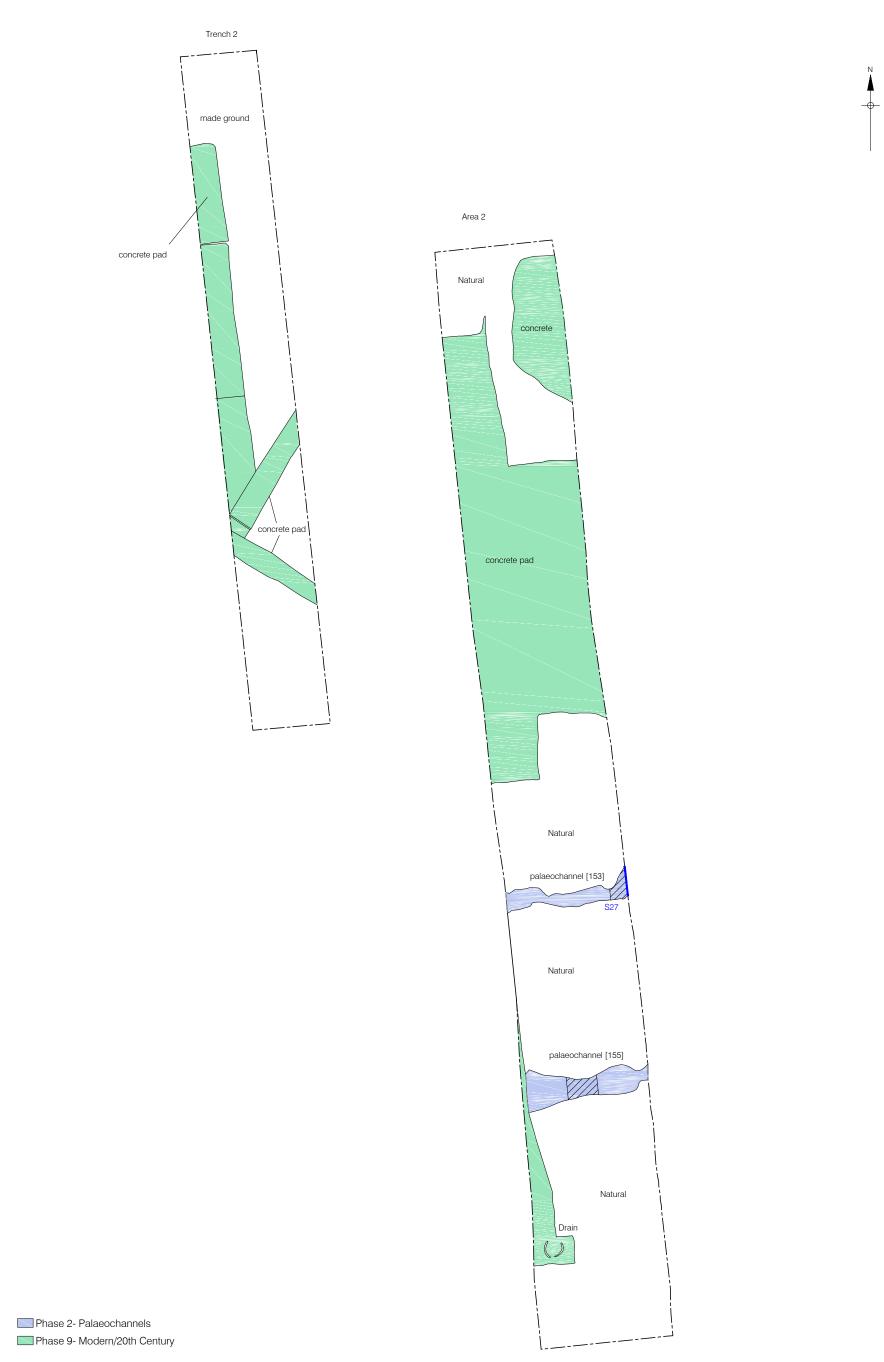
#### Area 2

7.10.3 The two palaeochannels were sealed by a layer of made ground [152] composed of compacted building materials included crushed tarmac and concrete which was 0.19m thick.

Area 7

7.10.4 Made ground layers of modern material and/or re-deposited material were revealed in Area
7 including layers [133] (containing residual prehistoric pottery), [201], [202] (Figure 11 Section 30).

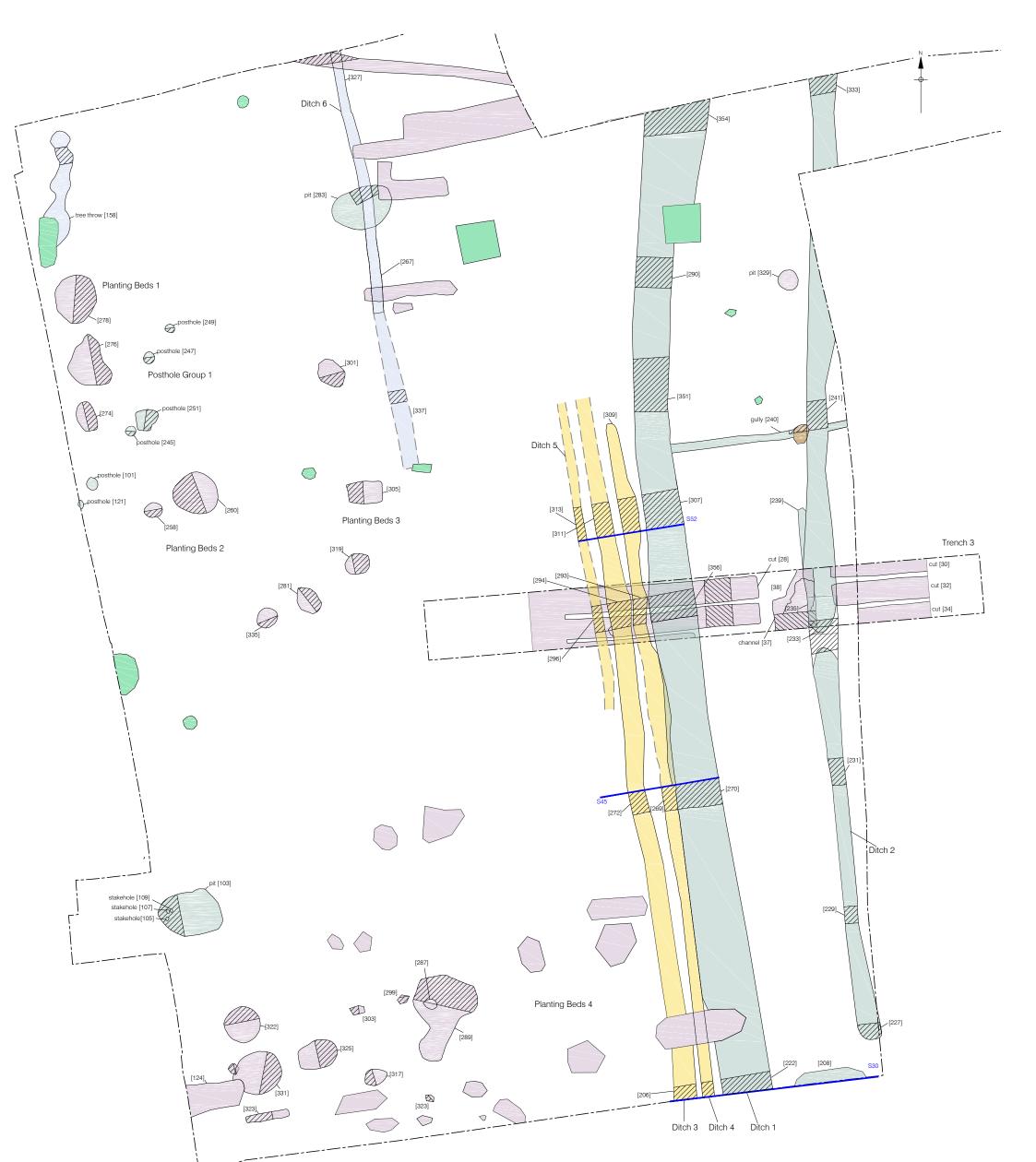






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Figure 4 Plan of Trench 2/Area 2 1:100 at A3





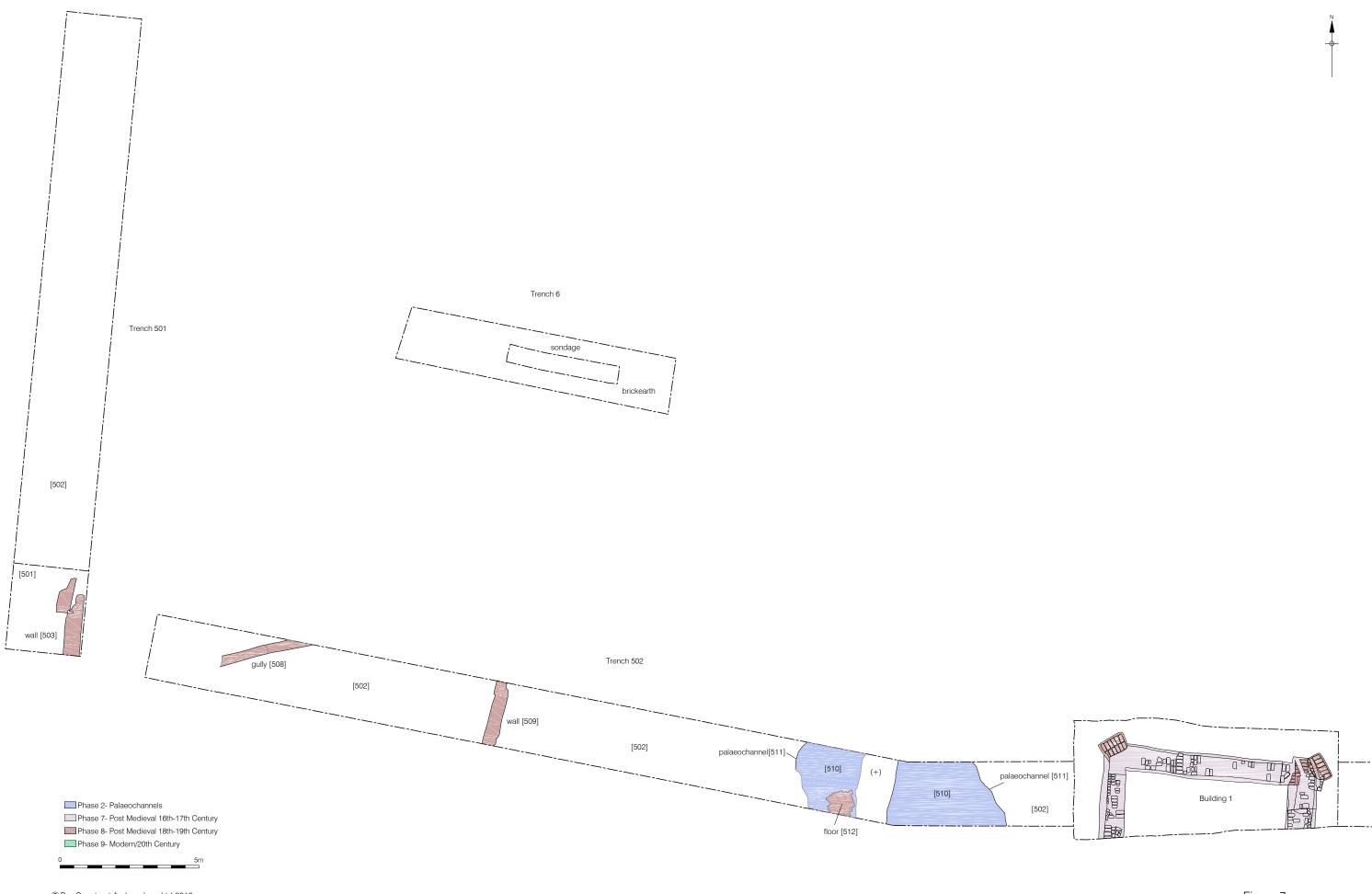
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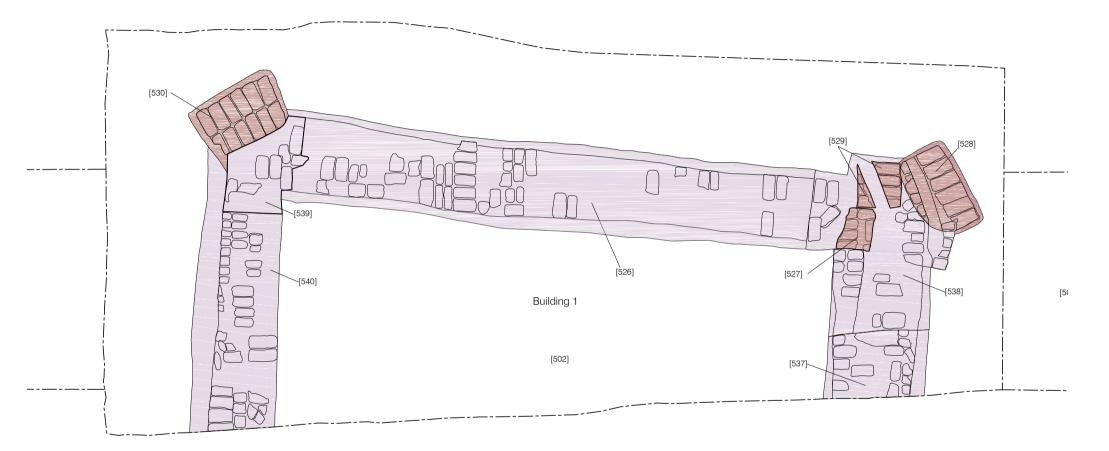


Figure 5 Plan of Trench Area 7 1:100 at A3





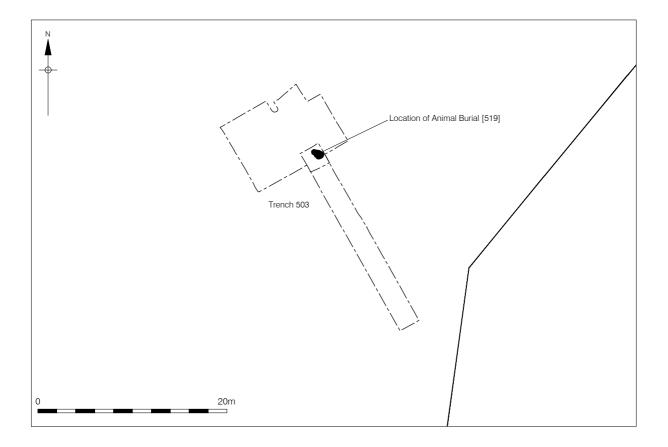
© Pre-Construct Archaeology Ltd 2018 09/04/18 RM Figure 7 Plan of Trenches 501 and 502 1:125 at A3

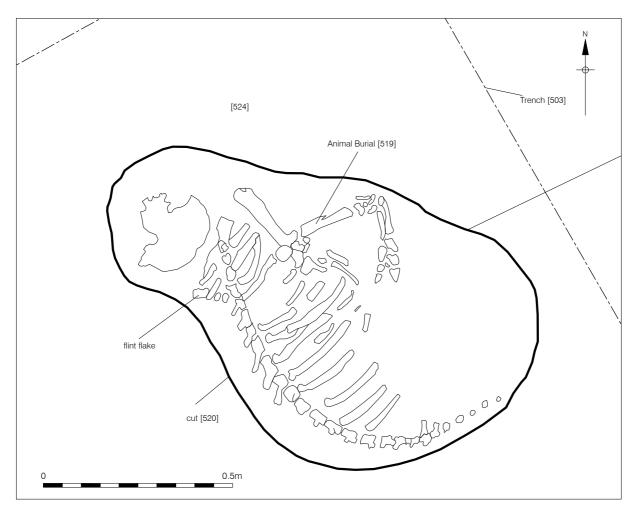


Phase 7- Post Medieval 16th-17th Century
Phase 8- Post Medieval 18th-19th Century

5m

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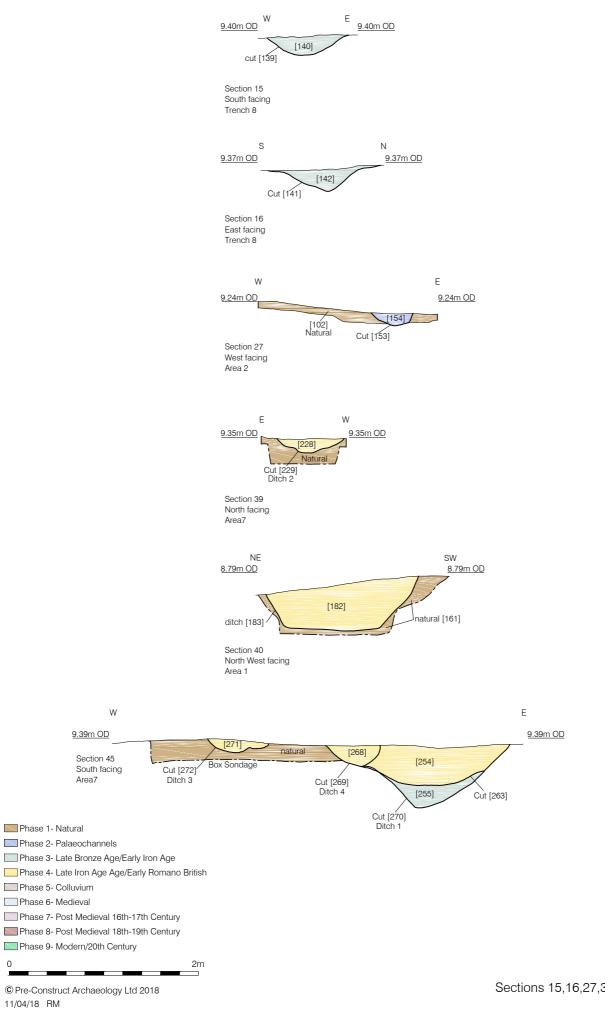


Figure 10 Sections 15,16,27,39,40 and 45 1:40 at A4

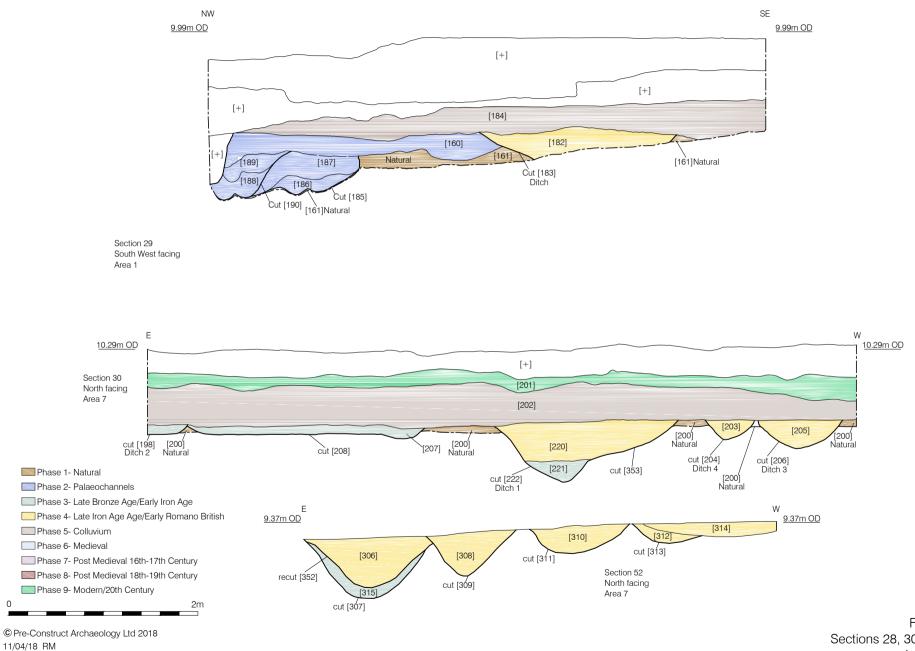


Figure 11 Sections 28, 30 and 52 1:40 at A4



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## PLATES

Plate 1: Area 1: Palaeochannel [185] (left), Ditch [183] (right), view to SE, Scale 1m



Plate 2: Area 2: Paleochannel [153] (palaeochannel [155] to right unexcavated), view to E, Scale 1m





Plate 3: Area 7: (Ditch 1 to the right), view to north-west, Scale 1

Plate 4: Ditch 1 cut by Ditch 4 (top left). Earlier re-cut of Ditch 1 is also shown. View to NNW. Scale 1m.





Plate 5: Area 8: Ditches [139] (left) and [141] (right), view to north, Scale 1m

Plate 6: Trench 503: Animal burial [520], view to south-west, Scale 0.5m





Plate 7: Trench 503: Animal burial (detail), flint under scapula, view to NE, Scale 0.3m

Plate 8: Area 7: Ditch 6, cut [267] view to NE, deposit of medieval pottery, Scale 0.5m





Plate 9: Trench 502, Building 1, General Plan, view to south, Scale 2m

Plate 10: Trench 502, Building 1, NE corner buttress [528], view to south, scale 2m.



