

Phase 2 Navigation Park Ponders End Enfield



Archaeological Evaluation Report



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Phase 2, Navigation Park, Ponders End, Enfield

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Summary

Oxford Archaeology undertook an archaeological evaluation of the Phase 2 development area at Navigation Park, Ponders End, Enfield for SEGRO Properties Limited in May 2015. This comprised the excavation of 19 trenches over an area that encompassed 3.48ha.

Archaeological features were located in the central part of the site, where the underlying Pleistocene gravel rises in elevation, away from the deeper parts of the floodplain. The features comprised postholes, pits and a substantial N-S aligned ditch that ran through three of the trenches. Pottery of the Deverel-Rimbury tradition indicates a middle Bronze Age date and the quantity and character of the features and finds suggest the site may represent a domestic settlement, possibly associated with a ditched boundary or enclosure.

Contamination by hydrocarbons and unstable trench edges in the eastern part of the site precluded detailed recording and sampling of the deeper alluvial and peat sequences in this area.

Sondages excavated into the Pleistocene gravels in order to investigate the organic 'Arctic Bed' deposits, which are known to be preserved within the Lea Valley, failed to identify any evidence for them; this may indicate either that the deposits are absent from this area or that they are buried at too great a depth to be exposed in the sondages.



1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 Between May and June 2015 Oxford Archaeology (OA) undertook an archaeological evaluation of the Phase 2 development area at Navigation Park, Ponders End, Enfield for SEGRO Properties Limited (Fig. 1). The site lies within an existing industrial estate within the Lea Valley. It was proposed to erect three industrial units with accompanying loading docks, parking areas and landscaping within the development boundary, which encloses an area of c 3.48 hectares.
- 1.1.2 A Desk-Based Assessment (DBA) that included a deposit model for the site had previously been produced by OA (OA 2009) and an archaeological evaluation for the Geopost Phase 1 of the development, to the south of the current site, had been carried out in 2010 (OA 2010).
- 1.1.3 This current phase of evaluation work was undertaken as a condition of Planning Permission (planning ref: P12-02641PLA). Condition 32 of the Planning Permission relating to heritage assets is quoted below. This evaluation specifically fulfils the requirements of part A of the condition.

Condition 32

A) No development shall take place until the applicant has secured the implementation of a programme of archaeological works in accordance with a Written Scheme of Investigation which has been submitted by the applicant and approved by the local planning authority.

B) No development or demolition shall take place other than in accordance with the Written Scheme of Investigation approved under Part (A).

C) The development shall not be occupied until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the Written Scheme of Investigation approved under Part (A), and the provision made for analysis, publication and dissemination of the results and archive deposition has been secured.

Reason: Heritage assets of archaeological interest survive on the site. The planning authority wishes to secure the provision of archaeological investigation and the subsequent recording of the remains prior to development (including historic buildings recording), in accordance with recommendations given by the borough and in NPPF.

- 1.1.4 The Local Planning Authority did not set a detailed brief for archaeological evaluation of this site. Following discussions with Sandy Kidd of the Greater London Archaeological Advisory Service (GLASS) at Historic England to establish the scope of work required to adequately evaluate the archaeological potential of this site, OA prepared a Written Scheme of Investigation (WSI). The WSI outlined the scope, aims and method by which the evaluation was to be undertaken and was approved by GLASS prior to fieldwork commencing (OA 2015).

1.2 Geology and topography

- 1.2.1 The site is bordered by Morson Road to the west, the Phase 1 Geopost development to the south, the River Lea Navigation to the east and industrial areas to the north. It lies within the historic parish of Enfield, and the administrative authority of Enfield Borough Council. This evaluation area encloses an area of 3.48ha centred on TQ 36260 95280.



The above ground structures were demolished and crushed prior to the start of the evaluation. The floor level (slab) and below ground obstructions (foundations) were not removed prior to the evaluation. The surface level of the current site is at approximately 13m aOD.

- 1.2.2 The underlying geology is mapped as a drift geology of the Kempton Park Gravels (a river terrace deposit), with the eastern part lying on Holocene alluvium (silt and clay with peat and organic clay horizons). The underlying solid geology is London Clay (BGS Sheet 256, Solid and Drift 1:50,000).
- 1.2.3 The site was subject to geoarchaeological modelling as part of the DBA, using data from the Phase II Geotechnical and Environmental Ground Investigation Report (Arcadia GMI 2008). The main stratigraphic bodies are summarised below (OA 2009). This covers the entire DBA investigation area, comprising both the area of the Phase 2 evaluation and the Phase 1 Geopost area. The survey identified and characterised an alluvial sequence at the edge of the valley which includes peat deposits and organic clays. It also indicated that the whole site was overlain by alluvial deposits, and not just the eastern extent as suggested by the geology map, although these deposits do become much more shallow from east to west.
- The London Clay bedrock forming the base of the sequence was generally described as soft to firm becoming stiff with increasing depth, dark grey, slightly sandy clay and was identified in 27 of the 54 borehole locations. The upper surface of this unit was encountered at depths from 4.5m below ground level (bgl) in borehole GM403 to 8.0m bgl (GM302).
 - A layer of brown, light to dark grey, orange and yellow, slightly clayey, very sandy gravel (Kempton Park Gravel) was encountered overlying the bedrock. The gravel was fine to coarse multi-coloured clasts, composed of flint and quartzite gravel. The upper surface of the unit was encountered at depths of between 1.2m bgl (GM113) and 4.2mbgl (GM101) (Fig. 2). In the boreholes that penetrated the full thickness of gravel, the base of the deposits was revealed at depths of between 4.5m bgl (GM403) and 8.0m bgl (GM302).
 - Soft to firm, grey, orange and brown occasionally organic-rich, slightly sandy gravely towards the base, clay (alluvium) was encountered overlying the gravel in 43 of the 54 locations. The upper surface of the alluvium ranged from 0.4m bgl (GM116 and GM612) to 2.1m bgl (GM402), whereas the base of the alluvium ranged from 1.2m bgl (GM113) to 4.0m bgl (GM201, GM504 and GM607). The alluvium varied in thickness from 0.3m at the south-west (GM402) to 3.1m at the south-east of the site (GM502). Brown fibrous and spongy peat deposits were identified in three locations, both overlying (GM111 and GM604) and underlying (GM604 and GM609) this alluvium. The thickness of the peat deposits ranged from 0.1m (GM604, overlaying alluvium) to 0.8m (GM604, underlying alluvium).
 - Bituminous and concrete hardstanding is present across the site, generally from surface level ranging in thickness from 0.15m to 0.25m with the exception of one location to 0.8m. Underlying the hardstanding, a unit of made ground, highly variable both in thickness and composition, was identified in 50 of the 54 sampling locations. The depth to the base of the made ground ranged from 0.4m bgl (GM116 and GM612) to 2.8m bgl (GM405), and comprised predominately clayey sand and gravel layers that contained fragments of brick, concrete, mortar, glass, metal, pottery, timber, coal, bituminous surfacing, plastic, flint, quartz, chalk, clinker and potentially asbestos-containing material.



Phase 1 Geopost evaluation

- 1.2.4 The results of the evaluation carried out in 2009 was generally consistent with the initial deposit modelling and revealed that the alluvial sediment sequence was well preserved in the east. Intercalated peat and channel-edge deposits were recorded, sealed by up to 2m of alluvium. A brown gravelly silt overlying the gravel in Trench 5 produced an early Bronze Age radiocarbon date of 3690 ±40 BP (SUERC-32559, 2200-1950 cal BC). However, no artefacts or other evidence was present to suggest contemporary human activity within the site. Of note was the apparent absence of alluvium over the western part of the site, which was significantly truncated by modern foundations. The evaluation also investigated the potential for deposits relating to the late Pleistocene organic 'Arctic Beds' through deeper test pits but no such deposits were encountered.

1.3 Archaeological and historical background

General

- 1.3.1 The archaeological background of the site has been previously outlined in detail in the DBA (OA 2009). The following section summaries the key points.
- 1.3.2 The earliest deposits of palaeoenvironmental significance known to exist within the vicinity of the site are the Lea Valley 'Arctic Beds'. These deposits are contained within the gravel and sand units of the Lea Valley Gravel and have been shown to contain cold climate or full glacial plant, insect and faunal assemblages (Corcoran *et al.* 2011; Gibbard 1994, 109-10, 192). The sediments comprise organic beds with plant detritus, beetles, shells and occasional animal bones. The first instance of discovery was at Pickett's Lock, approximately 1.3km south of the site.
- 1.3.3 During the Holocene period, the Lea Valley experienced gradual sedimentation combined with active channel movements across the width of the valley floor. The Lea Valley Mapping Project (Corcoran *et al.* 2011), recognised the potential of the deposit sequence within the Lea Valley to contain significant archaeological and palaeo-environmental remains. The location of Navigation Park close to the edge of the interface between the river valley and the higher ground of the terrace gravels suggests that it lies within a habitat likely to be favoured by prehistoric populations. Excavation within former river channels at Milmarsh Lane, c 1.8 km to the north, identified peat and alluvial sequences; toward the base of the sequence the peat produced an early Mesolithic radiocarbon date of 7420-7050 cal BC and the excavation recovered 120 struck flints dominated by flakes and blades. The peat deposits were overlain by alluvial clays and other organic-rich sediments that produced excellent palaeo-environmental evidence and a late Mesolithic radiocarbon date of 6115-5835 cal BC. Significant waterlogged deposits dating to the Bronze Age have also been discovered within Enfield to the north of the site. These discoveries are indicative of prehistoric exploitation of the wetland margin habitat.
- 1.3.4 There is comparatively little evidence for activity within the surrounding area during the later prehistoric period, although possible occupation dating from the Iron Age has been identified c 660 m to the south of the site. The River Lea is also believed to have been the boundary between the territories of the two Iron Age tribes of the Catuvellauni to the west and the Trinovantes to the east (Robbins 2003, 12).
- 1.3.5 During the Roman period, *Londinium* (London) developed as an urban centre and later the provincial capital and lay at the centre of Roman Britain's communication system (Perring and Brigham 2000, 147). Enfield was at this time c 12km north of Londinium and would not have been considered part of its territory. However, a Roman settlement has been identified c 2.2km west of the Site, and is believed to have originated in the



early Roman period as a posting station on Ermine Street, the Roman road from London to Lincoln (*ibid.*, 150). Evidence for Roman activity in the immediate vicinity of Navigation Park is scarce, although a small excavation nearby to the west recorded a ditch of probable Roman date, whilst there have been other instances of stray Roman finds in the parish. The River Lea was an important route during the Roman period, and river traffic is likely to have passed frequently along it.

- 1.3.6 The name 'Enfield' is of later Saxon origin, the suffix '-field' implying settlement and clearance in woodland. Domesday records the parish of Enfield as mainly woodland with marshes by the river (Weinreb *et al.* 2008, 652). A section of land within the eastern part is recorded as belonging to the Ponder family from at least the 14th century, hence the settlement name of Ponders End, and the land belonging to them is recorded as having been used for common grazing (*ibid.*, 652).
- 1.3.7 The earliest detailed map that includes the site boundary is the 1754 map of the Parish of Enfield. This shows a change in land use from common land in the west and marshland in the east, through the development of the eastern limits of the site to accommodate the canalisation of the Lea with its various locks. By 1803, there is some evidence for a series of irrigation ditches within the western part of the site, which, combined with the canalisation of the River Lea Navigation, is likely to have stopped the seasonal flooding of this locality.
- 1.3.8 By the 1st Edition Ordnance Survey map of 1881 the process of industrialisation had begun and by 1896 the 2nd Edition Ordnance Survey map showed major development within the site boundary for the first time. This comprises a number of small buildings labelled as 'Corticine Works (Linoleum)'. Further industrial development occurred during the 20th century with at least three phases of construction/modification taking place. Additionally, the William Girling Reservoir was built on an area of former marsh to the east.



2 EVALUATION AIMS AND METHODOLOGY

2.1 Aims

General

2.1.1 The evaluation aimed to establish the archaeological potential of the site. To achieve this the general objectives were:

- to establish the presence/absence of archaeological remains within the proposal area;
- to determine and confirm the character of any remains present, without compromising any deposits that may merit detailed investigation under full area excavation;
- to determine or estimate the date range of any remains from artefacts or otherwise;
- to characterise any underlying archaeological strata down to undisturbed geology without significantly impacting upon significant younger (overlying) deposits where possible;
- to determine the geoarchaeological and palaeoenvironmental potential of any archaeological deposits encountered;
- to establish what archaeological remains/deposits may be affected by any proposed development;
- to make available the results of the investigation to inform the potential for any further mitigation strategy;
- to produce a report and full archive;
- to disseminate the results of the investigation at a level appropriate to their importance.

