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Imperial College Sports Ground Sipson Lane, Harlington

Archaeological Excavation: Phases 1 and 2
Interim Assessment Report

Wessex Archaeology



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March 1998

**Imperial College Sports Ground, Sipson Lane,
Harlington, London Borough of Hillingdon
Archaeological Excavation; Phase 1 and 2**

Interim Assessment Report

Report no. 42282.b

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Prepared For:

Henry Streeter (Sand and Ballast) Ltd.,
66 Purley Way,
Croydon,
Surrey.
CR9 6EG

By:

Wessex Archaeology,
Portway House,
Old Sarum Park,
Salisbury,
Wiltshire.
SP4 6EB

March 1998

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Summary

In August 1996 Wessex Archaeology was commissioned by Henry Streeter (Sand and Ballast) Ltd to carry out an archaeological excavation on land proposed for ballast extraction. Overall, the Site covers an area of *c.* 19 hectares, to the south of Sipson Lane, Harlington (centred on Ordnance Survey Grid Reference TQ 0825 7765), in the London Borough of Hillingdon (Fig. 1). The excavation timetable comprises five annual phases of fieldwork, with the initial two phases, Phase 1 and 2, which have been completed extending over *c.* 5.5 hectares and forming the eastern sector of the Site.

As suggested by the results of the archaeological evaluation (MoLAS 1996), the first two phases of excavation have revealed a complex arrangement of archaeological features and deposits representing at least four broadly defined periods of activity in the area. In summary the chronological development of Phase 1 and 2 area of the Site can be outlined as follows;

- the occupation of a presumably previously wooded landscape during the later Neolithic period, including the construction of a large rectangular ditched 'ritual' enclosure and a number of pits, both isolated and grouped throughout the surrounding landscape that contain both probable 'placed' deposits of pottery and worked flint, and assemblages perhaps more characteristic of settlement activity,
- the establishment of a formalised landscape of fields, enclosures, wells and pits during the Late Bronze Age and Early Iron Age, probably associated with a settlement site that was focused to the south-east of the Site, and including the continued use of the Neolithic enclosure, possibly as a pyre site associated with an adjacent cremation cemetery,
- the formation of a small Late Iron Age and Romano-British enclosed settlement to the north-west of the earlier Bronze Age settlement, including an associated trackway with wayside inhumations, cremations and middens, as well as a complex arrangement of internal enclosure divisions, peripheral stock enclosures, wells, gravel pits, pits, post-holes, and the ephemeral remains of round-house features, and
- the establishment of a medieval field system of small enclosures and wells to the south, with the ephemeral remains of possible ridge and furrow cultivation to the north.

Other features include a single Saxon pit, and a number of Post-medieval field divisions (many of which reflect the medieval field system) and modern remains associated with the Site's former use as a sports field. As anticipated after Phase 1

(Wessex Archaeology 1997, iii), Phases 1 and 2 have combined to present a coherent picture of the archaeological resource at Imperial College Sports Ground, particularly in relation to the Late Iron Age and Romano-British settlement remains. It is therefore considered appropriate that this assessment report considers not only Phase 2, but Phases 1 and 2 combined. However, it should be stressed that a further 3 phases of fieldwork remain, and although the evaluation results suggest that the major concentration of archaeological features has now been revealed, isolated 'pockets' of activity related to all periods undoubtedly await discovery in the landscape beyond.

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Acknowledgements

Wessex Archaeology would like to acknowledge the assistance of the staff of Henry Streeter (Sand and Ballast) Ltd and in particular Mr Paul Stockton, thanks are also due to Dr Simon Collcutt of OAA, who acted as archaeological adviser to Henry Streeter (Sand and Ballast) Ltd.

The Project Design and Specification was prepared by Wessex Archaeology, in consultation with English Heritage - London Region, acting as archaeological advisers to the Local Planning Authority (LPA). The fieldwork was monitored by Rob Whytehead, English Heritage - London Region, on behalf of the LPA, his comments and observations throughout this project are gratefully acknowledged.

In addition, many people visited the excavation and offered the benefit of their experience and local knowledge. In particular, thanks are due to John Cotton (Curator of Prehistory, Museum of London), John Barrett and Gill Andrews and Jez Reeve (Head of English Heritage - London Region).

The project was managed on behalf of Wessex Archaeology by Jonathan Nowell, with the fieldwork directed by Andrew Crockett, assisted by Chris Ellis and Isca Howell, and carried out, to date, by Angela Brennan, Richard Conolly, Nick Cooke, Julie Draper, Marie-Claire Ferguson, Jan Grove, Guy Hopkinson, Karl Hulka, Steve Legg, Bill Moffat, Jenni Morrison, Doug Murphy, Tobin Rayner, Jim Stedman, John Taylor and Andy West. Intermittent monitoring of gravel extraction was undertaken by Phil Harding. The finds assessment was provided by Lorraine Mephram, Finds Manager, assisted by Emma Loader, and environmental assessment by Mike Allen, Environmental Manager, and Sarah Wyles. Illustrations were provided by Linda Coleman, assisted by Angela Brennan, Andrew Crockett and Emma Loader, and based on site survey data collated and processed by Andrew Crockett. This report was compiled by Andrew Crockett and Jonathan Nowell.

**Imperial College Sports Ground, Sipson Lane,
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1. INTRODUCTION

1.1. Project Introduction

1.1.1. Wessex Archaeology was commissioned by Henry Streeter (Sand and Ballast) Ltd (the Client) to carry out an archaeological excavation on land (hereafter referred to as the Site) proposed for ballast extraction to the south of Sipson Lane (centred on TQ 0825 7765), in the Harlington area of the London Borough of Hillingdon (Fig. 1).

1.1.2. In August 1990 the Local Planning Authority (LPA) granted the Client conditional planning permission for gravel extraction. One of these conditions related to archaeological matters:

1.1.3. Condition 3 : Archaeological Investigation and Recording

No operation hereby authorised by this consent shall commence until the results of an archaeological evaluation, including a mitigation strategy has been submitted to and approved in writing by the Minerals Planning Authority, unless otherwise agreed in writing by the Minerals Planning Authority.

Reason

The site is in a locality where previous archaeological investigations have been productive and comprehensive records are in the public interest.

1.1.4. The LPA requirement for a pre-extraction archaeological excavation of the area was initiated on the basis of the results of an archaeological evaluation carried out during early 1996 by the Museum of London Archaeology Service (MoLAS 1996). These results indicated that, whilst the majority of the archaeological features were located within the eastern portion of the Site (i.e. Phases 1 and 2), remains were recorded throughout the Site.

1.1.5. These remains comprised a range of feature types and dates, spanning the Neolithic to Late Roman periods, including enclosures, cremations, ditches, pits and post-holes. The evaluation report concluded that "...the results of the evaluation have highlighted the eastern part of the sports ground as being archaeologically very significant...".

1.2. Scope of Report

- 1.2.1. This document is not intended as a formal assessment report, as defined in English Heritage's Management of Archaeological Projects (MAP2) 1991, which sets out proposals for further analysis and publication of the archaeological results. Such work is felt inappropriate in view of the proposed forthcoming excavation of Phases 3, 4 and 5 which will, without doubt, considerably expand upon and elucidate the current archaeological record.
- 1.2.2. The purpose of this document is to summarise the results to date and briefly consider them in relation to the stated research aims. A brief consideration of the evaluation is also given in the light of the excavation results.

1.3. The Site

- 1.3.1. The land covers an area of *c.* 19 hectares and is owned by Imperial College. The land was most recently used for both market gardening and grassland set aside as an overspill area for temporary sports pitches.

1.4. Topography, Geology and Hydrology

- 1.4.1. Topographically, the Site is flat within its limits, with the modern ground surface at an approximate height of 26 m above Ordnance Datum (aOD). The Site is situated on the north side of the Middle Thames Valley, the general trend for which exhibits a gentle slope from north to south, in a series of stepped, broad flat terraces.
- 1.4.2. The underlying basal drift geology for the area is recorded as Taplow Gravel, one of the Pleistocene gravel terraces formed through a series of erosional and depositional episodes associated with the post-diversionary phase of the River Thames. The Taplow Terrace was formed between the Hoxnian and Ipswichian interglacials (i.e. between *c.* 189,000 - 128,000 BP), and has been assigned to Oxygen Isotope stage 6 (Bridgland 1994).
- 1.4.3. Overlying the gravel is a deposit of yellowish brown silty sand identified as Langley Silt, although more commonly referred to as 'brickearth'. This is a complex deposit of probable Late Devensian date (i.e. *c.* 19,000 - 13,000 BP), and is derived from a combination of aeolian and fluvial deposition (Rose n.d. 18-21).
- 1.4.4. The hydrography and drainage of the area is dominated by the River Thames, flowing from west to east and situated approximately 10 km to the south of the Site. In addition, the Site is approximately centrally located between two south-flowing principal tributaries of the Thames, the River Colne to the west and the River Crane to the east.

1.5. Archaeological Background

- 1.5.1. As noted above, the archaeological evaluation of the area has provided a good indication of the range and nature of archaeological activities represented at the Site. However, the Site forms but part of a wider landscape that is well noted for intensive archaeological activity.
- 1.5.2. A considerable number of Lower and Middle Palaeolithic finds (hand-axes, flint flakes etc.) have been recovered from the immediate area (Wessex Archaeology 1996), predominantly from the Lynch Hill Gravels to the north of the site. However, some abraded and rolled examples have also been recovered from the Taplow Gravels that underlie the Site. The condition of these latter examples may suggest that they are derived from the more ancient Lynch Hill Gravels to the north. In addition, Middle Palaeolithic finds have been recovered at the base of the Langley Silt Complex.
- 1.5.3. The semi-nomadic hunter-gatherer societies present during the Mesolithic period leaves few traces within the archaeological record. Within the area, such activity is represented by occasional finds of flint tools and associated faunal remains, predominantly concentrated within the river valleys. In particular, a probable animal butchery site has been identified at Three Ways Wharf in the Colne Valley (Lewis, JSC forthcoming).
- 1.5.4. During the Neolithic period large swathes of the wooded landscape would have been cleared, both for domestic activity, such as growing crops and grazing animals, and in order to construct a number of substantial 'ritual' monuments in the area. In particular, these monuments include a Middle Neolithic causewayed enclosure at Yeoveney Lodge, Staines, and probable contemporaneous ring ditches at Horton, Shepperton and Burrows Hill, and the large Late Neolithic cursus at Stanwell that extends over a distance of some 3.5 km.
- 1.5.5. A section of the Stanwell Cursus and the surrounding landscape has recently been archaeologically investigated at Perry Oaks Sludge Works, to the west of Heathrow Airport. This excavation identified an earlier timber-post avenue, replaced by the ditched cursus monument, both features located on the edge of the terrace where it drops down to the River Colne to the west.
- 1.5.6. Settlement evidence for the Neolithic period is less common within the area, although tentative evidence is recorded at Runnymede Bridge to the south-west, Prospect Park to the west and Cranford Lane to the east. In addition, isolated pits predominantly containing a mixed assemblage of diagnostic finds, such as flint tools, waste flakes and fragments of stone axes, are a relatively common find in the area. It is unclear whether these pits are truly indicative of either ritualistic or domestic activity, it is perhaps likely that both aspects are represented.
- 1.5.7. Early Bronze Age remains are scarce within the area, with the notable exception of an 'auroch burial' within a large pit, associated with six barbed-and-tanged flint arrowheads. Some circular cropmarks may indicate contemporaneous activity, although some may be Neolithic features.