A Summary Assessment of an Archaeological Excavation at Imber Court Trading Estate, Orchard Lane, East Molesey, Surrey KTB 0BY © Pre-Construct Archaeology Limited, June 2018

#### 8 PHASE DISCUSSION

#### 8.1 Phase 1a: Sand and gravel

8.1.1 The underlying sand and gravel river terrace deposits were only revealed during the excavation of Test Pit 1 where they were recorded at 7.18m OD, c.3.36m below ground level. This illustrated the way in which the site had been formed on the east bank of the River Ember on a series of gently eroded gravel terraces sloping in terraces towards the course of the river 224m to the west.

#### 8.2 Phase 1b: Clayey-sand brick earth

- 8.2.1 As would be anticipated, a small variation occurred across the site with regards to the drift geology. However, it remained fairly consistent appearing as a sandy-clay brickearth with sandier patches, layers and lenses as recorded across the site. At lower depths of a metre or more the clay quotient increased as did the incidence of sand and gravel inclusions. Some bioturbation, animal burrowing and several possible tree throws were identified.
- 8.2.2 The surface of the drift geology sloped downwards from east to west and from south to north, generally towards the river at the west. A fall of around one metre was recorded from the eastern edge of the site across to the western edge 120m away. The slope was gentle and undulating.
- 8.2.3 The first phase of the evaluation revealed brownish mid-orange silty sand deposits at a height between 9.24m OD in Trench 1 at the north of the site and at 9.54m OD in Trench 6 at the south of the site. Areas 1, 2, 7 and 8 were opened up over phase two evaluation trenches. The largest area was 7, adjacent to the mill leat. Levels here were recorded at 9.94m OD in easternmost Trench 8 and at 8.86m OD at its lowest on the western edge of Area 7. In phase 3 of the excavations in the south of the site, the sand was recorded at 10.00m OD in Trench 503 and 9.18m OD in Trench 501.
- 8.2.4 A differential in the survival level of the natural occurred; it had been heavily truncated in some places due to prior development of the land whilst in other places survivals of the original level existed.

#### 8.3 Phase 2: Palaeochannels

8.3.1 In several trenches the traces of palaeochannels, irregular in profile and sinuous in plan, were recorded meandering across the original ground surface. They followed the natural fall of the ground to both the west and north. They were narrower at their eastern ends becoming gradually wider at the western ends as they worked downhill. Channels were recorded in Trench 1, Area 1, Area 2 and 502.

8.3.2 In nearly all cases fragmentary burnt flint was recovered from their fills suggesting that the channels had remained open during the time of human habitation. The presence of worked flint confirmed activities taking place in the vicinity which was likely to have been hunting, fishing and wildfowling within a semi-marsh or wetland environment, probably within a landscape braided with smaller streams and tributaries of the River Ember to the west.

#### 8.4 Phase 3: Late Bronze Age / Early Iron Age

- 8.4.1 The study area was dominated by Ditch 1, a curvilinear enclosure ditch running approximately NNW-SSE parallel to the river valley, curving gently towards the north-east at the north of the site. The ditch describes a gentle arc and may be the western boundary of an enclosure located to the east, upslope on higher ground. Seven slots or interventions were made into the ditch to fully understand its sequence. It appears that the original ditch was, on average, c.1.40m wide and c.0.70m deep, whose basal fill [221] reflected the erosion of the sides and the silting up of the ditch over time. Pottery dating to the Late Bronze Age to Early Iron Age was recovered from this fill. It was heavily re-cut during the Late Iron Age/Early Romano British period, so any secondary and tertiary fills were lost during this cleaning or re-cutting episode.
- 8.4.2 Ditch 2 ran parallel and east of Ditch 1 at a fairly constant distance of 3.5m. It also followed the same plan and turned gently towards the north-east at its northern extremity as Ditch 1. This may represent a further delineation of the same boundary but may have equally been designed to create a droveway between the two ditches for livestock rather than being part of an enclosure.
- 8.4.3 One of the characteristic developments of the Late Bronze Age/ early Iron Age in this area is the proliferation of field systems along the Thames valley and in the valleys of its major tributary streams (Yates 2001, 56). In later prehistory, field systems and settlements start to proliferate east of the River Mole (Cotton 2004, 32). The appearance of enclosures, land divisions and drove-ways suggest changes in the pattern of land tenure that hint in turn at wider social change (Cotton 2004, 27). Enclosed and unenclosed Middle Bronze Age settlements seem to have been single-generation occupancies embedded within field systems but by the Late Bronze Age there is a demonstrable increase in settlement longevity and complexity. However, by the early Iron Age the Thames Valley undergoes a phase of desertion and depopulation (Thomas 1999 quoted in Cotton 2004, 30).
- 8.4.4 A similar enclosure was discovered through excavations at Arran Way, Esher located1.56km south-west of the study area, where ditches dating to the Middle to Late Bronze

Age were uncovered. Similarly, there was a background of Mesolithic and Neolithic struck flint. The site was dominated by one main Middle Bronze Age ditch oriented NW-SE measuring 2.4m wide and 0.75m deep - so it was slightly wider than Ditch1 found at Imber Court but of a similar depth. In the next phase, during the Late Bronze Age, a series of closely spaced, parallel ditches on the same alignment (but slightly offset) were cut over the top (Randall and Poulton 2014, 5). The features were closely dated due to a higher quantity of pottery and domestic refuse in their fills. The site at Esher was located on a slightly higher ground (above 12m OD) and the multiple, parallel ditches were interpreted as field boundaries with a series of re-cuts that represented a second phase of activity (Randall and Poulton 2014, 16).

- 8.4.5 Boundary ditches are the physical remnant of the re-organisation of the landscape whose appearance introduced a new concept, that of land tenure. Field boundaries make claim of individual communities and settlements to areas of land. The Middle Bronze Age appears to show a marked change to a landscape principally concerned with agricultural production (Barrett *et al.* 1999, 222). Social geography was mapped onto the landscape in terms of distribution, role and function of a range of structures (Barrett *et al.* 1999, 225).
- 8.4.6 The re-cutting of the ditch in the Late Iron Age/ Early Romano-British period appears to represent a re-definition and re-use of the enclosure due to the length of time between its original silting and re-cutting. Some of the fills of the re-cuts also contain residual Late Bronze Age/Early Iron Age pottery. Furthermore, the re-cut does not deviate from the ditch's original course and the cut is located centrally to its original course on the ground. This suggests that the original enclosure was being re-used during the Late Iron Age/ Early Romano-British period in its original form, even though Middle Iron Age activity appears to be absent. Later Ditches 3, 4 and 5 seem to be on a slightly different alignment and Ditch 4 cuts over the top of both the original Ditch 1 and its subsequent re-cut/clean.
- 8.4.7 The function of the enclosure is unclear as the interior was not uncovered nor 'internal' structures identified. However, its location close to the river suggests a livestock enclosure with proximity to the river suggesting access for the watering of animals. A survey of Late Bronze Age sites in Surrey by Needham (1987, 134) concluded that many of the Bronze Age sites surveyed lie very close to the rivers; those being the Wey, Wandle and the Mole (of which the Ember is an artery). All are tributaries that feed into the River Thames to the north. The period is further characterised by the effects of climatic factors and soil exhaustion necessitating land clearance and felling of woodland as new field systems were laid out (Needham 2014, 135). Sedimentological studies suggest that, by the Late Bronze Age agriculture had resulted in soil erosion leading to the possible abandonment of some fields. Perhaps this provided the impetus to expand the field systems onto new land (Barrett *et al.* 1999, 224). However, at Imber Court domestic refuse was at a minimum with very few finds of animal bone and rare flecks of charcoal in the fills. It appears that the

enclosure was located some way from settlement activity.

8.4.8 In Area 8 both ditches [139] and [141] possessed the curvilinear plan and rounded 'U' shaped profile characteristic of prehistoric cut ditches. The 'Y' junction formed by the meeting of the two ditches may be the corner of an enclosure or other feature. Late Bronze Age/early Iron Age pottery was recovered from the basal fill of one of the ditches.

#### 8.4.9 Phase 4: Late Iron Age / Early Romano-British

Area 1

- 8.4.10 Only 9 sherds of Romano-British pottery were recovered from the upper fills of some of the ditches; the subsoils in Area 1 and one of the post-medieval planting beds. Due to the small size of the assemblage and their condition (rolled and/or abraded) it was concluded that a degree of re-deposition had taken place (see Appendix 4). Several sherds may also be intrusive. The lack of Romano-British finds from secure contexts suggests we should view the assemblage with caution; sherds could have been brought in with soils and intrusive pottery may have entered the tops of features through the plough or later interventions.
- 8.4.11 The fill of in ditch [183] produced pottery dating to the Romano-British period as well as burnt and struck flint. It appears to belong to a re-organisation of the landscape, possibly as a series of 'formal' field boundaries which would have been in stark contrast to the preceding sub-oval enclosure on the edge of a wetland environment. The ditch was oriented NW-SE, 1.75m at its widest and 0.69m deep making it a substantial ditch which cut a palaeochannel immediately to its north.

Area 7

- 8.4.12 Ditches 3, 4 and 5 ran NNW-SSE, almost touching one another, and were located along the western edge of Ditch 1. However, as Ditch 1 curved away to the north-east these ditches appeared to continue on the NNW-SSE alignment even though their northern extremities could not be traced properly due to poor visibility on the ground. However, the ditches are straighter and less curvilinear than Ditch 1. Although they appear to be broadly contemporaneous their function is uncertain as they are too close together to work in concert with one another. They may represent the annual re-definition of a boundary in a landscape that is becoming more formalised and one in which rigid, defined boundaries are becoming increasingly important. Ditches 2, 3, 4 and 5 have been placed in this phase due to their relationships to the preceding ditches and ditch cuts. It is only Ditch 4, which cuts the top fills of Ditch 1, that produced sherds of Romano-British pottery.
- 8.4.13 As noted above, Ditches 3, 4 and 5 are cut on or close to the original boundary Ditch 1 but all are straighter (less curvilinear) and maintain the NNW-SSE orientation at the north of

the site whilst Ditch 1 curves away to the north-east. A similar, subtle re-organisation of the landscape was seen at Perry Oaks, 12km to the north-west and located on the east bank of the River Colne, another tributary of the Thames. The site had begun in the Neolithic and seen the layout of field boundaries in the Bronze Age. The early Romano-British period saw a re-alignment of new field systems which cut across the earlier prehistoric land divisions. It represented the first recognisable re-orientation of access routes and enclosures for some one-and-a-half millennia (Barrett *et al.* 1999, 227). The land divisions became more formalised, straighter and created a new 'ladder' settlement of land organisation in contrast to its curvilinear predecessors.

8.4.14 Following on from the Roman invasion of AD 43, life in the countryside probably continued much as before, suggesting that the subtle re-arrangements of field boundaries at Imber Court may have been in response to the new administrative system and the introduction of a new framework of towns and roads. However, there is little sign that life for the native population outside the towns was much altered (Bird 1987, 171).

Trench 503

8.4.15 Animal burial [519] in pit [520] had been laid, in an articulated state, upon a worked flint recovered from under its left scapula. Its articulation may be an indicator that its burial may have been one other than pragmatic - it may have been diseased - but it is more likely the burial had a ritual function. Due to its size, with relation to measurements of Iron Age pigs of the period, it may be a wild animal rather than a domesticated pig. The skeleton may represent a large boar (see Appendix 7).

#### 8.4.16 Phase 5: Colluvium (Post Romano-British to Early Medieval?)

8.4.17 The colluvium which sealed the foregoing features contained flint from different periods in quite high quantities. It presented a multi-period assemblage broadly dating from the Mesolithic to Early Neolithic periods. The presence of thick, crudely struck flakes is indicative of flint-working from the Late Neolithic to early Bronze Age. Most of the material was slightly chipped, suggesting the flint had moved some distance from its original place of discard. Its diversity suggests relatively intense occupation along the banks of the river illustrating the attractiveness of this location throughout time (see Appendix 6). The material appears to have derived from possible settlement activities upslope to the east. The thickness of the colluviums may have been exacerbated by ploughing following the formalisation of the field systems in the Romano-British period as posited above.

#### 8.4.18 Phase 6: Medieval (12th-13th Centuries)

8.4.19 The Domesday Survey of 1086 records the manors of Weston and Thames Ditton in the vicinity of the study site. The archives suggest the possibility that a pre-Conquest original

mansion house may have been located in or nearby the study area and subsequently demolished. Archives recording the owners and tenants of Ember Court reach back until 1086 although it is not clear from the records when the mansion house recorded in later sources was built. Since the late post-medieval mansion lay partly in the southern portion of the study site, it was deemed likely that any pre-conquest original buildings would have been sited adjacent or nearby (Roberts 2015, 10).

Area 7

- 8.4.20 Unfortunately, the reach of the excavation into the southern area was prohibited by the service main running along the southern LOE. Trench 502 uncovered only the north wall of the north wing of Ember Court whose brickwork was dated to the 16th-17th centuries. No sign of any earlier buildings or internal structures were noted.
- 8.4.21 Ditch 6 at the north of the site was seen to be running NNW-SSE for about 12m and parallel to Ditches 3, 4 and 5 to the east (and south). It is conceivable that these ditches present an ensemble that would create a straight droveway or track between co-axial field systems but no evidence for such activity was detected. This would also mean that finds from all fills would have to be residual. In the event, Ditch 6 contained a large cache of pottery dating to the late 12th century. It had been cut by later post-medieval planting pits.

#### 8.4.22 Phase 7: Post-medieval (16th-17th Centuries)

#### Trench 3, Area 7 & Trench 502

- 8.4.23 The manor of Ember Court first appears on the Senex map of 1729 and is then depicted as having been adorned with a 'formal' garden on Rocque's Map of 1768 (which depicts an avenue of trees to the east and south). The Ordnance Survey map of 1811 shows that Ember Court had expanded to comprise several buildings and gardens including a large, rectangular kitchen garden in the central part of the study site (Roberts 2015, 12).
- 8.4.24 However, the layout of buildings is not clearly depicted with any accuracy until the Tithe Map of 1843 where the north wing can be seen projecting into the study area and a series of outbuildings added to the north. This is further refined on the Estate Plan of 1864 which also shows additions being made to the south wing endowed with a large bay window (Figure 12). The map regression exercise carried out for the Desk Based Assessment suggests that the site of the house as depicted had been the likely location of Ember House mansion from the Tudor period until its demolition in 1919. The whereabouts of the original medieval mansion, however, remains unknown (Roberts 2015: 14).
- 8.4.25 The first evidence for formal gardens was revealed in trial Trench 3 in the first phase of excavation on the site. Regular rows of planting beds were revealed oriented east-west laid out either side of a north-south drainage ditch. Fragments of pottery and CBM dated

them to the post-medieval period and their fills displayed inclusions of animal bone added for fertiliser. A similar arrangement existed at Arran Way, Esher located 1.5km to the southeast, where over 30 closely spaced planting beds were recorded. All were approximately 8m in length but all uniformly shallow – only 100mm or so - and horticultural in origin. Dating material at Esher was sparse but a 17th-century bronze buckle, found through metal detecting was considered indicative of their date (Randall & Poulton 2014, 8). The features bear a marked similarity to the rows of uniform planting beds at Imber Court. Planting beds allowing weeding from the paths in-between and raised beds were known from the 15th century. Their lengths were often determined by the space available (Jacques 1999, 32).

- 8.4.26 The gardens to the north appear to become increasingly formalised and decorative on the 1867 Ordnance Survey Map with rows of trees (or orchards) and with the addition of ornamental flower beds divided by walkways. This may hint at a date for the gardens; the beds can be seen to be divided into quarters of '*compartiments*.' Examination of the components of Tudor gardens confirms their place within European tradition. From the late 15th century Italian architects became increasingly concerned with the organisation of the garden area. '*Compartimenti*' functioned as autonomous design units, usually in groups of four to eight. '*Compartiment*' and the verb '*compartition*' were used by the learned in 17th-century England for the art of laying out (Jacques 1999, 32-33). However, the gardens here at Imber Court are on a much smaller scale although the principle is the same. The country gentry undoubtedly shared in the cultural influences and aspirations of the period but their gardens were shaped by much more by their engagement in farming, land management and country pursuits (Roberts 2015, 89).
- 8.4.27 It is not possible to trace the evolution of the garden via the maps which do not record the requisite detail to allow an interpretation of wealth or status to be constructed. It was considered that the richer and the more important the owner, the larger and more sophisticated the garden. Men of lesser status tended to have smaller, less complex gardens. From the middle of the 16th century to the beginning of the 18th century, gardens were mainly formal (Taylor 1983, 41). By the late 17th century the arrangements of gardens was changing under the influence of new ideas from abroad and especially France. By mid 18th century, fashion changed once more to open parklands (Taylor 1983, 48).
- 8.4.28 During excavation only the regimented planting beds were recorded but there was no sign of the elaborate formal gardens depicted on the 1867 map. It is likely that these beds comprised the large rectangular kitchen garden north of the house. During the time since the formal gardens depicted on the 1867 Ordnance Survey map to the garden layout on the 1913 Ordnance Survey map, the garden had become less regimented and open, possibly reflecting a move to the fashion of the afore-mentioned 'parklands.'

8.4.29 Trench 502 revealed the north wall of the north wing of Ember Court with the returning walls running southwards towards the south LOE. Upon excavation the structure was broken down into two broad phases; the foundations of the walls comprising bricks dating to between the 16th-17th centuries, whilst the additions of radially-oriented buttresses dated to the 18th-19th centuries. The first phase of building showed several repairs and strengthening of the walls on the corner angles had already taken place. This may have been due to subsidence or may have been introduced to facilitate extra building if an additional storey had been added to the house.

#### 8.4.30 Phase 8: Post-medieval (18th-19th Centuries)

- 8.4.31 In this phase the regimented planting beds uncovered in area 7 had been sealed by an organic-rich garden soil which was interpreted as a plough soil resulting from a change in land use. The change of land use may reflect a change in the fortunes of the manor. Material recovered from this layer fell mainly into the 18th and 19th centuries, including a higher incidence of animal bone than found elsewhere on site. The animal bones came from 'notably large individuals' clearly from 'improved' stock suggestive of 18th-century husbandry techniques (see Appendix 7).
- 8.4.32 The north wing of Ember Court also saw additions with a few repairs and the addition of two buttresses on both the north-west and north-east corner angles. The post-medieval brick fell into the 1700-1900 date range for its fabrication. It is unclear as to whether the enlargement of the foundations was due to subsidence or to strengthen the outer, supporting walls so that a storey could be added. An 18th-century architects drawing survives commissioned by the then owner Arthur Ounslow (1720-1768) which shows both a ground plan and elevation of three storeys but it is unknown as to whether this structure was ever built (Roberts 2015, 11).

#### 8.4.33 Phase 9: Modern (20th Century)

- 8.4.34 By the time of the Ordnance Survey Map of 1913, Ember Court appeared very much the same in configuration but with the addition of a glasshouse to the south-west corner. A record of the owners and tenants records that by 1900 the house was unoccupied and that by 1919 it had been demolished. At this time the land was taken over by the Metropolitan Police Mounted Branch. By the Ordnance Survey map of 1932 the mansion at the south of the site along with the associated outbuildings had been demolished and replaced with the Ember Court Concrete and Engineering Works. By 1937 the works had expanded to encompass the majority of the study site area (Roberts 2015, 13).
- 8.4.35 Further buildings were added by the time of the 1957 Ordnance Survey map with the

concrete works labelled separately as the Metropolitan Concrete Works in the north and Trianco Engineering works in the south. By 1973-4 the Ordnance Survey map shows that some of the old buildings had been demolished and new buildings added that formed the basis for the Imber Court Trading Estate. It is between 1957 and 1973 that the name Ember became corrupted to 'Imber.' No further changes were made within the study area until the demolition of the site in 2017 for the present residential development (Roberts 2015, 13).

8.4.36 Evidence for both the concrete and engineering works were uncovered in the first phase of the evaluation where a small scale 'rail' track was recorded in Trench 1 and concrete pads were found in Trench 2 and Area 2, whilst a dump of concrete posts were uncovered in Trench 4.