Specific aims and objectives

2.1.2 The evaluation specifically sought to;

- establish the presence/absence of the Ponders End 'Arctic Beds' within the new building footprints;
- establish the presence/absence and extent of any organic deposits within the alluvial sequence;
- establish the date range of organic remains ('Arctic Beds' and Holocene horizons) through the use of C14 dating or other suitable scientific methods as appropriate to the types of deposits encountered.

2.2 Methodology

2.2.1 The evaluation was carried out alongside and immediately following the removal of the existing concrete slab in stages by the demolition principal contractor. A method for the removal of the slab in a manner to avoid impact upon potential buried archaeological remains had been previously produced by OA and agreed with GLAAS.

2.2.2 The evaluation itself comprised an approximate 4% sample of the area of greatest impact within the development boundary (building footprints), along with additional trenches to adequately cover the impact of subsurface drainage and other services



within the parking areas. This translated to 19 trenches, each measuring 30m x 2m (Fig. 2).

Trenches within the footprint of the new structures

- 2.2.3 The trenches excavated within the footprint of the new structures were mechanically excavated to the first archaeological horizon or the surface of the underlying gravel depending upon which was encountered first. Some of these trenches were expected to reach depths of 2-2.5m or more due to the presence of alluvial sediments and thick deposits of made ground based upon the evidence of the deposit model and the existing ground levels. To safely excavate to this depth these trenches were stepped in 1m units (depth and step in) with spoil stored at a distance of no less than 1m from the edge of the upper step.
- 2.2.4 It was recognised that archaeological deposits might be stratified within the alluvial sequence above the gravel and particular care was taken to ensure such deposits were identified during the machine excavation. Where archaeological horizons were identified above the level of the underlying gravel, machine excavation exposed this horizon along the length of the trench. Hand excavation continued at this stage to fulfil the aims outlined above. Once this archaeological horizon has been sufficiently evaluated the trench was machine excavated to the next horizon below this level or the surface of the gravel.
- 2.2.5 Where machine excavation exposed the surface of the gravel, this horizon was sufficiently cleaned to establish the presence/absence of archaeological remains. Where these were absent and within a maximum of two of these trenches, machine-dug sondages were excavated to investigate the gravel sequence and evaluate for the potential presence of the Arctic Beds. These were entirely machine excavated and all recording of the exposed deposits was undertaken from the surface of the trench.

Trenches beyond the footprints of the new structures

- 2.2.6 Machine excavation of these trenches followed the same general principles outlined above. However, the impact of the construction within these areas was much less than that of the new buildings and the depth of the trenches was therefore limited to 2m, this being the maximum depth of the drainage attenuation installations.

3 RESULTS

3.1 Introduction and presentation of results

- 3.1.1 The descriptions of the trenches presented below provide a detailed overview. A comprehensive listing of individual trench and associated context data can be found in Appendix A. This should be referred to for factual information such as dimensions, which are not otherwise included within the descriptive text unless pertinent to the description.
- 3.1.2 Individual contexts have been uniquely numbered by trench starting at 100 and then being followed by the individual context (eg the first context used for Trench 1 would be 100, that for Trench 2 would be 200 etc).
- 3.1.3 Detailed reports on the finds and samples are presented in Appendices B and C, with relevant information integrated into the detailed trench descriptions and a summary following the trench descriptions.

3.2 General soils and ground conditions

- 3.2.1 The risk of contamination was a major consideration during the evaluation. Groundwater was encountered in all trenches, usually as soon as the underlying gravel deposits were exposed. In trenches in the eastern part of the site, this groundwater was clearly contaminated with hydrocarbons. Because of this, the lower steps in these trenches were not entered and recording was conducted from the uppermost levels prior to backfilling. Consequently, no detailed recording or sampling of the alluvial sediment sequences could be carried out.

3.3 General distribution of archaeological deposits

- 3.3.1 Table 1 summarises the distribution of archaeological features identified during the evaluation.

Table 1: Distribution of archaeological features

Trench	Description	Associated dating evidence
1, 2, 3, 4, 5, 6, 9, 12, 13, 14, 17, 18*, 19*	Trenches devoid of archaeology. Modern concrete and made ground truncating alluvial clay and/or gravel	
7	Not excavated due to high levels of truncation in the trenches located immediately adjacent	
8	Ditch 805	MED-PMED?
10	Pits 1006 [†] * and 1012* Ditch 1010* Postholes 1015 * and 1017 *	MLBA Fired clay [†] MBA pottery* Charred cereal
11	Pits 1107 and 1110 Ditch 1112 Posthole 1114	
15	Ditch 1504	
16	Ditches 1607 * and 1618	MBA pottery* Charred cereal



3.4 Trench descriptions

Trenches 1-4

3.4.1 Trenches 1-4 were all located in the northern half of the overall development area, with Trenches 2, 3, and 4 being situated within the proposed footprint of new structures. A similar sediment sequence was recorded in all four trenches and no archaeological features were identified.

3.4.2 Trench 1 presented a representative sequence of this group. Here the gravel surface was encountered at 1.7-1.9m bgl, generally sloping down to the west. High levels of hydrocarbon staining to the upper horizon of the gravel was noted throughout. Sealing the gravel was a homogeneous, tenacious, mid bluish grey alluvial silty clay (1002) that was c 1.10m thick and had been truncated at its upper surface. The alluvium was overlain by c 0.5m of modern made ground, comprising mixed rubble and hydrocarbon-contaminated soil with brick, fragments of rusting metal and cinders. The sequence was capped by the remnants of a broken-up concrete slab 0.10m thick (1000).

Trench 5

3.4.3 Trench 5, further to the east, contained large concrete foundations, heavily truncating the alluvial clay horizon. This, together with the presence of contamination and the existence of live cabling, dictated the trench be shortened to 12m for safety reasons. In the areas where preserved deposits were visible, it was clear it followed the same sequence as Trenches 1-4, with made ground deposits (500) truncating a heavily contaminated alluvial clay horizon (501). Natural gravel was reached at slightly lower elevations at c 2.4m bgl, which is consistent with the eastward slope of the gravel surface indicated by the deposit model. No archaeological features were identified.

Trenches 6 and 7

3.4.4 Trench 6 was intended to be located within the proposed footprint of new structures, but due to obstruction by concrete foundations its position was moved 25m to the north. Despite this adjustment, many modern intrusions were nevertheless encountered. The western end of the trench had suffered the most disturbance with multiple large concrete foundation pads penetrating into the natural gravel deposits. The surface of the gravel (604) was noted at 1.8m bgl. There were fewer intrusions in the eastern part of the trench, with a clear sloping of alluvial clay deposits 602 and 603, deepening to the east. Layer 602 was described as a dark bluish grey silty clay and layer 603 was a mid bluish grey clay silt. A test pit was excavated at the eastern end of the trench to establish the depth of the surface of the gravel, but despite a depth of 3.5m bgl, no gravel deposits were observed. A dark brown, organic sandy silt (605) was identified beneath alluvial clay 603, exposed to a thickness of 1.5m. A sieved sample from the silt produced 13 small amphibian bones.

3.4.5 Trench 7 was intended to be located on the far eastern side of the development area, closest to the River Lee Navigation channel. Due to truncation evidence nearby and intrusions visible on the surface, it was agreed with GLASS that the archaeological potential was low and the trench was not excavated.

Trench 8 (Fig. 3)

3.4.6 Trench 8 was located outside the footprint of the new structures on the eastern side of the site. As with other trenches in similar locations, a high level of hydrocarbon contamination was observed during excavation.



- 3.4.7 The western end of the trench contained much modern truncation, but further east the deposit sequence was less effected (Fig 3). Here, the undisturbed natural gravel surface (804) was encountered at c 1.30-1.45m bgl. This was sealed by a 0.72m thick sequence of clay alluvial deposits (803), which appeared entirely natural in deposition with no artefacts present. Cut into the surface of layer 803 were two features, slightly obscured by contaminated soils. These represented a linear ditch (805) and a natural feature (807).
- 3.4.8 Ditch 805 was aligned approximately N-S and had a shallow U-shaped profile filled with a single, sterile silting deposit (806). The feature may be one of the linear boundaries recorded on historical maps from the 19th century onwards. On its western edge lay pit/natural feature 807, but the stratigraphic relationship between them was unclear. Neither feature contained any artefacts. Both features were overlain by a preserved subsoil horizon (802), which in turn has been sealed by modern made ground material (801).

Trenches 9, 12, and 14

- 3.4.9 Trenches 9 and 12 were both located outside the footprint of the proposed attenuation installations. In Trench 9 large modern drainage systems, cabling channels and live services obscured much of the southern end of the trench. The surface of the floodplain gravel (903) was exposed along the length of the trench, but significant truncation of the overlying clay alluvial deposits (902) was noted, with only localised survival within the northern portion of the trench. No archaeological features were encountered.
- 3.4.10 Trench 12 produced a similar results to Trenches 1 and 2, with hydrocarbon contaminated floodplain gravels (1203) sealed by a truncated horizon of alluvial clay (1202) that was in turn overlain by made ground (1201). No archaeological features were encountered.
- 3.4.11 Trench 14 was located toward the southern extent of the development site and within the proposed footprint of the new structures. The sequence in this trench consisted of natural gravel (1402) exposed at a depth of 2.1m bgl, truncated by a concrete foundation/made ground layer (1401) that was sealed by a concrete slab (1400).

Trench 10 (Fig. 4)

- 3.4.12 Trench 10 was located just inside the northern edge of the proposed structure area. The trench was excavated to a depth of c 1.00-1.2m bgl, exposing the surface of a firm orange brown sandy clay silt (1011) that was cut by several archaeological features. The sandy clay silt appeared different in character than the overlying alluvial deposits in both density, colour and texture and has affinities with 'brickearth'-type deposits that are known to cap the Pleistocene gravels in the region. This deposit was c 0.4m thick overlying sandy fluvial gravel. The archaeological features comprised a linear ditch (1010), two pits (1006 and 1012) and two postholes (1015 and 1017). The archaeological horizon was sealed a weathered brickearth 'subsoil' comprising a mid yellowish to greyish brown sandy clay silt (1003) 0.20-0.25m thick. Overlying the subsoil was a dark brownish grey alluvial clay silt (1002) c 0.10m thick. The sequence was capped by c 0.6m of made ground (1001) and a c 0.2m thick concrete slab layer (1000).

Ditch 1010

- 3.4.13 Ditch 1010 ran on a roughly N-S alignment and had a regular V-shaped profile, in-filled with three fills. The lower fill (1009) consisted of orange brown sands mixed with light grey sandy clay, which in part may be the result of erosion of the feature edges and



perhaps an external bank and silting within the base of the feature. The overlying fill (1008) consisted of a dark bluish grey slightly sandy clay with occasional flint gravel. The upper fill (1007) consisted of a mixed deposit of mid brown and orange mottled gravelly silty sand with pockets of clay. Four pottery sherds from fills 1007 and 1008 have been dated to the middle-late Bronze Age.

Pit 1012

- 3.4.14 Pit 1012 was located adjacent to ditch 1010, on its western side. It measured c 1.30m x 0.72m, and was 0.27m deep, with contained two fills. The lower fill (1013), an orange-brown silty clay, appeared to derive from burning processes related to occupational activity and contained charcoal, burnt flint, fired clay and a single sherd of undecorated middle Bronze Age pottery. Thirteen fragments of tooth enamel were recovered that probably came from cattle. The upper fill (1014) was a more sterile greyish brown silty clay and may have derived from natural silting.

Pit 1006

- 3.4.15 Pit 1006 was located further west and had a similar shape and profile to pit 1012, but with larger dimensions of c 2.00m x 1.19m and 0.25m deep. The lower fill, a mid orange brown sandy silt (1005), contained worked and burnt flint, fired clay and pottery. The upper fill, a mid grey brown sandy silt (1004) contained smaller quantities of finds. A total of 155 sherds of pottery were recovered from fills 1004 and 1005, representing c 40% of a single middle Bronze Age thick-walled jar with a fingernail-impressed cordon on the vessel wall. The base was present but no rim fragments were recovered. The form and fabric is consistent with vessels described as Deverel-Rimbury Bucket Urns (Ellison 1978). All but two of the sherds were recovered from the lower fill (1005), in what appeared to be a dump of material in the south-western corner of the pit, although the sherds were not deposited as an intact vessel. Fourteen fragments of fired clay from fill 1004 suggest domestic debris from an internal oven wall surface was deposited in this pit. Four pieces from fill 1005 are likely to derive from a cylindrical drum- or barrel-shaped block with an axial perforation of c 30mm diameter. It is possible this may have served as oven or hearth furniture and is characteristically of a mid-late Bronze Age date. Fourteen pieces of worked flint were recovered from fill 1004 from sample sieving. The flints were very fresh and consist of undiagnostic fine knapping waste or small trimming flakes. In addition to the artefactual material the fills from the pit appeared to contain significant quantities of charred material. A 40L sample processed from fill 1004 recovered frequent charred cereal grains of wheat and barley along with cereal chaff, charred weed seeds, legumes and wood charcoal. Much of the charcoal appeared to derive from oak.