Furthermore, an array of ring ditches running east from the south end of the Stanwell cursus may be an Early Bronze Age barrow cemetery.

- 1.5.8. During the Middle and Later Bronze Age, evidence for both settlement and ritualistic activity increases, with archaeological investigations within the A4/M4 corridor revealing ditched enclosures, urned and unurned cremations, domestic pits and post-holes, and other features. These remains have produced many finds, including Deverel Rimbury pottery, daub, worked flints and loom weights. Of particular note is the large Late Bronze Age defended enclosure at Mayfield Farm.
- 1.5.9. The Iron Age period represents a continuation of settlement activity from the preceding Late Bronze Age, with further defended enclosures and unenclosed settlements being established in the area, such as at Caesar's Camp (now beneath Heathrow Runway 1). This site contained at least eleven roundhouses, as well as many four-poster structures, a characteristic feature of the period, and thought to represent grain stores and/or driers.
- 1.5.10. Romano-British settlement in the area can be grouped into two broad categories, comprising roadside settlement associated with the principal roads radiating out from *Londinium* (London), and truly rural settlement on the fringes of London. In the area around the Site both aspects are represented, with known semi-urban settlement sites situated at Staines and Brentford.
- 1.5.11. Rural settlement evidence is an emerging feature of more recent discoveries in the area, often represented by enclosures, pits, track- or droveways and wells. However, associated structural evidence is seldom recorded, and it must be assumed to be relatively ephemeral and hence not survive the post-Roman agricultural impact on the landscape.
- 1.5.12. Perhaps most notably, a pair of Romano-British corn-driers and a timber-lined well, as well as associated features and finds, were discovered on the north side of Sipson's Lane, at Walled Garden Farm. These remains were predominantly 1st-century AD, although the well was infilled in the 3rd-century. Similarly Romano-British settlement activity elsewhere in the area is concentrated within the Early (i.e. 1st and early 2nd-century) and Later (i.e. 3rd and 4th-centuries), with little evidence of continuity between the two periods. This may reflect a general economic decline in the province during the 2nd and early 3rd-centuries.
- 1.5.13. Although evidence for Saxon activity is comparatively rare, sufficient is known from both archaeological and documentary sources to indicate settlement centres at both Sipson and Harmondsworth. However, there are few indications within the archaeological record for rural settlement associated with these settlement centres. At Prospect Park, near Harmondsworth, a group of at least 11 Sunken Featured Buildings, probably associated with an apsidal-ended rectilinear post-built structure were recorded, with limited evidence for associated agricultural activity.

- 1.5.14. Medieval occupation concentrates around the Later Saxon settlements of Sipson and Harmondsworth, as well as at Harlington immediately to the east of the Site. These centres appear to suggest a relatively prosperous agricultural hinterland to the west of London, consisting of small nucleated villages concentrated alongside the major roads in and out of London. The high grade/ high yield status of the soil for market gardening purposes has long been recognised, with the area latterly referred to by planning authorities as the A4/M4 Horticultural Belt.
- 1.5.15. Post-medieval settlement patterns represent a continuation of the system established during the Later Saxon and medieval periods. The area became subject to the enclosure act relatively late on, in the early 19th-century, although the area as a whole escaped the urbanisation and industrialisation experienced by much of London during the Victorian period.
- 1.5.16. The development of Heathrow as the main international airport serving London has instigated a considerable rise in associated development in the area, as has the increasing demand for sand and gravel to supply the construction industry. However, the discrete nature of the original settlements of Sipson, Harmondsworth and Harlington is a feature still evident today.

1.6. Nature of Development

- 1.6.1. Henry Streeter (Sand and Ballast) Ltd propose to extract gravel from the Site within a programme of works spanning five years (or phases) (See Fig 2). Extraction will progress from east to west, with approximately one fifth of the 19 ha. site extracted during each yearly phase. Generally, topsoil and subsoil from Phase 1 will be used to create the protective bunds around the perimeter of the site, whilst the overburden from subsequent phases will partly be used to infill the preceding phase of extraction. Ultimately, the site will be fully reinstated to its former land use.

1.7. Summary of Archaeological Evaluation Results

- 1.7.1. As noted above, an archaeological evaluation of the site was undertaken by the Museum of London Archaeology Service (MoLAS 1996) in early 1996. Originally the fieldwork was to comprise 106 trenches, although the westernmost 9 trenches (Trenches 1, 5, 9, 10, 15, 16, 21, 22 and 26) were subsequently not excavated, leaving 97 machine trenches, each approximately 20 m long and representing a c. 1.7% sample of the Site area (see Fig 2 and 3).
- 1.7.2. The evaluation revealed a complex arrangement of features, concentrated towards the eastern end of the site, though spread across the entire area. These features indicated human activity within the site from the Neolithic through to the Romano-British period. As with other evaluations within the area, relatively few closely datable artefacts were recovered, resulting in a substantial proportion of the features remaining undated, although many were presumed to be prehistoric on the basis of non-diagnostic finds (such as waste flint flakes and burnt flint).

- 1.7.3. The majority of the features from all periods comprised ditches, gullies, pits and occasional post-holes, consistent with a predominantly rural agricultural landscape. However, the evaluation also recorded a number of features of a more 'ritualistic' function. These included an assemblage of diagnostic Neolithic artefacts within a pit (including flint tools, pottery and polished stone axe fragments), that may be considered as a 'placed deposit' comparable with similar features previously recorded in the area, and both urned and unurned cremations of Bronze Age date.

2. METHODOLOGY

2.1. Fieldwork

- 2.1.1. The project specification (Wessex Archaeology 1996) was prepared in accordance with relevant guidelines (English Heritage 1992; Museum of London 1994 etc.). A unique site reference code (IMC96) was assigned by the Museum of London, to be used for all phases of fieldwork.
- 2.1.2. Topsoil and subsoil overburden were removed by the staff of Henry Streeter (Sand and Ballast) Ltd using a 360° tracked hydraulic excavator under constant archaeological supervision. The removal of overburden continued to the surface of undisturbed geological deposits, or the level at which archaeological, or potential archaeological features, could be identified. Generally this level equated to the surface of the undisturbed brickearth i.e. the base of the ploughsoil horizon.
- 2.1.3. All identified features were recorded, prior to excavation, at the point of discovery as 3-dimensional survey data using an on-site Total Station. Survey stations used for this work were tied into the Ordnance Survey (OS) National Grid using nearby available OS triangulation points.
- 2.1.4. Although dependant on many factors, the percentage of archaeological features to be excavated was generally 10% of all linear features (i.e. ditches, gullies etc.) and 50% of discrete features (i.e. pits, post-holes etc.). In general, these percentages were considered as a minimum response, with a more detailed investigation of significant deposits (i.e. structures, burials, ritual deposits etc.).
- 2.1.5. On the basis of the results from Phase 1 and following discussions with English Heritage, a more pragmatic approach to the percentage excavation of linear features was adopted in Phase 2. This approach comprised a reduction in the 10% level of formal excavation (i.e. scaled plans and sections, detailed photographs and comprehensive context recording) for linear features considered to represent field boundaries or road-side ditches beyond the settlement centres. This reduction was offset by an increase in rapid excavation of narrow slots through such features to chart artefact (and where possible ecofact) assemblage compositions and distributions in relation to settlement centre proximity's. As a minimum response, each rapid 'slot' was uniquely identified and 3-d recorded using the on-site Total Station.

- 2.1.6. A rigorous targeted environmental sampling strategy was adhered to, comprising up to 30 litre (if obtainable) bulk samples from most sealed and dated deposits, ensuring that an appropriate range of feature types per period throughout the site limits were sampled. Additional samples were also taken from either sealed or dated deposits to elucidate the nature and/or date of such deposits. Where appropriate, soil monoliths, mollusc columns, artefact samples and magnetic susceptibility readings were also obtained.
- 2.1.7. All recording was carried out using Wessex Archaeology's *pro forma* recording sheets, including a full graphic and photographic record of archaeological remains and the site in general (**Fig. 3**).
- 2.1.8. As Phases 1 and 2 of the excavation progressed, land parcels of approximately 1 ha were 'released' to the Client, subject to the agreement of English Heritage, acting as advisers to the LPA. On release, each area was stripped by the Client of all remaining brickearth, to the top of the gravels which were then commercially extracted. By the end of the Phase 2 excavation, the gravel beds within Phase 1 were approaching exhaustion.
- 2.1.9. During the gravel extraction of the Phase 1 area an intermittent monitoring of Pleistocene deposits was undertaken to assess the potential for Palaeolithic material within brickearth/gravel interface and the gravels, the results of which are incorporated into **Section 3** (Archaeological Results) below. Monitoring of Phase 2 gravel extraction should commence early in 1998.

3. ARCHAEOLOGICAL RESULTS

3.1. Palaeolithic and Mesolithic period (c. 500,000 - 4,000 BC)

- 3.1.1. Although no features or deposits were recovered from the open area excavation that could be confidently ascribed to these periods, at least one rolled waste flint flake of Palaeolithic origin was recovered from gravel beds exposed during the excavation of later features.
- 3.1.2. Gravel monitoring recorded a section through the gravel with 2-3 m of fluvial well-bedded matrix supported gravel. Individual beds ranged from those with a clay matrix, probably derived from the bedrock London Clay, through others with sandy material to some with open framework.
- 3.1.3. The gravel was capped by up to 2 m of 'brickearth' which thinned out to expose the gravel approximately centrally within the limits of Phase 2. The contact with the underlying gravel was marked by cryoturbation involutions which formed during periods of cold climate. The 'brickearth' appears to comprise a basal sandy/silty layer and an upper darker clayey 'brickearth'. It may be possible to correlate these with similar more extensive deposits, which were sampled at Prospect Park, Harmondsworth, as fresh sections become available.

3.2. Neolithic (c. 4,000 - 2,400 BC) (Fig. 4)

- 3.2.1. Although a fine example of an Early Neolithic leaf-shaped arrowhead was recovered from a later pit, it is likely that this represents a stray residual find. A number of features have been positively identified as belonging to the Late Neolithic period, comprising the first phase of the large rectangular enclosure within the north-east corner of the site, and a number of shallow pits throughout the Site, and appearing to concentrate towards the south end of Phase 2. Dating is predominantly based on the identification of Peterborough Ware pottery.
- 3.2.2. The enclosure measured approximately 40 m east to west and 15 m north to south, and comprised a broad convex sided and flat bottomed ditch, with one internal north - south aligned ditch, dividing the main enclosure into two areas on a ratio of c. 1:6. Limited evidence was recorded across sections of the outer ditch to suggest an internal bank or mound. Although no direct evidence was recovered to indicate the function of this enclosure, magnetic susceptibility readings obtained from both within and outside the enclosure indicate very high readings within the enclosure. This may reflect the effects of heating from fires on the *in situ* subsoil, though not necessarily contemporary with this period.
- 3.2.3. Stratigraphic relationships clearly indicated at least two phases of use for this monument, the second phase comprising the re-excavation of the outer ditch without an internal division. The two phases are separated by a period of time sufficient to allow the first enclosure ditch to infill (either naturally or artificially) to such a degree that trees had established, matured and fallen (or been felled) along the line of the infilled ditches, prior to the second phase of the enclosure. Both phases are cut by, and therefore predate, a number of intercutting Middle Bronze Age features, including large pits and ditches.
- 3.2.4. There are no known excavated parallels to this enclosure within the area. However a number of features, identified from aerial photographs, in the vicinity of the Stanwell Cursus are of similar form and size. Further afield similarities can be made with the East Anglian group of Neolithic rectilinear enclosures (Buckley *et al* 1988, fig. 10 & 11), and in particular the Rivenhall enclosure. In addition, similarities are also evident with the Long Enclosure at Dorchester-on-Thames (Whittle *et al* 1992, fig. 4), and to a lesser degree, the interrupted ditch forming the Normanton Down mortuary enclosure (Vatcher 1961, fig. 2).
- 3.2.5. It is of note that all these parallels are recorded in contemporaneous archaeological landscapes dominated by ritual/funerary monuments, and the comparison between rectilinear enclosures and long barrows has already been noted.
- 3.2.6. The pits appear to form two distinct types, isolated archaeologically-rich features, containing many examples of pottery, worked flint, worked stone, burnt flint etc., and morphologically similar features containing relatively few finds. The latter include a concentrated group of up to 16 similar features, four of which have produced small quantities of Late Neolithic

pottery, located towards the southern end of Phase 2. This large group of shallow pits is relatively close to a smaller group of four such features that have produced a large, and noteworthy, collection of decorated Peterborough Ware pottery in near pristine condition.