### 9 RESEARCH QUESTIONS

#### 9.1 Original Research Questions

The following research questions were put forth in the Written Schemes of Investigation Mayo 2016: 2017) and these are addressed below:

#### To determine the natural topography and geology of the site, and the height at which it survives.

- 9.1.1 The site is situated on the east bank of a mill leat fed by the River Ember to the west which lies 216m to the east and it appears that it was located on the edge of the old meander corridor of the river. However, the site did not show any signs of seasonal inundation suggesting it would have been situated on the valley side high enough to avoid flooding. No alluvial deposits were detected during excavation. The site is located east of the rivers Mole and Ember, both tributaries of the River Thames which is situated to the north. It is likely that the site was originally just above the flood plain that may have been originally wetlands or a braided river system in the prehistoric period as shown by the series of palaeochannels revealed on the site.
- 9.1.2 The first phase of the evaluation revealed brownish mid-orange silty sand deposits at a height between 9.24m OD in Trench 1 at the north of the site and at 9.54m OD in Trench 6 at the south of the site. This was overlain across the site by a layer of made ground up to 1.2m thick capped by reinforced concrete slabs c.0.2m thick. Areas 1, 2, 7 and 8 were opened up over phase two evaluation trenches. Levels were recorded at 9.94m OD in the easternmost Area 8 and at 8.86m OD at its lowest on the western edge of Area 7. In phase 3 of the excavations in the south of the site, its highest it was recorded at 10.00m OD in Trench 503 and 9.18 in trench 501. The Roman and earlier phases were sealed by a deposit of colluvium which covered the site.
- 9.1.3 The natural topography of the site appears to have been truncated during the construction of the Ember Cement & Engineering Works in the early 20th century. Its subsequent demolition, levelling and construction work required to create the Imber Court Trading Estate in the later 20th century has also played a part in partially truncating and damaging the site.

#### To establish the presence or absence of prehistoric activity.

9.1.4 In the final phase of excavation a total of three palaeochannels were discovered, one in the northern part of Area 1 and two in Area 2. Nearly all channel fills provided finds of burnt and struck flint which suggests hunting activity close to a series of watercourses on the sides of the valley. Burnt flint in large quantities is usually indicative of the little understood 'burnt mound' monuments usually associated with the Bronze Age, although here it was only found in very small quantities. The struck flint may represent either tools brought to the site or fabricated in the vicinity - although no evidence for dense spreads of débitage or *in situ* flint knapping was

found. It has not been possible to date this flint-work accurately but may it belong to the Neolithic to early Bronze Age period where semi-nomadic peoples may have visited the area seasonally.

9.1.5 The large enclosure Ditch 1 and a narrower Ditch 2 belong to the Late Bronze Age/Early Iron Age period which shows similarities to a site at Esher 1.56km to the south-west on the east bank of the River Mole. The enclosure at Imber Court was a curvilinear enclosure ditch which was subsequently overcut by straighter ditches roughly on the same alignment in the Late Iron Age/early Romano-British period. These may be the beginning of a co-axial field system arrangement. No evidence for settlement activity was recorded.

#### To establish the presence or absence of Roman activity

9.1.6 The possibility of Roman activity within the study area is based upon 9 pottery sherds, a very small assemblage. They do suggest light activity in the area but most are likely to be residual or in secondary contexts. Furthermore, they bear many similarities to Late Iron Age wares so, for the purposes of this report, they have been studied together.

#### To establish the presence or absence of medieval activity.

- 9.1.7 In the original Trench 1 a row of stakeholes; [11], [13], [15], [17], [19], [21] & [23] were found to be cutting the palaeochannel fills. A medieval (or later) date is suggested for these remains, which may have been a possible fish or eel trap. Although no finds were made from their fills the presence of known medieval activity in the area presents a better case than a Roman date for the features. Taking into account the nearby leat cut from the River Ember, the mills known to have lined the leat and the possible pre-Conquest origins for Ember Court, the picture emerges of a dynamic medieval landscape, where water management and resource exploitation were well established. However, it must be stipulated that no stakes were found *in situ* nor dating material recovered.
- 9.1.8 Ditch 6 at the north of the site contained a substantial amount of unabraded pottery. The ditch was oriented NNW-SSE, parallel to Ditches 3-5 which were located further to the south. The ensemble possibly could have formed a droveway or track between fields but no evidence was found to support this theory.

#### To establish the presence or absence of post-medieval activity at the site.

9.1.9 In the original Trench 3 the formal planting beds and a drainage ditch were uncovered and in Area 3 numerous features interpreted as garden features were revealed which accorded well with the layout of the gardens associated with Ember Court as seen on the 1867 Ordnance Survey Map. By this stage, the map seems to show the development of a symmetrical garden,

tree planting and glasshouses situated to the north of the site in line with what would have been expected to adorn a large manor house whose roots were in the Tudor (and possibly earlier) period. In turn, this more formal garden appears to have been abandoned in favour of a more general purpose garden illustrated by the layer of soil [54] that later sealed the features.

- 9.1.10 In Trench 502 the north wall of the north wing of Ember Court was uncovered whose foundation courses were constructed of brick dating to the 16th-17th centuries. Its location matched the map regression exercise perfectly and gave a tantalising glimpse of the (possible) Tudor manor. No internal features south of the wall were uncovered due to the presence of a service main which prohibited further investigation.
- 9.1.11 In the 18th-19th centuries the north wall of the north wing was further strengthened through the additions of brick-built buttresses on the corner angles, possibly due to subsidence or for the addition of further storeys.

#### To establish the extent of all past post-depositional impacts on the archaeological resource.

9.1.9 It is apparent from the work of the evaluation that the post-depositional impacts have had a severe but localised effect on the preservation of the archaeology. As has already been outlined above with regards to the survival of the natural topography, 20th-century construction and demolition has locally truncated the site down to 1.0-1.4m from the present ground level surface with a mixture of concrete floors and service trenches. Impacts were even deeper around the steel stanchions (or pillars) which no doubt are formed on top of concrete piles - although none of the trenches were close enough to examine their depth or below-ground impact.

#### 9.2 Revised Research Questions

Questions arising out of the excavation are as follows:

#### 9.2.1 What is the earliest activity on the site and what form did it take?

The earliest activity at the study site was represented by the burnt and struck flint captured in the fills of the various palaeochannels or rivulets recorded in Areas 1 and 2. Unfortunately, no further dating material was recovered and the flint-work is not closely dateable. During excavation flint débitage was recovered from a number of feature fills and colluvial layers that may have originated from the high ground to the east. The assemblage spanned a long period from the Mesolithic through to the late Neolithic period. A similar 'background' of such flintwork was found at another Bronze Age enclosure site at Arran way, Esher just 1.54km to the south-east, also located on the east bank of the River Mole (Randall and Poulton 2014, 4).

At Perry Oaks, on the east bank of the River Colne, c.12km to the north-west, an area of Mesolithic activity (c.6000 BC) close to a stream channel (including a series of pits) revealed a

spread of burnt flint. The pits occupied a 'classic' hunter-gatherer location, next to a stream. Mesolithic human activity was confined to the margins of the floodplain and gravel terrace. These activities were thus located on the boundary between different geological and vegetational zones. The excavation report suggested that the memory of the use of the Colne floodplain many centuries before will have remained and so the boundary zone marked the transition from the ancestral past of the floodplain to the descendants' future on the gravel terrace (Barrett *et al.* 2001, 196). Although no pits dating to this period were found at Imber Court the later enclosure appears to be located on the edge of the same riparian zone. In an overview of finds from the period in Surrey, Cotton (2004, 23) concluded that, topographically, lake sides, valley floors and hill slopes were all favoured localities.

Taking comparisons from the site at Perry Oaks again, the Neolithic period is characterised as a pattern of movement and activity across the landscape of the river terraces resulting in the deposition of pottery and struck flint in tree throws and material subsequently incorporated into later deposits. It was believed that Neolithic activity occurred along the transition line between floodplain and terrace (Barrett *et al.* 2001, 196). It would appear that activity during Late Neolithic/early Bronze Age at Imber Court was unfolding in a similar *milieu* as evidenced by the quantity of flint recovered. Later Neolithic activity in the area is still principally defined on lithic scatters (Cotton 2004, 25). Apart from concentrations of activity around monument building, the Neolithic period still seems to be characterised by semi-nomadic seasonal occupation and transhumance. Much of our knowledge of the period is based upon ephemeral archaeological evidence of occupation and land usage that typifies these periods (Randall and Poulton 2014, 15).

#### It is recommended that:

- Other evidence and reports of similar Mesolithic and Neolithic finds deposition in natural features, such as at Hengrove Farm, Ashford Prison, Ashford Hospital and St Michael's Road Ashford, is considered and reviewed for a better understanding of deposition as uncovered at the Imber Court site.
- 2. The natural formation processes involved in the development of the palaeochannel features will be further studied and results of the analysis of the environmental samples be used to reconstruct the environmental conditions within which this activity took place.

#### 9.2.2 What form did the first 'formalisation' of the landscape take place?

It is believed that Ditch 1 forms the western arc of a sub-oval enclosure with possible settlement activity further to the east outside of the study area. The pottery suggests a Late Bronze Age/ Early Iron Age date. At Arran way, Esher the main enclosure ditch was dated to the Middle Bronze Age with a Late Bronze Age re-definition of boundary alignments. However, finds and evidence for settlement activity was much richer at Esher and included a hoard of metalworker's ingots characteristic of the Late Bronze Age (Randall and Poulton 2014, 16). At the Perry Oaks site, the developed field system, defined by ditches, were maintained in the Iron Age by the introduction of hedges. Small Middle and Late Bronze Age settlements are closely associated with the creation of field systems but the Late Bronze Age and Early Iron Age sees an apparent reduction in the quantity of settlement evidence in this area (Barrett *et al.* 2001, 223-4). The major difference in the Middle Bronze Age is that the field systems for the first time formalise and makes visible archaeologically the ordering of the landscape (Barrett 2001, 222). Around the tributaries of the Thames, the foci for settlement tended to be on the floodplain where a wider resource base could be exploited (Poulton 2004, 52).

At the Ashford Hospital site, ditches forming a co-axial field system were excavated producing Deverel-Rimbury ware, dating them to the Middle Bronze Age. Unlike at Imber Court, the ditch system created a series of land parcels on a co-axial system, complete with features suggestive of livestock control and management, such as waterholes and droveways (Cowie 2008, 78). At Perry Oaks the original field ditches may have had Middle Bronze Age origins but were developed in the Late Bronze Age (Barrett *et al.* 2001, 223). It was concluded that the people of the Late Bronze Age were coming to terms with a landscape created in the Middle Bronze Age and with the consequences of the way that landscape was exploited. Thus the Late Bronze Age agricultural and settlement dynamics set up the social and economic conditions which were carried on into the 1st millennium BC, and so acted as a springboard for the Iron Age (Barrett *et al.* 2001, 224). In a summary of Iron Age sites in Surrey Poulton (2004, 60) concluded that semi-nomadic communities continued to be dominant over much of Surrey down to the Late Bronze Age, or even the Middle Iron Age.

#### It is recommended that:

 More large-scale surveys of potential Bronze Age field systems are integrated with the information gleaned from the small, 'key-hole' excavations of rescue archaeology. Can models of say, the extensive Bronze Age field systems of Dartmoor or Swaledale, North Yorkshire be transposed onto settlements of the Thames valley?

# 9.2.3 What was the nature of the late Bronze Age settlement's economy? Do the enclosures have parallels elsewhere in the region?

A number of factors have been posited for the appearance and increase of enclosure during the Middle to Late Bronze Age period such as the environmental factors discussed above. At Perry Oaks the Middle Bronze age appears to show a very marked change to a landscape principally concerned with agricultural production. Environmental evidence suggested a generally open grassland which may have maintained a mixed agricultural regime – dung beetles indicate the presence of grazing animals whilst cereal pollen was also present. Evidence for textile production in the form of spindle whorls and loom weights were recovered (Barrett *et al.* 2001, 222-3). At Ashford Hospital co-axial field systems with watering holes suggested livestock breeding and management (Cowie 2008, 78). At Esher metalworking was

suggested by the hoard of copper ingots whilst fragments of quern-stones and loom weights hinted at grain and textile production (Randall and Poulton 2014, 6).

At Imber Court the burial of the domestic boar may suggest that hunting was still playing a role as part of the site's economy. However, the lack of other faunal remains from site does not allow us to infer what was being bred or eaten. Further, even the few cases of wheat seeds being present in a number of scattered features is inconsequential in terms of quality and quantity and may only represent wind-blown material (Appendix 8).

It is recommended that:

1. Further research is conducted on similar possible enclosures in the region.

# 9.2.5 What is the nature of the Late Iron Age / early Romano-British influence on the site and how does it manifest itself?

The Late Iron Age/ Early Romano-British period on site does not overtly change the general layout of the features associated with the preceding Bronze Age. Ditches 3, 4 and 5 are all cut along the same orientation as the original Ditch 1 enclosure but are straighter and less curvilinear. The NW-SE oriented ditch in Area 1 also seems to be part of this phase of reorganisation. They may represent a re-alignment of old boundaries in favour of a more formalised landscape. This was later developed in the medieval period, possibly illustrated by Ditch 6 at the north of Area 7 which runs parallel to these ditches and retains the same orientation.

It is clear that the bulk of Roman Britain's population lived in the countryside but our evidence for their way of life is unfortunately mainly lacking. However, it is now generally accepted that their numbers increased considerably in the Roman period (Bird 1987, 171-2). Noting the apparently minor changes to the ditches (subject to a better understanding of the levels and impact of later truncation) and the addition of principally a new ceramic culture, there appears to be significant continuity of the agricultural landscape into the Roman period (Appendix 7). Romano-British activity at Perry Oaks also saw that the orientation of the Iron Age buildings and enclosures was maintained (Barrett *et al.* 2001, 227). Whilst there is evidence for a number of small-scale activities taking place within the settlements it is believed that the primary purpose of the new field systems was to allow more intensive exploitation of cattle, although arable farming must also have been taking place (Yates 2001, 65-6). The transition from the Iron Age to the Roman period is (still) not well understood (Bird 2004, 69; Poulton 2004, 60).

It is recommended that:

1. Comparisons with contemporary Romano-British field structures and layouts within the larger local area will be made.

# 9.2.6 What evidence do we have for the first manor house on the site? What date does the first brick-built structure appear? Is there any evidence for the evolution of the house and its eventual demise?

The first time the plan of Ember Court is depicted is on the Thames & Ditton Tithe Map of 1843 where the main body of the house (rectangle in plan) is oriented WNW-SSE with the south and north wings spurring off the east end forming a 'T' plan. By the Ember Court Estate Plan of 1864 the south wing looks as though it has been modified to create a bay window whilst the north wing projects into the study area. The plan of the house is depicted slightly differently on each successive map but this variation may be due to the quality of the cartography. Trench 502 exposed the north wall of the north wing although no internal features were uncovered as a service run on the southern limit of excavation prohibited further investigations. However, an architect's drawing exists that shows a proposal for works showing a ground plan and elevations of two storeys, commissioned by the then owner Arthur Ounslow (1720-1768) (Roberts 2015, 11). However, the plan depicting a facade flanked by two towers does not conform to ground plans captured during the map regression exercise. It appears that the planned additions never took place.

The foundation course of the bricks exposed in Trench 502 consisted of the north-wall on a slight NNW-SSE orientation with the west and east walls running south to the southern limit of excavation. Analysis of the building materials have dated the brick on the lower courses as having been manufactured between 1450-1700, those being a post-medieval sandy brick bonded with an off-white, cindery mortar. Upon this foundation a number of repairs and the addition of two buttresses had been constructed, utilising a different, later brick whose manufacture dated to sometime between 1700-1900 (Appendix 5). It shows that additional building or repairs were still being affected during this period. The purpose of the buttresses is to either support the building that was being subject to subsidence or to take the weight of further storeys being added as part of the buildings evolution.

The surrounding garden, particularly that area to the north, also shows an evolution in tandem with the developments of the building. It is useful to scrutinise the gardens as historic gardens are a unique type of archaeological site, principally because they continue to evolve (Currie 2005, 2). Gardens change through time and may reflect the social aspirations, artistic aims, changing fashions and wealth and status of the owners (Taylor 1983, 41).

The 1768 Rocque map depicts two rows or avenues of trees running north-west to south-east from the house to the road at the east. A rectangular 'kitchen' garden with glasshouses is depicted on the Thames & Ditton Tithe Map of 1843. No detail for the garden is evident on any of the maps until the Ordnance Survey of 1867 which depicts a 'formal' garden of rows of trees, the rectangular kitchen garden and, to the north-west, what appear to be ornamental flower beds divided by walkways.

The garden area around Ember Court as depicted on the Ordnance Survey of 1913 appears to show a much looser design of open areas and driveways studded with occasional trees. It is possible that the formal garden of '*compartiments*' had been dismantled in favour of the open parklands fashion of the 19th century in the intervening 46 years. A record of the owners and tenants of Ember Court records that by 1900 the house was unoccupied and that by 1919 it had been demolished.

No evidence for the original, pre-Conquest medieval manor was uncovered through the excavations, although the residual medieval pottery found across the site and the cache of 12th-century ceramics in Ditch 6 hint at activity from this period within the study site. The remains of the north wing in Trench 502 had been sealed by a thin layer of demolition rubble but no reason for the buildings eventual decline and destruction was forthcoming. By the Ordnance Survey map of 1932 the Ember Court Concrete and Engineering works occupied the site and only a few scattered outbuildings and the kitchen garden remained, the final reminders as to what was left of Ember Court.

It is recommended that:

1. The plan of the Ember Court gardens defined during the map regression should be graphically compared to the possible garden features recorded during the excavation.

A Summary Assessment of an Archaeological Excavation at Imber Court Trading Estate, Orchard Lane, East Molesey, Surrey KTB 0BY © Pre-Construct Archaeology Limited, June 2018

## 10 CONTENTS OF THE ARCHIVE

#### 10.1 Paper Records

Contexts	504 sheets
Plans	99 sheets
Sections	102 sections
Environmental Sheets	15 sheets

#### 10.2 Finds

Prehistoric Pottery	1 box
Roman Pottery	1 box
Post Roman Pottery	1 box
Ceramic Building Material	2 boxes
Lithics	2 boxes
Clay Tobacco Pipe	1 box
Glass	1 box
Animal Bone	1 box
Small Finds	32 objects

#### 10.3 Samples

Environmental Bulk Samples				

#### 10.4 Photographs

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# 11 IMPORTANCE OF THE RESULTS, FURTHER WORK & PUBLICATION PROPOSAL

### 11.1 Importance of the Results

- 11.1.1 The results of the archaeological excavations are of local and regional significance. The results for the Bronze Age are significant as they add further evidence for an intensification in the setting out of a formalized agricultural landscape with associated settlements. The ditches appear to from a curvilinear enclosure rather than the more formalised co-axial field system that perhaps one would expect. It is unknown as to whether this was a simple stock enclosure or ditched settlement. The enclosure site is only 1.5km away from a similar settlement at Arran Way, located on the east bank of the River Mole to the south-east. However, this latter enclosure displayed evidence for settlement activity such as grain and cereal production unlike at Imber Court.
- 11.1.2 Regionally, the site is significant as it informs on Late Bronze Age / Early Iron Age period of later farming communities south of the Thames. It is a period that sees, in some areas, the emergence of an increasingly organised landscape from the Middle to Late Bronze Ages. This is somewhat disrupted in the early Iron Age where a dichotomy appears between, on the one hand, a continuation of the semi-nomadic lifestyle Poulton (2004, 60) and enclosure to facilitate an increase in cattle farming in the Early Iron Age period (Yates 2001, 65-6).
- 11.1.3 The locating of the remains of Ember Court is of local significance, although the majority of the building lay outside the site boundaries and little could be said apart from the fact that the structure was subject to later rebuilding with the addition of buttresses.

### 11.2 Further Work

General

11.2.1 The site is a valuable addition to the number of riverside enclosures or settlement sites such as Arran Way, Esher, Perry Oaks, Heathrow & Ashford Hospital. Questions still rise as to whether the curvilinear enclosure is a type of monument which predates more formal co-axial field systems of the Bronze Age or, whether it is a 'specialist' site, for example, located close to the river for livestock rearing. Also, the question as to why there are a lack of settlement sites in the Bronze Age/Iron Age transition remains unanswered. Equally, although there is testimony as to a continuity of practices in the early in the countryside in the Romano-British period in the countryside, when does full-scale 'Romanisation' and villa style farming regimes alter the landscape irrevocably?

Prehistoric pottery

11.2.2 No further work is required on the assemblage and no sherds are worthy of illustration.

Roman pottery

11.2.3 No further work is required on the assemblage and no sherds are worthy of illustration.

Post Roman pottery

11.2.4 The pottery provides dating evidence for the contexts from which it was recovered, but of most significance is the medieval assemblage as it represents the first material of this date to be recovered from the study area and provides physical evidence to suggest the manor has earlier origins, or at the very least that there was medieval settlement activity in the immediate vicinity. Any future publication should include a brief summary of the pottery assemblage recovered, focusing in particular on the well-preserved vessels from ditch [267]. A total of 4 illustrations will be required.