Postholes 1016 and 1017

- 3.4.16 Further west, two postholes were identified. Posthole 1015 was circular in plan, with steep sides and a flat base, and measured 0.37m in diameter and 0.22m deep. Posthole 1017 was also is also circular in plan, with steep sides and a flat base, measuring 0.25m in diameter and 0.3m deep. Both features contained similar fills including burnt flint and sherds of middle Bronze Age pottery, probably derived from Globular Urns. A 12 litre sample processed from fill 1016 of posthole 1015 produced a small number of charred cereal grains which included wheat and oat/brome. Charred cereal chaff was also noted along with weed seeds. Wood charcoal was dominated by oak with a lower proportion of Pomoideae type.

**Trench 11 (Fig. 5)**

- 3.4.17 Trench 11 was located between the two areas of proposed structural development, and was intended to be oriented N-S. However, due to the identification of the N-S ditch that ran through Trenches 10, 16, and 15, the trench was rotated to an E-W alignment in order to investigate the possible continuation of this feature. However, no evidence of the ditch was found.
- 3.4.18 The natural gravel was not exposed in this trench, which was excavated to the surface of orange to yellow-brown sandy clay silt 'brickearth'-type deposits, 1105 and 1104 at c 1.8-1.9m bgl. This horizon was cut by pits 1107 and 1110, posthole 1114 and possible linear feature 1112. Layer 1105 and the archaeological features were sealed by a series what appeared to be disturbed or redeposited soils (1102 and 1103). Layer 1103 was a mid grey-brown clayey sand with heavy manganese flecking, small coal and CBM fragments and frequent small stones, and was 0.20m thick. Layer 1102 was a dark grey clay silt 0.15m thick. The sequence was capped by c 0.9m of made ground (1101) comprising clayey gravels and building rubble, overlain by 0.5m of broken up concrete slab (1100).

Pits 1107 and 1110

- 3.4.19 Both pits were irregularly shaped with uneven sides and bases, measuring roughly 0.6m and 1.0m in diameter respectively. Both were backfilled with sterile silting fills, leading to the suggestion that these were more likely to be tree holes. No artefacts were identified during excavation.

Linear feature 1112

- 3.4.20 Feature 1112 ran on a N-S alignment. It had a shallow uneven base with a shallow concave western side, and measured 0.9m long and 0.2m wide. It had a single fill (1111), which appeared to be sterile and probably derived from natural silting. No artefacts were identified during excavation. It had a diffuse, ambiguous inter-cutting relationship with posthole 1114.

Posthole 1114

- 3.4.21 The posthole had a very regular appearance, circular in plan with a flat base and steep, slightly concave sides. It measured 0.27m in diameter and was 0.17m deep. It had a similar fill to [1112], and no finds were recovered.

Trench 13

- 3.4.22 Trench 13 did not encounter the extent of modern truncation demonstrated by trenches further north. Similar to Trenches 10 and 11, the natural gravel (1307) was overlain by c 0.5m of sandy clay silt 'brickearth' (1306), the surface of which lay at c 0.70m bgl. The 'brickearth' was cut by an irregularly-shaped natural feature (1305). Above this lay various layers of recent made ground (1301, 1302 and 1303).
- 3.4.23 A series of N-S features that were initially viewed as possible ditches or channels cutting into the surface of the brickearth at the western end of the trench were investigated. Additional machine excavation and detailed inspection of the sediments revealed these to be areas where industrial contaminants had leached into the sediments and vividly staining the soils. The sondage was excavated c 2m into the brickearth, revealing the profile of the underlying gravel. No evidence of the 'Arctic Bed' sediments were noted within the gravel at this location and elevation.

Trench 15 (Fig. 6)

- 3.4.24 Trench 15 did not encounter as much modern truncation as trenches further north. The trench was excavated to the surface of an orange to yellow-brown sandy clay silt 'brickearth' (1508) that lay at c 1.3m bgl and was cut by a ditch (1504). Ditch 1504 had a sharp V-shaped base, with steep straight sides, and measured 1.54m wide and 0.86m deep. It was in-filled with three silting fills (1505, 1506 and 1505). The middle fill (1506) contained frequent flint gravel which may suggest collapse/weathering of bank material. No artefacts were identified during excavation. The brickearth and ditch were sealed by a thin alluvial subsoil (1503) and capped by made ground deposits (1501 and 1502) and a concrete slab layer (1500).

Trench 16 (Fig. 7)

- 3.4.25 The natural gravel was recorded in Trench 16 at c 1.6m bgl. It was overlain by an orange to yellow-brown sandy clay silt 'brickearth' (1622) that was cut by a series of archaeological features at c 0.90m bgl. The brickearth and archaeological features were sealed by a thin alluvial subsoil (1603) and capped by made ground deposits (1601 and 1602) and a concrete slab layer (1600).
- 3.4.26 The ditch that had been identified in Trench 15 (1504) continued into Trench 16 and was investigated by two interventions; one at the northern end (1607), and one mid-way along the trench (1618), where it had been partially truncated by a modern construction trench (1610). Both ditch profiles were similar, comprising a regular V-shaped base and steep concave sides. In both instances, the ditch was filled in with three deposits (1604-6 and 1614-17). The middle fill (1605 and 1614) again contained frequent flint gravel. Four pottery sherds recovered from fills 1604 and 1605 are middle Bronze Age and broadly contemporary with the material from Trench 10. Single cattle molars were recovered from fills 1604 and 1605, along with a small number of poorly preserved bone fragments. A small number of worked flint and burnt flint fragments were recovered from fill 1605. This included a heavily patinated finely made blade of possible Mesolithic or Neolithic date that is most likely residual.
- 3.4.27 The ditch was truncated by a large, E-W aligned linear feature (1610), which appeared to be a modern construction cut, c 2.1m wide, with a depth of more than 1.82m, and backfilled with modern construction aggregate material, mainly sandy gravels. Ditch 1618 also shared an uncertain relationship with possible tree hole 1620.

Trenches 17, 18 and 19

- 3.4.28 Trenches 17, 18 and 19 were located in the far south-eastern corner of the development site and were all located within the proposed new structure.
- 3.4.29 Trench 17 contained a sequence of sediments similar to that of Trenches 1-4, exposing the hydrocarbon-contaminated natural gravel sequences at a depth of c 1.9m bgl. The gravel was overlain by various layers of alluvial clay (1702, 1703 and 1704), which appeared entirely natural in deposition with no artefacts present. These layers were truncated by made ground levelling deposits associated with the modern industrial use of the site (1700 and 1701).
- 3.4.30 Trench 18 was similar to Trench 17, with the hydrocarbon-contaminated natural gravel horizon (1806) exposed at a depth of c 1.85m bgl. This was sealed by c 1.3m of alluvial clay deposits (1803 and 1805) which, in turn, was truncated by modern levelling deposits (1801 and 1802). A sondage was excavated at the northern end of the trench to investigate the gravels for the presence of 'Arctic Bed' sediments, but no such deposits were identified within the elevations investigated. The sondage was

discontinued at c 6m bgl following collapse of the overlying made ground deposits and groundwater ingress.

- 3.4.31 Trench 19 contained a very a similar deposit sequence to that of Trenches 17 and 18, with the hydrocarbon contaminated natural gravel horizon exposed at a depth of c 2.2m bgl. This was sealed by c 0.7m of alluvial clay deposits (1904 and 1905) which, in turn, was truncated by recent levelling deposits (1901 and 1902). A sondage at the eastern end of the trench was excavated to a depth of 5.5m bgl to check for the presence of 'Arctic Bed' sediments but no such deposits were encountered.

3.5 Finds summary

Table 2: Summary of the artefactual material recovered during the evaluation

Material	Weight	Tr 6	Tr 10	Tr 16	Tr 21	Total
Pottery	4374g	-	239	4		243
Fired clay	248g	-	19	-		19
Worked flint	-	-	16	4		20
Burnt flint	29g	-	19	5		24
Animal bone	19g	13	13	16		42
Slag	29g	-	31	1	12	44

Prehistoric pottery

- 3.5.1 A total of 243 sherds of prehistoric pottery were recovered, the majority from Trench 10. On the basis of fabric and the few surviving diagnostic traits the group can be dated to the middle Bronze Age.
- 3.5.2 In Trench 10 most of the sherds (155 sherds) belonged to a single vessel from pit 1006, approximating 40% of a thick-walled jar, with a fingernail-impressed cordon on the vessel wall. This is likely to derive from a Deverel-Rimbury Bucket Urn. An additional sherd recovered from pit 1012 and four further sherds from postholes 1015 and 1017 derive from Globular Urns.
- 3.5.3 Trench 16 yielded three sherds from ditch 1607. In the absence of diagnostic features, the burnt flint temper suggests they are likely to be broadly contemporary with the pottery from Trench 10.

Fired clay

- 3.5.4 A total of 19 fragments of fired clay weighing 248g was recovered from Trench 10. Most was undiagnostic but is likely to derive from oven wall surfaces, probably from structures of domestic function.
- A.1.1 The only diagnostic pieces were from pit 1006 and are likely to derive from a cylindrical drum- or barrel-shaped object that may be a loomweight or oven/hearth furniture.

Worked and burnt flint

- 3.5.5 A total of 20 struck flints were recovered, the majority from pit 1006 in Trench 10. The evaluation also yielded 24 pieces of burnt unworked flint weighing 129g. Some pieces are clearly early and it is possible that the entire assemblage could belong in the Mesolithic or early Neolithic period. However, it is equally probable that the assemblage is of mixed date with some later material included.



Animal bone

- 3.5.6 A total of 42 fragments of animal bone were recovered during the evaluation, the majority from Trenches 10 and 16. Although the bone is in a very poor state of preservation, 24 fragments were identified as belonging to cattle.

Slag

- 3.5.7 The slag assemblage (42 pieces) recovered from Trenches 10, 16 and 21 includes pieces fused with modern concrete.

3.6 Environmental summary

- 3.6.1 Five bulk samples were taken for the recovery of environmental remains during the evaluation works. All of the samples contained some wood charcoal. Although only a small number of items were examined for the current stage of work, the majority of the identified pieces were of oak. Several of the samples contained cereal grain. Although these were often poorly preserved and non-identifiable to species, the better preserved items demonstrated the presence of wheat and barley. One sample contained a small quantity of cereal chaff including glume bases provisionally identified as spelt wheat on the basis of their morphology. The charred remains identified are consistent with the deposits being Bronze Age in date.



4 DISCUSSION

- 4.1.1 Overall the evaluation is considered to provide a reliable indication of the presence, date, survival and distribution of below ground archaeological remains that may be impacted by the proposed development. Visibility was generally good and the majority of the trenches in the western and central areas remained dry to allow recording and excavation of features. Problems were encountered in some trenches due to the presence of contamination and ground water, which inhibited access to the lower levels of the excavations. However, visibility was sufficient to ascertain the presence/absence of archaeology. Unfortunately poor conditions and unstable trench edges in the eastern part of the site precluded detailed recording and sampling of the deeper alluvial and peat sequences.
- 4.1.2 The sedimentary sequence encountered was broadly consistent with the deposit model presented in the DBA. However, there was a significant absence of thick alluvial units over the central and western parts of the site. Archaeological features of potential significance were encountered in Trenches 10, 11, 15 and 16. These trenches are located in the central part of the site where the underlying Pleistocene gravel rises in elevation, away from the deeper parts of the floodplain (Fig. 2). The gravel at this location appeared to be capped by a sandy clay silt 'brickearth' c 0.5m thick, into the surface of which the features were cut. This 'brickearth' is likely to have been correlated with alluvium in the original deposit model, but clearly pre-dates the creation of the features during the middle Bronze Age and may well represent a much earlier depositional event of potential late Pleistocene or early Holocene date. The surface of this brickearth, the archaeological horizon, was sealed by either a thin alluvial clay layer or modern made ground deposits, which suggests that truncation may have occurred in some areas. There was no obvious weathered surface or buried soil associated with this interface.
- 4.1.3 The archaeological features comprise several postholes, pits and a substantial N-S aligned ditch which was identified in three trenches (Trenches 10, 15 and 16). Pottery from these features is of the Deverel-Rimbury tradition and suggests a middle Bronze Age date for the activity. Other artefactual material recovered included fired clay, possibly deriving from domestic ovens or hearths. The fills of the features were charcoal rich and contained assemblages of charred cereal grains and chaff. Overall, the quantity and character of the finds assemblages suggest the features may represent significant later prehistoric occupation or activity of a domestic character. It is possible the ditch represents a boundary or part of an enclosure delineating this activity. The presence of the postholes suggests some form of structure or fence line.
- 4.1.4 The sondages excavated into the Pleistocene gravels failed to identify any evidence of Arctic Bed deposits, which are known to be preserved around Ponders End. This may either that these deposits are deeply buried, that the sondages were not able to penetrate deep enough within the gravel sequence, or that these deposits are not located within the site boundary.