- 3.2.7. On the basis of the evidence to date, it is considered likely that both ritual and settlement activity is occurring in the area during the Late Neolithic period, with the settlement activity perhaps concentrated towards or somewhere beyond the southern end of Phase 2.

3.3. Bronze Age (c. 2,400 - 700 BC) (Fig. 4)

- 3.3.1. Although a small quantity of pottery (from a possible Collared Urn) may be of Early Bronze Age date, there is little other **directly** datable evidence to indicate human occupation within the Site during the Early Bronze Age. As such, it is probable that a hiatus in settlement activity occurs between the preceding Late Neolithic phase and the Mid to Late Bronze Age activity recorded below.
- 3.3.2. However, given the timescale necessary for the Late Neolithic enclosure ditch to gradually infill, sprout trees along its length, the trees to fall or be felled, the enclosure ditch to be re-excavated, the re-excavation to gradually infill, and then Middle Bronze Age features to cut the infilled re-cut ditch, it is entirely conceivable that the later phases of the Neolithic enclosure are perhaps more likely to be found in the Early Bronze Age period.
- 3.3.3. Middle to Late Bronze Age evidence comprises a small Middle Bronze Age cremation cemetery to the west of the earlier Neolithic enclosure, a number of other linear and discrete features predominantly clustered around and cutting the Neolithic enclosure and at least two enclosures within the south-east sector of the site. Two isolated cremations were also recorded towards the southern end of Phase 2, one each during the evaluation and excavation.
- 3.3.4. The cremation cemetery comprised at least five urned cremations in shallow pits, and a number of other pits that contained cremated bone that may be either unurned cremations or associated features containing pyre debris. The eastern limit of this cemetery appears to be defined by a shallow narrow north to south aligned ditch, with a possible small entrance centrally located. However, no other defining features were located.
- 3.3.5. Although the site is generally flat, an examination of the micro-topography indicates that these cremation features are located on a small rise. It is therefore likely, given the very shallow truncated nature of the surviving cremation pits, that this area was relatively higher in antiquity and hence acted as a focus for these burial features.
- 3.3.6. The choice of this area for 'ritual' activity may not have solely depended on topography, as it is possible that the Neolithic enclosure was utilised within this period for part of the burial rite. The very high magnetic susceptibility readings recorded within the enclosure may have resulted from its use as the pyre site for the Bronze Age cremations, with the single ditch forming the

east boundary to the cremation cemetery symbolically acting as the boundary between the funerary rite and the last resting place.

- 3.3.7. The group of Bronze Age features concentrated around the Neolithic enclosure, comprise large and small pits and an east to west aligned ditch that may represent part of another enclosure.
- 3.3.8. Evidence for settlement in the Middle and Late Bronze Age is generally concentrated to the south and south-east of the cremation cemetery and earlier Neolithic enclosure, and comprises at least two regular subrectangular enclosures, defined by discontinuous small ditches that were presumably of a non-defensive nature, probably representing field systems. It is perhaps significant that a broad band of 'clear' ground can be identified between the southern limit of the ritual activity and the northern limit of the settlement activity, a band dominated by tree throws and other such natural features. Although these tree throws and features remain undated, it is tempting to suggest that they formed a boundary between the ritual and settlement areas.
- 3.3.9. Within these southern enclosures, limited evidence was recorded for internal divisions, however there were no indications as to what such divisions represented in terms of area activities. Although a number of post-holes and small pits were recorded, both dated and undated, there were no coherent patterns to indicate structural remains.
- 3.3.10. Associated remains include a large well or gravel pit within the south-west corner of the easternmost enclosure, as well as a possible driveway forming the west side of the southernmost enclosure. Relatively substantial quantities of pottery and other finds were recovered from the excavated sections within these enclosures, suggesting that the settlement associated with these field systems was reasonably close to, if not within, the limits of the excavation.
- 3.3.11. To the west, within Phase 2, relatively few similarly dated remains were recorded, with the exception of a few lengths of predominantly north to south and east to west field boundary ditches, co-aligned with the previously recorded remains to the east, and a few isolated discrete features. Relatively few artefacts were recovered from these features, in comparison to the features towards the southern edge of Phase 1, supporting the interpretation that the Middle to Late Bronze Age settlement centre is focused to the south of Phase 1, and 'fading-out' to the north and west within the site limits.
- 3.3.12. A feature of note from Phase 2 is a rectangular 6-post structure towards the southern end of the site, measuring *c.* 8 m by 5 m (Fig. 7). Although dating evidence recovered from the post-holes comprised a single small sherd of undiagnostic Romano-British pottery, the structure as a whole appears to respect or be respected by the Late Bronze Age ditch immediately to the south. Although this relationship may be a coincidence, it may suggest that the pottery sherd is intrusive, and that the structure and the ditch are relatively contemporary.
- 3.3.13. Isolated sherds of probable Early Iron Age pottery may indicate that this settlement continued to be occupied beyond the end of the Bronze Age,

although the small quantities would suggest that if so, this continuation was short-lived.

3.4. Iron Age (700 BC - AD 43) (Fig. 5)

3.4.1. Although small quantities of Middle Iron Age pottery were recovered, insufficient amounts were recorded to suggest a coherent occupation phase within the site during this period. Although it is therefore probable that these sherds are residual or intrusive finds within features from other periods, as noted above, one of the features that produced such pottery was the east to west aligned ditch cutting through the infilled remains of the Neolithic enclosure (**Fig. 4**).

3.4.2. Late Iron Age material is more coherently represented, with features of this date appearing to form the nucleus of the later Romano-British settlement centrally located within Phase 2. Pending a more detailed analysis, the general distribution appears to indicate at least three roundhouses, located to the east and south of a large multi-phase square enclosure measuring *c.* 30 m along each side, and with an east-facing entrance within the north-east corner.

3.4.3. A few additional features may be attributed to this period, including the ephemeral remains of what appear to be small subrectangular enclosures formed by discontinuous ditches, to the north-west of the main square enclosure. Although a number of features were identified within the large square enclosure, including a well, up to two gravel pits and a short length of gully, only the gully appears to correspond to the Late Iron Age phase. Artefacts recovered include a quantity of copper working slag, predominantly but not exclusively recovered in association with Late Iron Age pottery. No clear evidence was recorded to indicate a metal-working area (hearths etc.) although the presence of such material would suggest that such activity occurred, and may well have continued into the Romano-British period.

3.4.4. Perhaps one of the most notable features of the Iron Age settlement, and its Romano-British successor, is its orientation within the landscape. Unlike the preceding and subsequent periods, where field systems and settlement layouts are generally orientated north-south and east-west, in the Iron Age the orientation undergoes a material change. Aligned on a north-west to south east axis, the settlement is co-aligned with the route of a trackway which becomes formalised in the Romano-British period.

3.5. Romano-British (AD 43 - 410) (Figs. 6 and 7)

3.5.1. Romano-British activity is the most coherently represented period within the site, comprising enclosure ditches, burials (both inhumation and cremation), gravel quarries, working surfaces, pits, post-holes, timber-lined wells and middens. The majority of this evidence is concentrated within a broad east-south-east to west-north-west swathe across Phase 1 and the northern half of Phase 2, representing the expansion of the Late Iron Age settlement

throughout the Romano-British period to either side of the trackway noted above, a width of approximately 30 - 35 m.

- 3.5.2. Ceramic evidence from Phase 1 hinted at the possibility that an hiatus occurred between the Early (1st/2nd-century) and Late (3rd/4th-century) Romano-British period. However, the complete assemblage from Phases 1 and 2 suggests that no such hiatus existed, and it is therefore likely that the evidence indicates continued occupation throughout the period.
- 3.5.3. Stratigraphically, at least, three phases of activity have been consistently recorded throughout the complex of Romano-British features. The earliest activity appears to comprise the addition of a larger internally divided enclosure to the east of the Iron Age precursor, and probably extending as far as the curvilinear ditches recorded within the south-west corner of Phase 1. Within this area, numerous internal ditched divisions, pits, post-holes, middens and curvilinear gullies were recorded, and it is likely that detailed stratigraphic and artefactual analysis will reveal elements of sub-phases within this area. Structural remains indicate the continued use of Iron Age-style roundhouses, some appearing to replace the earlier prehistoric examples. No evidence for rectilinear dwellings was recorded, although the recovery of Romano-British roof tile would suggest that such buildings may have existed in the vicinity.
- 3.5.4. This development to the south of the trackway is mirrored by a commensurate expansion to the north of the trackway, with the establishment of a number of enclosures, probably for animal husbandry, or some form of small-scale market gardening. The comparatively low quantity of artefacts recovered, from the northern enclosures suggests that they were unlikely to have been used for settlement. Many of the ditches forming these enclosures, and the road side ditches in particular, have been recut/replaced on up to two separate occasions.
- 3.5.5. The Later Romano-British period sees the replacement of the earlier enclosure layout with a pair of conjoining larger rectangular enclosures (one end-on and one parallel to the trackway) with fewer internal divisions or features. A large spread of midden is deposited in a broad linear band across the line of the trackway, sealing an earlier inhumation and several cremations, and a second smaller deposit of midden, associated with a roughly linear spread of gravel, is deposited over earlier enclosure ditches. Inhumations from any period are extremely rare in the general area, in part due to poor conditions for bone survival. The survival of the inhumation is probably due to favourable conditions produced by the overlying mantle of midden material which also contained animal bone, in the context of the archaeological development of West London must be seen as a very significant find.
- 3.5.6. Although the stratigraphic relationships for the second smaller midden are unambiguous, it is composed of predominantly Early Romano-British material. It is possible that this therefore represents detritus cleared from the earlier settlement during the establishment of the later sub-rectangular enclosures. Few structural remains are clearly associated with this phase,

and it is possible that the settlement centre shifted to the east, beyond the limit of the excavation.