**Building material** 

11.2.5 The value of this small building material assemblage from Imber Court lies partly in its ability to date the early post-medieval structures and none of the material is of intrinsic interest. Unworked daub attests to the presence of a timber framed wattle and daub construction in the vicinity. No further work recommended.

Small finds

11.2.6 The metal finds from Imber Court add little to the understanding of the site in earlier periods. Besides the nail fragment, the copper-alloy strap remains undiagnostic, although it may possibly have been used as a staple. The numerous curved pieces of iron strap are almost certainly remains of binding from a large wooden barrel, and if so may have some potential interest if it can be associated with Ember Court or its garden. If so, an estimate of the size of the barrel should be made and included in any further publication. It is unlikely that x-rays will add significant information to the iron binding, although some pieces could be elected for recording and potentially establishing their original width. Following publication all metal finds may be discarded.

Lithics

11.2.7 The struck flint has been comprehensively catalogued for the purpose of this assessment report. The relative richness of the site and the fact that several periods are represented at the site indicates that this location was of some significance throughout the Mesolithic to Bronze Age. Further research may explain the attractiveness of this location.

Clay tobacco pipe

11.2.8 This small, fragmentary assemblage of clay tobacco pipes has no significance at a local level.

The bowl forms present are typical for Surrey and the London area and unfortunately the clay tobacco pipe makers' marks are either uncertain or cannot be linked to an individual. The only potential of the clay tobacco pipes are to provide dating for the deposits that they were recovered from. There are no recommendations for further work on the assemblage and information from this report should be used if the data is required for a publication text.

Glass

11.2.9 The glass assemblage, due to its fragmentary nature, has no significance at a local, national or international level. The glass does have some potential to date the site stratigraphy. There are no recommendations for further work on the assemblage.

Animal bone

11.2.10 The animal bones from the prehistoric (excluding the pig skeleton) and the postmedieval/modern levels are essentially of little interest. Small quantities and relatively poor dating diminish their potential value, the latter clearly detrimental to any comparison of animal usage throughout the occupation period of Imber Court. However, it is recommended that the post-medieval information described in this report (or at least a summarised version) should be included in any future publication concerning this high status household. In contrast, the probable Iron Age pig skeleton is certainly worthy of further work. It was mentioned that it may represent a rather rare find amongst the articulated remains (generally referred to as Associated Bone Groups or ABGs) so far discovered from Iron Age sites in Southern England, the more so if this animal does indeed represent a wild boar. Now of course this perceived rarity and therefore potential value is reliant on accurate identification and dating. In the latter case, if the associated finds and stratigraphy are insufficient, it is recommended that part of this skeleton should be sent off for carbon dating. The identification issue can be resolved by a visit to a reference collection with numerous comparative pig and wild boar skeletons, as for example the Natural History Museum in London.

Environmental samples

11.2.11 Preservation of environmental remains in the selected samples from Imber Court was mixed. The most promising samples in terms of environmental potential are likely to be samples <3> and <12>, taken from the fill of a post-medieval planting bed, and a Late Bronze Age/ Early Iron Age ditch. Both these samples contained an abundance of weed seeds, plant material and fungal schlerotia, additional analysis of which may prove useful in undertaking an environmental reconstruction of the area and could help to shed light on patterns of cultivation during the both of these periods. The remaining seed assemblage from this site did not have the abundance or diversity required to be of diagnostic value, though the charred cereals may be useful in providing an improved chronology for deposits when suitable artefacts are not available, via radiocarbon dating. None of the assessed samples is suitable for insect analysis. A summary of these results should be included in any subsequent site publications. A Summary Assessment of an Archaeological Excavation at Imber Court Trading Estate, Orchard Lane, East Molesey, Surrey KTB 0BY © Pre-Construct Archaeology Limited, June 2018

### 11.3 Publication Proposal

11.3.1 A paper for the regional journal e.g. Surrey Archaeological Collections will be prepared. This paper will be in the order of 20 to 40 pages in length and carry an appropriate number of illustrations (in the order of 10 pages). Its focus will be on the principal archaeological finds of the project consisting of the prehistoric features and finds and their interpretation and regional comparisons. The remains of post-medieval Ember Court and its potentially associated finds will also be discussed.

## 12 ACKNOWLEDGEMENTS

- 12.1 Pre-Construct Archaeology Ltd would like to thank Duncan Hawkins of CgMs Consulting on behalf of Wates Developments Limited and Cala Homes, for commissioned the work. We would also like to thank Nigel Randall of Surrey County Council for his input and monitoring the project.
- 12.2 The author thanks Chris Mayo for his project management and Jon Butler for his postexcavation management and editing of this report, Anna Tonelli and Mark Roughley for the CAD illustrations and Richard Archer for the survey work. Thanks are also due to John Joyce for the logistics, Pat Cavanagh, Kari Bower, Craig Carvey, Flo Laino, Corso Dominici, Gavin Smith, Mauro Puddu, Ben Bazely, Stacey Harris, Tom Brook and Kalliopi Themeli for their onsite fieldwork.
- 12.3 Thanks also to the following specialists: Jon Cotton (prehistoric pottery), Eniko Hudak (Romano-British pottery) Berni Sudds (Post-Roman pottery), Amparo Valcarcel (CBM), Kevin Rielly (animal bone), Ella Egberts (lithics) and Kate Turner (environmental samples).

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### **APPENDIX 1: CONTEXT INDEX**

Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
1	Layer		1	Made ground			0.35	9.67	9.32	9
2	Layer		1	Re-deposited clay			0.13	9.32	9.19	9
3	Structure		1	Steel rail						9
4	Timber		1	Wooden sleepers for rail [3]						9
5	Fill		1	Fill of ditch [6]				9.74	9.74	4
6	Cut		1	SW-NE oriented ditch			0.34	9.94	9.44	4
7	Fill		1	Fill of palaeochannel [8]			0.6	9.8	9.8	2
8	Cut		1	Palaeochannel			0.6	9.84	9.49	2
9	Layer		1	Made ground for steel rails [3]			0.19	9.94	9.86	9
10	Fill		1	Fill of stakehole		0.1	0.07	9.4		6
11	Cut		1	Stakehole		0.1	0.07	9.4	9.34	6
12	Fill		1	Fill of stakehole [13]		0.1	0.07	9.4	9.4	6
13	Cut		1	Stakehole		0.1	0.07	9.4	9.33	6
14	Fill		1	Fill of stakehole [15]		0.11	0.08	9.4	9.4	6
15	Cut		1	Stakehole		0.12	0.06	9.4	9.34	6
16	Fill		1	Fill of stakehole [17]		0.09	0.09	9.4	9.4	6
17	Cut		1	Stakehole		0.09	0.09	9.4	9.31	6
18	Fill		1	Fill of stakehole [19]		0.1	0.1	9.49	9.49	6
19	Cut		1	Fill of stakehole [19]		0.1	0.2	9.49	9.29	6
20	Fill		1	Fill of stakehole 21		0.1	0.1	9.4	9.4	6
21	Cut		1	Stakehole		0.1	0.1	9.4	9.3	6
22	Fill		1	Fill of stakehole [23]		0.1	0.2	9.4	9.4	6
23	Cut		1	Stakehole		0.1	0.2	9.4	9.2	6

Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
24	Fill		1	Fill of palaeochannel [6]			0.25	9.74		2
25	Fill		1	Fill of palaeochannel [6]			0.3	8.99		2
26	Layer		1	Made ground			0.2	10.18		9
27	Fill		3	Fill of planting bed [28]	8.2	2.4		9.62	9.43	7
28	Cut		3	Planting bed	8.2	2.4		9.62	9.54	7
29	Fill		3	Fill of planting bed [30]	3.1	0.4		9.54		7
30	Cut		3	Planting bed	3.1	0.4	0.11	9.54	9.43	7
31	Fill		3	Fill of planting bed [32]	3.1	0.8	0.11	9.54		7
32	Cut		3	Planting bed	3.1	0.8	0.11	9.54	9.43	7
33	Fill		3	Fill of planting bed [34]	2.3	0.6	0.11	9.54		7
34	Cut		3	Planting bed	2.3	0.6	0.11	9.54	9.43	7
35	Layer		3	Layer of plough/garden soil				9.43		8
36	Fill		3	Fill of ditch [37]	2.4	1.5	0.5	9.43		7
37	Cut		3	Irrigation ditch	2.4	1.5	0.5	10.69	9.62	7
38	Layer		3	Drift geology: natural				9.49		1
39	Layer		3	Drift geology: brick earth				9.62		1
40	Masonry		3	Un-mortared brick garden wall						9
41	Layer		6	Made ground	1.8	1	1.1	10.48		9
42	Layer		6	Drift geology: brickearth	1.8	1		10.48		1
43	Fill		2	Palaeochannel			0.69	9.2		2
44	Layer		2	Drift geology: mid orange silty sand			0.29	8.52		1

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
45	Layer		2	Drift geology: clayey sand			0.67	9.8		1
46	Layer		2	Drift geology: mid orange silty sand			0.4	8.53		1
47	Layer		4	Made ground			0.08	10.19	10.14	9
48	Layer		4	Made ground	9.6	1.8	0.18	10.13	10.1	9
49	Layer		4	Ploughsoil	9.6	1.8	0.25	9.94	9.93	8
50	Layer		4	Ploughsoil	9.6	1.8	0.11	9.69		8
51	Layer		4	Plough or garden soil	9.6	1.8	0.06	9.59	9.57	8
52	Layer		4	Drift geology: brick earth	9.6	1.8	0.15	9.54	9.51	1
53	Layer		1	Made ground						9
54	Layer		3	Made ground						9
55	Cut		2	Palaeochannel						2
100	Fill	7		Fill of posthole [101]	0.44	0.4	0.31	8.87	8.87	3
101	Cut	7	7	Posthole	0.44	0.4	0.31	8.87	8.56	3
102	Layer	7	7	Drift geology: mottled yellow-orange silty sand				9.33	8.86	1
103	Cut	7	7	Sub-oval pit	2.2	1.54	0.93	9.03	8.51	3
104	Fill	7	7	Basal fill of pit [103]		1.8	0.79	9.03	8.51	3
105	Cut	7	7	Posthole		0.17	0.2	9.06	8.86	4
106	Fill	7	7	Fill of posthole [105]		0.17	0.2	9.3	9.3	4
107	Cut	7	7	Posthole	0.11	0.16	0.23	9.06	8.83	4
108	Fill	7	7	Fill of stakehole [107]		0.16	0.23	9.3	9.3	4
109	Cut	7	7	Stakehole	0.1	0.06	0.06	9.1	9.04	4

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
110	Fill	7	7	Fill of stakehole [109]	0.1	0.06	0.06	9.1	9.1	4
111	Layer		9	Re-deposited soil and natural	2.5	1.18	0.4	9.89	9.7	9
112	Layer		9	Subsoil or colluvium	2.5	1.8	0.6	9.46	9.3	5
113	Layer		9	Drift geology/natural: orange clayey sand	8	2.5	0.1	9.3	9.1	1
114	Layer		9	Topsoil	5		0.25	10.28	10.25	9
115	Layer		9	Post-medieval/modern make-up layer	5	1.8	0.28	10.05	10.02	9
116	Layer		9	Subsoil	2.5	1.8	0.25	9.88	9.82	9
117	Fill		9	Fill of planting bed [118]	1.8	0.8	0.2	9.69	9.66	7
118	Cut		9	Planting bed	1.8	0.8	0.2	9.69	9.46	7
119	Layer		9	Drift geology/natural: yellow-brown sandy clay	2.5	1.8	0.18	9.79	9.46	1
120	Fill	7	7	Fill of posthole [121]	0.3	0.2	0.06	8.87	8.87	4
121	Cut		7	Posthole	0.3	0.23	0.06	8.87	8.81	4
122	Fill		7	Secondary fill of pit [103]		0.97	0.42	8.87	8.87	3
123	Fill		7	Fill of planting bed/hedge line [124]	1.05	0.88	0.1	9.67	9.67	7
124	Cut		7	Planting pit or hedgeline	1.88	1.05	0.1	9.67	9.43	7
125	Layer		7	Modern made ground			0.2	10.01	9.91	9
126	Layer		7	Subsoil			0.38	9.47	9.44	5
127	Cut		7	Planting bed		0.5	0.25	9.47	9.44	7

Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
128	Fill		7	Fill of planting bed [127]		0.5	0.23	9.69	9.44	7
129	Cut		7	Planting bed		0.8	0.35	9.63	9.35	7
130	Fill		7	Fill of planting bed [129]		0.5	0.23	9.62	9.62	7
131	Cut		7	Planting bed		1.02	0.32	9.66	9.41	7
132	Fill		7	Fill of planting bed [131]		1.02	0.32	9.64	9.63	7
133	Layer		7	Re-deposited topsoil			0.27	9.94	9.94	9
134	Layer		8	Colluvium	1.8	1.5	0.5	10.09	10.07	5
135	Fill	8	8	Fill of ditch [136/139]		0.13	0.2	9.94	9.74	3
136	Cut		8	Curvilinear ditch		0.13	0.2	9.94	9.74	3
137	Layer		8	Drift geology: yellowish brown clayey sand	1.8	1.8	0.56	9.94	9.94	1
138	Layer		8	Colluvium			0.54	10.14		6
139	Cut		8	Curvilinear ditch	5.3	0.8	0.35	9.3	8.88	3
140	Fill		8	Fill of curvilinear ditch [141]		0.84	0.35	9.3	9.3	3
141	Cut		8	Curvilinear ditch		1.25	0.24	9.31	9.07	3
142	Fill		8	Fill of curvilinear ditch [141]		1.25	0.24	9.31	9.28	3
143	Cut	8	8	Planting pit	0.9		0.29	9.29	8.99	7
144	Fill	8	8	Fill of planting pit [143]		1.09	0.29	9.29	9.29	7
145	Cut	8	8	Posthole		0.36	0.15	9.29	9.09	3
146	Fill		8	Postpipe within posthole [145]		0.16	0.22	9.29	9.29	3
147	Fill		8	Backfill of posthole [145]		0.36	0.15	9.29	9.29	3

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
148	Cut		8	Posthole		0.15	0.17	9.37	9.22	3
149	Fill		8	Fill of posthole [148]		0.15	0.17	9.37	9.37	3
150	Cut		8	Post-medieval pit		2	0.45	10.33	9.45	8
151	Fill		8	Fill of pit [150]		2	0.45	10.33	10.33	8
152	Layer		2	Made ground			0.19	10.56	10.52	9
153	Cut		2	Palaeochannel	3.5	0.84	0.3	10.43	10.07	2
154	Fill		2	Fill of palaeochannel [154]	3.15	0.84	0.3	10.43	10.39	2
155	Cut		2	Palaeochannel	2.16	0.5	0.14	10.33	10.19	2
156	Fill		2	Fill of palaeochannel [155]	2.96	0.5	0.14	10.33	10.33	2
157	Layer		2	Drift geology: reddish brown silty sand				10.57	9.89	1
158	Cut	7	7	Tree throw	4.1	0.82	0.25	9.11	8.98	6
159	Fill	7	7	Fill of tree throw [158]	4.1	0.82	0.25	9.11	9.1	6
160	Fill	1	1	Final fill of palaeochannel [185]			0.25	8.98	8.74	2
161	Layer		1	Drift geology: dark yellow clayey sand				8.73	8.64	1
162	Fill	1	1	Fill of pit [163]	0.85	0.72		8.54	8.54	9
163	Cut		1	Large pit	0.85	0.72		8.54		9
164	Fill	1	1	Fill of planting bed [165]	0.65	0.35	0.08	9.04	9.04	7
165	Cut	1	1	Planting bed	0.65	0.35	0.08	9.04	8.96	7
166	Fill		1	Fill of planting bed [167]	1	0.65	0.08	9.04	9.04	7
167	Cut	1	1	Planting bed	1	0.65	0.08	9.04	8.9	7

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
168	Fill	1	1	Fill of planting bed [169]	0.65	0.5	0.27	9.01	9.01	7
169	Cut	1	1	Planting bed	0.65	0.5	0.27	9.01	8.74	7
170	Fill	1	1	Fill of planting pit [171]	0.9	0.77	0.22	9.06	9.06	7
171	Cut	1	1	Planting pit	0.9	0.77	0.22	9.06	8.84	7
172	Fill	1	1	Fill of planting bed [173]	0.5	0.5	0.3	8.97	8.97	7
173	Cut	1	1	Planting bed	0.5	0.5	0.3	8.97	8.67	7
174	Fill		1	Fill of planting bed [175]	0.6	0.49	0.08	8.95	8.95	7
175	Cut	1	1	Planting bed	0.6	0.49	0.08	8.95	8.87	7
176	Fill	1	1	Fill of planting pit [177]	0.45	0.35	0.33	8.94	8.94	7
177	Cut	1	1	Planting pit	0.45	0.35	0.33	8.94	8.61	7
178	Fill	1	1	Fill of planting pit [179]	0.5	0.3	0.23	8.94	8.71	7
179	Cut	1	1	Planting pit	0.5	0.3	0.23	8.94	8.71	7
180	Fill	1	1	Fill of planting bed [181]	0.4	0.2	0.24	8.88	8.86	7
181	Cut	1	1	Planting bed	0.4	0.2	0.24	8.88	8.64	7
182	Fill	1	1	Fill of ditch [183]	4.5	1.75	0.69	8.84	8.53	4
183	Cut	1	1	DNW-SE oriented ditch	4.5	1.75	0.69	8.84	8.15	4
184	Layer	1	1	Colluvium	3.7	1.8	0.29	8.54	8.43	5
185	Cut	1	1	Palaeochannel	3.7	1.8	0.29	8.54	8.25	2
186	Fill	1	1	Primary fill of palaeochannel [185]	0.9	0.74	0.2	9.99	8.46	2
187	Fill	1	1	Secondary fill of palaeochannel [185]	1.1	0.74	0.35	8.79	8.53	2

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
188	Fill	1	1	Tertiary fill of palaeochannel [185]	0.55	0.4	0.55	8.48	8.41	2
189	Fill		1	Tertiary fill of palaeochannel [185]	0.5	0.4	0.2	8.68	8.59	2
190	Cut	1		Possible cut above palaeochannel	0.6	0.4	0.6	8.79	8.24	2
191	Fill	7	7	Fill of planting pit [192]	0.37	0.33	0.05	9.41	9.41	7
192	Cut	7	7	Planting pit	0.37	0.33	0.05	9.41	9.32	7
193	Fill	7	7	Fill of planting pit [194]	0.5	0.4	0.32	9.3	9.3	7
194	Cut	7	7	Planting pit	0.5	0.4	0.35	9.3	8.88	7
195	Fill	7	7	Fill of planting pit [196]	1.4	0.9	0.15	9.28	9.28	7
196	Cut	7	7	Planting bed	1.4	0.9	0.15	9.28	9.16	7
197	Void	7		Void						7
198	Void									7
199	Void	7		Void						
200	Void			Void						
201	Layer	7	7	Layer of re-deposited ground		7.5	0.25	10.05	10.05	9
202	Layer	7	7	Colluvium		7.5	0.4	9.93	9.93	5
203	Fill	7	7	Fill of planting pit [204]	0.42	0.15	0.4	9.59	9.59	7
204	Cut	7	7	Planting bed	0.42	0.4	0.16	9.59	9.33	7
205	Fill	7	7	Fill of planting pit [206]	0.8	0.7	0.22	9.47	9.47	4
206	Cut	7	7	Planting pit	0.8	0.7	0.22	9.47	9.24	4

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
207	Fill	7	7	Fill of planting bed [208]	2.5	0.5	0.1	9.49	9.49	7
208	Cut	7	7	Ditch	2.3	0.5	0.1	9.93	9.37	3
209	Fill	7	7	Fill of planting bed [210]	0.25	0.5	0.3	10.19	10.19	7
210	Cut	7	7	Planting bed	0.25	0.5	0.3	10.19	9.86	7
211	Fill	7	7	Secondary fill of planting bed [213]	0.8	0.9	0.5	10.13	10.13	7
212	Fill	7	7	Primary fill of planting bed [213]	0.65	0.41	0.15	9.67	9.67	7
213	Cut	7	7	Planting bed	0.8	0.8	0.65	10.13	9.51	7
214	Fill	7	7	Secondary fill of planting bed [216]	0.96	0.9	0.5	10.19	10.19	7
215	Fill	7	7	Primary fill of planting bed [216]	0.86	0.8	0.15	9.71	9.71	7
216	Cut	7	7	Planting bed	0.96	0.9	0.67	10.19	9.53	7
217	Fill	7	7	Secondary fill of planting bed [219]	0.74		0.44	10.19	10.19	7
218	Fill	7	7	Primary fill of planting bed [219]	0.75		0.22	9.79	9.79	7
219	Cut	7	7	Planting bed	0.75	1	0.6	10.19	9.56	7
220	Fill	7	7	Fill of Ditch 1 re-cut [353]	1.78	0.82	0.32	9.48	9.48	4
221	Fill	7	7	Primary fill of Ditch 1 [222]	1	0.68	0.22	9.13	9.1	3