APPENDIX A. TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General description				Orientation	E-W	
Trench devoid of archaeology. Consists of modern concrete and made ground layers truncating alluvial clay deposits which overlie natural Kempton Park gravel sequences				Avg. depth (m)	2	
				Width (m)	2.1	
				Length (m)	30	
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
100	Layer	-	0-0.1	Concrete slab	-	-
101	Layer	-	0.1-0.6	Made ground	-	-
102	Layer	-	0.6-1.7	Alluvial clay deposits	-	-
103	Layer	-	1.7+	Natural gravel	-	-

Trench 2						
General description				Orientation	N-S	
Trench devoid of archaeology. Consists of modern concrete and made ground layers truncating alluvial clay deposits which overlie natural gravel sequences				Avg. depth (m)	2	
				Width (m)	2.4	
				Length (m)	26	
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
200	Layer	-	0-0.1	Concrete slab	-	-
201	Layer	-	0.1-1	Made ground	-	-
202	Layer	-	1-1.9	Alluvial clay deposits	-	-
203	Layer	-	1.9+	Natural gravel	-	-

Trench 3						
General description				Orientation	E-W	
Trench devoid of archaeology. Consists of modern concrete and made ground layers truncating alluvial clay deposits which overlie natural Kempton Park gravel and sand sequences. High volume of hydrocarbons recognised during stripping toward Eastern end of trench.				Avg. depth (m)	1.3-2	
				Width (m)	2.3	
				Length (m)	30	
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
300	Layer	-	0-0.1	Concrete slab	-	-
301	Layer	-	0.1-0.8	Made ground	-	-
302	Layer	-	0.8-1.8	Alluvial clay deposits	-	-
303	Layer	-	1.8+	Natural gravel	-	-



Trench 4						
General description				Orientation	SW-NE	
Trench devoid of archaeology. Consists of modern concrete and made ground layers truncating alluvial clay deposits which overlie natural gravel sequences. High volume of hydrocarbons and contamination observed during stripping.				Avg. depth (m)	2	
				Width (m)	3.5	
				Length (m)	28	
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
400	Layer	-	0-0.35	Concrete slab	-	-
401	Layer	-	0.35-0.75	Made ground	-	-
402	Layer	-	0.75-1.7	Alluvial clay deposits	-	-
403	Layer	-	1.7+	Natural gravel	-	-

Trench 5						
General description				Orientation	E-W	
Trench devoid of archaeology. Consists of modern concrete and made ground layers truncating alluvial clay deposits which overlie natural gravel sequences. The deposits are heavily disturbed throughout by large concrete foundations, truncating into the gravel sequences, along with large amounts of petroleum contamination and as a result the trench was shortened.				Avg. depth (m)	2.5	
				Width (m)	3.5	
				Length (m)	12	
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
500	Layer	-	0-0.9	Made ground	-	-
501	Layer	-	0.9-2.5	Alluvial clay deposits	-	-
502	Layer	-	2.5+	Natural gravel	-	-



Trench 6						
General description				Orientation	E-W	
Trench devoid of archaeology. Consists of modern concrete and made ground layers truncating alluvial clay deposits which overlie natural gravel sequences. The gravel sequence deepens further East with the build-up of a deep "peat" deposit within the alluvial sequence, in which a test pit was excavated to determine the full depth; which was not found due to safety reasons. High levels of hydrocarbons and contaminated soil observed throughout				Avg. depth (m)	1.7+ (3.5TP)	
				Width (m)	4	
				Length (m)	23.1	
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
600	Layer	-	0-0.2	Concrete slab	-	-
601	Layer	-	0.2-0.76	Made ground	-	-
602	Layer	-	0.76-1.26	Alluvial clay deposit	-	-
603	Layer	-	1.26-1.8	Alluvial clay deposit	-	-
604	Layer	-	1.8-3.4	"Peat" deposit	-	-
605	Layer	-	1.8+	Natural gravel	-	-

Trench 7						
General description				Orientation	-	
Due to high levels of truncation in the trenches located immediately adjacent, this was not excavated.				Avg. depth (m)	-	
				Width (m)	-	
				Length (m)	-	
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
-	-	-	-	-	-	-

Trench 8						
General description				Orientation	E-W	
Trench 8 was heavily truncated in many areas, with large concrete foundation obstructions. Archaeology in the form of a north-south aligned linear ditch truncating an earlier natural feature was observed in an area of preserved alluvial clay. Otherwise, an attempt was made throughout to excavate to the gravel sequence.				Avg. depth (m)	1.35	
				Width (m)	2.5	
				Length (m)	25	
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
800	Layer	-	0-0.26	Modern construction rubble	-	-
801	Layer	-	0.26-0.55	Made ground	-	-
802	Layer	-	0.55-0.73	Subsoil	-	-
803	Layer	-	0.73-1.45	Alluvial clay	-	-



804	Layer	-	1.45+	Natural gravel	-	-
805	Cut	1.25	0.38	Linear ditch feature	-	-
806	Fill	1.25	0.38	Fill of [805]	-	-
807	Cut	0.45	0.32	Natural feature	-	-
808	Fill	0.45	0.32	Fill of [807]	-	-

Trench 9

General description	Orientation	N-S
Trench devoid of archaeology. Consists of modern foundation and made ground layers truncating alluvial clay deposits which overlie natural gravel sequences. Large areas of the trench were heavily disturbed by modern services and brick foundations, so the trench was shortened on the grounds of health and safety. Large quantities of hydrocarbons and contaminated soils observed during stripping.	Avg. depth (m)	1.8
	Width (m)	3.7
	Length (m)	21.5

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
900	Layer	-	0-0.35	Brick foundation	-	-
901	Layer	-	0.35-0.7	Made ground	-	-
902	Layer	-	0.7-1.8	Alluvial clay deposits	-	-
903	Layer	-	1.8+	Natural gravel	-	-

Trench 10

General description	Orientation	E-W
Trench 10 contained a number of features cut into the archaeological horizon of the alluvial clays. These included a linear ditch, two post holes and, two pits. The trench was not subsequently stripped to the natural gravel sequence.	Avg. depth (m)	1
	Width (m)	2.2
	Length (m)	28.6

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
1000	Layer	-	0-0.15	Concrete slab	-	-
1001	Layer	-	0.15-0.75	Made ground	-	-
1002	Layer	-	0.75-0.95	Alluvial clay deposit	-	-
1003	Layer	-	0.95-1.1	Subsoil	-	-
1004	Fill	1.1	0-0.18	Fill of [1006]	-	-
1005	Fill	1.19	0-0.25	Fill of [1006]	Pottery, CBM, Flint	-
1006	Cut	1.19	0.25	Possible Pit?	-	-
1007	Fill	1.6	0-0.38	Fill of [1010]	Pottery	-
1008	Fill	1.4	0-0.8	Fill of [1010]	Pottery	-
1009	Fill	2	0-1	Fill of [1010]	-	-



1010	Cut	2	1	Linear ditch – possible enclosure ditch	-	-
1011	Layer	-	-	Natural alluvial clay silt	-	-
1012	Cut	0.72	0.27	Possible Pit	-	-
1013	Fill	0.72	0.08-0.27	Fill of [1012]	Pottery, Animal Bone, Burnt Flint	-
1014	Fill	0.72	0-0.08	Fill of [1012]	-	-
1015	Cut	0.37	0.22	posthole	-	-
1016	Fill	0.37	0.22	Fill of posthole	Pottery	-
1017	Cut	0.25	0.3	posthole	-	-
1018	Fill	0.25	0-0.24	Fill of posthole	Pottery	-
1019	Fill	0.25	0.13-0.3	Fill of posthole	-	-

Trench 11						
General description					Orientation	E-W
Trench 11 contained four possible pit-like features, and one edge of a possible linear ditch cut into the alluvial horizon. It also contained large amounts of modern construction disturbance, obscuring the archaeological horizon in places.					Avg. depth (m)	0.95
					Width (m)	2.3
					Length (m)	33
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
1100	Layer	-	0-0.2	Concrete slab	-	-
1101	Layer	-	0.2-0.55	Made ground	-	-
1102	Layer	-	0.55-0.7	Buried topsoil	-	-
1103	Layer	-	0.7-0.85	Buried subsoil	-	-
1104	Layer	-	0.85-1	Buried subsoil	-	-
1105	Layer	-	1+	Alluvial clay deposit	-	-
1106	Fill	0.6	0.15	Fill of [1107]	-	-
1107	Cut	0.6	0.15	Possible pit	-	-
1108	Fill	1	0-0.34	Fill of [1110]	-	-
1109	Fill	0.4	0.34-0.35	Fill of [1110]	-	-
1110	Cut	1	0.35	Possible pit	-	-
1111	Fill	0.2	0.07	Fill of [1112]	-	-
1112	Cut	0.2	0.07	Possible linear feature	-	-
1113	Fill	0.27	0.17	Fill of [1114]	-	-
1114	Cut	0.27	0.17	Possible posthole	-	-



Trench 12						
General description				Orientation		SE-NW
Trench devoid of archaeology. Consists of modern concrete and made ground layers truncating alluvial clay deposits which overlie natural gravel sequences. High volume of hydrocarbons and contamination observed during stripping.				Avg. depth (m)		1.26
				Width (m)		2.4
				Length (m)		30
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
1200	Layer	-	0-0.32	Modern rubble	-	-
1201	Layer	-	0.32-0.72	Made ground	-	-
1202	Layer	-	0.72-1.26	Alluvial clay deposits	-	-
1203	Layer	-	1.26+	Natural gravel	-	-

Trench 13						
General description				Orientation		E-W
Trench 13 contained minor naturally derived features cut into the surviving "brick-earth" deposits of sandy clay material. Otherwise the trench was devoid of archaeological potential, but highlighted the changing level of the natural gravel terracing. Features recorded as possible natural channels were later found to be caused by leaching of modern contaminated material during industrial processes.				Avg. depth (m)		1.65
				Width (m)		3.1
				Length (m)		28.75
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
1300	Layer	-	0-0.24	Concrete slab	-	-
1301	Layer	-	0.24-0.54	Made ground layer	-	-
1302	Layer	-	0.54-0.6	Made ground layer	-	-
1303	Layer	5.3	0.6-0.9	Buried subsoil	-	-
1304	Fill	1.6	0.35	Fill of [1305]	-	-
1305	Cut	1.6	0.35	Natural feature	-	-
1306	Layer	-	0.7-1.1	Alluvial clay deposit	-	-
1307	Layer	-	1.16-1.46	Gravel deposit	-	-
1308	Cut	6.84	0.78	Possible channel	-	-
1309	Fill	6.84	0-0.48	Fill of [1308]	-	-
1310	Fill	5.88	0.48-0.78	Fill of [1308]	-	-
1311	Layer	-	1.68+	Gravel deposit	-	-
1312	Layer	-	1.54-1.6	Gravel deposit	-	-
1313	Fill	2.24	0.08	Fill of [1308]	-	-
1314	Layer	-	1.6+	Gravel deposit	-	-
1315	Layer	-	0.64-0.78	Made ground layer	-	-
1316	Layer	2.42	0.58-0.64	Made ground layer	-	-



1317	Layer	12	0.2-0.3	Made ground layer	-	-
1318	Layer	4.3	0.64-0.8	Buried subsoil	-	-
1319	Layer	-	1.12-1.24	Gravel deposit	-	-
1320	Cut	5.24	0.62	Possible channel	-	-
1321	Fill	1.12	0.48-0.62	Fill of [1320]	-	-
1322	Fill	1.58	0.38-0.48	Fill of [1320]	-	-
1323	Fill	2.6	0.32-0.38	Fill of [1320]	-	-
1324	Fill	5.24	0-0.32	Fill of [1320]	-	-
1325	Layer	5.7	0.14	Made ground layer	-	-
1326	Cut	3.06	0.18	Possible channel	-	-
1327	Fill	3.06	0.18	Fill of [1326]	-	-
1328	Layer	1.38	0.1	Sandy gravel deposit	-	-
1329	Cut	3.7	0.46	Possible channel	-	-
1330	Fill	3.26	0.08-0.46	Fill of [1330]	-	-
1331	Fill	3.7	0-0.08	Fill of [1330]	-	-
1332	Cut	0.94	0.08	Possible channel	-	-
1333	Fill	0.94	0-0.08	Fill of [1332]	-	-