3.5.7. Few Romano-British features are recorded beyond the main settlement extent; the 6-post structure to the south, provisionally dated as Romano-British, may be a prehistoric feature. To the west, within Phase 1, a timber-lined well was recorded on the line of the trackway ditches forming the north side of the trackway. It is possible that the well and ditch(es) were contemporaneous, with the linear features deliberately draining into the well. Its relative proximity to the settlement centre has been previously considered as indicative of more ephemeral un-enclosed settlement activity in the immediate area. It is perhaps more likely, on the balance of evidence, that this represents a water supply for stock rather than humans, possibly penned in the large elongated rectangular enclosure of which the well occupies the south-east corner.

3.5.8. In addition, a series of large intercutting gravel pits and wells were recorded to the south of the well. It is probable that the extracted gravel served a local purpose, either for floor surfaces within the settlement enclosures, or perhaps more likely used as ballast for the trackway surface. Two smaller shallower gravel pits were recorded within the former Iron Age enclosure, which were more likely to serve a domestic purpose, as well as a single defunct well, which produced a considerable quantity of iron and copper alloy objects.

3.6. Saxon (AD 410 - 1066) (Fig. 8)

3.6.1. A single pit produced Early/Middle Saxon pottery, situated *c.* 10 m to the south of the Neolithic enclosure. With nearby documentary recorded Saxon settlements at Sipson and Harmondsworth, it is not perhaps surprising that isolated features are recorded within the site, representing the dispersed fringes of what were presumably un-enclosed settlements.

3.7. Medieval (AD 1066 - 1500) (Fig.8)

3.7.1. A considerable quantity of dated medieval (predominantly 12th/13th-century) features were recorded within the southern portion of Phase 2, although no such remains were noted from Phase 1. The remains predominantly comprise small discontinuous lengths of ditch forming a network of fields/enclosures (representing more than one phase of activity) together with a few discrete features, including one large well-like feature containing pieces of waterlogged wood.

3.7.2. The size of the enclosures would appear to exclude the possibility that they represent arable cultivation, and a function related to either animal husbandry and/or market gardening appears more likely. The northern side of a probable small sub-rectangular enclosure was recorded at the southern extent of Phase 2. This may represent the periphery of associated medieval settlement features.

3.7.3. The northern extent of this field system is marked by the main east to west post-medieval field boundary, marked on recent maps and revealed as a

subsurface multi-phase feature crossing both Phase 1 and Phase 2. Although dating evidence for this feature is predominantly post-medieval or modern, it is possible that this represents the location of a former medieval field boundary. It is of note that several north to south aligned post-medieval field boundaries to the south of this main ditch replicate the line of earlier medieval examples.

- 3.7.4. To the north of the main east to west aligned post-medieval ditch, a number of broad ephemeral north to south aligned 'features' were recorded throughout Phase 1 and Phase 2. These diffuse features could not be 'excavated' as such, and the interpretation at the time was that they may represent elements of ridge and furrow cultivation. On the basis of the evidence recorded in Phase 2, this interpretation appears valid, and although undated, may also therefore be medieval in origin.

3.8. Post-medieval and Modern (AD 1500 onwards) (Fig. 8)

- 3.8.1. Post-medieval and modern features predominantly comprise field boundaries and more recent fence lines and drainage features associated with the sites' former use as sports pitches. It is of interest to note that the southernmost north to south aligned field boundaries appear to define the east and west limits of the Romano-British gravel extraction area, perhaps suggesting that this area was still seen as distinct by the 19th-century, presumably on the basis of terrain and/or drainage.

3.9. Undated Features

- 3.9.1. A substantial number of features were also excavated that contained no securely datable material and could not be dated stratigraphically, many of these features are likely to be either Romano-British or prehistoric in origin. Detailed post-excavation analysis will undoubtedly enable some of these remains to be 'dated' on the basis of morphology, location or alignment.

4. FINDS EVIDENCE

4.1. Ceramic Building Material

- 4.1.1. The ceramic building material (CBM) is mostly of Romano-British type, with several recognisable *tegulae* (including an example with an animal pawprint), *imbrices*, and one flue tile. The remainder are unspecified Romano-British bricks/floor tiles, one with a finger-smear 'signature'. Post-medieval roof tile and brick was also recovered in small quantities.

4.2. Burnt Flint and Stone

- 4.2.1. Burnt, unworked flint was recovered in some quantity from features across the site; burnt, unworked stone occurred in smaller quantities. Both material types are un-datable, and are of uncertain origin. This burnt material occurs as a low-level scatter across the site; few contexts produced more than 1000g in weight.

4.3. Clay Pipe

- 4.3.1. Three contexts produced clay pipes: one bowl of late 17th/early 18th century form, and two stems, one with a spur stamp 'WP'.

4.4. Fired Clay

- 4.4.1. Nearly all fragments of fired clay recovered are featureless and probably structural in origin, either from upstanding structures or from hearths, pit linings etc. However, a number of pieces of loomweight have been recognised, from prehistoric and Romano-British contexts, mainly from Phase 1: at least three cylindrical weights, one triangular, and at least two more of uncertain form. Cylindrical, axially perforated weights are generally associated with Middle to Late Bronze Age settlements; triangular weights are often taken as characteristic Iron Age types but are also known from Late Bronze Age sites, and appear to continue in use into the Romano-British period.

4.5. Worked Flint

- 4.5.1. The worked flint assemblage exhibits a chronological mix of manufacturing techniques, and has a potential date range of Neolithic to Bronze Age; no diagnostically Mesolithic material was identified. Raw materials consist almost entirely of locally-derived gravel flint; there is also a small but significant proportion of pieces in an opaque, light grey flint which is non-local (possibly from a chalk source) and which is likely to derive from worked down axes (three such axes were recovered: see below). Condition ranges from fresh to edge-damaged; patination also varies across the assemblage.
- 4.5.2. The majority of the assemblage comprises flakes and broken flakes which are not chronologically distinctive although a large proportion can be generally characterised as hard hammer worked. There are a small number of poor quality cores, each producing a few squat flakes. There are few tools (scrapers, piercers and fabricators) or other retouched pieces. These appear typically later Bronze Age.
- 4.5.3. There is, however, a recognisable component within the assemblage which comprises more diagnostic Neolithic forms, such as blades, multi-platform cores, end scrapers, a leaf arrowhead, a serrated blade, possible axe thinning flakes, fragments of three polished axes (one of which has been re-used as a core), a well executed backed knife and the flakes probably deriving from worked down axes, mentioned above.
- 4.5.4. Many of these diagnostic Neolithic pieces, including the three polished axes, were recovered from Late Neolithic features containing Peterborough Ware, but other fragments were found in later features across the site, where they are likely to be residual.

4.6. Glass

- 4.6.1. Glass was recovered from five contexts, all examples being either post-medieval or modern.

4.7. Pottery

- 4.7.1. The pottery recovered ranges in date from Late Neolithic to post-medieval. In general the condition is poor, sherds are fragmentary and abraded, and the Romano-British calcareous (shelly) wares in particular are badly leached and pitted; the Late Neolithic Mortlake Ware sherds are a notable exception to this poor preservation. Apart from the latter sherds there are no reconstructable profiles and diagnostic sherds are scarce. This has led to some difficulty in the accurate dating of the Iron Age material in particular, and chronological groups have been deliberately broadly defined (Early/Middle Iron Age, Middle/Late Iron Age, Late Iron Age/early Romano-British) to reflect probable overlap between groups. The general impression gained is that the pottery reflects a continuity in the ceramic sequence throughout the later prehistoric period although, given the overall quantities of material, any short hiatus would be difficult to identify.

Late Neolithic

- 4.7.2. All examples recovered are of Mortlake style, comprising sherds of several vessels with impressed and/or 'rusticated' (finger-pinched) decoration. These vessels are well paralleled amongst previously excavated material from Heathrow (Grimes 1960, figs. 75-7), and this small group adds to the significant and increasing number of Late Neolithic findspots in the area. Sherds were found concentrated in contexts in and around the large rectangular enclosure in the north-east corner of the Phase 1 excavations, and within a group of four pits at the southern end of the Phase 2 excavations. The latter included one large group which contains at least four vessels in a remarkably good state of preservation, although fragmentary. Other sherds were recovered from isolated pits in both stages.

Early Bronze Age

- 4.7.3. One grog-tempered rim sherd, recovered during Phase 1, may derive from a Collared Urn. No other potential Early Bronze Age material has been identified during Phases 1 and 2.

Middle/Late Bronze Age

- 4.7.4. Several thick-walled cremation vessels of typical Deverel-Rimbury type, including one possible globular urn, were recovered from a small cemetery of Middle Bronze Age date during Phase 1; these vessels are well paralleled amongst other cemetery sites in the Lower Thames region (e.g. Barrett 1973). A small number of sherds in coarse flint-tempered fabrics, from thick-walled vessels, including a few rim sherds and at least one applied cordon, are likely to be of Middle Bronze Age date, although could equally well be Later Bronze Age; these sherds came from a number of contexts across the site.

Late Bronze Age/Early Iron Age

- 4.7.5. There is a small quantity of sherds in moderately coarse flint-tempered and sandy fabrics which has been assigned to the post-Deverel-Rimbury plainware tradition of the early 1st millennium BC (Barrett 1980). Diagnostic sherds are scarce; one decorated 'fineware' vessel was recognised during Phase 1. The concentration of sherds falls within the area of the Phase 1 excavations; comparatively little of this material was identified during Phase 2.

Middle/Late Iron Age

- 4.7.6. In contrast to Phase 1, the Phase 2 excavations produced a significant quantity of Middle to Late Iron Age pottery, mainly deriving from contexts associated with the roundhouse complex in the centre of the site. These sherds are in moderately coarse sandy and flint-tempered fabrics. Diagnostic sherds are scarce but there are a few jar rims; two possible saucepan pots were identified during Phase 1.

Late Iron Age/Early Romano-British

- 4.7.7. The distinction between Middle/Late Iron Age and Late Iron Age/early Romano-British pottery here is not clear-cut, and it is likely that this reflects continuity in the ceramic sequence, with little change in pottery technology until the introduction of 'Romanised' wares in the 1st century AD. However, a group of contexts has been identified, mainly within the Phase 2 area, which contain either grog-tempered fabrics alone, or grog-tempered fabrics accompanied by 'Romanised' greywares in 1st or early 2nd century vessel forms such as bead rim jars and bowls and cordoned jars. A date within the 1st century AD is suggested for these contexts, although a start date in the 1st century BC is possible for the grog-tempered wares and, as seen above, they may continue into the early 2nd century AD.
- 4.7.8. Other wares within the early Romano-British group include small quantities of coarse oxidised wares and some whitewares, possibly early Verulamium types, as well as a little samian. In contrast to Phase 1, identifiable early Romano-British wares from the Phase 2 excavations constitute a larger proportion of the total Romano-British assemblage than the later wares.

Late Romano-British

- 4.7.9. Later Romano-British wares include greywares, many of which may derive from the Alice Holt industry (rilled jars with hooked rims); buff wares (Overwey types) are also present in very small quantities. Shelly wares in similar forms are much more scarcely represented in Phase 2 than in Phase 1.
- 4.7.10. The most numerous recognisable later wares are the Oxfordshire fine wares, mainly colour coated wares in open forms, and whiteware mortaria, with all identifiable forms dating from the mid 3rd century AD onwards.
- 4.7.11. This later Romano-British group is dated here broadly to the 3rd and 4th centuries AD. While it is accepted that both the Oxfordshire and Alice Holt industries, for example, continued in operation into the beginning of the 5th century AD, the general lack of diagnostic material means that it is impossible here to identify forms which could be of such a late date,

although the possibility that the occupation on the site continued into the early 5th century should be recognised.