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
222	Cut	7	7	Ditch 1: NNW-SSE oriented ditch	20	1.78	0.5	9.48	8.89	3
223	Fill	7	7	Fill of re-cut [351] of Ditch 1	1.1	1	0.3	9.1	9.08	4
224	Fill	7	7	Fill of [351] Ditch 1	1.15	1	0.53	9.1	8.79	3
225	Fill	7	7	Fill of ditch [290] Ditch 1	1.72	1	0.21	8.21	8.21	3
226	Fill	7	7	Fill of ditch [227] Ditch 2	0.8	0.6	0.14	9.45	9.41	3
227	Cut	7	7	NNW-SSE oriented ditch. Ditch 2	0.8	0.6	0.14	9.45	9.31	3
228	Fill	7	7	Fill of ditch [229]. Ditch 2	0.66	0.65	0.16	9.34	9.33	3
229	Cut	7	7	NNW-SSE oriented ditch. Ditch 2	0.66	0.65	0.16	9.34	9.19	3
230	Fill	7	7	Fill of ditch [231]. Ditch 2	1.4	0.56	0.19	9.22	9.21	3
231	Cut	7	7	NNW-SSE oriented ditch. Ditch 2	1.04	0.56	0.19	9.22	9.03	3
232	Fill	7	7	Fill of [233]. Ditch 2	0.46	0.11	0.4	9.02	9.02	3
233	Cut	7	7	NNW-SSE oriented ditch. Ditch 2	0.46	0.11	0.4	9.02	8.98	3
234	Fill	7	7	Fill of ditch [235]. Ditch 2	1.3	1.02	0.24	9.23	9.17	2
235	Cut	7	7	NNW-SSE oriented ditch. Ditch 2	1.3	1.02	0.24	9.23	8.98	3
236	Fill	7	7	Fill of ditch [237]. Ditch 2	0.62	0.33	0.39	9.18	8.87	3
237	Cut	7	7	NNW-SSE oriented ditch. Ditch 2	0.62	0.33	0.39	9.18	8.8	3

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
238	Fill	7	7	Fill of ditch [239]. Ditch 2	6.5	0.4	0.12	9.09	9.05	3
239	Cut	7	7	North terminal of NNW- SSE oriented ditch. Ditch 2	6	0.4	0.12	9.09	8.95	3
240	Fill	7	7	Fill of E-W ditch [241]	6	0.3	0.16	9.09	9.08	3
241	Cut	7	7	E-W oriented ditch. Ditch 2	6	0.3	0.16	9.09	8.93	3
242	Fill	7	7	Fill of ditch 243]. Ditch 2	1.04	0.72	0.2	9.1	9.05	3
243	Cut	7	7	NNW-SSE oriented ditch. Ditch 2.	1.07	0.72	0.2	9.1	8.9	3
244	Fill	7	7	Fill of posthole [245]	0.4	0.31	0.2	9.08	9.08	3
245	Cut	7	7	Posthole	0.4	0.31	0.2	9.08	8.96	3
246	Fill	7	7	Fill of posthole [247]	0.4	0.35	0.41	9.04	9.04	3
247	Cut	7	7	Posthole	0.4	0.38	0.14	9.04	8.91	3
248	Fill	7	7	Fill of posthole [249]	0.3	0.25	0.25	9.06	9.06	3
249	Cut	7	7	Posthole	0.31	0.25	0.25	9.06	8.81	3
250	Fill	7	7	Fill of posthole [251]		0.81	0.92	9.04	9.04	3
251	Cut	7	7	Posthole		0.81	0.92	9.04	8.66	3
252	Fill	7	7	Ditch 1: fill of re-cut [256]		3.16	0.47	9.44	9.44	4
253	Fill	7	7	Primary fill of [354]. Ditch 1		1.74	0.39	8.99	8.99	3
254	Fill	7	7	Fill of re-cut [263]. Ditch 1		1.36	0.4	9.34	9.29	4

Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
255	Fill	7	7	Ditch 1: Primary fill of [270]		1.49	0.25	9.19	8.9	3
256	Cut	7	7	Re-cut of ditch [354]. Ditch 1		3.16	0.47	9.44	8.99	4
257	Fill	7	7	Fill of posthole [258]	0.58	0.54	0.1	9.1	9.1	7
258	Cut	7	7	Posthole	0.58	0.54	0.1	9.1	8.95	7
259	Fill	7	7	Fill of pit [250]	1.6	1.52	0.52	9.11	9.11	7
260	Cut	7	7	Pit	1.52	1.5	0.52	9.11	8.64	7
261	Void			Void						
262	Cut	7	7	Re-cut of ditch [351]. Ditch 1	1.06	1	0.32	9.1	8.79	4
263	Cut	7	7	Re-cut of ditch [270]. Ditch 1		1.36	0.4	9.28	8.66	4
264	Cut	7	7	Re-cut of ditch [290]. Ditch 1		1.4	0.51	9.24	8.46	4
265	Fill	7	7	Fill of re-cut [264]. Ditch		1.5	0.51	8.21	8.21	4
266	Fill	7	7	Fill of NNW-SSE oriented ditch. Ditch 6		0.44	0.41	9.08	9.08	6
267	Cut	7	7	NNW-SSE oriented ditch. Ditch 6.		0.44	0.41	9	8.88	6
268	Fill	7	7	Fill of ditch [269]. Ditch 4		0.6	0.24	9.31	9.31	4
269	Cut	7	7	NNW-SSE oriented ditch. Ditch 4		0.6	0.24	9.31	9.09	4

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
270	Cut	7	7	NNW-SSE oriented ditch. Ditch 1		1.96	0.68	9.34	8.6	3
271	Fill	7	7	Fill of ditch [272]. Ditch 3		0.61	0.12	9.38	9.34	4
272	Cut	7	7	NNW-SSE oriented ditch. Ditch 3		0.65	0.14	9.38	9.24	4
273	Fill	7	7	Fill of tree-throw [274]	1.06	0.65	0.23	9.06	9.06	7
274	Cut	7	7	Tree-throw	1.06	0.65	0.23	9.06	8.85	7
275	Fill	7	7	Fill of planting pit [276]	1.86	1.32	0.09	9.01	9.01	7
276	Cut	7	7	Tree-throw	1.86	1.32	0.09	9.1	9.01	7
277	Fill	7	7	Fill of planting pit [278]	2.3	1.6	0.19	9.17	9.17	7
278	Cut	7	7	Planting pit.	2.3	1.6	0.19	9.17	8.98	7
279	Fill	7	7	Secondary fill of planting pit [281]		0.93	0.05	9.13	9.13	7
280	Fill	7	7	Primary fill of planting pit [281]	1.02	0.8	0.16	9.1	9.1	7
281	Cut	7	7	Planting pit	1.02	0.8	0.16	9.13	9	7
282	Fill	7	7	Fill of pit [283]	2.18	1.5	0.25	9.26	9.12	3
283	Cut	7	7	Shallow pit.	2.18	1.5	0.26	9.26	8.97	3
284	Fill	7	7	Colluvium		2.46	0.19	9.3	9.1	5
285	Cut	7	7	'Edge' of natural depression		2.46	0.19	9.3	9.15	5
286	Fill	7	7	Fill of pit [287]	0.52	0.35	0.18	9.39	9.35	7
287	Cut	7	7	Pit	0.52	0.35	0.18	9.41	9.23	7
288	Fill	7	7	Fill of pit [289]		1.37	0.52	9.42	9.42	7

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
289	Cut	7	7	Pit		1.37	0.52	9.42	8.87	9
290	Cut	7	7	NNW-SSE oriented ditch. Ditch 1.	1.52	0.71	0.21	8.21	7.47	3
291	Fill	7	7	Fill of ditch [292]. Ditch 4		0.68	0.22	9.22	9.22	4
292	Cut	7	7	NNW-SSE oriented ditch. Ditch 4		0.68	0.22	9.22	9.02	4
293	Fill	7	7	Fill of ditch [294]. Ditch 3		0.82	0.31	9.24	9.24	4
294	Cut	7	7	NNW-SSE oriented ditch. Ditch 3		1.04	0.29	9.24	8.92	4
295	Fill	7	7	Fill of ditch [296]. Ditch 5		0.74	0.18	9.24	9.24	4
296	Cut	7	7	NNW-SSE oriented ditch. Ditch 5		0.74	0.21	9.24	9.06	4
297	Layer	7	7	Colluvium		2.74	0.1	9.36	9.24	5
298	Fill	7	7	Fill of pit [299]	0.34	0.24	0.12	9.27	9.27	7
299	Cut	7	7	Pit	0.34	0.24	0.12	9.27	9.27	7
300	Fill	7	7	Fill of planting bed [301]	0.6	0.52	0.1	9.32	9.32	7
301	Cut	7	7	Planting bed	0.6	0.52	0.11	9.32	9.23	7
302	Fill	7	7	Fill of planting pit [303]	0.4	0.3	0.13	9.17	9.17	7
303	Cut	7	7	Planting pit	0.4	0.3	0.13	9.17	8.91	7
304	Fill	7	7	Fill of planting bed	1.23	0.82	0.12	9.34	9.34	7
305	Cut	7	7	Planting bed	1.23	0.82	0.12	9.35	9.23	7
306	Fill	7	7	Fill of re-cut [352] of Ditch 1		1.46	0.52	9.18	9.19	4

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
307	Cut	7	7	NNW-SSE oriented ditch. Ditch 1		1.46	0.64	9.19	8.54	3
308	Fill	7	7	Fill of ditch [309]. Ditch 4		0.96	0.48	9.16	9.16	4
309	Cut	7	7	NNW-SSE oriented ditch. Ditch 4		0.96	0.48	9.26	8.78	4
310	Fill	7	7	Fill of ditch [311]		1.07	0.29	9.33	9.32	4
311	Cut	7	7	NNW-SSE oriented ditch. Ditch 3		1.07	0.29	9.33	9.02	4
312	Fill	7	7	Fill of ditch [31]. Ditch 5		0.74	0.21	9.33	9.33	4
313	Cut	7	7	NNW-SSE oriented ditch. Ditch 5		0.73	0.21	9.33	9.12	4
314	Layer	7	7	Colluvium		1.42	0.34	9.35	9.32	5
315	Fill	7	7	Fill of ditch [307]. Ditch 1		1.23	0.12	9.12	9.12	3
316	Fill	7	7	Fill of planting pit [317]	0.81	0.58	0.1			7
317	Cut	7	7	Planting pit	0.81	0.58	0.1	9.33	9.22	7
318	Fill	7	7	Fill of planting pit [319]	0.88	0.77	0.25	9.33	9.33	7
319	Cut	7	7	Planting pit	0.88	0.77	0.25	9.33	9.04	7
320	Fill	7	7	Fill of pit [323]	0.4	0.3	0.15	9.34	9.34	7
321	Fill	7	7	Fill of planting pit [322]	1.28	1.44	0.17	9.34	9.34	7
322	Cut	7	7	Planting pit	1.28	1.44	0.17	9.33	9.27	7
323	Cut	7	7	Planting pit	0.4	0.3	0.15	9.35	9.17	7
324	Fill	7	7	Fill of planting bed [325]	1.4	0.94	0.32	9.3	9.3	7
325	Cut	7	7	Planting bed	1.4	0.94	0.32	9.29	9.01	7
326	Fill	7	7	Fill of ditch [327]. Ditch 6		0.9	0.32	8.95	8.95	6

Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
327	Cut	7	7	NNW-SSE oriented ditch. Ditch 6		0.9	0.32	8.95	8.62	6
328	Fill	7	7	Fill of pit [329]		0.75	0.72	9.34	9.34	7
329	Cut	7	7	Pit		0.75	0.72	9.34	9.2	7
330	Fill	7	7	Fill of planting pit [331]		1.46	0.2	9.29	9.29	7
331	Cut	7	7	Planting pit		1.46	0.2	9.29	9.09	7
332	Fill	7	7	Fill of ditch [333]. Ditch 2		1.42	0.51	9.25	9.25	3
333	Cut	7	7	NNW-SSE oriented ditch. Ditch 2		1.42	0.51	9.63	8.82	3
334	Fill	7	7	Fill of planting bed [335]		0.77	0.17	9.11	9.11	7
335	Cut	7	7	Planting bed	0.8	0.7	0.17	9.11	8.98	7
336	Fill	7	7	Fill of ditch [337]. Ditch 6		0.7		9.33	9.33	6
337	Cut			NNW-SSE oriented ditch. Ditch 6		0.7		9.33	8.91	6
338	Layer		TP4	Re-deposited natural.			0.47	10.34	10.34	9
339	Fill		TP4	Fill of modern service trench [340]		0.82	0.74	10.34	10.34	9
340	Cut		TP4	Modern service trench		0.82	0.74	10.34	9.58	9
341	Layer		TP4	Drift geology: firm, yellowish mid-brown sandy clay				9.9	9.81	1
342	Masonry		TP3	Concrete interceptor	3.2	2.4	1.28	12.38	10.97	9
343	Layer		TP1	Made ground			2.02	10.24	9.76	9

Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
344	Layer		TP1	Layer of sand and gravel beneath brickearth			0.19	8.18	8.02	1
345	Layer		TP2	Re-deposited natural			0.16	10.01	10.01	9
346	Layer		TP2	Drift geology: friable, yellowish dark brown sandy clay			0.26	9.73	9.73	1
347	Layer		TP5	Made ground			0.96	9.78	9.43	9
348	Layer		TP5	Drift geology: friable, yellowish mid-brown sandy clay			0.19	8.97	8.78	1
349	Fill		TP5	Fill of pit [350]	0.85	0.5	0.1	8.78	8.78	7
350	Cut		TP5	Pit	0.85	0.5	0.1	8.78	8.78	7
351	Cut	7	7	NNW-SSE oriented ditch. Ditch 1		2.22	0.99	9.02	8.05	3
352	Cut	7	7	Re-cut of ditch [307]. Ditch 1		1.34	0.64			3
353	Cut	7		Re-cut of ditch [222]. Ditch 1						4
354	Cut	7		NNW-SSE oriented ditch. Ditch 1						3
501	Layer		501	Modern made ground			0.8	11.33	9.66	9
502	Layer		501 502	Drift geology: compact, yellowish mid-brown sandy silt				9.96	9.18	1

Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
503	Masonry		501	N-S oriented brick wall	1.2	0.5		9.44	9.15	8
504	Cut		501	Construction cut for brick wall [503]	0.5	0.5		9.44	9.21	8
505	Layer		501	Buried soil or colluvium	0.5	0.26		9.44	9.21	5
506	Layer		501	Colluvium	0.8	0.35		9.44	8.85	5
507	Fill		502	Fill of gully [508]	2.4	0.35		9.36	9.06	8
508	Cut		502	NE-SW oriented gully	2.4	0.4		9.17	8.93	8
509	Masonry		502	Non-load bearing, possibly garden wall	3.18	0.43		9.62	9.44	8
510	Fill		502	Fill of palaeochnnel [511]	8.9	2.3		9	9	2
511	Cut		502	Palaeochannel	8.9	2.3		9	9	2
512	Masonry		502	Small brick surface of re- used bricks	0.95	0.9		9	9	8
513	Layer		502	Demolition layer of bricks	2.4	2.3		9.6	9.56	8
514				Void						7
515	Cut		501 502 503	Modern truncation of site by 'proof' digging prior to excavation						9
516	Layer		502	Made ground			0.25	9.72	9.47	9
517	Layer		502	Modern ground			0.42	9.47	9.28	9
518	Fill		503	Fill of animal burial pit [520]	1.2	0.72	0.1	9.98	9.91	4

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
519	Skeleton		503	Animal burial (pig or wild boar)	1.05	0.53		9.9	9.94	4
520	Cut		503	Grave cut for animal burial [519]	1.8	0.76	0.1	9.98	9.91	4
521	Void			Void						
522	Cut		502	Construction cut for brick wall [509]	3.18	0.6		9.44	9.44	8
523	Layer		502	Demolition layer			0.15	9.5	9.44	8
524	Layer		502	Drift geology: yellowish mid-brown clayey sand	1.38	1.23		9.44	9.34	1
525	Fill		502	Construction cut [509] backfill	2.7	0.07		9.46	9.44	8
526	Masonry		502	E-W aligned wall, north wall of Building 1	5.12	0.62		9.69	9.28	7
527	Masonry		502	Repair to N-S aligned wall [538]	0.9	0.3		9.54	9.54	8
528	Masonry		502	18th-19th century buttress foundation/addition	0.9	0.55		9.51	9.51	8
529	Masonry		502	18th-19th C buttress re- build/addition	0.48	0.46		9.45	9.45	8
530	Masonry		502	18th-19th C buttress -re- build/addition	0.84	0.54		9.5	9.5	8

Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
531	Fill		502	Construction cut [526] backfill	4.8	1.04		9.49	9.49	7
532	Cut		502	Construction cut for [526], [539]	4.8	1.04		9.48	9.3	7
533	Other		502	Group number for Building 1				9.69	9.25	7
534	Layer		502	Layer of demolition			0.08	9.56	9.54	8
535	Layer		502	Burnt layer				9.67	9.6	8
536	Layer		502	Demolition layer			0.12	9.78	9.72	8
537	Masonry		502	N-S brickwork forming east wall of north wing	0.88	0.8		9.69	9.69	7
538	Masonry		502	N-S brickwork forming east wall of north wing	1.32	0.67		9.37	9.37	7
539	Masonry		502	Return aligned E-W, N wall of N wing	1.32	0.77		9.37	9.28	7
540	Masonry		502	N-S aligned, W wall of N wing	2.34	0.6		9.54	9.31	7
541	Cut		502	Construction cut for wall [537]	1.08	0.74		9.54	9.54	7
542	Fill		502	Backfill of construction cut [541]	1.08	0.74		9.49	9.49	7
543	Fill		502	Backfill of construction cut [544]	1.84	1.28		9.48	9.48	7

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Context	Туре	Area	Trench	Interpretation	Length	Width	Depth	Levels high	Levels low	Phase
544	Cut		502	Construction cut for wall [526]	1.84	1.28		9.52	9.52	7
545	Fill		502	Backfill of construction cut [546]	1.28	1.26		9.49	9.4	7
546	Cut		502	Construction cut for wall [539]	1.28	1.26		9.5	9.5	7
547	Fill		502	Backfill of construction cut [548]	2.38	1.08		9.49	9.49	7
548	Cut		502	Construction cut for wall [548]	3.02	0.91		9.49	9.49	7

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# APPENDIX 2: PREHISTORIC POTTERY ASSESSMENT

Jon Cotton

#### Introduction

A small mixed ceramic assemblage comprising 32 sherds of pottery weighing 174g and representing a minimum of 26 vessels from 14 contexts was presented for assessment. (Several shapeless worn fragments of fired clay were also recorded from contexts 142 (weight: 4g) and 308 (weight: 14g).)

Without exception the sherds were small and worn, many with rounded edges and lost surfaces. Very few feature sherds (i.e. rims/bases) are present, and spot-dating has largely had to rely on an assessment of the different fabric recipes employed.

Based on the main tempering agents three fabric groups were identified in hand specimen. These comprise crushed burnt flint (FLIN), quartz sand (SAND) and crushed fired clay (GROG). Furthermore, plate-like voids in a handful of sherds suggest that organic temper (possibly shell) had burnt out in firing or had leached out subsequently.

Cxt No	No FLIN			SAND			GROG			OG/SA	ND	DATE	
	SC	ENV	Wt	SC	ENV	Wt	SC	ENV	Wt	SC	ENV	Wt	
126	3	2	8	7	7	44							Mixed
133	1	1	5										LBA/EIA
135	2	1	11										LBA/EIA
138										1	1	10	?
140	4	3	11										LBA/EIA
142				1	1	5							RB/Med?
166				1	1	4	1	1	8				RB/Med?
174				1	1	2							RB/Med?
182				2	1	4							RB
220				1	1	7							RB?
221	1	1	31										LBA/EIA
252				1	1	4	3	1	14				LIA/RB
254	1	1	5										LBA/EIA
308				1	1	1							RB
TOTAL	12	9	71	15	14	71	4	2	22	1	1	10	-

The material has been recorded on pro-forma spot-dating sheets and is summarised in Table 1.

Table 1: All sherds from all contexts (SC=sherd count; ENV= estimated number of vessels; Wt=Weight in grams)

### The Pottery

A total of 12 FLIN sherds were present, all of which were tempered with finely-crushed burnt flint <2mm in size. There is one tiny rim sherd from context [140], while one large body sherd from context [221] has finger-smearing on its exterior. The balance of probability suggests that all the FLIN sherds can be ascribed to the LBA/EIA, though it is not possible to be any more precise.