Trench 14						
General description					Orientation	N-S
Trench devoid of archaeology. Consists of modern concrete and made ground layers truncating deep into natural gravel sequences. High volume of hydrocarbons and contamination observed during stripping.					Avg. depth (m)	2.3
					Width (m)	3
					Length (m)	30
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
1400	Layer	-	0-0.1	Concrete slab	-	-
1401	Layer	-	0.1-2.1	Made ground	-	-
1402	Layer	-	2.1-2.4	Natural gravel	-	-

Trench 15						
General description					Orientation	E-W
Trench 15 contained a sequence of made ground deposits, overlying an alluvial clay layer which had a single linear ditch, running north-south, cut through it. This produced no datable finds but is similar in shape and alignment to Bronze Age dated ditch found in previous trenching.					Avg. depth (m)	45
					Width (m)	2.3
					Length (m)	30
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
1500	Layer	-	0-0.1	Concrete slab	-	-



1501	Layer	-	0.1-0.75	Made ground	-	-
1502	Layer	-	0.75-1.02	Made ground	-	-
1503	Layer	-	1.02-1.22	Buried subsoil	-	-
1504	Cut	1.54	0.86	Linear ditch	-	-
1505	Fill	1.38	0-0.32	Fill of [1504]	-	-
1506	Fill	1.22	0-0.0.54	Fill of [1504]	-	-
1507	Fill	1.54	0-0.86	Fill of [1504]		
1508	Layer	-	1.22+	Alluvial clay deposit	-	-

Trench 16						
General description					Orientation	N-S
Trench 16 contained the regular sequence of made grounds deposits overlying a linear which runs north-south for the entirety of the trench, albeit heavily truncated by a large east-west aligned construction cut. Dating from pottery found within the ditch fills indicates this ditch sequence to be of likely Bronze Age construction.					Avg. depth (m)	1.56
					Width (m)	2.1
					Length (m)	29
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Findings	Date
1600	Layer	-	0-0.08	Concrete slab	-	-
1601	Layer	-	0.08-0.72	Made ground	-	-
1602	Layer	-	0.72-0.8	Made ground	-	-
1603	Layer	-	0.8-0.98	Buried subsoil	-	-
1604	Fill	1.16	0-0.76	Fill of [1607]	Pottery?	Late Bronze Age?
1605	Fill	1.32	0-1.92	Fill of [1607]	Pottery?	Late Bronze Age?
1606	Fill	1.52	0-1.92	Fill of [1607]	-	-
1607	Cut	1.52	1.92	Linear ditch	-	-
1608	Layer	-	0.08-0.52	Made ground	-	-
1609	Fill	1.7	0-0.64	Fill of [1610]	-	-
1610	Cut	2.7+	1.82+	Construction cut	-	-
1611	Fill	2.7+	0-1.66	Fill of [1610]	-	-
1612	Layer	-	0.72-1.04	Made ground	-	-
1613	Layer	-	1.04-1.50	Made ground	-	-
1614	Layer	-	1.5-1.76	Buried subsoil	-	-
1615	Fill	0.72	0-0.24	Fill of [1618]	-	-
1616	Fill	0.85	0-0.44	Fill of [1618]	-	-
1617	Fill	0.58	0-0.58	Fill of [1618]	-	-
1618	Cut	1.2+	0.58	Linear ditch	-	-
1619	Fill	2.1	1.66+	Fill of [1610]	-	-
1620	Cut	0.74	0.22	Natural feature	-	-
1621	Fill	0.74	0.22	Fill of [1620]	-	-



1622	Layer	-	0.98+	Sandy alluvial clay	-	-
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Trench 17

General description Trench 17 was devoid of archaeology. Consists of modern rubble and made ground layers truncating alluvial clay deposits which overlie natural gravel sequences. High volume of hydrocarbons and contamination observed during stripping.	Orientation	E-W
	Avg. depth (m)	2.1
	Width (m)	4.1
	Length (m)	31

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Findings	Date
1700	Layer	-	0-0.25	Modern rubble	-	-
1701	Layer	-	0.25-1	Made ground	-	-
1702	Layer	-	1-1.15	Alluvial clay deposits	-	-
1703	Layer	-	1.15-1.5	Alluvial clay deposits	-	-
1704	Layer	-	1.5-1.9	Alluvial clay deposits	-	-
1705	Layer	-	1.9+	Natural gravels	-	-

Trench 18

General description Trench 18 was devoid of archaeology. Consists of modern concrete and made ground layers truncating alluvial clay deposits which overlie natural gravel sequences. A test-pit was excavated at the northern end of the trench to test for the existence of any 'Arctic Bed' deposits, but gravel sequences continued to a depth of 6m. High volume of hydrocarbons and contamination observed during stripping.	Orientation	N-S
	Avg. depth (m)	1.9
	Width (m)	3.7+ (6TP)
	Length (m)	27.5

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Findings	Date
1800	Layer	-	0-0.1	Concrete slab	-	-
1801	Layer	-	0.1-0.8	Made ground	-	-
1802	Layer	-	0.8-1.05	Made ground	-	-
1803	Layer	-	1.05-1.15	Buried topsoil	-	-
1804	Layer	-	1.15-1.65	Buried subsoil	-	-
1805	Layer	-	1.65-1.85	Alluvial clay deposit	-	-
1806	Layer	-	1.85+	Natural gravels	-	-



Trench 19						
General description				Orientation	E-W	
Trench 19 was devoid of archaeology. Consists of modern concrete intrusions and foundations, and made ground layers which truncate alluvial clay deposits which overlie natural gravel sequences. A test-pit was excavated at the eastern end of the trench to test for the existence of any 'Arctic Bed' deposits, but gravel sequences continued to a depth of 5.5m. High volume of hydrocarbons and contamination observed during stripping.				Avg. depth (m)	2.2	
				Width (m)	3.7+ (5.5TP)	
				Length (m)	29	
Contexts						
Context no	Type	Width (m)	Depth (m)	Comment	Findings	Date
1900	Layer	-	0-0.15	Concrete slab	-	-
1901	Layer	-	0.15-1	Made ground	-	-
1902	Layer	-	0.75-1.65	Concrete foundation pad	-	-
1903	Layer	-	1-1.65	Made ground	-	-
1904	Layer	-	1.54-1.8	Buried subsoil	-	-
1905	Layer	-	1.75-2.2	Alluvial clay deposits	-	-
1906	Layer	-	2.2+	Natural gravels	-	-



APPENDIX B. FINDS REPORTS

B.1 Pottery

By Lisa Brown

- B.1.1 A total of 243 sherds of prehistoric pottery weighing 4385g was recovered from Trenches 10 and 16 during the evaluation. On the basis of fabric and the few surviving diagnostic traits the group can be dated to the middle Bronze Age.
- B.1.2 The entire assemblage is in flint-tempered fabrics, the flint in all cases appearing to be crushed and calcined to a greater or lesser extent. The grade of flint ranges from relatively fine and well-sorted to very coarse and ill-assorted. Flint could have been obtained from the Upper Chalk deposits to the north of the site.
- B.1.3 Most of the sherds (63% by count, 84% by weight) belong to a single vessel from pit 1006 (fills 1004 and 1005). These fragments represent c 40% of a thick-walled jar with a fingernail-impressed cordon on the vessel wall. The base is present but no rim fragments were encountered within the excavated deposits. The fabric contained very coarse, calcined flint temper, typical of middle Bronze Age Deverel-Rimbury pottery found across a wide area of southern Britain. The form is consistent with vessels described as Deverel-Rimbury Bucket Urns (Ellison 1978), although the use of 'urn' terminology is currently restricted to cremation vessels by some specialists. There was no evidence that this vessel contained cremated bone. The sherds were deposited in a fragmented condition rather than as a complete vessel.
- B.1.4 Additional sherds from Trench 10 were recovered from a large pit (1012), and two postholes – 1015 and 1017. The pottery from posthole 1015 is much finer than the Bucket Urn fabric and the vessel, probably a Globular Urn, is relatively thin-walled. Posthole 1017 produced, amongst plain flint-tempered body sherds, two small, simple rim fragments, again probably belonging to Globular Urns. Fills 1007 and 1008 of ditch 1010 each yielded a single small, flint-tempered sherd, which can be broadly dated to the middle-late Bronze Age.
- B.1.5 Trench 16 yielded only three sherds (47g), all from fills of ditch 1607. These also contained burnt flint temper and, despite the absence of otherwise diagnostic features, are likely to be broadly contemporary with the pottery from Trench 10.
- B.1.6 Although middle Bronze Age pottery has until recently been relatively rarely recovered in this region, examples have been recorded from cemetery sites (Cotton 1993), from burnt mound deposits (Miles 2008) as well as from settlement contexts, mostly pits. The use of flint temper is standard for this region close to the Lea Valley and northwards.

*Table 3: Prehistoric pottery*

Ctx	Feature	No.	Wt (g)	Description
1004	1006	2	8	(Sieved) calcined flint temper; undecorated body sherd
1005	1006	153	3587	Very coarse calcined flint temper; straight-sided bucket urn fingernail-impressed cordon
1007	1010	1	8	Finer calcined flint temper; undecorated body sherd, thin-walled
1008	1010	3	22	Calcined flint temper; undecorated body sherd
1013	1012	1	11	Coarse calcined flint temper; undecorated sherd
1016	1015	52	370	Somewhat fine calcined flint temper; undecorated sherds but prob globular urn
1016	1015	2	38	(Sieved) finer calcined flint temper; undecorated body sherd
1018	1017	5	40	Somewhat fine, calcined flint temper; undec sherds + 2 Simple rims probably of globular urns – 1 coarser than the other
1018	1017	20	53	(Sieved) finer calcined flint temper; undecorated body sherds, thin walled
1604	1607	2	27	Coarse calcined flint temper; 2 joining undecorated sherds,
1605	1607	1	215	(Sieved) coarse calcined flint temper; undecorated body sherd
1605	1607	1	6	Coarse calcined flint, undecorated body sherd



B.2 Struck flint

By Michael Donnelly

- B.2.1 A small assemblage of 20 struck flints was recovered. Nearly all of these were recovered from soil samples, with only two pieces being recovered by hand. The flints originated from just four contexts with a marked concentration from pit 1006 in Trench 10. The assemblage is very fresh and it would seem likely that the flints have not moved far, if at all. The evaluation also yielded 24 pieces of burnt unworked flint weighing 129g.
- B.2.2 Much of the assemblage consists of fine knapping waste or small miscellaneous trimming flakes that are in no way diagnostic. Some of the flakes are thin and are likely to be early in date while others display hard-hammer bulbs and may be later.
- B.2.3 One core was recovered from context 1005 and is undiagnostic. It is a flake-producing multi-platformed example and is likely to date to any time between the Mesolithic and early Bronze Age. Complex, well-maintained cores are not really a feature of later prehistoric knapping
- B.2.4 A finely made blade was recovered from context 1605. While this piece is very heavily patinated, its edges are fresh and it is probably close to or at its place of primary deposition. The blade is most probably Mesolithic in date but an early Neolithic date cannot be ruled out
- B.2.5 The assemblage is difficult to date with any degree of certainty. Some pieces are clearly early and it is possible that the entire assemblage could belong in the Mesolithic or early Neolithic period. However, it is equally probable that the assemblage is of mixed date with some later material included. The freshness of the assemblage strongly suggests that some form of activity focus is nearby such as a knapping or domestic site.
- B.2.6 Early prehistoric material has been discovered along many of the tributaries of the Thames, particularly the northern ones (e.g. the Colne (Lacaille 1963; Lewis and Rackham 2011) and Beam (Champness *et al.* 2017)). The exception is the Lea where very little was discovered despite extensive works in preparation for the Olympics (Corcoran *et al.* 2011; Powell 2012).