Saxon

- 4.7.12. Sherds of at least two Early/Middle Saxon vessels were recovered during Phase 1, from a single pit. No other Saxon material has been recognised during Phases 1 and 2.

Medieval

- 4.7.13. Medieval pottery was not found during the Phase 1 excavations, but was recovered in moderate quantities during Phase 2, from the ditches of the medieval field system. The medieval assemblage comprises mainly sherds in a coarse sandy fabric containing limestone and/or subangular flint, with a smaller proportion in coarse sandy fabrics. One thumb-impressed pitcher handle is present, but otherwise diagnostic sherds are absent. The group is likely to cover a fairly restricted timespan, probably late 12th to early 13th century.

4.8. Stone

- 4.8.1. A small quantity of worked stone was recovered, consisting mainly of quern fragments (lava, greensand and quartz). There are also other fragments of worked quartz sandstone which appear to be straight-edged, of uncertain function, and at least three other possible utilised fragments and pebbles. A small group of rounded quartz or flint pebbles from one context in Phase 2 may have been deliberately collected.

4.9. Metalwork

- 4.9.1. All metal objects have been X-radiographed. Metalwork includes objects of iron and, in smaller quantities, copper alloy. The copper alloy comprises three strip fragments, one Romano-British coin, one probable Romano-British armlet fragment, one decorative spiral-ribbed tube (?binding) and two small unidentified blobs, possibly waste. The majority of the ironwork comprises nails; there is also one possible knife blade and a possible horseshoe fragment. Most of the metalwork was recovered during Phase 2.

4.10. Metalworking debris

- 4.10.1. Small quantities of slag were recovered from a number of contexts, concentrated in the area of the Phase 2 excavations. There are very small amounts of iron-working slag, probably from smithing, but most of this material consists of fragments of an unusual light, vesicular, white/grey slag whose origin and date is unknown. Many of the fragments came from undated contexts, and associated datable material with the remainder ranged in date from Late Bronze Age to medieval.

4.11. Wood

- 4.11.1. During Phase 1, worked timbers were recovered from several waterlogged contexts within a late Roman timber-lined well. These comprise nine planks, three stakes and four roundwood pegs. The most complete planks are approximately 1.20 m in length and are notched at each end where the planks fitted over timbers in the adjacent walls. In addition, one timber fragment, possibly part of a plank, came from a Middle/Late Bronze Age pit on the eastern edge of the site.
- 4.11.2. Eight small fragments of worked timber were recovered from three waterlogged contexts within a medieval well during Phase 2. These fragments represent part of the well lining, which comprises a construction of tangentially split planks (thickness 20-30 mm) and narrow roundwood pegs (diameter 15-17 mm). The lining appears to have been constructed of horizontal planks laid on edge up the sides of the well, and held in place by vertical pegs, which fitted into through holes drilled through the planks. One fragment of lining comprises parts of two planks and two pegs; the pegs are spaced 40 mm apart.

4.12. Human Bone

- 4.12.1. During Phase 1, cremated human bone (total 2379 g) was recovered from 16 contexts including a minimum of four urned burials and two (possibly three) urned burials of Middle Bronze Age date. Other contexts comprised redeposited pyre debris in association with the urned burials and small quantities of scattered bone. A minimum of six individuals was identified, including one infant/juvenile, one older subadult and four adults, two probably female.
- 4.12.2. In addition, one badly disturbed inhumation grave of Late Iron Age/early Romano-British date contained the remains of a 25-35 year old adult, probably male.
- 4.12.3. Human bone was recovered from a single Late Bronze Age cremation burial during Phase 2.

5. ENVIRONMENTAL EVIDENCE

5.1. Introduction

- 5.1.1. Bulk samples of 30 litres were collected during hand excavation from dated or datable features for recovery of charred remains and animal bones. Where appropriate samples were taken for land- or fresh-water shells, though few suitable deposits were recovered.
- 5.1.2. During Phase 1 some 350 bulk samples were taken, together with a selection of other more specific samples (2 monoliths of undisturbed sediment, and a series of 18 smaller samples in contiguous columns for snail analysis from the quaternary gravel facies).

5.1.3. A slightly more targeted approach was subsequently taken for Phase 2 with a total of 127 bulk samples collected. No suitable deposits for land- or fresh-water shells sampling were identified during Phase 2.

5.1.4. From Phase I a total of 138 (39%) of the 350 bulk samples, and 43 (34%) of the 127 bulk samples from Phase 2 were selected and processed by standard flotation methods.

5.2. Charred plant remains and charcoals; fields, farming and occupation processes

Neolithic Features

5.2.1. Samples were taken from the enclosure structure and pits. The flots were small, averaging less than 60ml from the 30 litre samples and overall grain and weed seeds, where present, occurred in low quantities and chaff was almost completely absent.

5.2.2. Although the flots were generally small, this seems to be normal for brickearth sites. Charred plant remains are sparse in the Neolithic phases, however, the relative scarcity of Neolithic sites in the vicinity makes these remains a potentially significant resource. In addition the apparent combination of both ritual and domestic detritus makes the sparse remains highly significant in a regional context. The lack of charred remains in the pits may allow some activities normally associated with pits to be discounted. It is likely that the charred remains in the pits relate to the broader activities and have become accidentally incorporated, rather akin to the remains from the enclosure ditch.

Late Bronze Age Features

5.2.3. Samples were taken from field boundary ditches and gullies, pits, cremation pits, well and a few postholes. Flot sizes were greater in range, with some being slightly larger, than those from Neolithic samples, varying between 15ml and 250ml, but only averaging about 50ml. Charred weed seeds occurred in most samples and grain in many but chaff was sparse. The size of some of the bigger flots was mostly accounted for by the presence of large quantities of charcoal in some samples.

5.2.4. Remains are sparse in the Bronze Age features, but this is countered by the large array of feature types and the distribution of features across the excavated area. Some features, despite small flots, contained high numbers of charred grain. Variability in the presence of charred remains across the site and feature types is notable:- not surprisingly the well feature has very low potential for charred remains and cremation pits, typically provide the potential to examine the specific selection of wood for the pyres, but the presence of charred grain and weed seeds is also interesting as these might represent straw or kindling material.

5.2.5. None of the samples, when considered individually, are significant, however collectively they form an excellent database to examine the nature of a stable farming economy and attempt to define the agricultural basis of that economy. Although, it is true to say, highly detailed information cannot be

gained, the overall picture of a rural Bronze Age economy is locally significant. More so when compared with its Neolithic predecessors, and Roman successors, as major changes can then be isolated and related to cultural, social or environmental factors helping to explain the nature of the settlement development.

Early Iron Age features

- 5.2.6. A small selection of samples were taken from the few Early Iron Age features (pits, hearth and ditches). Flot sizes were larger than many of the Neolithic and Bronze Age samples, and grain was common in all samples processed. Charcoal was also present, especially in features which produced slag.
- 5.2.7. Although the Early Iron Age remains are a small and isolated group they have the potential to determine the nature of the crop husbandry and potentially the nature of other activities on site (charcoal). This will provide an excellent comparison with the earlier and later evidence.

Late Iron Age and Romano-British Features

- 5.2.8. On the whole flot sizes were larger than for other periods, the occurrence of remains more frequent, and quantities of charred items higher. Nevertheless flot sizes are still relatively small and in view of sample size the remains are relatively sparse.
- 5.2.9. These samples, collectively are richer, than in previous phases. Their potential, however, is restricted largely to the site and local significance. As the comprehension of the full plan of the Roman site is advanced, so too, the potential of these remains will almost certainly be raised. The evidence spanning the Late Iron Age to Late Romano-British periods enables the establishment of the development rural farming economy and crop processing activities.

Saxon features

- 5.2.10. The single Saxon pit sample produced only charcoal. It has very low potential, except to indicate the potential presence of other features belonging to this episode. A general lack of Saxon charred material and the paucity of information of Saxon farming economy makes such features potentially significant.

Medieval features

- 5.2.11. Flot sizes were small, but plant remains were present in relatively high quantities and a limited quantity of chaff was recorded. The large proportion of uncharred seeds from these samples is an indication of recent rooting, rather than waterlogging. Peas and beans were also present
- 5.2.12. These samples provide the opportunity to examine any contrast with the Romano-British evidence, rather than to establish the nature of the medieval farming economies and site based crop processing and preparation activities.

5.3. Waterlogged plant remains and timbers

- 5.3.1. None of the samples from Phase 2 were recorded as being waterlogged in the field, though there were two medieval waterlogged wooden stakes (12075 and 12078) despite the fact that none of the processed samples were waterlogged.

5.4. Soils/pollen

- 5.4.1. Sequences of fine-grained (i.e. silt and clays) deposits which can be related to archaeological horizons/events were sampled in monolith tins (up to 1 m at a time), to enable consideration for finer sampling for pollen or for more formal description to aid field interpretation. During the Phase 2 field work a single soil monolith was taken (sample 12089) for descriptive purposes.

5.5. Land and freshwater snails

- 5.5.1. A series of 18 samples for land snails were taken from the gravel facies from the quarry face to provide the Quaternary background to the excavated areas. The samples were processed following standard methods and the flots examined for any snail shells. The flots from most samples were completely devoid of shells or shell and very few shells fragments were noted. This sequence of samples cannot provide any information from the molluscan evidence about the Quaternary environment.
- 5.5.2. Further sampling from these coarse gravel facies, is therefore, not recommended, unless large sequences of fine-grained (i.e. sands or silts) are encountered within the gravel facies and are exposed neither in easily accessible quarry faces nor from the site as a whole.

5.6. Animal Bones

- 5.6.1. Some 2,338 bone fragments were recorded, weighing only 8,562g. This entire assemblage is from less than 170 contexts and the small nature of the size of this assemblage is a testimony of the poor preservation. The bone was highly fragmented (minimum bone numbers are very low), and only three bones are considered measurable. The assemblage is dominated by teeth (mainly cow and horse) and large mammal species which is typical of badly preserved elements were the less robust and smaller element have been destroyed. Consequently very little animal bone was recovered from any of the bulk samples or from the artefact samples. Very few small mammal bones were recovered and these are likely to be recent intrusions. Information about the bone fragments and weight and comments of the species and faunal elements are presented in archive. The assemblage is dominated by cattle remains, but a surprisingly high proportion of teeth and identifiable fragments were horse. Pig was present; the majority as buried carcasses. Small quantities of sheep/goat was recorded and one goat horn core. One dog was represented. Otherwise no other species were noted in the scan. Significantly deer was not noticed in either the Neolithic or Bronze

Age contexts, though it may reside in the unidentified large mammal elements (LAR) in both of these periods.

Neolithic

- 5.6.2. The Neolithic assemblage was exceptionally small; only three, possibly four contexts contained bone. No bone was recovered from the main Neolithic enclosure; all fragments were recovered from pits. Apart from the presence of cattle and sheep in this period, little can be said, and certainly the faunal assemblage cannot help in determining whether any of the Neolithic features are likely to be domestic or ritual.

Bronze Age

- 5.6.3. Only 26 Bronze Age contexts produced bone (15% of the bone bearing contexts) which contained *c.* 620 fragments, which represents over 25% of the assemblage by both fragment numbers and weight. 26% of the contexts contained horse, and in all but case these were ditches rather than pits. The main species present, however, was cattle, with some sheep/goat present. The only recorded goat in the scan came for this period. Some butchery and burning was noticed on both horse and pig bones and some evidence of canid gnawing.