The remainder of the assemblage is certainly somewhat later in date. There is a single small rim sherd from a M/LIA globular bowl in a SAND fabric from mixed context [126], and a handful of SAND and GROG sherds of LIA/RB type from context [252]. Small body sherds of SAND grey wares from contexts [182] and [308], and a rim from [220], are likely to be Roman, while those from contexts [142], [166] and [174] could be of Roman or medieval date (a sherd of possible sag base came from context [174]).

### **Recommendations for Further Work**

No further work would seem to be required on the assemblage as it stands, and no sherds are worthy of illustration.

### **APPENDIX 3: ROMAN POTTERY ASSESSMENT**

### Eniko Hudak

The archaeological investigations at Imber Court produced a very small amount of Roman pottery totalling nine fragments weighing 33g, and four fragments of fired clay weighing 16g. The pottery was fully quantified and catalogued using the standard measures of sherd count and weight. The assemblage was recorded using standard Museum of London fabric codes (Symonds 2002) into an MS Access database.

Roman pottery was recovered from seven individually numbered contexts: [126], [138], [142], [174], [182], [220], and [308]; and fired clay from [142] and [308]. The condition of the assemblage is abraded to heavily abraded comprising small sherds only. There are no diagnostic sherds in the assemblage.

There is a very limited range of fabrics represented including four fragments of Alice Holt Surrey Ware (AHSU) dated to AD 50-160, and a single sherd of London Mica-Dusted Ware (LOMI) dated to AD 70-140. There are also a few unsourced fragments of oxidised and grog-tempered wares.

Context	Fabric	Spotdate	SC	Wt(g)
126	LOMI	70-140	1	6
138	GROG	50-400	1	9
142	OXID	50-400	2	4
174	AHSU	50-160	1	2
182	AHSU	50-160	2	4
220	AHSU	50-160	1	6
308	GROG	50-400	1	2

Table 1: Catalogue of Romano-British pottery and spotdates (excl. fired clay)

The condition and the small size of the assemblage limit its significance and discussion, but the state of the sherds suggests a degree of redeposition had taken place. There are no recommendations of further work on the pottery at this stage.

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# APPENDIX 4: POST-ROMAN POTTERY ASSESSMENT

Berni Sudds

#### Introduction

A small assemblage of post-Roman pottery was recovered from the excavation phase, amounting to 150 sherds, representing an estimated 51 vessels (ENV) and weighing 3,322kg. The pottery from the evaluation phase has been reported on previously, although two sherds not included in this report were considered as part of the current analysis (Jarrett 2016). The pottery dates from the early Saxon period to the 19th century, although the majority is of late 12th to 13<sup>th</sup>-century date (Saxon and medieval - 128 sherds/ 34 ENV; post-medieval - 22 sherds/ 17 ENV). The assemblage was collected from 25 contexts, 24 of which are of small size (less than 30 sherds), with just one of medium size (31-99 sherds). With the exception of the medium sized group of pottery from ditch fill [266], producing the complete or semicomplete profiles of 5 well-preserved jars, and possibly one or two other groups, the pottery is fragmentary and demonstrates varying degrees of abrasion indicative of re-deposition. A small proportion is residual in later features.

The assemblage was examined macroscopically and microscopically using a binocular microscope (x20), and recorded in an Access database, by fabric, form and decoration. The medieval pottery was classified following the type series for Surrey proposed by Jones (1998), whilst the post-medieval wares were recorded using the Museum of London Archaeology type series (MOLA 2014). The forms were identified in accordance with the Medieval Pottery Research Group's guide to the classification of forms (MPRG 1998). The pottery was quantified by sherd count (SC), estimated number of vessels (ENV's) and weight. A summary of the pottery types and forms appears below in Table 1. A summary catalogue of the pottery by context with date ranges and suggested spot dates appears in Table 2.

Code	Pottery type	Date range	SC	ENV	Weight	Forms
ESSTA	Sandstone-tempered, fine with cemented sandstone	400–600	1	1	6	-
SNC/Q1	Saxo-Norman 'chalky' ware/ Poly- tempered sandy ware	900–1300	26	3	435	Jar
IQ	Ironstone sandy ware (=ESUR)	1050–1150	2	2	58	-
SYSH	Surrey shell-tempered ware	1050–1300	7	6	66	-
CQ1	Poly-tempered sandy ware (coarse)	1150–1300	31	1	1093	Jar
Q1	Poly-tempered sandy ware	1150–1300	4	4	78	Jar

### The pottery types

Code	Pottery type	Date range	SC	ENV	Weight	Forms	
Q2	Grey/ brown sandy ware	1150–1300	40	2	859	Jar	
QFL	Sand/flint-tempered ware	1150–1300	3	1	59	-	
HMQ	Herts/ Middlesex reduced ware (= SHER)	1150–1400	1	1	33	Jar	
WW1B	Kingston-type ware	1240–1400	9	9	71 Jar, jug		
WW1A	Coarse Border ware	1270–1500	5	5	59 Jar		
MISC GL	Unsourced glazed ware (?London-type ware)	900–1400	1	1	48	Jug	
PMRE	London-area early post-medieval redware	1480–1600	1	1	19	-	
RWW/ RBOR	Surrey-Hampshire border redware	1550–1900	2	1	24	-	
TGW	London tin-glazed ware	1570–1846	2	2	7	Dish	
TGW BISC	London biscuit-fired tin-glazed ware	1570–1846	1	1	1	-	
PMFR	Essex-type post-medieval fine redware	1580–1700	1	1	10	-	
PMR	London-area post-medieval redware	1580–1900	2	2	303	Flowerpot	
TGW C	London tin-glazed ware with plain white glaze	1630–1846	5	1	15	Plate	
STSL	Staffordshire-type combed slipware	1660–1870	1	1	17	Dish	
NOTS	Nottingham stoneware	1700–1800	1	1	5	-	
SWSG	White salt-glazed stoneware	1720–1780	2	2	13	Bowl	
TPW3	Refined whiteware with under-glaze brown or black transfer-printed decoration	1810–1900	1	1	10	Plate	
MISC RED	Unsourced late post-medieval redware	1700–1900	1	1	33	Flowerpot	

Table 1: Pottery types. SC = Sherd count; ENV = Estimated number of vessels; Weight in grams.

### Distribution

The distribution of the pottery by context is summarised below in Table 2, with the date range of the pottery recovered and a suggested spot date. The majority of feature assemblages are small and with abraded, the pottery dispersed across ditch and pit fills, but also retrieved from layers and horticultural features. Of note, however, are 96 sherds recovered from ditch [267], deriving from 5 semi-complete

Context	SC	ENV	Wt	Fabrics and forms	Date	range	Context
			(g)		of	the	considered
					pottery		date
7 (eval)	1	1	6	ESSTA	400	600	400–600
27 (eval)	1	1	1	SWSG	1720	1780	1720–1780
117	4	3	14	SYSH; WW1B (Jug)	1050	1400	1240–1400
123	1	1	33	SHER (jar)	1150	1350	1150–1400
125	2	2	15	WW1B (Jug); TPW3 (Plate)	1240	1900	1810–1900
126	4	4	40	IQ; WW1A; WW1B; PMRE	1050	1900	1480–1900
130	3	3	24	SYSH; WW1B	1050	1400	1240–1300
134	2	2	18	TGW BISC; STSL (Dish)	1570	1870	1660–1870
138	5	4	94	PMR; RBOR; NOTS; SWSG (Bowl)	1550	1800	1720–1780
159	1	1	46	Q1 (Jar)	1150	1300	1150–1300
162	4	2	78	QFL; SNC/Q1	900	1200	1100–1200
166	2	2	10	SYSH; Q2	1050	1300	1150–1300
178	1	1	33	MISC RED (Flowerpot)	1700	1900	1700–1900
220	2	2	56	MISC GL (Jug); WW1B (Jar)	1080	1400	1240–1400
221	3	3	64	SYSH; WW1B (Jar)	1050	1400	1240–1300
223	1	1	24	WW1A (Jar)	1270	1500	1270–1500
225	1	1	6	WW1A	1270	1500	1270–1500
266	96	5	2388	SNC/Q1 (Jar); CQ1 (Jar); Q1; Q2 (Jar)	900	1300	1150–1200
279	1	1	1	Q1	1150	1300	1150–1300
286	1	1	45	IQ	1050	1150	1050–1150
306	3	3	33	SYSH; WW1A	1050	1500	1240–1300
328	7	3	271	PMR (Flowerpot); TGW (Dish); TGW C (Plate)	1570	1900	1680–1750
332	2	2	11	PMFR; TGW	1570	1900	1700–1800
334	2	2	11	SYSH; Q1 (Jar)	1050	1300	1150–1300

jars. The latter are very fresh with reconstructable profiles.

Table 2: Pottery by context. SC = Sherd count; ENV = Estimated number of vessels; Weight in grams.

#### Significance of the assemblage and recommendations for further work

The range and composition of the assemblage is similar to that observed on other contemporary sites in north-west Surrey (Jones 1998; Jarrett 2017). There are a small number of chalky, shelly and ironstone tempered wares (SNC; SYSH; IQ) with Saxo-Norman or 11th-century origins but the largest numerically are the sand, flint or poly-tempered wares dated to late 12th to 13th century (CQ1; Q1; Q2; QFL). There is also a single Herts/ Middlesex reduced ware jar and Kingston-type ware jars and jugs, the latter dating from the mid 13th to 14th century. Typical of this period the forms are dominated by jars with fewer jugs. The five semi-complete jars recovered from ditch [267] are handmade, possibly with wheel-turned or finished rims, demonstrating tall necks and everted or thickened thumbed rims. The smaller later medieval and post-medieval assemblage can also be well-paralleled in the region.

Given the size and freshness of the assemblage from ditch [267], it was likely deposited directly from contemporary activity in the immediate vicinity, possibly even the putative manor on or near the study area with pre-conquest origins (Roberts 2015, 10). The majority of the medieval assemblage is of late 12th to 13th-century date, and although much of the remaining pottery is likely to be re-deposited, the single early Saxon sherd recovered from the evaluation ([7]) and the shell and ironstone-tempered wares, are suggestive of earlier activity in the vicinity of site. Given the presence of the Tudor and later post-medieval manor, it is interesting that relatively little pottery of this date was recovered from site, perhaps suggesting waste was being dumped elsewhere, in keeping with the suggested use of this part of estate grounds during this period as formal gardens.

### **Recommendations for Further Work**

The pottery provides dating evidence for the contexts from which it was recovered, but of most significance is the medieval assemblage as it represents the first material of this date to be recovered from the study area and provides physical evidence to suggest the manor has earlier origins, or at the very least that there was medieval settlement activity in the immediate vicinity. Any future publication should include a brief summary of the pottery assemblage recovered, focusing in particular on the well-preserved vessels from ditch [267]. A total of 4 illustrations will be required.

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# APPENDIX 5: BUILDING MATERIAL ASSESSMENT

Amparo Valcarcel

# Introduction and Methods

This small size assemblage of building material (50 examples 42.6kg) recovered from an excavation (SITC16) was reviewed was assessed in order to:

- Identify (under binocular microscope) the fabric and forms of the post-medieval ceramic building material and mortars.
- > Made recommendations for further study.

The application of a 1kg mason's hammer and sharp chisel to each example ensured that a small fresh fabric surface was exposed. The fabric was examined at x20 magnification using a long arm stereomicroscope or hand lens (Gowland x10). Matches were then made with the London fabric collection as there was found to be great similarity in fabrics. Fabrics unique to Imber Court were prefixed with SITC (*SITC01 and SITC02*).

# **Ceramic Building Material**

# Fabrics and Forms

The assemblage was dominated by post-medieval ceramic building material, often in a broken up or fragmentary condition with much smaller amounts of bricks, suggesting that it has been reused, dumped or both.

# Early post-medieval Bricks (11 examples, 21.39kg)

A small amount of brick was recovered from Phase 7, all of which were found to be from local clays of orange course moulded sand with black and red iron oxide fabric (*SITC01*) and dark red sandy fabric (*SITC02*). The earliest bricks with any quantifiable dimensions came from the period 1450-1700 to 1700/1900, but the great majority of the brick is dated to the first half of the 18th century or later. The largest proportion of early post-medieval bricks are shallow (53-58mm), wide (104-112mm), poorly made and unfrogged.

# Peg tile

# 2276type (1480-1900), (20 examples, 1.66kg)

Post-medieval peg tile with fine moulding sand are occasionally found at [27] [35] [36] [49] [125] [508] [525], made from fabrics that appear similar to established London group *2276* (1480-1900) but made from local clays.

# Later post-medieval bricks

# Local sandy fabrics (SITC01 and SITC02), (22 examples, 20.32kg)

From Phase 8 structures are examples of well-made local sandy bricks (*SITC01* and *SITC02*). The largest proportion of bricks is shallow, well made and with sharp arises, indicating that these local fabrics were manufactured until the late 19th century or early 20th century.

# The daub (2 examples, 87g)

Daub was identified as small lumps from [35] and [36]. Daub collected from the site has no indication of the thickness of all the material so it is not clear if it came from a wall, a timber framed wattle or other structural object.

# Mortar

Mortar/Concrete Type	Description	Use at SITC16
T1	Grey hard lime glassy mortar, mixed with I	This late post-medieval and modern
	vitrified brick fragments (1700-1900)	concrete was used to bond bricks from
		[509] [525] [529] [530] & [537]
T2	Loose yellow sandy mortar (1450-1700)	Associated with early post-medieval
		structures [514] [526] [527] [531] [538]
		[539] and [540]

# Distribution

Context	Fabric	Form	Size	Date r	Date range Latest da		dated	Spot date	Spot date with
				of ma	material material			mortar	
27	2276type	Local silty peg tile; post-med peg tile	2	1450	1900	1450	1900	1450- 1900	No mortar

Context Fabric Form Size Date range Latest dated Spot date Spot date with of material material mortar 1500 1900 1450-35 3102; Abraded daub; 4 1450 1900 No mortar 2276type post med peg tile BC 1900 36 3102; Abraded daub; 4 1500 1900 1450 1900 1450-No mortar BC SITC01; 1900 post-medieval 2276 sandy brick; postmed peg tile 49 Post-med peg tile 6 1450 1900 1900 1450-2276type 1450 No mortar 1900 51 SITC01 Post-med sandy 1 1450 1900 1450 1900 1450-No mortar red brick 1900 125 2276type; Post-medieval 2 1450 1900 1450 1900 1450-No mortar SITC01 unglazed peg tile 1900 and red sandy brick 334 Post-medieval 1 1450-2276type 1450 1900 1450 1900 No mortar 1900 unglazed peg tile 508 2276type; Post-medieval 4 1450 1900 1450 1900 1700-No mortar SITC01 peg tile and sandy 1900 bricks 509 1450 1900 1700-SITC01; Post-medieval 1 1450 1900 1700-1900 1900 3101PM sandy brick; mortar type 2 512 SITC02 1450 1900 1900 1700-Post-medieval 4 1450 No mortar 1900 sandy brick 514 2 1700-SITC01; Post-medieval 1450 1900 1450 1900 1450-1700 1900 3101PM sandy bricks: mortar type 1 523 SITC02 Post-medieval 1 1450 1900 1450 1900 1450-No mortar 1700 sandy brick 1700-1900 525 2276type; Post-medieval 1 1450 1900 1450 1900 1700-3101PM 1900 peg tile; mortar type 2

Context	Fabric	Form	Size	Date	range	Latest	dated	Spot date	Spot date with
				of ma	terial	materi	ial		mortar
526	SITC02;	Post-medieval	1	1450	1900	1450	1900	1450-	1450-1900
	3101PM	sandy brick;						1700	
		mortar type 1							
527	SITC02;	Post-medieval	3	1666	1900	1666	1900	1700-	1700-1900
	3101PM	sandy brick;						1900	
		mortar type 2							
528	SITC01;	Post-medieval	2	1450	1900	1450	1900	1700-	1700-1900
	3101PM	sandy brick;						1900	
		mortar type 2							
529	SITC01;	Post-medieval	1	1450	1900	1450	1900	1780-	1700-1900
	3101PM	sandy brick;						1900	
		mortar mortar							
		type 2							
530	SITC02;	Post-medieval	1	1450	1900	1450	1900	1700-	1700-1900
	3101PM	sandy mortar;						1900	
		mortar type 2							
531	SITC01;	Post-medieval	1	1450	1900	1450	1900	1700-	1450-1900
	3101PM	sandy brick;						1900	
		mortar type 1							
537	SITC02;	Post-medieval	1	1450	1900	1450	1900	1700-	1700-1900
	3101PM	sandy brick;						1900	
		mortar type 2							
538	SITC02;	Post-medieval	1	1450	1900	1450	1900	1450-	1450-1900
	3101PM	sandy brick;						1700	
		mortar type 1							
539	SITC01;	Post-medieval	1	1450	1900	1450	1900	1700-	1450-1900
	3101PM	sandy brick;						1900	
		mortar type 1							
540	SITC02	Post-medieval	1	1450	1900	1450	1900	1450-	No mortar
		sandy brick						1700	

# Phasing

# Phase 7: Post-medieval (16th-17th century)

A medium size of building material was recovered from Phase 7 (11 fragments, 21.39kg). The structures preserved from this phase are mainly brick walls from the early building [514] [526] [527] [531] [538] [539] and [540]. Local sandy bricks (*SITC01* and *SITC02*) are the predominant fabric. The mortar used to bond these structures is Type 1.

# Phase 8: Post-medieval (18th-19th century)

A medium size of building material was recovered from Phase 8 (40 fragments, 21.23kg). The material was collected from different structures and layers. Roofing tiles are the predominant form followed by bricks and occasional daub. Bricks made from fabrics *SITC01* and *SITC02* are dated to the late 18th and 19th century. Homogeneity in brick shape, fabric and mortar type (Type 2) selection show that the construction of the structures to be contemporary.

# Recommendations

The value of this small building material assemblage from Imber Court Trading Estate lies partly in its ability to date the early post-medieval structures and none of the material is of intrinsic interest. Unworked daub attests to the presence of a timber framed wattle and daub construction in the vicinity. No further work recommended.

# **APPENDIX 6: THE METAL FINDS ASSESSMENT**

# Märit Gaimster

Thirty-two individual metal pieces were retrieved from the excavations; they are listed in the table below. The metal finds came from three contexts.

Context [280], the primary fill of tree-throw [281], included a fragment of narrow but sturdy copper-alloy strap, now bent into a U-shape. No associated dateable finds were recovered, but the context is dated to Phase 7. It is not clear whether the strap was bent in antiquity, for functional purposes; it could feasibly have been used as a staple, to fix a metal component to wood, but as both ends of the strap are snapped off it is not possible to ascertain.

Context [328], the backfill of pit [329], produced thirty lengths and pieces of heavily corroded iron straps. Most of the straps are curved in profile, and many have visible remains of decayed wood on the inside, suggesting they are the remains of binding from one or several large timber barrels. The width of the straps vary widely, but decay makes it unclear whether these are actual differences. The iron straps were associated with pottery dating from 1680-1750, but there were also fragments of glass wine bottle from the 18th to 19th centuries

Context [332], the fill of Ditch 2, included the corroded shaft fragment of an iron nail. Associated finds include pottery dating from 1700-800, and fragments of a moulded glass jar from the late 19th to 20th centuries.

# Significance and recommendations for further work

The metal finds from Imber Court add little to the understanding of the site in earlier periods. Besides the nail fragment, the copper-alloy strap remains undiagnostic, although it may possibly have been used as a staple. The numerous curved pieces of iron strap are almost certainly remains of binding from a large wooden barrel, and if so may have some potential interest if it can be associated with Ember Court or its garden. If so, an estimate of the size of the barrel should be made and included in any further publication. It is unlikely that x-rays will add significant information to the iron binding, although some pieces could be elected for recording and potentially establishing their original width. Following publication all metal finds may be discarded.

Context	Description	Pot Date	Recommendations
280	Copper-alloy strap, fragment only, bent into U-shape; narrow with	n/a	discard
	sharp rectangular section; snapped at both ends; W 5mm; L		
	62mm+; 1.5mm thick		
328	Thirty pieces of curved corroded iron strap or binding; several pieces	1680-1750	discard
	have remains of decayed wood on the inside; W 35-90mm, but		
	decay suggests difference in width is accidental rather than		
	reflecting different objects		
332	Iron nail; corroded shaft fragment only	1700-1800	discard

# **APPENDIX 7: LITHIC ASSESSMENT**

Ella Egberts

# Introduction

Archaeological investigations at the above resulted in the recovery of quantities of struck flint and unworked burnt stone. The assemblage has been comprehensively catalogued by context and this includes further descriptive details of the material (Archive Catalogue). This report summarises the data in the catalogue; it quantifies and describes the material and presents a preliminary assessment and outline of its significance. No statistically based technological, typological or metrical analyses have been conducted and a more detailed examination may alter or amend any of the interpretations offered here.