Table 4: Worked and burnt flint

Context	Type	Sub-type	Notes	Date
1004	flake	inner	hard-hammer struck	
1004	flake	misc trimming		
1004	flake	misc trimming	soft-hammer struck	EPH?
1004	flake	misc trimming	hard-hammer struck	
1004	flake	misc trimming	soft-hammer struck	EPH?
1004	chips x 7	sieved		
1004	chips x 2	sieved	burnt chips	
1004	burnt	unworked	8 pieces weighing 40g	
1005	core	multiplatform flakes	Includes stray flake from it (recently struck) complex and maintained	EPH-EBA
1005	burnt	unworked	2 pieces weighing 18g	
1013	burnt	unworked	3 pieces weighing 9g	
1016	burnt	unworked	1 piece weighing 7g	
1018	flake	misc trimming		
1018	burnt	unworked	5 pieces weighing 30g	
1605	blade	inner	38mm x 14mm x 4mm soft-hammer, uni-directional, no abrasion, probably Mesolithic	EPH
1605	chips x 3	sieved		
1605	burnt	unworked	5 pieces weighing 25g	

B.3

B.4 Fired clay

By Cynthia Poole

- B.4.1 Fired clay, amounting to 19 fragments weighing 248g, was recovered from Trench 10 from three contexts. The fired clay from contexts 1004 and 1013 was undiagnostic: the pieces have only a single roughly finished, moulded surface and are generally well fired and oxidised. They are most likely to derive from internal oven wall surface, probably from structures of domestic function.
- B.4.2 The only diagnostic pieces were from context 1005 and are likely to derive from a cylindrical drum- or barrel-shaped block with an axial perforation c 30mm in diameter. Such objects are typically middle to late Bronze Age in date and are distinguished by flat ends in the late Bronze Age in contrast to more convex ends during the earlier period. They have traditionally been regarded as loomweights based on their occurrence in domestic structures. One of the best examples was a group of ten in house platform 4 (Hut 3) at Black Patch, Sussex (Drewett 1982, fig. 10), where their linear arrangement was interpreted as evidence of a loom, though storage of the group against the back wall of the structure is an equally valid interpretation. More recently evidence to associate such artefacts with pottery production in a late Bronze Age context has been found at Bestwall Quarry (Ladle and Woodward 2009, 291-9) and Tinney's Lane, Sherborne, Dorset (Best and Woodward 2012, 231-4), suggesting that these objects may have served as oven or hearth furniture.

Table 5: Fired clay

Context	Sample	No.	Weight (g)	Class	Form	Fabric	Comment
1004	101	14	87	Oven structure	Wall	sandy	Single moulded surface, probably internal oven wall surface
1005	-	4	158	Oven furniture	Perforated block	sandy with flint grit	Fragments with flat or curving plano-convex surface with evidence of a perforation c. 30mm dia.
1013	-	1	3	Structural	Misc	sandy	Single flat fairly even moulded surface
Total		19	248				

B.5 Animal bone

By Lena Strid

- B.5.1 A total of 42 fragments of animal bone were recovered during the evaluation, the majority from Trenches 10 and 16. Although the bone is in a very poor state of preservation, 24 fragments were identified as belonging to cattle. 13 fragments from Trench 6 were identified as amphibian.
- B.5.2 The animal bone assemblage is in a very poor state of preservation and is of low potential. It should be included in any further analysis that is undertaken following future work on the site.

Table 6: Animal bone

Trench	Context	Sample	No.	Weight	Description
6	605	102	13	1g	small amphibian bones
10	1013		13	2g	fragments of enamel tooth, probably cattle,
16	1604		1	6g	cattle molar,
16	1605		1	8g	cattle molar, 8g
16	1605	100	14	2g	9 fragments of probable cattle molar, 5 fragments badly preserved bone

B.6 Slag

By Geraldine Crann

B.6.1 The slag assemblage (42 pieces) recovered from Trenches 10, 16 and 21 includes pieces fused with modern concrete.

Table 7: Slag

Trench	Context	Sample	No. pieces	Weight
10	1016	103	1	1g
10	1018	104	30	16g
16	1605	100	1	1g
21	2156	113	12	11g



APPENDIX C. ENVIRONMENTAL REPORTS

C.1 Charred plant remains and charcoal

By Julia Meen

- C.1.1 Four bulk samples were taken for the recovery of charred plant remains and charcoal. One sample was taken from the fill of pit 1006, a second from the base of ditch 1607, and a further two samples were taken from fills of postholes in Trench 10.
- C.1.2 The samples were processed by water flotation using a modified Siraf style flotation machine. The flots were collected on a 250µm mesh and the heavy residues were sieved to 500µm and dried in a heated room, after which the residues were sorted for artefacts and ecofactual remains. The dried flots were scanned for plant remains using a binocular microscope and identifications made with reference to published guides and the comparative seed collection held at OAS. Where charcoal was present a small number of items (<10) were examined, initially under low magnification and where necessary at up to x200 magnification using a Brunel metallurgical SP-400 BD microscope. Plant nomenclature follows Stace (2010). A decision was taken not to include sample <102> in the present phase of work and the waterlogged flot was retained.
- C.1.3 All of the samples assessed for charred plant remains contained some wood charcoal, demonstrating that conditions at the site are suitable for the preservation of this type of material. Although only a small number of items were examined for the current stage of work, the majority of the studied pieces were of oak (*Quercus*). Samples <103> and <104>, from postholes in Trench 10, additionally contained charcoal provisionally identified as Pomoideae type (hawthorn type) as well as a fragment of alder or hazel (*Alnus/Corylus*) from sample <104>.
- C.1.4 Several of the samples contained cereal grains. Although these were often poorly preserved and not identifiable to species, the better preserved items demonstrated the presence of wheat and barley. Seeds of oat or brome grass were also present although no diagnostic features which might determine whether these represent cultivated oat or wild forms were preserved. Sample <104> contained a small quantity of cereal chaff including glume bases provisionally identified as spelt wheat (*Triticum spelta*) on the basis of their morphology. Charred weed seeds and small legumes were also present in most of the samples. The charred remains identified are consistent with the deposits being Bronze Age in date.



Table 8: Charred plant remains and charcoal

Sample	Context	Cut	Sample Vol.	Flot Vol.	% Scanned	Charred							Description	
						Grain	Cereal NFI	Chaff	Legume	Seed	fruit/nut	Charcoal		
100	1605	1607	38L	5ml	100.00%		+						++	Charcoal fragmentary, with low number of items potentially identifiable in flot (further 15 items extracted from 10-4mm heavy residue). Selection of charcoal examined all <i>Quercus</i> Single indeterminate cereal grain extracted from 4-2mm heavy residue.
101	1004	1006	40L	100 ml	50%	+++		+	++	++			+++	Frequent cereal grain, often poorly preserved or distorted but identifiable items a mixture of <i>Triticum</i> sp. and <i>Hordeum</i> sp. Single item of <i>Hordeum</i> sp. rachis noted. Charred weed seeds mostly of Cyperaceae family including one cf <i>Eleocharis</i> sp., also one example of <i>Galium</i> sp. Legumes quite uniform, generally around 2mm in diameter. Potentially identifiable charcoal quite frequent, plus another 50+ items extracted from heavy residue. All examined charcoal of <i>Quercus</i> including one item of roundwood, heartwood also present.
103	1016		12L	10ml	100%	++		+		+			++	Small number of cereal grains present, mostly poorly preserved and indeterminate. One grain identifiable as <i>Triticum</i> sp. and one as <i>Avena/Bromus</i> sp..One fragment of <i>Triticum</i> sp. glume base and one cereal culm node observed. Four charred weed seeds were noted including one of the Cyperaceae family. Only a small number of potentially identifiable charcoal items present; those examined suggest assemblage dominated by <i>Quercus</i> with a low proportion of diffuse porous cf Pomoideae type.



Sample	Context	Cut	Sample Vol.	Flot Vol.	% Scanned	Charred						Description
104	1018		20L	60m l	100%	+++	+ +	+	++	+	+++	<p>Cereal grain present, often indet. but with examples of both <i>Triticum</i> sp. and <i>Hordeum</i> sp., two grains <i>Avena/Bromus</i> sp. Glume bases with morphology of better preserved examples indicative of <i>Triticum spelta</i>. One frag. of charred nutshell of <i>Corylus avellana</i>. Small no. of weed seeds include Poaceae and Cyperaceae; <2mm, legumes also present. Freq. charcoal of identifiable size (including >25 items extracted from heavy residue). Examination of small number of charcoal items suggest dominated by <i>Quercus</i> with occ. Pomoideae type including roundwood) and one item of <i>Alnus/Corylus</i></p>

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APPENDIX E. SUMMARY OF SITE DETAILS

Site name:	Phase 2, Navigation Park, Ponders End, Enfield
Site code:	NVK15
Grid reference:	TQ 36260 95280
Type:	Evaluation (19 trenches)
Date:	25th May-12th June 2015
Area of site:	3.48 hectares
Summary of results:	

Oxford Archaeology undertook an archaeological evaluation of the Phase 2 development area at Navigation Park, Ponders End, Enfield for SEGRO Properties Limited in May 2015. This comprised the excavation of 19 trenches over an area that encompassed 3.48ha.

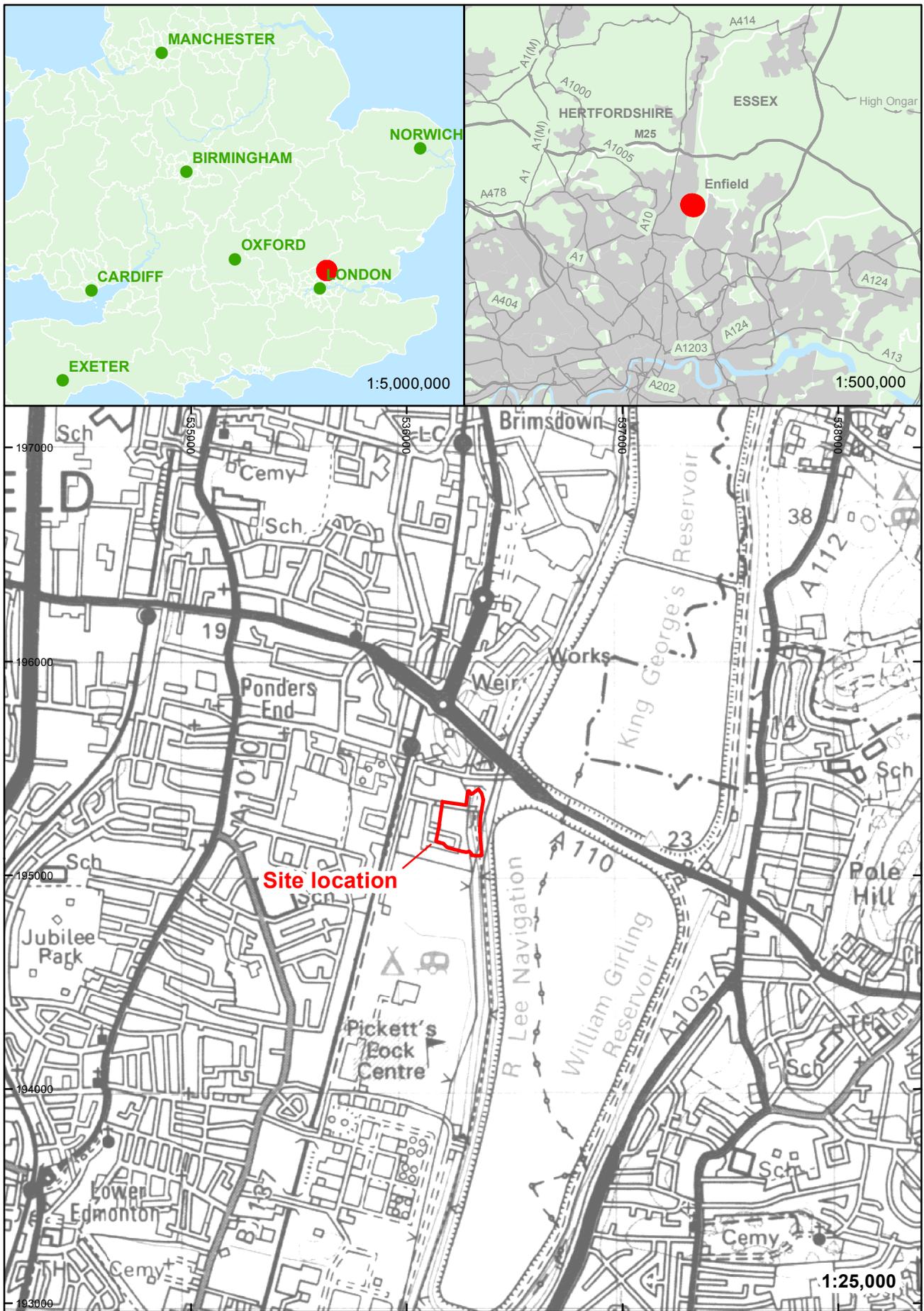
Archaeological features were located in the central part of the site, where the underlying Pleistocene gravel rises in elevation, away from the deeper parts of the floodplain. The features comprised postholes, pits and a substantial N-S aligned ditch that ran through three of the trenches. Pottery of the Deverel-Rimbury tradition indicates a middle Bronze Age date and the quantity and character of the features and finds suggest the site may represent a domestic settlement, possibly associated with a ditched boundary or enclosure.