Romano-British

- 5.6.4. The Early and Late Romano-British are discussed together. This assemblage, includes all the unphased bone which at this junction, have been assumed to belong to this phase being the most extensive on the site. Together this represents over 65% of the total assemblage, however less than 25% of the assemblage comes from phased Romano-British contexts.
- 5.6.5. The predominant records are cow teeth, and cow is undoubtedly the most commonly represented species. Horse is present in low numbers, as is sheep/goat. The single record of dog also comes from this group. Pig are represented almost entirely by a series of five unphased contexts described as pig burials. All other pig is sparse and most found in pits (some burnt). All three measurable bones come from this phase; one horse metacarpal (unphased) a sheep/goat metacarpal from Early Romano-British pit and a female cow tibia from a Dexter of about 1.14m height from an Early Romano-British well shaft.
- 5.6.6. A few bones were burnt and some showed signs of canid gnawing.

Medieval

- 5.6.7. Only 9 bone fragments have been ascribed as medieval and all are cattle. The potential here is minimal

5.7. Chronological and thematic summary; the development of a managed landscape

- 5.7.1. All the environmental evidence considered together could both be seen to attempt to address the major academic chronological themes, but also provides specific evidence of the landscape, economy and farming through a five thousand year time span. These more specific palaeo-environmental and

palaeo-environmental sub-themes will be highlighted in the chronological review below.

Palaeolithic

- 5.7.2. Despite the potential of the gravel facies to provide both faunal assemblages and evidence of the depositional environments (snails and sediments), such evidence has not been revealed or recovered during the phase I and phase II excavations. Evidence for the Lower and Middle Palaeolithic (500,000-30,000 BC) fauna and landscape cannot be augmented (*Theme 1*), and for this area will have to rely on the artefactual evidence in the vicinity.

Mesolithic

- 5.7.3. Any Mesolithic communities (8,500-4,000 BC) have left no trace of evidence of their passing. These societies are largely nomadic with temporary and seasonal base camps; evidence of the landscape can be found if dated stratified sequence, especially alluvial, are encountered (e.g. Colne valley). As no features or deposits have been encountered we cannot provide any new evidence of the nature of this changing landscape (*Theme 2*).

Neolithic

- 5.7.4. It is assumed that the Neolithic landscape would have been covered in *Quercum mixtum* climax woodland (mixed oak deciduous wood). Charcoals from the features will help define both the nature of that woodland, as well as themselves, providing evidence of clearance and burning of that woodland. We can suppose that clearance had occurred, locally at least, for the construction of the enclosure, and in relation to activity associated with the scatter of Neolithic pits. The presence of charred cereal grains indicates that some of the clearance was not just restricted to the construct of the enclosure, but also for opening of the woodland to allow cultivation of cereals. Cereals would have augmented the diet, rather than being the staple and we can suggest that this was largely a horticultural pursuit (i.e. tending in small plots), rather than truly farmed in wide-open fields.
- 5.7.5. The comparison of the disposal of the charred grain, weed seeds and charcoal from the pits and enclosure may also help us to discern whether the enclosure had a solely ritual or domestic function.
- 5.7.6. Unfortunately the analysis of the bone will not provide much detailed evidence, but may be able to isolate the presence of domestic cattle and aurochs, and also of wild boar or domestic. The poor assemblage contains sheep and domestic cattle, and certainly with the lack of deer tends to indicate a more domicile population with a greater reliance on domestic animals. This allows some major input into the nature of the developing origination of the landscape during the later Neolithic and earlier Bronze Age periods (*theme 3*).
- 5.7.7. Environmental remains from the Neolithic are neither plentiful, nor well preserved in the Greater London area (Armitage *et al* 1987, 259). The data here will provide information on the two following palaeo-environmental themes, both of which are highlighted as major research themes for this region (Armitage *et al.* 1987, 289):

- i) the natural and man-made landscape of the London region
- ii) early farming communities

Bronze Age

- 5.7.8. The archaeological evidence during the Middle to late Bronze Age and Early Iron Age includes a flat cremation cemetery, perhaps maintaining the LNEBA ritual tradition. The field evidence also indicates open enclosures (?field systems) and possible structures (huts/farmsteads) of a distinctly more domestic nature. This is borne out by the charred plant remains and faunal evidence. We might expect the woodland clearings but his period to be more extensive, and the local woodland to be quite different in composition; an hypothesis that can be tested by the charcoals; the analysis of which may also enable the identification of managed woodland (coppiced, pollarded etc).
- 5.7.9. The charred plant remains contain varying numbers of grain and several species are present in nearly 50% of the assessed samples indicating a greater reliance of farmed food. The field evidence (for land enclosures/fields and huts) also confirms indeed this more sedentary way of life. Further the presence, albeit sparse, of chaff indicates the processing of crop produce.
- 5.7.10. If we can suggest a more organised farming settlement at this time, the animal bones, though sparse, also show the presence of herds of cattle with some sheep. the high proportion of horse, which was probably eaten, rather than ridden, is of particular interest at this time. These remains, however are likely to confirm the start of a more organised and formal farming community. This development of the farmed and settled landscape, can therefore be addressed by the environmental evidence and contribute directly to *theme 4*.
- 5.7.11. Permanent settlement in this landscape is in part also shown by the flat cremation cemetery, from which the charcoal will allow us to examine the nature of the funerary pyres. This wood is more likely to have been selected (oak) specifically for the pyre, rather than generally representative of the natural local woodland (as you might find in hearths).
- 5.7.12. Again the potential evidence here can address all three major research themes for the Greater London area as defined by Armitage *et al.* (1987, 289) in their English Heritage review:

- i) the natural and man-made landscape of the London region
- ii) early farming communities
- iii) human inhabitants of the London region in prehistoric times.

Roman

- 5.7.13. A major change in the Late Iron Age to Late Romano-British excavated evidence can be seen in the orientation and alignment of the site (see Fig 7). then a major change and re-organisation of land tenure, land-use and farming. Certainly from the relatively few samples of this period that have been processed and assessed, there is a continued presence of charred grain, but the numbers of samples containing chaff increases, even if the quantity of chaff in each sample doesn't. This may suggest more local crop processing

activities with the settlement. Although grain is present in many samples, a few pits (e.g. pit 1798) contain very high numbers and possibly suggest storage. The intensification of activity at this time may indicate that double cropping was prevalent, and the charred weed seeds would help discern the time of harvest of these crops.

- 5.7.14. The large midden contained both charred crop refuse and animal bones, some of which are burnt and chewed which tend to confirm that this is domestic refuse disposal. Dogs, for which there is evidence of both their presence in gnawed bones and as faunal evidence, scavenged the open midden. Cattle, horse and sheep are predominate domesticates, and perhaps some of the roadside paddocks were for horses.
- 5.7.15. The wider range of evidence may enable us to suggest trade over larger distances and the presence of weed seeds in the samples will allow the examination of changes in soil as a consequence of long term tillage, or even of the importing of grain (trade) as opposed to cultivation association with the settlement.
- 5.7.16. This combine evidence of a larger rural economy in the London hinterland (Theme 5) can also be dissected to examine the development of this new almost imposed route-side settlement from the Late Iron Age to late Romano-British period. Evidence for trade along the route-way can also be examined.
- 5.7.17. The examination of refuse disposal in the Romano-British period is highlighted by Armitage et al. (1987, 289) as a major area of concern for this period. More relevant here, however, is their second regional research there, the "supply of food and raw materials to London". The evidence here enables the nature of local produce and the possibility of trade to be examined in this route-side settlement.

6. STORAGE AND CURATION

6.1. Archive

- 6.1.1. The project archive is currently held at the offices of Wessex Archaeology under the Museum of London site code IMC96, and the Wessex Archaeology administration codes 42281 and 42282. The archive for all five phases of fieldwork, and post-excavation analysis and publication, will remain at the offices of Wessex Archaeology, pending consultation and agreement with the appropriate bodies to determine the most suitable storage location.

6.2. Conservation

- 6.2.1. All waterlogged timbers recovered were supported and stabilised in a waterlogged condition prior to removal and storage at the offices of Wessex Archaeology, by sealing in appropriate polythene sheeting. It is not proposed to submit any waterlogged timbers for long term conservation treatment. Metal objects recovered will be submitted for long term conservation

treatment at Salisbury Conservation Centre. Salisbury Museum, Kings House, Salisbury, Wiltshire.

6.3. Discard Policy

- 6.3.1. Artefacts of modern date (19th/20th century) that were collected on site will be retained. All waterlogged timbers will be discarded once full analysis has taken place.

7. EXCAVATION RESEARCH THEMES - A REVIEW

7.1. Introduction

- 7.1.1. The following is presented as a review of the research themes, as defined in the Project Design (Wessex Archaeology 1996, 11-3), in light of the results from Phase 1 and 2 excavation.

Theme 1: The archaeology and environment during the Middle and Late Pleistocene (Lower to Upper Palaeolithic; 500,000 - 10,000 BC).

- 7.1.2. A potential exists for *in situ* Middle and early Upper Palaeolithic remains within the brickearth at the interface with the Taplow Gravel, the greatest potential being for Middle Palaeolithic Levalloisian industries. Any such finds would be of significance in assisting our understanding of both the human exploitation of the landscape at this period, the relationship between the Taplow and Lynch Hill Gravels and the formation processes and dating of the Brickearth.
- 7.1.3. Not surprisingly very few finds, and no features, were recovered during the main excavation of Phases 1 and 2 to contribute to this theme. The intermittent gravel monitoring has however confirmed the potential for Middle and early Upper Palaeolithic remains within the Brickearth, at the interface with the Taplow Gravel. However it was also noted that any tools in the 'brickearth' are likely to have been removed during the overburden strip.
- 7.1.4. It is therefore unlikely that with the existing methodology this theme is likely to be significantly addressed during subsequent phases of work.

Theme 2: Archaeology and environment during the transition between the Late Pleistocene and early Holocene epochs (i.e. Late Glacial to Early Post-Glacial transition; Late Upper Palaeolithic / Mesolithic; 12,000 - 8,500 BC).

- 7.1.5. To date, the majority of evidence for human activity within the area from this transitional period has been recovered from the flood plain silts of the river valleys, most notably the Colne, and there is scant direct evidence for human exploitation of the surrounding gravel terraces. It is presumed that the terraces were exploited for their natural resources, such as wood, and for hunting game.

- 7.1.6. Results from Phases 1 and 2 proved consistent with these previous findings, with no firm evidence of human activity on the Taplow terrace during this period. Any exploitation of the terrace must have been transient, leaving little, if any, trace in the archaeological record. The nature of this exploitation is most likely to be elucidated by inference, through the study of sites/deposits of this period located within the river valleys rather than those on the terraces.
- 7.1.7. It is considered unlikely that excavation of Phases 3 to 5 will significantly add to our understanding of this period.