# Quantification

	Decortication flake	Chip	Flake	Flake fragment	Blade-like flake	Blade	Blade fragment	Debitage <10mm	Core	Core shaping	Core rejuvenation	Retouched	Shattered flint	Burnt stone (no.)
Total	6	0	54	11	10	14	5	12	9	10	3	7	14	465

Table 1: Quantification of the struck and burnt from Imber Court.

A total of 141 struck flints, 14 pieces of shattered flint and nearly 5kg of unworked burnt stonewere were recovered from Imber Court. The majority of the assemblage was recovered from Trench 7 with context [126] being by far the richest deposit, contributing 66 struck flints and 52 unworked burnt flints (Table 1; Archive Catalogue).

# **Raw material**

A range of raw materials was used including variants of fine-grained translucent dark grey (pure black/dark flint with a variety of light grey opaque mottling or randomly orientated darker grey stripes [fossils]), a translucent to more opaque yellow/grey flint and light grey opaque flint. One flake was struck from coarse

grained yellow/grey chert, possibly Greensand Chert. Some pieces were struck from seemingly fresh nodular flint with unweathered cortex. The majority however, have a thin, weathered nodular cortex with ancient sub-angular and sub-rounded fractured surfaces. The assemblage furthermore includes some unworked, burnt pebbles. The character of the raw material suggests this was most likely derived from Pleistocene river gravel deposits abundantly present in the direct vicinity of the site. The relatively fresh flint nodules used for some of the struck flints may have been sourced from the Chalk outcrops in the Surrey Hills/North Downs, south of the site (BGS 2017) whilst the bulk of the raw materials are likely to have been gathered from the local terrace deposits.

# Description

The relatively rich assemblage from Imber Court is technologically heterogeneous, presenting a multiperiod assemblage. The presence of bladelets, blades and well-worked blade cores, indicate a blade-based production strategy that can be broadly dated to the Mesolithic or Early Neolithic periods, with the former period certainly represented, as indicated by a failed micro-burin, crested blades and a transversely truncated, finely retouched blade. The part of the assemblage that could be dated to the Mesolithic/Early Neolithic also included core preparation and core shaping flakes, and crested blades. The presence of wide and thick, crudely struck flakes also indicate that flintworking occurred during later in the Neolithic or the Bronze Age. Context [126] included an Early Bronze Age arrowhead blank. Most of the material is slightly/ moderately chipped suggesting the struck flint has moved some distance from its original place of discard.

## Significance

The struck flint material from Imber Court is multi-period and represents different flintworking activities from core preparation to the production of tools. This therefore indicates relatively intense occupation along the banks of the river Thames during various periods of prehistory. Finding material of this antiquity at this location is significant and further investigations can contribute to the understanding of the prehistory of the region. Moreover, the multi-period assemblage indicates occupation activities during various periods, suggesting the attractiveness of this location throughout time. Further work in the vicinity of the site therefore has the potential to elucidate ancient landscape use and could offer insights in change and continuity from Mesolithic through to Bronze Age times.

# Recommendations

The struck flint has been comprehensively catalogued for the purpose of this assessment report. The relative richness of the site and the fact that several periods are represented at the site indicates that this location was of some significance throughout the Mesolithic to Bronze Age. Further research may explain the attractiveness of this location.

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# **APPENDIX 8: CLAY TOBACCO PIPE ASSESMENT**

Chris Jarrett

# Introduction

Clay tobacco pipes recovered from an earlier archaeological investigation of the area has been previously reported upon (Jarrett 2016). A small sized assemblage of clay tobacco pipes was recovered from the site (less than one box). Most fragments are in a fairly good condition, indicating they had not been subjected to too much redeposition or were deposited fairly soon after breakage. Clay tobacco pipes occur in six contexts as small (under 30 fragments) sized groups.

All the clay tobacco pipes (ten fragments, of which none are unstratified) were recorded in a database format and classified by Atkinson and Oswald's (1969) typology (AO) except that 18th-century bowls are according to Oswald's (1975) simplified typology and are pre-fixed OS. The pipes are further coded by decoration and quantified by fragment count. The tobacco pipes are discussed by their types and distribution.

# The Clay Tobacco Pipe Types

The clay tobacco pipe assemblage from the site consists of two bowls and eight stems. The clay tobacco pipe bowl types are solely dated c. 1700-1740.

The bowls1700-1740

OS10: two heeled, upright bowls with a rounded front and straight back and both items are initialled on the sides of the heels.

R C: one bowl surviving as a heel with a conjoining stem. Context [342]. The pipe maker for this bowl is yet to be documented in Surrey or London.

?R ?W: one bowl and the initials are very unclear and the possible W has been truncated and squashed. Context [197].

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## The stems

The stems were broadly dated according to their thickness and more pertinently the size of the bore. Two thick stems with a medium bore, broadly dated c. 1580-1740 were noted in context [117], while context [342] produced a single stem of a probable early 18th-century date. Deposits [133], [252] and [332] produced mostly stems with fine bores that were broadly dated c. 1730-1900. The example from [332] is of note for containing a deposit of red was indicating that the stem was from near the mouth part.

## Distribution

Table 1 shows the distribution of the clay tobacco pipes, showing where relevant the cut number, the trench, the size of the group, the number of fragments, the date range of the types and the latest bowl type, the types of bowls present, together with a spot date for each context the tobacco pipes occur in.

Context	Fill of	Trench	Size	No. of bowls/frags	Context ED	Context LD	Part/bowl types (makers mark.)	Spot date
117	118	9	S	2	1580	1910	Stems	1580–1740
133		7	S	3	1580	1910	Stems	1730–1910
197	Void		S	1	1700	1740	Bowl: x1 OS10 (?R ?W),	1700–1740
252	256	7	S	1	1580	1910	stem	1730–1910
332	333	7	S	1	1580	1910	Stem	1730–1910
342		TP3	S	2	1700	1740	Bowl: x1 OS10 (R C), stem; x1	1700–1740

Table 1. SITC160. Distribution of the clay tobacco pipes, showing which contexts contain clay tobacco pipes, the cut number, the trench it occurs in, the number of fragments and the size of the group, the *terminus ante/post quem* (Context ED/LD) for the group and its suggested deposition.

# Significance and Recommendations for Further Work

This small, fragmentary assemblage of clay tobacco pipes has no significance at a local level. The bowl forms present are typical for Surrey and the London area and unfortunately the clay tobacco pipe makers' marks are either uncertain or cannot be linked to an individual. The only potential of the clay tobacco pipes are to provide dating for the deposits that they were recovered from. There are no recommendations for further work on the assemblage and information from this report should be used if the data is required for a publication text.

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# **APPENDIX 9: GLASS ASSESSMENT**

Chris Jarrett

# Introduction

The glass from an earlier phase of archaeological work has been reported upon previously (Jarrett 2016) and this report considers only the glassware recovered from contexts [100] – [332]. A small sized assemblage of glass was recovered from the site (one box). The glass dates from the Roman and post-medieval period. The glass is overall in a fragmentary state. None of the material demonstrates evidence of abrasion, although one vessel is burnt and another vessel fragment shows evidence for being heated. The glass appears to have been deposited under secondary and tertiary conditions. The post-medieval natural and soda glass fragments often show evidence of weathering resultant from the burial conditions. The material was quantified by the number of fragments, estimated number of vessels and weight. The assemblage was recovered from nine contexts and individual deposits produced solely small (fewer than 30 shards) sized groups.

All the glass (eighteen fragments, 13 ENV, 265g, of which none were unstratified) was recorded in a database format, by glass type, colour and form. The assemblage is discussed by period and vessel shapes and its distribution.

# The forms

The range of glass forms, broken down by chronological period, is shown in Table 1.

# Roman

The rim of a free-blown flagon made in aquamarine natron soda glass was found in context [293].

Period/form	No. of fragments	ENV	Weight (g)
Roman			
Flagon	1	1	3
Post-medieval			
English wine bottle	3	3	242

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Period/form	No. of fragments	ENV	Weight (g)
Jar	1	1	4
Vessel glass	11	6	11
Window glass	1	1	4
Wine glass?	1	1	1
Total (post-medieval)	17	12	262

Table 1: Roman and post-medieval glass forms quantified by fragment count, estimated number of vessels (ENV) and weight

# Post medieval

## English wine bottle

All of the wine bottle fragments appear to be free-blown. A rim of a wine bottle made in olive green soda glass and dating to the end of the 17th century was noted in context [332]. The base (with a rounded kick) of either an onion- or mallet-type wine bottle made in dark olive green high-lime low-alkali glass, dated to the early-mid 18th century, was found in deposit [197]. A wide shoulder of an olive green wine bottle could only be broadly dated to the 18th-19th century and was recovered from context [328].

# Jar

A moulded clear soda glass jar rim, showing evidence of burning, was found in context [332] and the vessel is dated to the late 19th-20th century.

## Vessel glass

Small fragments of vessel soda glass occurred in contexts [126] (as a burnt or heated strip), [279] and as a possible wine bottle shard: deposit [332]. Two fragments of olive green HLLA glass were recovered from deposits [130] and [178]. This material was broadly dated to the post-medieval period unless otherwise stated in Table 2.

## Window glass

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A singular triangular, thin walled flat fragment of window glass made in pale olive green soda glass, broadly dated to the post-medieval period, was noted in context [130].

# ?Wine glass

The edge of a clear soda foot from a possible wine glass was noted in context [332]. The edge of the foot has been rolled under and dates to the end of the 17th century.

# Distribution

The distribution of the glass is shown in Table 2 and was found in Phase 2-8 dated deposits.

	Fill		No. of		Weight		
Context	of	Trench	fragments	ENV	(g)	Forms	Spot date
100	101	7	1	1	1	Vessel glass	Early - mid 18th century
126		7	1	1	3	Vessel glass	19th century
130	129	7	2	2	5	Vessel glass, window glass	19th century
178	179	1	1	1	1	Vessel glass	19th century
197	Void		1	1	56	English wine bottle	Early - mid 18th century
279	281	7	1	1	1	Vessel glass	Post-medieval
293	294	7	1	1	3	Flagon	Roman
328	329	7	1	1	18	English wine bottle	18th-19th century
332	333	7	9	4		English wine bottle, jar, vessel glass	Late 19th - 20th century

Table 2: Distribution of the glass showing for each context it occurs in the quantification by number of fragments, ENV and weight, the range of forms and a spot date

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# Significance, Potential and Recommendations:

The glass assemblage, due to its fragmentary nature, has no significance at a local, national or international level. The glass does have some potential to date the site stratigraphy. There are no recommendations for further work on the assemblage.

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# **APPENDIX 10: ANIMAL BONE ASSESSMENT**

Kevin Rielly

# Introduction

Animal bones were found within each of the occupation phases, with a notable concentration taken from one of the Iron Age ditches, this providing the partial skeleton of a pig. The site assemblage was recovered by hand as well as by sorting through the residues provided by the washing of a number of bulk samples. The bones described in this report include those retrieved from the evaluation trenches (Rielly 2016; 2017) as well as those from this latest investigation.

# Methodology

The bone was recorded to species/taxonomic category where possible and to size class in the case of unidentifiable bones such as ribs, fragments of longbone shaft and the majority of vertebra fragments. Recording follows the established techniques whereby details of the element, species, bone portion, state of fusion, wear of the dentition, anatomical measurements and taphonomic including natural and anthropogenic modifications to the bone were registered. The sample collections were washed through a modified Siraf tank using a 1mm mesh and the subsequent residues were air dried and sorted.

# **Description of faunal assemblage**

The site provided a total of 163 bones retrieved by hand and an additional 114 taken from 5 bulk samples (see Table 1). The great majority of this assemblage was well preserved, without any obvious indication of gross fragmentation. Notably, the soil matrix is rather silty which is conducive for the survival of osseous materials. This collection has been placed into the three main periods, Prehistoric (Late Iron Age), post-medieval (including the earlier and later phases of Ember Court) and modern (essentially 20th century).

Period:	PreH		PM					М		Total
Trench:	7	503	3	4	7	9	502	7	1	
Species										
Cattle	1		2	1		1				5

Cattle-size	1(2)			1	1	ĺ	2		(2)	5(4)
Sheep/Goat			2				1	1		4
Pig		145(9)						1		146(9)
Chicken								1		1
Hare							1			1
Sheep-size		(100)					1			1(100)
Uniden fish			(1)							(1)
Grand Total	2(2)	145(109)	4(1)	2	1	1	5	3	(2)	163(114)

Table 1. Species representation by Period and Trench using refitted total fragment counts.

# Prehistoric - Late Iron Age

Bones related to this phase were taken from two trenches (see Table 1), incorporating very minor collections from a selection of ditch fills in Trench 7 and then a concentration of bones from the contents of pit [520] in Trench 503. The former comprise a single identifiable fragment, a cattle radius shaft piece from [231] (Ditch 2) as well as part of a cattle-size thoracic vertebra. Notably the latter is in poor condition, perhaps relating to the time this bone was buried, contrasting with the well preserved cattle radius. It could be supposed that the latter bone is more residual than ancient. However, the apparently contemporary bones from pit [520] are similarly well preserved. These represent the remains of an adult pig skeleton, including the greater part of the axial component (head, vertebrae and ribs) as well as most of the bones of the left forelimb. The skeleton was essentially found in the basal fill [519] although a few extra parts were retrieved from a sample taken from the upper fill [518]. This animal is lying on its left side and it can be assumed that the absence of the right forelimb as well as both hindlimbs, plus damage to the anterior part of the skull (see Figure 1) are all related to truncation.

This is undoubtedly a rather large pig, the intact ulna (length of 233.8mm) providing a shoulder height of 928.2mm (after von den Driesch and Boessneck 1974). Iron Age pigs tended to be rather small (Hambleton 2008, 65), the largest measurable example from Danebury with a height of 700mm, while the various epiphyseal measurements are consistently smaller than shown in this specimen (Grant 1984, 517), e.g. the range of sizes for breadth of proximal scapula and distal humerus at 26 to 37mm and 29 to 42mm compared to 41.8mm and 44.2mm respectively. Considering this evidence it is possible that the Imber Court pig may actually be a wild rather than a domestic animal, although it could also conceivably represent a large domestic boar.



Figure 1: The pig skeleton from pit [520] showing the vertebrae and ribs, the skull (top right) and left foreleg (bottom right).

As for why this animal was buried, it can be suggested that it may have been diseased and therefore discarded. However, its discovery within a distinct feature could perhaps be more indicative of some form of ritual. This potential interpretation was applied to a whole range of complete and semi-complete articulations, including pigs, found at Danebury (ibid, 533-543). Now pig articulations have been found at numerous other Iron Age sites in Southern England, however, the incidence of complete adult skeletons is particularly rare. Indeed Morris (2008, 121) mentions just one example, this from an Early Iron Age pit at Suddern Farm (Poole 2000). It should also be mentioned that none of these pig articulations, from Danebury and elsewhere, have been positively identified as wild boar.

# Post-medieval

A few rather sparse collections were recovered from a number of probable planting beds (the bones taken from Trenches 3, 7 and 9), a gully [508] (Trench 502) and one soil deposit [49] in Trench 4. The planting beds may relate to the garden associated with the earlier occupation of Ember Court, although most of

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these clearly contained 19th-century pottery, the gully dates to the 17th/18th century and the soil to the 19th century. An indication of date is provided by the presence of bones from notably large individuals, as represented by a cattle pelvis and sacrum, as well as a sheep femur and tibia, all from planting bed [37] (Trench 3); plus a cattle radius from soil [49] (Trench 4). These are clearly from 'improved' stock, here following 18th-century husbandry techniques aimed at providing earlier maturing animals specifically for their meat. Such animals began entering the London meat markets from the latter part of the 18th century (Rixson 2000, 215). A final point, potentially of some interest, concerns the juxtaposition of animal bones, notwithstanding their small quantity, within these probable garden beds. While these may simply represent redeposited waste from earlier deposition events, their presence in these features could also be deliberate, this waste intended as garden fertilizer. There is historical evidence, dating to the 19th century, for a similar usage (see Campbell 2005, 182 concerning the growing of vines).

# Modern

This represents another small collection, arising from layer [2] (Trench 1) and two levelling deposits [125] and [133] both from Trench 7. Context [2] provided two cattle-size fragments, while the levelling deposits produced a sheep metacarpus, again probably 'improved' and a chicken femur, also large, suggestive of a male bird or an 'improved' poultry breed, from [125]; and finally a pig mandibular canine, from an adult sow [133].

The sheep/goat metacarpus from [125] displayed thin layers of extra bone along the latero- and medialposterior margins of the shaft close to the proximal end, suggestive perhaps of periostitis related to a nonspecific infection.

# Conclusion and recommendations for further work

The animal bones from the prehistoric (excluding the pig skeleton) and the post-medieval/modern levels are essentially of little interest. Small quantities and relatively poor dating diminish their potential value, the latter clearly detrimental to any comparison of animal usage throughout the occupation period of Ember Court. However, it is recommended that the post-medieval information described in this report (or at least a summarised version) should be included in any future publication concerning this high status household.

In contrast, the probable Iron Age pig skeleton is certainly worthy of further work. It was mentioned that it may represent a rather rare find amongst the articulated remains (generally referred to as Associated Bone Groups or ABGs) so far discovered from Iron Age sites in Southern England, the more so if this animal

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does indeed represent a wild boar. Now of course this perceived rarity and therefore potential value is reliant on accurate identification and dating. In the latter case, if the associated finds and stratigraphy are insufficient, it is recommended that part of this skeleton should be sent off for carbon dating. The identification issue can be resolved by a visit to a reference collection with numerous comparative pig and wild boar skeletons, as for example the Natural History Museum in London.

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# APPENDIX 11: ENVIRONMENTAL ASSESSMENT

Kate Turner

# Introduction

This report summarises the findings of the rapid assessment of the environmental remains found in twelve soil samples taken during the archaeological evaluation, and subsequent excavation, of land at Imber Court Trading Estate, East Molesey. These samples were taken from a series of features, including postholes, gullies, ditches and four suspected palaeochannels, the context information for which is given in Table 1.

The aim of this assessment is to:

- 1. Give an overview of the contents of the assessed samples;
- 2. Determine the environmental potential of these samples;
- 3. Establish whether any further analysis is necessary.

Context No.	Cut	Stage	Context type	Context category	Trench number	Phase	Date	Interpretation
5	6	Evaluation	Fill		1	EV1	Natural	Fill of palaeochannel (?) [6]
7	8	Evaluation	Fill		1	EV1	Natural	Fill of palaeochannel (?) [8]
27	28	Evaluation	Fill		3	EV4	Post-medieval	Fill of post medieval planting bed [28]
100	101	Excavation	Fill	Backfill	7	3	LBA/EIA	Fill of posthole [101]
135	136	Excavation	Fill	Accumulation	8	3	LBA/EIA	Fill of gully [136]
140	139	Excavation	Fill	Accumulation		3	LBA/EIA	Fill of palaeochannel (?)
142	141	Excavation	Fill	Accumulation	8	3	LBA/EIA	Fill of palaeochannel (?)
266	267	Excavation	Fill	Disuse	7	6	Medieval	Fill of ditch [267]
279	281	Excavation	Fill	Disuse	7	7	PM 16th-17th C	Secondary fill of tree throw [281]
280	281	Excavation	Fill	Disuse	7	7	PM 16th-17th C	Primary fill of tree throw [281]
332	333	Excavation	Fill	Disuse	7	3	LBA/EIA	Fill of ditch [333]
518	520	Excavation	Fill	Backfill		4	LIA/RB	Fill of animal burial [520]

Table 1: Context information for environmental samples, SITC16

# Methodology

Eleven environmental bulk samples, ranging from fourteen to sixty-five litres in volume, were processed using the flotation method; material was collected using a 300µm mesh for the light fraction and a 1mm mesh for the heavy residue. The heavy residue was then dried, sieved at 1, 2 and 4mm and sorted to extract artefacts and ecofacts. The abundance of each category of material was recorded using a non-linear scale where '1' indicates occasional occurrence (1-10 items), '2' indicates occurrence is fairly frequent (11-30 items), '3' indicates presence is frequent (31-100 items) and '4' indicates an abundance of material (>100 items).

The light residue (>300µm), once dried, was scanned under a low-power binocular microscope to quantify the level of environmental material, such as seeds, chaff, charred grains, molluscs and charcoal. Abundance was recorded as above. A note was also made of any other significant inclusions, for example roots and modern plant material.

Additionally, one bulk sample of thirty-three litres in volume was processed by wet sieving rather than tank flotation. This sample was collected from an animal burial for bone retrieval, though a flot was also retained. The sample was gently washed between 10mm and 2mm metal sieves over a floatation tank and the clean residue then dried and sorted as described above.

## **Results and Discussion**

All of the processed samples produced flots, ranging between three and one-hundred and ten millilitres in volume. For the purpose of this report, the results for the flots and heavy residues will be collated, and presented by intervention stage and phase.