Contamination by hydrocarbons and unstable trench edges in the eastern part of the site precluded detailed recording and sampling of the deeper alluvial and peat sequences in this area.

Sondages excavated into the Pleistocene gravels in order to investigate the organic 'Arctic Bed' deposits, which are known to be preserved within the Lea Valley, failed to identify any evidence for them; this may indicate either that the deposits are absent from this area or that they are buried at too great a depth to be exposed in the sondages.

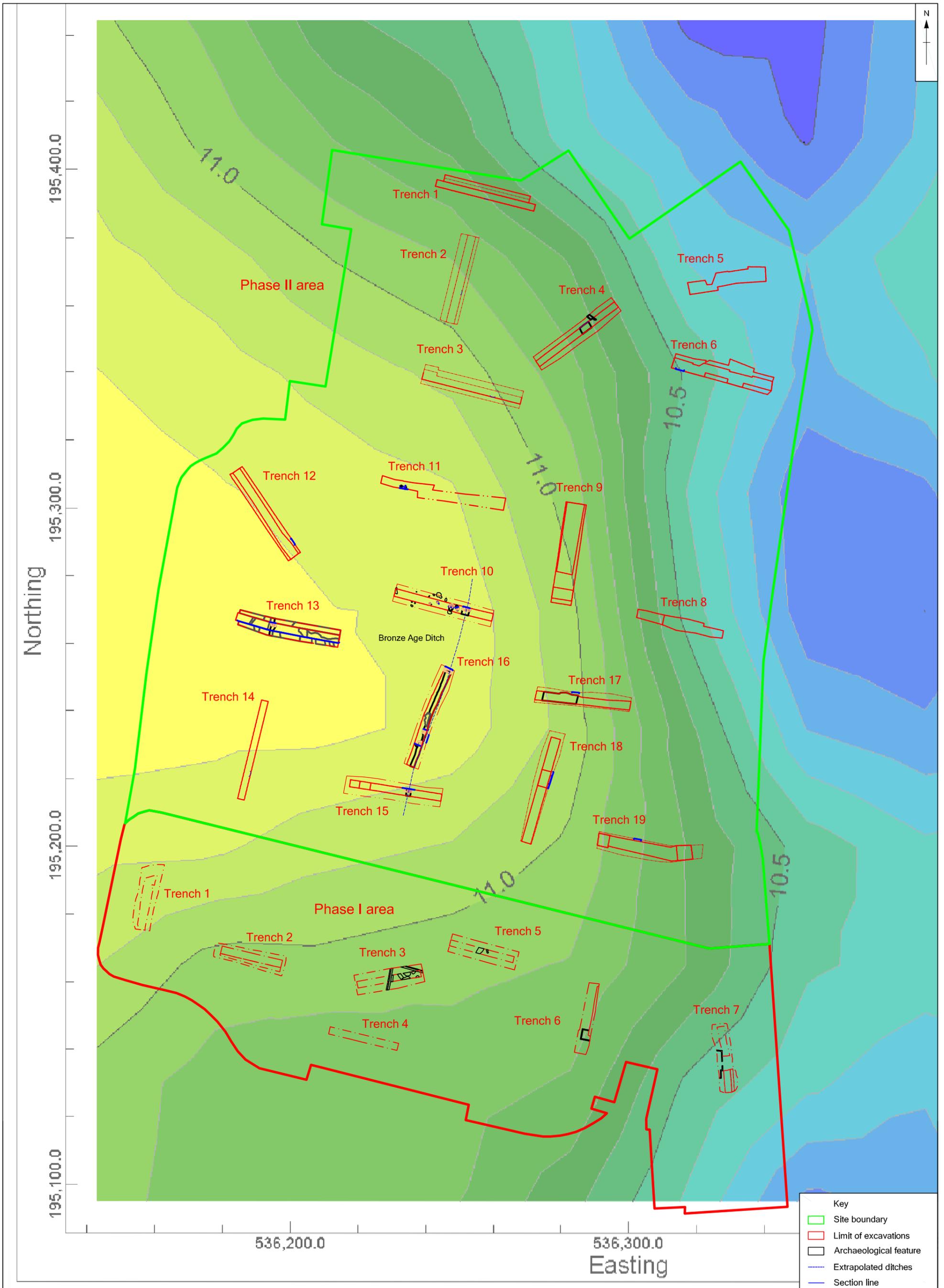
Location of archive:

The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Museum of London in due course under the accession number NVK15.



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Figure 1: Site location



Key

- Site boundary
- Limit of excavations
- Archaeological feature
- Extrapolated ditches
- Section line

Figure 2: Trench location plan with modelled gravel surface (from OA 2010)