Theme 3: Development of the organised landscape during the Neolithic (4,000-2,400BC) and Early Bronze Age (2,400-1,500BC)

- 7.1.8. Evidence from previous excavations in the area suggest that during the Neolithic and Early Bronze Age, the landscape of the gravel terrace was largely exploited for 'ritual', burial or other ceremonial purposes. There is scant evidence for domestic/agricultural activity relating to the population(s) responsible for the formation and use of this landscape.
- 7.1.9. Results from Phase 1 and 2, however, do not entirely support a the concept of a purely 'ritual' landscape. They suggest a distinction between those monuments/features, generally isolated, which can be considered as almost entirely ritual (i.e. the enclosure and several archaeologically-rich pits), and clusters of relatively sterile groups of features (i.e. the pit groups towards the south end of Phase 2) which possibly encompass a combination of both domestic and ritual function.
- 7.1.10. Understanding the spatial and organisational relationship between domestic and ritual activity is clearly problematic, when definitive evidence for the domestic element is absent. However the relative positioning within the landscape of the enclosure and the pits, may provide a clue.
- 7.1.11. That the 'ritual' features appear to be concentrated in the northern part of the site, whilst features of a more domestic origin concentrate to the south, a pattern that persists into the later prehistoric period (i.e. the Late Bronze Age cremation cemetery and associated settlement) – suggest that the landscape during this period was indeed 'organised' in terms of function.
- 7.1.12. Evidence from previous excavations and observations in the area record the siting of 'ritual' monuments, where they could be considered as defining the boundaries of the 'Heathrow Terrace'. The Stanwell cursus may represent the western boundary, between the terrace and the River Colne, whilst the Neolithic/Bronze Age linear cemetery extending eastwards from the southern end of the cursus, the southern boundary with the Kempton Park terrace.
- 7.1.13. If this ritual delineation of the 'Heathrow Terrace' boundaries did take place, then the Neolithic enclosure at Imperial College may, in part, help define its northern boundary with the Lynch Hill terrace.

- 7.1.14. It is tempting to suggest that the area enclosed by these 'ritual' boundaries, if they existed, represents the limits of an inhabited territory, with any evidence for settlement/domestic activity being more centrally located.
- 7.1.15. The evaluation suggests that excavation of Phases 3 to 5 is likely to produce further evidence of ritual activity from this period. Such evidence will be important in determining whether the northern focus is real or apparent. Further evidence for any domestic activity would be of great significance, both in its own right and in relation to the ritual monuments.

Theme 4: Development of the settled landscape. Middle Bronze Age (1,500-1,100BC) to Iron Age (700BC-43AD).

- 7.1.16. This was one of the most extensively developed themes during the Phase 1 excavation, with the identification of both domestic/settlement and ritual activity by way of field systems, wells, pits, postholes, a cremation cemetery and the continued use of the northern 'ritual' enclosure.
- 7.1.17. The development of the Middle Bronze Age/Iron Age landscape can be traced from the precursor 'organised' landscape, discussed in Theme 3, in terms of spatial arrangement, function and boundaries.
- 7.1.18. Use of the northern part of the site for ritual/burial activity persists, focused around the earlier enclosure. Whilst to the south is the northern section of an, apparently undefended, agricultural settlement. The spatial separation of the profane from the ritual is perhaps further emphasised by the presence of a tree line, thought to be contemporary, dividing or possibly screening the two activity areas from each other.
- 7.1.19. Within the settlement itself there is little, if any, evidence for the spatial separation of specific industrial/domestic activities such as metal working, baking, boiling etc., as the evidence comprised mainly field systems, with the remainder of the settlement lying to the south of the proposed limit of excavation.
- 7.1.20. It is unlikely, for this particular settlement, that these questions will be resolved during further phases of excavation.
- 7.1.21. The field systems do however reflect one major change from the preceding periods, as these provide evidence, for the first time, for settled agriculture and the subdivision of land at a relatively small scale and permanent level.
- 7.1.22. Within the later phases of this period, the Iron Age settlement is established. However there are a number of significant differences between this settlement and the others associated with Theme 4. Firstly there is no evidence for specifically ritual activity and, perhaps more importantly, there is an abandonment of the north-south, east-west orientation of the landscape and a re-alignment which is continued into the Romano-British period. It may therefore be argued that Iron Age settlement reflects a pattern more akin to that seen in Theme 5.

*Theme 5: Development of rural settlement in the hinterland of London.
Roman (43AD-410 AD) - Post Medieval (1500AD- present)*

- 7.1.23. The most notable contribution to this theme from Phase 1 and 2 excavations is the discovery of the small enclosed Late Iron Age/Romano-British rural settlement with an associated trackway. Evidence for such rural settlement, particularly low status ones, is rare within the vicinity. The entire landscape seems to be re-structured and re-aligned along the trackway, rather than broadly north-south alignment seen in the preceding period, which may suggest a hiatus in settlement activity.
- 7.1.24. Beyond the main settlement evidence for gravel quarrying, wells, middens, inhumations and trackways all point to a relatively long lived settlement. These finds are significant in their own right, particularly the inhumation as few are known from the area. Dating for this Romano-British occupation appears to indicate continuous occupation throughout the period.
- 7.1.25. Little of the surrounding field system associated with this settlement is as yet recorded, however evidence for this may be expanded upon in later phases of excavation.

The Trackway

- 7.1.26. It is felt appropriate at this stage to consider briefly the nature of the trackway, already apparent during Iron Age, which becomes more formalised during the Romano British period (Fig 9). The trackway, some 30-35m in width, is aligned on a north-west to south-east axis, an orientation emphasised by the alignment of both the Iron Age and Romano-British settlements, and at odds with both previous and subsequent periods.
- 7.1.27. Extrapolation of the trackway at Imperial College takes it through known concentrations of Roman activity both to the east and west, where earlier investigations would appear to confirm the presence of such a trackway, either directly and/or indirectly, in terms of the alignment of field and settlement patterns.
- 7.1.28. These sites include, the Romano-British settlement at Cranford Lane (MoLAS 1989/90), through which the track would have passed, as indicated by a co-aligned linear multi-phase ditch passing centrally between the 1989 and 1990 excavation areas, and the Romano-British settlement at Wall Garden Farm, which although located to the north of the projected line, appears to focus on a trackway/field boundary at right-angles to the Imperial College track.
- 7.1.29. On this evidence alone the trackway can be traced running in a straight line over some 3km. Extending the alignment westwards from Cranford Lane the trackway 'crosses' the bridge over the River Crane at Cranford (*Crane ford*) and continues the line of the A4 Bath Road to its junction with the A30 Great South West Road, the known Roman road running from London through Brentford and Staines.

- 7.1.30. To the west of Imperial College the line continues to the north-west to a series of small islands within the River Colne near Mill Road, West Drayton, again a possible fording/bridging point in antiquity.
- 7.1.31. The suggestion that a hitherto unrecorded Roman road or track passes through the site from the River Crane to the River Colne and beyond has regional, if not national, implications for the study of Romano-British settlement patterns in the Middle Thames region.
- 7.1.32. If this postulated route is confirmed, then it potentially draws together and makes sense of a large number of rural Roman sites in the northern part of the Heathrow Terrace, suggesting a more formalised land use and ownership pattern than hitherto suspected.
- 7.1.33. The alignment of the trackway is such that further evidence for it within the Site is unlikely to persist beyond the limits of Phase 3.

Saxon

- 7.1.34. Excepting one small pit, there is no evidence so far for occupation of the Site between the end of the Romano-British period and the beginning of the medieval period. Clearly the southern areas of Phase 1 and 2 have proved suitable for, and attracted, settlement in the Bronze Age, Iron Age and Romano-British periods, so why not during the Saxon period? Does this suggest that the earlier Romano-British settlement was purposely avoided, as was the case with some of the larger Roman settlements?

Medieval

- 7.1.35. The medieval field systems suggest re-occupation of the area during this period, however the orientation of this system indicates that the Romano-British trackway has fallen out of use and that settlement activity is probably focused on the Bath Road to the south.

7.2. Conclusion

- 7.2.1. In conclusion this review suggests that Themes 3, 4 and 5 have been significantly addressed by the excavation of Phases 1 and 2, and are likely to continue be so in subsequent phases.
- 7.2.2. Themes 1 and 2 would at first seem less relevant to this particular site, and in all probability are unlikely to be further expanded upon by the results of subsequent phases of excavation. However Theme 2 in particular will play an important role when considering the development of the landscape from one exploited by hunter gatherers to a more organised/settled landscape of the Neolithic and later. Supporting material for this theme is likely to be derived from sites on the fringes of the gravel terrace and beyond.
- 7.2.3. It is perhaps a limitation of the Research Themes, which were based on previously recorded knowledge of the archaeological development of the West London area, that the Late Iron Age and Romano-British rural settlement straddles Themes 4 and 5 in terms of chronology. Clearly, further work to examine these two themes will have to ignore this arbitrary

chronological distinction, and develop a more holistic view of the pre-/post-conquest rural and urban landscape. In this respect, it would be worthwhile to compare and contrast broadly contemporaneous activity throughout the region (i.e. Staines, Perry Oaks, Cranford Lane etc.).

8. REVIEW OF EVALUATION STRATEGY

- 8.1.1. As noted previously, the evaluation (MoLAS 1996) identified archaeological features dating from the Neolithic (4,000-2400BC) through to the Roman (43-410 AD) period, with the main concentration of archaeology recorded at the eastern end of the Site, within extraction Phases 1 and 2. Other smaller activity clusters were identified to the west.
- 8.1.2. In the excavation Project Design (Wessex Archaeology 1996) this concentration of activity was interpreted as covering an area of some 4ha centred on the boundary between the proposed Phases 1 and 2 with a central focus of Roman activity surrounded by a slightly more dispersed prehistoric one.
- 8.1.3. Excavation of Phases 1 and 2 has broadly confirmed this interpretation, with the predicted focus of Roman activity approximately centred on the Roman settlement enclosure, and the predicted prehistoric focus incorporating all but the Bronze Age field system in the south and east.
- 8.1.4. Therefore, on the prehistoric and Romano-British evidence **to date**, the evaluation can be considered as a success in terms of predicting the date range and main areas of archaeological activity, subsequently confirmed by the results of the excavation.
- 8.1.5. The evaluation was perhaps less successful as a predictive tool in other ways. The evaluation provided no indication (nor did Phase 1 excavation) of the medieval field system recorded in Phase 2, although several of the evaluation trenches intersected with elements of this system.
- 8.1.6. Trial trenching evaluations of this type are primarily designed to identify cut features appearing in the base of the trench from which datable material may be recovered, features which are generally smaller than the overall trench dimensions. Where features are so large that the trench falls within the middle, or a large spread of material is encountered it may be difficult or impossible to recognise their presence. For example the evaluation did not identify the presence of either the Roman midden deposits or gravel quarries, though trial trenches were located over examples of both.
- 8.1.7. Such omissions may lead to a significant underestimate of the quantity of archaeology present, especially where large horizontal spreads of material overlie structured or relatively complex features, as was the case with the Roman midden deposit from Phase 1.