# **Evaluation (Feb 2016**

## Phase 1: Natural

Environmental samples were collected from two features where there appeared to be no anthropogenic activity, [6] and [8], both of which were interpreted to be palaeochannels. Preservation of environmental material in these deposits was relatively poor; a moderate amount of wood charcoal (30-100 pieces) was reported in both, though this material was heavily fragmented, and no significantly sized pieces were recovered (>4 mm in length/width). In addition, low densities of weed seeds were identified; both samples contained small numbers of bramble (*Rubus* sp.), goosefoot (*Chenopodium* sp.), sedge (*Carex* sp.) and cabbage (*Brassicaceae* spp.), with feature [8] also yielding a negligible amount of elder (*Sambucus* sp.)

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## and birch (Betula sp.).

Molluscs were scarce, only a single left valve of Ostra Edulis (native oyster) was extracted from feature [8].

In terms of other environmental material, a low frequency of insect remains were recorded in both samples, along with moderate concentrations of insect eggs/worm cases. Context [7] also contained a large number of what appeared to be fungal schlerotia, which can be indicative of burning. Mosses were also found, though these were modern and are likely to have become introduced during the excavation process. A small amount of large animal bone was reported in feature [6].

## Phase 4: Post-medieval

During the evaluation phase, a single sample was taken from a planting bed dated the post medieval period. As would be expected from this type of feature, a large concentration of weed seeds were present, including moderate to abundant densities of goosefoot, fool's parsley (*Aethusa* sp.) and fumitory (*Fumaria* sp.), which are commonly found on waste or cultivated ground. Between thirty and one-hundred seeds of the genus *Rubus* sp. (brambles) were also found, which includes species of edible fruit such as raspberry, and may be a sign of either deliberate cultivation for consumption, or a local wild population. A moderate range of other taxa was reported in low concentrations, including seeds of nettle (*Urtica* sp.) and sow-thistle (*Sonchus* sp.).

Other archaeobotanical material was recovered, including a moderate amount of heavily fragmented wood charcoal, along with an abundance of preserved wood. The bulk of this material was however less than 2 mm in length/width, and too small for species to be established. Tiny pieces of unidentifiable plant matter were common in this deposit, as well as moderate concentrations of woody roots and tubers.

The planting bed was also found to contain a relatively sparse amount of insect remains, and a small number of fish scales, and fragments of non-human bone.

## Excavation (Feb & April 2017)

## Phase 3: Late Bronze Age/Early Iron Age

Environmental samples were collected from five features thought to contain deposits dated to the late Bronze Age/early Iron Age, two palaeochannels, a posthole, a gully and a ditch. Preservation across these features was variable; the gully fill, (135), was largely sterile, with only a moderate amount of wood charcoal, a single seed of goosefoot and between thirty and one-hundred insect eggs/worn cases recovered. Little

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can be gained in terms of environmental information from this deposit.

Preservation of archaeobotanical material was similarly poor in the two palaeochannel samples; wood charcoal was present in both features, with the majority of fragments being very small (<2mm in length/width). Weed seeds were recorded in each, but abundances were low, with less than twenty seeds recorded per sample; sedge and goosefoot were present in both samples, as were brambles and burnt specimens of grass. Sample <7> also contained specimens of mustard (*Brassicaceae* spp.), elder (*Sambucus* sp.) and plantain (*Plantago* sp.) and a single charred wheat grain (*Triticum* sp). Sample <8> contained a moderate amount of woody stems and/or twigs and a small number of roots. Biological remains, including insect eggs/worm cases, and insect remains were identified in low to moderate concentrations throughout.

In the sample collected from posthole [100] a moderate amount of wood charcoal was found, but this material was highly fragmented and no sizeable pieces were identified. Low densities of alder (*Alnus glutinosa*) and goosefoot were also reported, along with less than ten specimens each of charred grass (*Poaceae* sp.) and wheat (*Hordeum* sp.). The scattered nature of this material indicates that it may have been introduced to the deposit by wind transport, or some other natural pathway.

The colluvial ditch fill, feature [333], exhibited greater richness than the other sampled deposits. Whilst yielding only a small amount of charcoal, it produced a large quantity of weed seeds, including over one-hundred specimens of nettle, bramble and goosefoot, along with lesser concentrations of fumitory and dead-nettle (*Lamium* sp.) and an abundance of fragmented plant matter. A substantial amount of fungal schlerotia was also recorded.

# Phase 4: Late Iron Age/Roman

The single context sampled from the late Iron Age/Roman period produced little in the way of environmental material. This sample was primarily taken for bone recovery, as it contained a complete animal burial; aside from the recovered bone assemblage a low frequency of heavily fragmented wood charcoal was reported, along with seeds of birch (*Betula* sp.), sedge, pine (*Pinaceae* sp.) and goosefoot (<10 per type). A moderate amount of woody stems and/or twigs, and potentially modern roots were also found.

## Phase 6: Medieval – 12th to 13th Century

One sample was taken from a ditch fill dated to the medieval occupation of the site. Wood charcoal was

abundant in this deposit, with between thirty and one-hundred sizeable fragments reported. Weed seeds, including brambles, nettle (*Lamium* sp.) and fumitory were also present, but the overall density of seeds was moderate, with less than one-hundred seeds in total. This sample also contained a small amount of charred grasses, charred peas (*Fabaceae sp.*) and charred rye grains (*Secale Cereale*). Insect remains were reported in low concentrations,

## Phase 7: Post-medieval – 16th to 17th Century

Two samples were taken from a post medieval tree throw, one from the lower fill of the feature and one from the upper fill. In terms of environmental material, burnt seeds were frequent in both samples; peas were the most abundant, though grasses, knotweeds (*Persicaria* sp.) and daisies (*Asteraceae* sp.) were also identified. In addition, charred cereals including barley (*Hordeum* sp.) and wheat and/or rye were recorded. Weed seeds were relatively scarce, present in low densities with limited species diversity. Abundant wood charcoal was extracted from both fills, though sizeable pieces were rare. As with the with the majority of the assessed samples, insect eggs/worm cases were also recorded in both, along with a small amount of fish scales and insect remains in sample <11>.

A full account of the sample contents is given in the appendices.

## **Conclusions and Recommendations for Further Work**

To summarise, preservation of environmental remains in the selected samples from Imber Court was mixed. The most promising samples in terms of environmental potential are likely to be samples <3> and <12>, taken from the fill of a post-medieval planting bed, and a Late Bronze Age/ Early Iron Age ditch. Both these samples contained an abundance of weed seeds, plant material and fungal schlerotia, additional analysis of which may prove useful in undertaking an environmental reconstruction of the area and could help to shed light on patterns of cultivation during the both of these periods. The remaining seed assemblage from this site did not have the abundance or diversity required to be of diagnostic value, though the charred cereals may be useful in providing an improved chronology for deposits when suitable artefacts are not available, via radiocarbon dating. None of the assessed samples is suitable for insect analysis.

A summary of these results should be included in any subsequent site publications.

## Bibliography

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Kerney, M.P., 1999. Atlas of the Land and Freshwater Molluscs of Britain and Ireland. Colchester. Harley.

Stace, C., 1991. New flora of the British Isles. Cambridge: Cambridge University Press

#### Sample No. Context No. Feature No. Phase EV 1 EV 1 EV 4 Volume of bulk (liters) Volume of flot (milliliters) Method of processing F F F F F F F F F F HEAVY RESIDUE Charcoal

## Table 1: Assessment of environmental residues, SITC16

Charcoar												
Charcoal >4 mm									1	1		
Charcoal 2-4 mm												
Charcoal <2 mm			1									
Marine Molluscs												
Ostrea edulis (left valve)	Native Oyster		1									
Bone												
Small animal bone												
Large animal bone			1									
Fish bone				1								
Bone fragments									1		1	
Building material												
Brick			1	1							1	
Mortar				1								
Flint												
Struck flint		1	1	1			1					
Burnt flint		2	1	1	1	1	1	1	1	1	1	
Other material												

F

WS

Sample No.	1	2	3	4	6	7	8	9	10	11	12	50
Context No.	5	7	27	100	135	140	142	266	279	280	332	518
Feature No.	6	8	28	101	136	139	141	267	281	281	333	520
Pottery		1	1					2	1			
Clay pipe			1									
Glass	1		1	1					1		1	
Iron											1	
Hammer-scale	R	R	R		R			R		R	R	
Slag		1	3		1						2	
Clinker/burnt coal												
Coal	1	1	3		1			1			2	

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant ('R' indicates <2 mm residue has been kept)

Table 2: Assessment of environmental flots, SITC16

Sample No.	1	2	3	4	6	7	8	9	10	11	12	50
Context No.	5	7	27	100	135	140	142	266	279	280	332	518
Feature No.	6	8	28	101	136	139	141	267	281	281	333	520
Phase	EV 1	EV 1	EV 4	3	3	3	8	6	7	7	3	4
Volume of bulk (liters)	33	25	26	15	14	32	31	65	24	18	23	33
Volume of flot (milliliters)	53	22	110	3	15	6	54	48	40	17	23	14
Method of processing	F	F	F	F	F	F	F	F	F	F	F	WS
FLOT RESIDUE												
Charcoal												
Charcoal >4 mm					1			3	2	1	1	
Charcoal 2 - 4 mm	1	1	2	2	1	1	1	3	4	2	1	2
Charcoal <2 mm	3	3	3	3	3	3	3	4	4	4		3
Frags. of ID size	х	х	х	х	<5	х	Х	Y	<10	х	Х	х

Sample No.		1	2	3	4	6	7	8	9	10	11	12	50
Context No.		5	7	27	100	135	140	142	266	279	280	332	518
Feature No.		6	8	28	101	136	139	141	267	281	281	333	520
Phase		EV 1	EV 1	EV 4	3	3	3	8	6	7	7	3	4
Fragmented wood					1								
Wood >4 mm				1									
Wood 2 - 4 mm				3									
Wood <2 mm				4									
Seeds			1		1	1	1	1	1	1	1	1	
Aethusa sp.	Fool's Parsley			3								1	
Alnus Glutinosa	Alder				1								
Apiaceae spp. (undiff.)	Carrots			2									
Atriplex sp.	Oraches									1			
Betula sp.	Birch		1	1					1		1		1
Brassicaceae spp. (undiff.)	Cabbages	1	1	1			1		1		1		
Carex sp.	Sedges	1	1	1			1	1					1
Chenopodium sp.	Goosefoots	2	1	4	1	1	1	1		2	1	4	1
cf. Clinopodium sp.	Calamints			1									
cf. <i>Daucus</i> sp.	Carrots			1									
cf. Erucastrum sp.	Hairy Rocket								1			1	
Euphorbia Helioscopia	Sun Spurge			1									
Euphorbia Peplus	Petty Spurge			2								1	
Fumaria sp.	Fumitory			3					1			2	
Hyoscyamus Niger	Henbane			1									
Juncus sp.	Rushes											1	
Lamiaceae spp. (undiff.)	Deadnettles								1			1	
<i>Lamium</i> sp.	Dead-nettles			1					1			2	

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Sample No.		1	2	3	4	6	7	8	9	10	11	12	50
Context No.		5	7	27	100	135	140	142	266	279	280	332	518
Feature No.		6	8	28	101	136	139	141	267	281	281	333	520
Phase		EV 1	EV 1	EV 4	3	3	3	8	6	7	7	3	4
Papaver sp.	Poppies			1							1	1	
Pinaceae sp. (undiff.)	Pines												1
cf. Prunus sp. (shell)	Cherries			2									
Ranunculus Repens/Bulbosus	Creeping/bulbous buttercup			1									
Ranunculus sp.	Buttercups						1						
Rubus sp.	Brambles	1	1	3			1	1	3			4	
Rumex sp.	Docks			1									
Sambucus sp.	Elder		1	1			1		1	1	1	1	
Solanum sp.	Nightshades			1									
Sonchus sp.	Sow-thistles			2									
cf. Stachys sp.	Woundworts			2								1	
<i>Stellaria</i> sp.	Stitchwort			1									
<i>Taraxacum</i> sp.	Dandelions								1				
Urtica sp.	Nettles			2					2		1	4	
Verbena sp.	Vervains			1									
<i>Viola</i> sp.	Violets			1									
Vitis Vinifera	Grape-vine			1									
Broken seeds												4	
Unknown				2									
Burnt seeds		-											
Anthemis sp.	Chamomiles										1		
Aster sp.	Michaelmas-daisies									1			
Asteraceae spp. (undiff.)	Daisies									1	1		

Sample No.		1	2	3	4	6	7	8	9	10	11	12	50
Context No.		5	7	27	100	135	140	142	266	279	280	332	518
Feature No.		6	8	28	101	136	139	141	267	281	281	333	520
Phase		EV 1	EV 1	EV 4	3	3	3	8	6	7	7	3	4
Fabaceae spp. (undiff.)	Peas								1	2	2		
Lamiaceae sp. (undiff.)	Deadnettles									1			
cf. Lens culinaris.	Lentil									1			
Persicaria sp.	Knotweeds									1	1		
Plantago sp.	Plantains						1						
Poaceae sp. (large)	Grasses				1		1	1	2	2	1		
Rumex sp.	Docks									1			
Unknown										1			
Cereals	1	1				-							
Hordeum sp.	Barley									2	1		
Secale cereale	Rye								1		1		
Triticum sp.	Wheat				1		1			1			
Broken/distorted (No ID)								1	1	2	1		
Other plant macrofossils			T	T	T	n		T	T	T	1	T	
Fragmented plant matter				4								4	
Woody stems/twigs			1					3					3
Roots/tubers				3				2			1		4
Modern mosses		2	2		1								
Modern grasses					1								
Bone						_	_						
Fish scales				1							1		
Small animal bone												1	

Sample No.	1	2	3	4	6	7	8	9	10	11	12	50
Context No.	5	7	27	100	135	140	142	266	279	280	332	518
Feature No.	6	8	28	101	136	139	141	267	281	281	333	520
Phase	EV 1	EV 1	EV 4	3	3	3	8	6	7	7	3	4
Other environmental remains			-									
Insect remains	1	1	3			1	1	1		1	2	
Insect eggs/worm cases	3	2			3	4	3	2	2	2		
Fungal schlerotia		4									4	
Industrial Residue												
Clinker/burnt coal			4	1	3	2	2	4			2	
Slag	1	1	3	1	2		2	2	1		3	
Hammer-scale			2					2			2	
Vitreous material	4	3	4	2	3	3	4	4	3	4	4	1
Coal	4	2	4	2	3	4	4	3	3	3	3	1

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

# **APPENDIX 12: OASIS FORM**

# OASIS ID: preconst1-311298

<b>.</b>	
Project details	
Project name	Imber Court Trading Estate, Orchard Way, East Molesey, Surrey KTB 0BY
Short description of the project	In total, three phases of fieldwork were carried out between 2016 and 2017. The initial evaluation in 2016 had found several palaeochannels containing burnt and worked flint suggesting hunter-gatherer-fisher activity on the braided river system of the east bank of the River Ember. this activity possibly dating to between the Mesolithic to Neolithic periods. The second phase in 2017 uncovered a large, curvilinear enclosure ditch dating to the Late Bronze Age/early Iron Age period. It was re-cut in the Late Iron Age/early Romano-British period and its orientation changed to form more formalised co-axial field divisions. Medieval activity was present with a single ditch containing a cache of 12th century pottery. Finally, the third phase of activity in the south of the site uncovered the north wall of the north wing of Ember Court. The base foundation courses appear to have dated to the Tudor period with repairs, re-builds and the addition of buttresses occurring in the later 18th-19th centuries. The evolving formal gardens around the house recorded during the map regression exercise was confirmed through excavation.
Project dates	Start: 24-07-2017 End: 04-08-2017
Previous/future work	Yes / No
Any associated project reference codes	SITC16 - Sitecode
Turne of project	
Type of project	Recording project
Site status	Recording project None
Site status	None
Site status Current Land use	None Industry and Commerce 4 - Storage and warehousing
Site status Current Land use Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic
Site status Current Land use Monument type Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age
Site status Current Land use Monument type Monument type Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age DITCH RE-CUTS Late Iron Age
Site status Current Land use Monument type Monument type Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age DITCH RE-CUTS Late Iron Age POSTHOLES Late Bronze Age
Site status Current Land use Monument type Monument type Monument type Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age DITCH RE-CUTS Late Iron Age POSTHOLES Late Bronze Age PITS Late Bronze Age DITCHES Late Iron Age DITCH Medieval
Site status Current Land use Monument type Monument type Monument type Monument type Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age DITCH RE-CUTS Late Iron Age POSTHOLES Late Bronze Age PITS Late Bronze Age DITCHES Late Iron Age
Site status Current Land use Monument type Monument type Monument type Monument type Monument type Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age DITCH RE-CUTS Late Iron Age POSTHOLES Late Bronze Age PITS Late Bronze Age DITCHES Late Iron Age DITCH Medieval
Site status Current Land use Monument type Monument type Monument type Monument type Monument type Monument type Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age DITCH RE-CUTS Late Iron Age POSTHOLES Late Bronze Age PITS Late Bronze Age DITCHES Late Iron Age DITCHES Late Iron Age PITCH Medieval PLANTING BEDS Post Medieval
Site status Current Land use Monument type Monument type Monument type Monument type Monument type Monument type Monument type Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age DITCH RE-CUTS Late Iron Age POSTHOLES Late Bronze Age PITS Late Bronze Age DITCHES Late Iron Age DITCHES Late Iron Age BUILDING Post Medieval
Site status Current Land use Monument type Monument type Monument type Monument type Monument type Monument type Monument type Monument type Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age DITCH RE-CUTS Late Iron Age POSTHOLES Late Bronze Age PITS Late Bronze Age DITCHES Late Iron Age DITCH Medieval PLANTING BEDS Post Medieval BUILDING Post Medieval
Site status Current Land use Monument type Monument type Monument type Monument type Monument type Monument type Monument type Monument type Monument type Monument type	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age DITCH RE-CUTS Late Iron Age POSTHOLES Late Bronze Age PITS Late Bronze Age DITCHES Late Iron Age DITCHES Late Iron Age DITCH Medieval PLANTING BEDS Post Medieval BUILDING Post Medieval BUILDING Post Medieval
Site status Current Land use Monument type Monument type Monument type Monument type Monument type Monument type Monument type Monument type Monument type Monument type Significant Finds	None Industry and Commerce 4 - Storage and warehousing PALAEOCHANNEL Mesolithic DITCH Late Bronze Age DITCH RE-CUTS Late Iron Age POSTHOLES Late Bronze Age PITS Late Bronze Age DITCHES Late Iron Age DITCHES Late Iron Age DITCH Medieval PLANTING BEDS Post Medieval BUILDING Post Medieval BUILDING Post Medieval CONCRETE WORKS Modern LITHICS Late Prehistoric

Significant Finds	CBM Post Medieval
Significant Finds	ANIMAL BONE Late Iron Age
Significant Finds	ANIMAL BONE Post Medieval
Investigation type	"'Part Excavation'"
Prompt	National Planning Policy Framework - NPPF
Project location	
Country	England
Site location	SURREY ELMBRIDGE ESHER Imber Court Trading Estate
Postcode	КТВ ОВҮ
Site coordinates	TQ 14695 67143 51.391215663092 -0.351350060255 51 23 28 N 000 21 04 W Point
Height OD / Depth	Min: 8.02m Max: 10m
Project creators	
Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	CgMs Consulting Ltd
Project design originator	CgMs Consulting Ltd
Project director/manager	Chris Mayo
Project supervisor	Wayne Perkins
Name of sponsor/funding body	Wates Developments Ltd and Cala Homes
Project archives	
Physical Archive recipient	Surrey History Centre
Physical Contents	"Animal Bones","Ceramics","Environmental","Glass","Worked stone/lithics"
Digital Archive recipient	Surrey History Centre
Digital Contents	"Animal Bones","Ceramics","Environmental","Glass","Stratigraphic","Survey","Worked stone/lithics"
Digital Media available	"Database","Images raster / digital photography"
Paper Archive recipient	Surrey History Centre
Paper Contents	"Animal Bones","Ceramics","Environmental","Glass","Stratigraphic","Survey","Worked stone/lithics"

Paper Media available	"Context sheet","Drawing","Matrices","Photograph","Report","Section"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Assessment of an Archaeological Excavation at Imber Court Trading Estate, Orchard Lane, East Molesey, Surrey KT8 0BY.
Author(s)/Editor(s)	Wayne Perkins
Other bibliographic details	Report Number R12402
Date	2018
lssuer or publisher	PCA
Place of issue or publication	Brockley
Description	Bound report containing a description of the works carried out; methodology utilised and results. report includes text, tables, figures and photographic plates along with appended specialists reports, context index and bibliography.
Entered by Entered on	Wayne Perkins (WPerkins@pre-construct.com) 17 April 2018

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