0 50 m
Scale at A3 1:1000

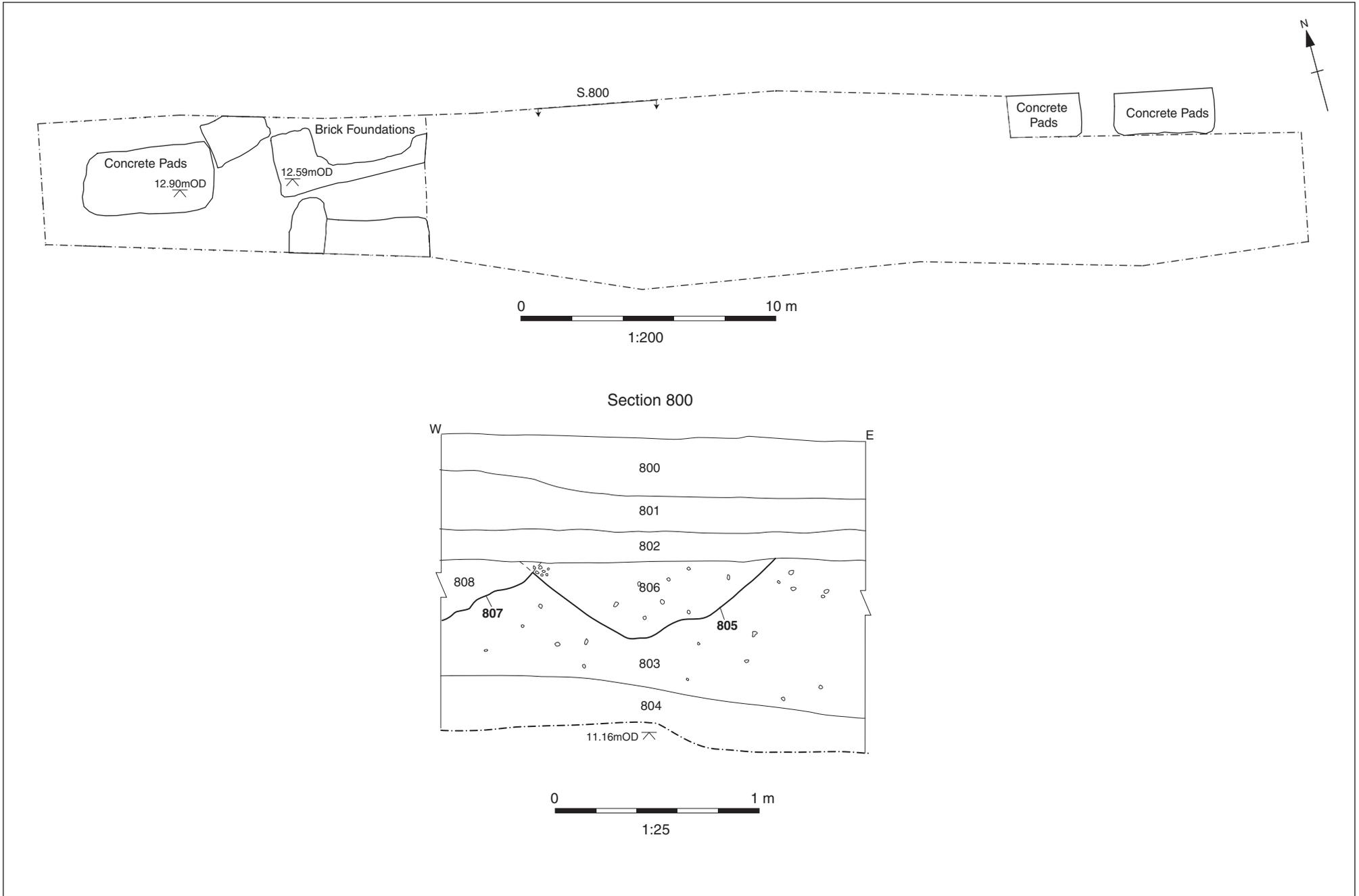


Figure 3: Plan and section, Trench 8

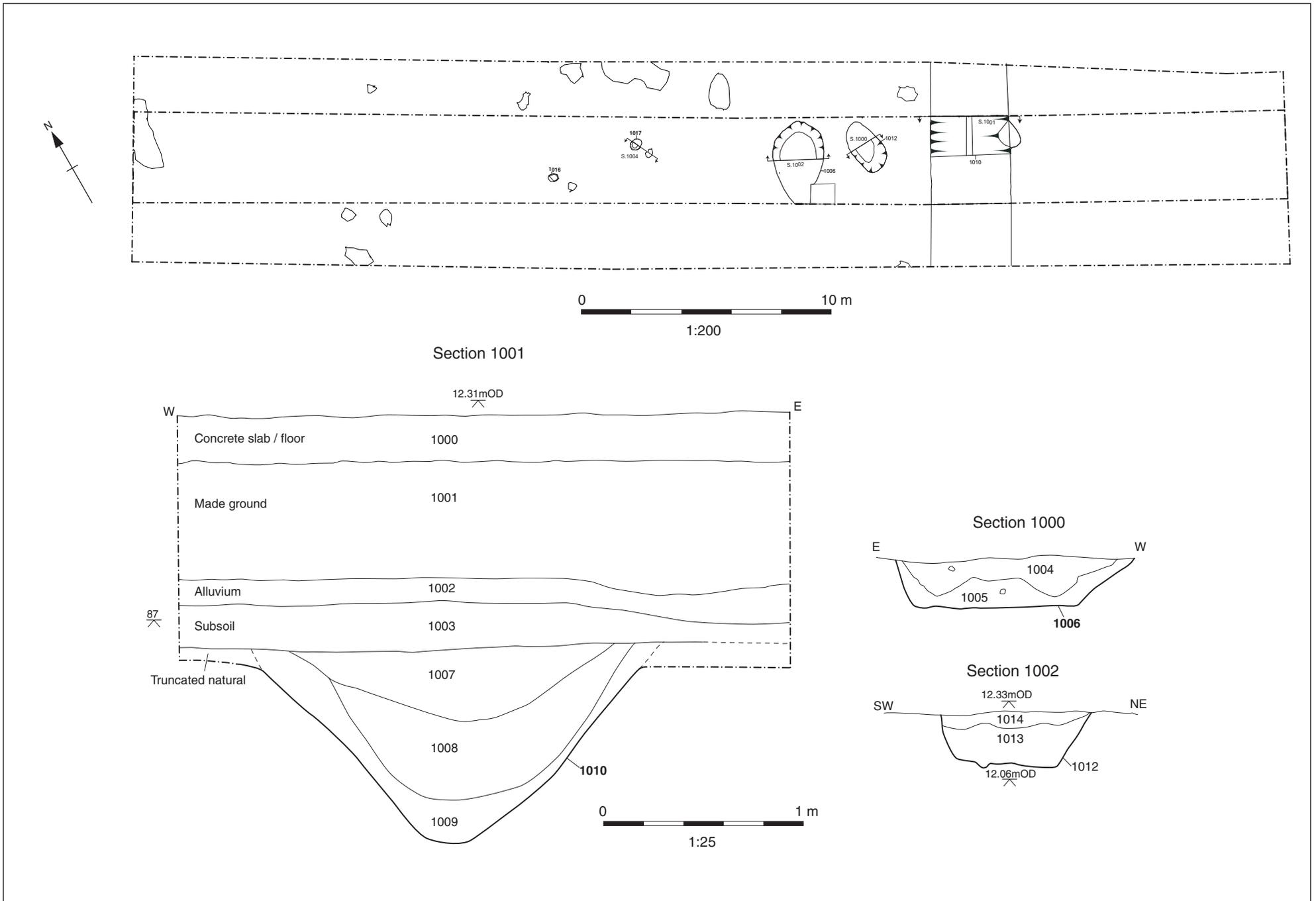


Figure 4: Plan and sections, Trench 10

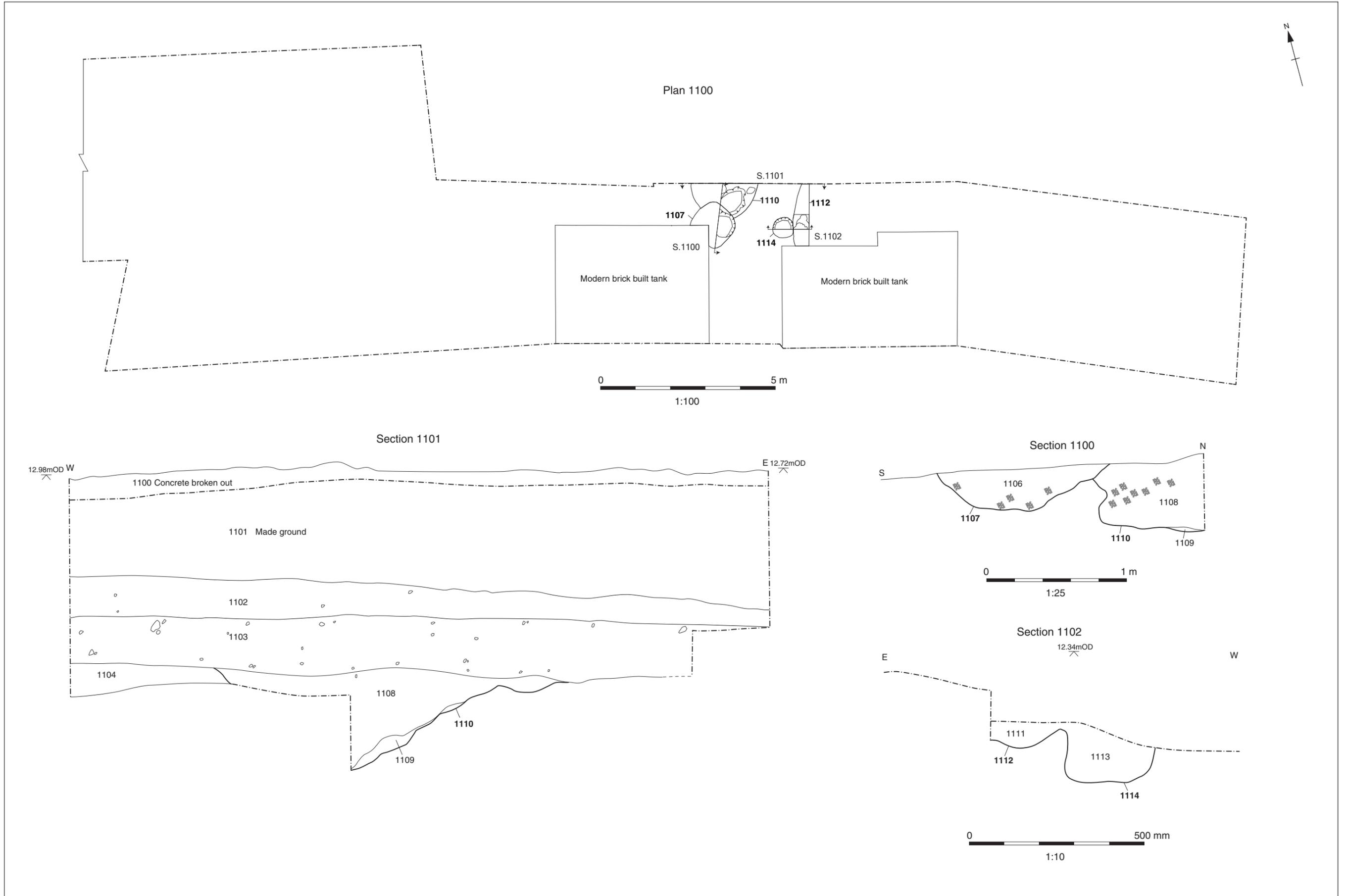


Figure 5: Plan and sections, Trench 11

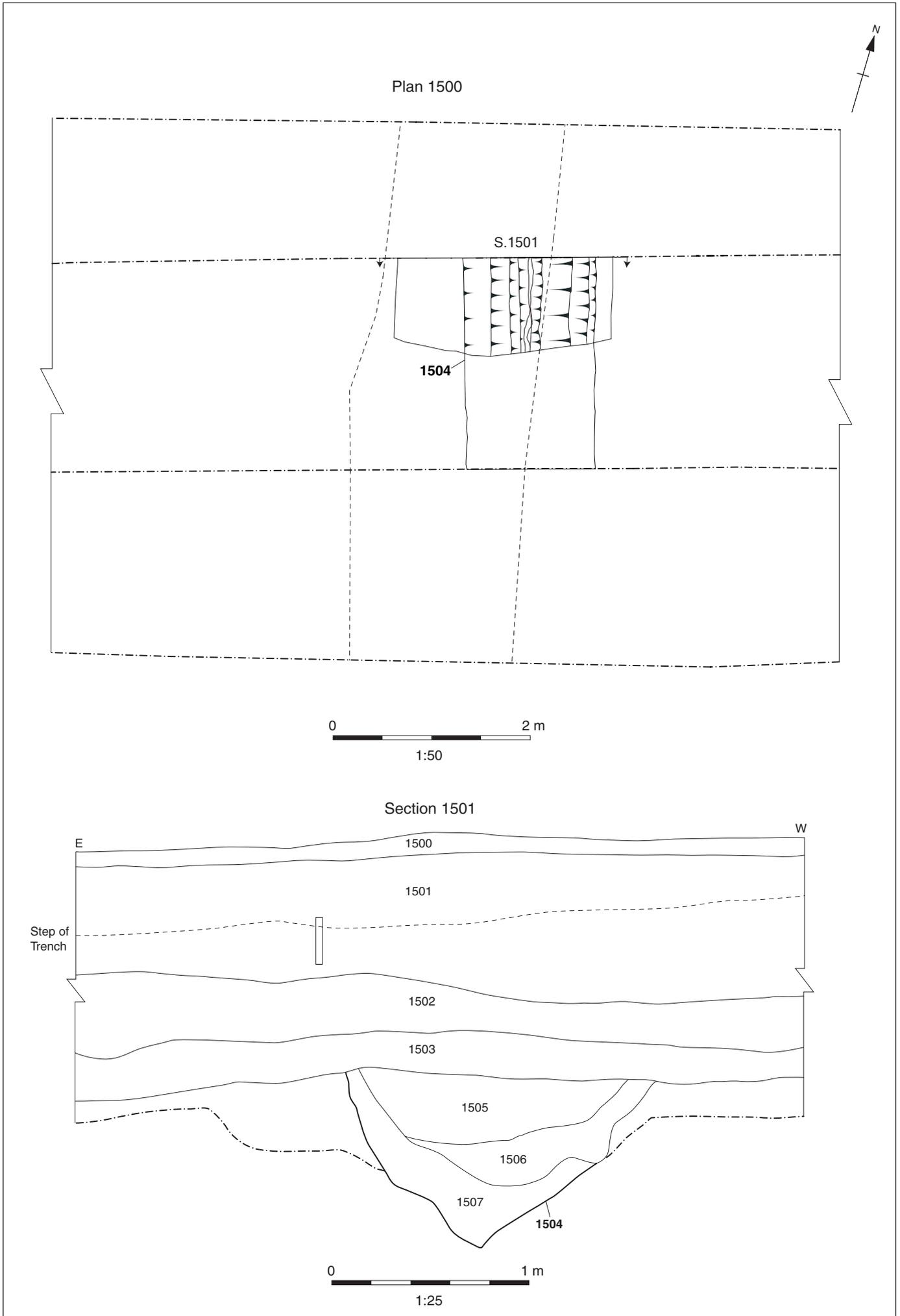


Figure 6: Plan and section, Trench 15

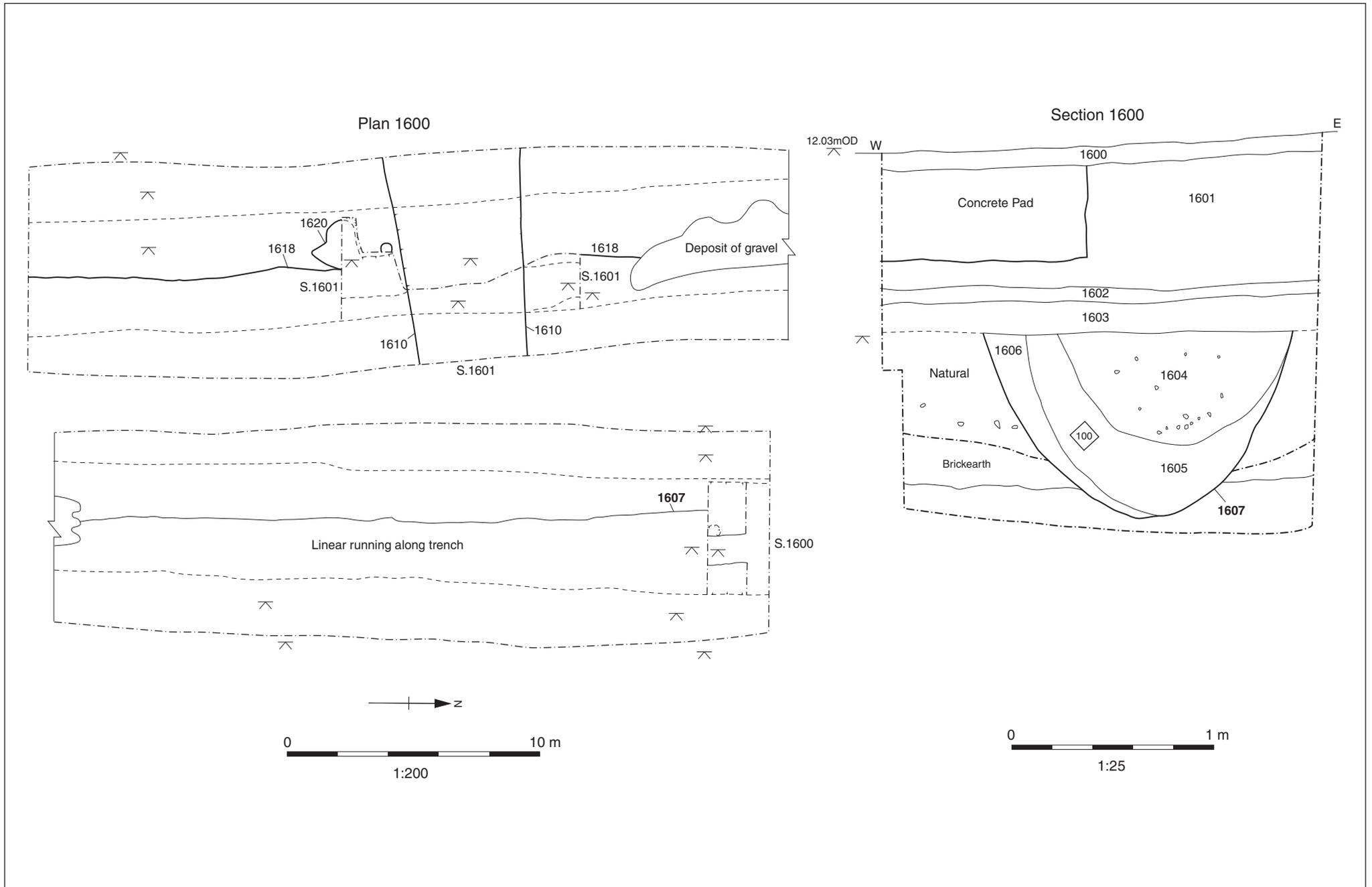


Figure 7: Plan and section, Trench 16



Plate 1 Trench 1, view west



Plate 2: Trench 2, view south



Plate 3: Trench 3, view east



Plate 4: Trench 4, view north-east



Plate 5: Trench 9, view south



Plate 6: Trench 10, view west



Plate 7: Trench 10, section 1000, pit 1006



Plate 8: Trench 10, section 1001, ditch 1010



Plate 9: Trench 10, section 1002, pit 1012



Plate 10: Trench 10, section 1004, posthole 1017



Plate 11: Trench 13, view east



Plate 12: Trench 15, view east



Plate 13: Trench 16, section 1600, ditch 1607



Plate 14: Trench 16, section 1601, ditch 1610



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