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10. APPENDIX 1 FINDS AND ENVIRONMENTAL TABLES

Table 1: Finds totals by material type

Material type	Number	Weight	Number	Weight
Animal Bone	1585	5752 g	753	2710 g
Human Bone	>7 individuals	-	1 individual	-
Burnt Flint	1461	25,677 g	928	21,742 g
Burnt Stone	-	-	14	740 g
Ceramic Building Material	68	8372 g	125	8320 g
Clay Pipe	2	16g	3	18 g
Fired Clay	486	7458 g	1063	14,510 g
Worked Flint	282	5202 g	248	1762 g
Glass	7	30 g	2	4 g
Pottery	2007	24016 g	2442208-	38,457 g
<i>Late Neolithic</i>	132	-	561531481721-	-
<i>Early Bronze Age</i>	1	-	1515	-
<i>Middle/Late Bronze Age</i>	463	-	-	-
<i>LBA/EIAMI/LIALIA/R</i>	460	-	-	-
<i>omano-British</i>	52	-	-	-
<i>Saxon</i>	873	-	-	-
<i>Medieval</i>	10	-	-	-
	-	-	-	-
	16	-	-	-
Slag	36	255 g	158	1571 g
Stone	13	1982 g	153	8269 g
Wood	21	-	8	-
Metalwork	24	-	86680	---
<i>Copper Alloy</i>	3	-		
<i>Iron</i>	21	-		

Table 2. Total samples (Phases I and 2)

	Late Neolithic		Late Bronze Age		Early Iron Age		Late Iron Age		LIA/ER-B		Early R-B		Late R-B		? R-B*		Saxon		Medieval		Undated	
	no.	proc	no.	proc	no.	proc	no.	no.	no.	proc	no.	proc	proc	proc	no.	proc	no.	proc	no.	proc	no.	proc
Pits	26	10	49	14	1	1	1	0			1	0	2	0	8	3	1	1	2	0	31	12
Pit/Well	3	1	17	6			1	0					2	0	8	1			7	2		
Enclosure	69	16																				
X-ditch	8	0																				
Ditches	1	0	37	24	4	3	2	2	1	1	1	1	2	1	45	18			7	2	19	9
Gully	7	2	8	6							1	1			4	1			2	2	5	0
Cremation	1	1	14	14							1	1			2	1					1	0
Midden									2	1	9	1			23	5						
Posthole			4	1											2	1					5	0
Hearth					1	1									3	1					2	0
Kiln																					1	1
layers			2	2											2	1						
scoop							1	1														
feature																					1	0
hollow											1	0	1	0	1	0						
tree hollow	1	1	2	1											1	0					7	1
Total = 377	116		135		6		5		18		3		13		84		1		18		74	
Total = 181		31		69		5		3		6		2		3		29		1		6		27

* note this includes all Phase 1 Romano-British which have not been divided into earlier and later as in Phase 2.

NOTE: no. = number taken, proc. = number processed

11. APPENDIX 2 GLSMR/RCHME NMR ARCHAEOLOGICAL REPORT
FORM

1) TYPE OF RECORDING		
Evaluation: Yes	Excavation: Yes	Watching Brief: Yes
Other (please specify)		
2) LOCATION		
Borough: Hillingdon		
Site address: Sipson Lane, Harlington		
Site Name: Imperial College Sports Ground		Site code: IMC96
Nat Grid Refs:	centre of site: TQ 08300 77600	
limits of site:	a) TQ 07900 77800	b) TQ 08550 77720
	c) TQ 07850 77600	d) TQ 08550 77550
3) ORGANISATION		
Name of archaeological unit/company/society: Wessex Archaeology		
Address: Portway House, Old Sarum Park, Salisbury, Wiltshire, SP4 6EB		
Site director/supervisor: Andrew Crockett	Project Manager: Jonathan Nowell	
Funded by: Henry Streeter (Sand and Ballast) Ltd., 66 Purley Way, Croydon, Surrey, CR9 6EG		
4) DURATION		
Date fieldwork started: September 1996	Date finished: September 1997	
Fieldwork previously notified ?	YES / NO	
Fieldwork will continue ?	YES / NO / NOT KNOWN	

5) PERIODS REPRESENTED	
Palaeolithic	Roman
Mesolithic	Saxon (pre-AD 1066)
Neolithic	Medieval (AD 1066-1485)
Bronze Age	Post-Medieval
Iron Age	Unknown

6) PERIOD SUMMARIES Use headings for each period (ROMAN; MEDIEVAL; etc.), and additional sheets if necessary.

Palaeolithic: A single rolled waste flake recovered from the edge of a later feature cutting through the underlying gravel.

Neolithic: The occupation of a presumably previously wooded landscape during the later Neolithic period, including the construction of a large rectangular ditched 'ritual' enclosure and a number of pits, both isolated and grouped throughout the surrounding landscape that contain both probable 'placed' deposits of pottery and worked flint, and assemblages perhaps more characteristic of settlement activity.

Bronze Age/ Early Iron Age: The establishment of a formalised landscape of fields, enclosures, wells and pits during the Late Bronze Age and Early Iron Age, probably associated with a settlement site that was focused to the south-east of the Site, and including the continued use of the Neolithic enclosure, possibly as a pyre site associated with an adjacent cremation cemetery.

Late Iron Age/ Romano-British: The formation of a small Late Iron Age and Romano-British enclosed settlement to the north-west of the earlier Bronze Age settlement, including an associated trackway with wayside inhumations, cremations and middens, as well as a complex arrangement of internal enclosure divisions, peripheral stock enclosures, wells, gravel pits, pits, post-holes, and the ephemeral remains of round-house features.

Saxon: A single pit

Medieval: The establishment of a medieval field system of small enclosures and wells to the south, with the ephemeral remains of possible ridge and furrow cultivation to the north.

Post-medieval: A continuation of elements of the medieval field system into the post-medieval period.

Unknown: A considerable number of features remain undated, though further analysis may reduce this number.

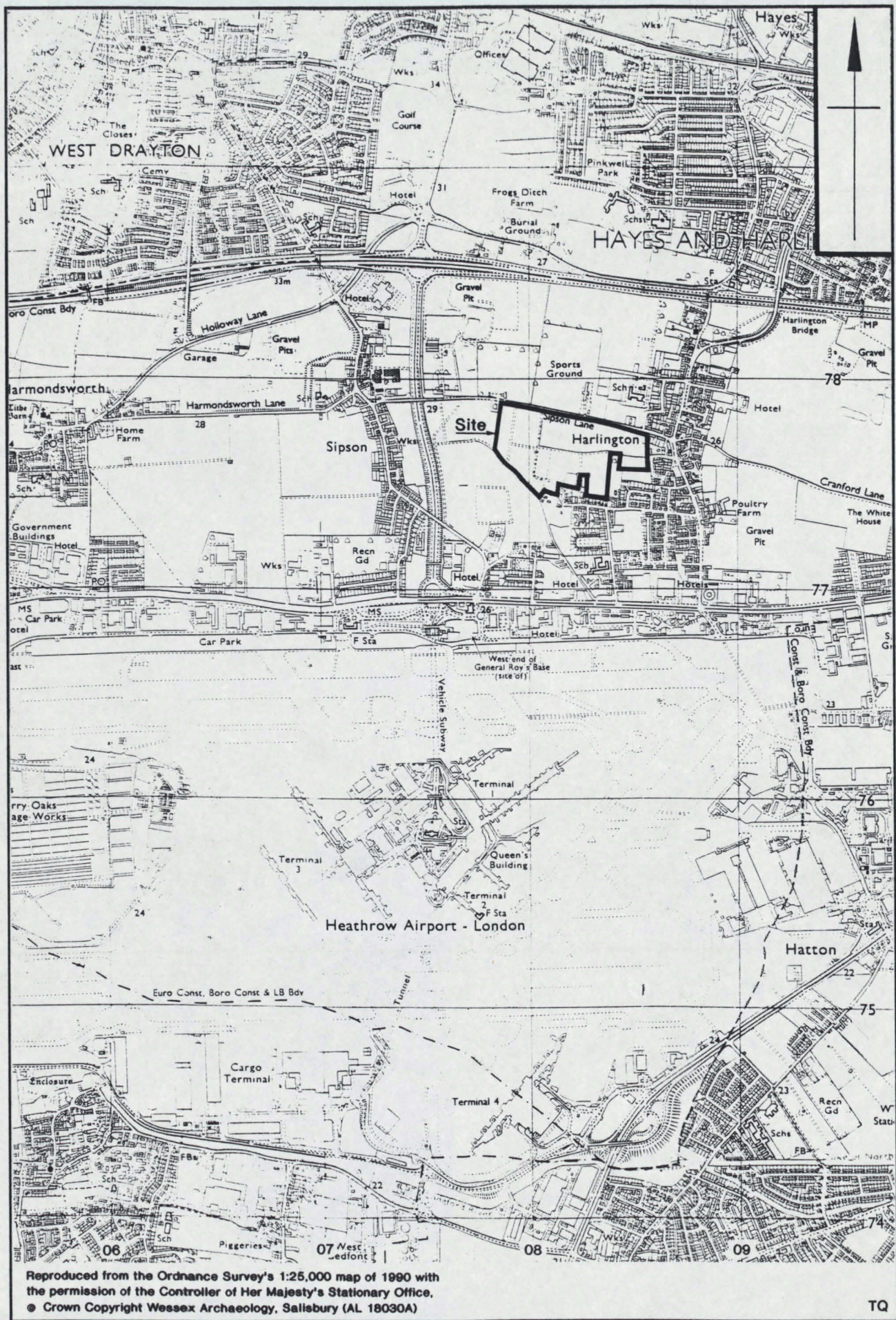
7) NATURAL (state if not observed; please DO NOT LEAVE BLANK)

Type: Langley Silt Brickearth, overlying Taplow Terrace gravels

Height above Ordnance Datum: c. 25.5 m aOD

8) LOCATION OF ARCHIVES		
a) Please indicate those categories still in your possession:		
NOtes: Yes	PLans: Yes	PHotos: Yes
NGatives: Yes	SLides: Yes	COrrispondence: Yes
MScripts (unpub reports, etc): Yes		
b) All/ some records have been /will be deposited in the following museum, records office etc: Museum of London, pending resolution of storage limitations currently experienced by MoL		
c) Approximate year of transfer: 2002		
d) Location of any copies:		
e) Has a security copy of the archive been made?		YES / NO
If not, do you wish RCHME to consider microfilming		YES / NO
9) LOCATION OF FINDS		
a) In your possession (delete as appropriate):		ALL / SOME / NONE
b) All/ some finds have been /will be deposited with the following museum, other body etc: Museum of London, pending resolution of storage limitations currently experienced by MoL		
c) Approximate year of transfer: 2002		
10) BIBLIOGRAPHY		
Wessex Archaeology, 1997, <i>Imperial College Sports Ground, Sipson Lane, Harlington, London Borough of Hillingdon - Archaeological Excavation; Phase 1 and 2</i> , unpublished interim assessment report no. 42282.b		
SIGNED: <i>Andrew Crockett</i>		DATED: 16 th April 1998
NAME (Block capitals): ANDREW CROCKETT		

Please return the completed form to The Greater London Sites and Monuments Record, Rooms 214 -217 English Heritage, London Region, 23 Saville Row, London W1X 1AB.
Tel: 0171 973 3731 / 3779 (direct dial) Fax 0171 973 3249



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TQ

Site location plan

Figure 1



Site plan showing location of trial trenches and main foci of archaeological activity

Figure 2



**Imperial College Sports Ground
Areas 1 and 2: All Features Plan**

KEY

- MOLAS Evaluation Trench, with archaeological features
- Wessex Archaeology Phase 1 & Phase 2 excavation area

- Post-medieval/Modern
- Medieval
- Saxon
- Undiagnostic Romano-British
- Late Romano-British
- Early Romano-British
- Late Iron Age
- Early Iron Age
- Late Bronze Age
- Late Neolithic
- Unphased

Drawn By	LJC/AC	Date	20.03.98	Revision	0
Scale	————— 50m				

Site plan by Wessex Archaeology
Evaluation trench plan based on MOLAS information

Figure 3

Imperial College Sports Ground Combined Phase Plan (Areas 1 and 2)

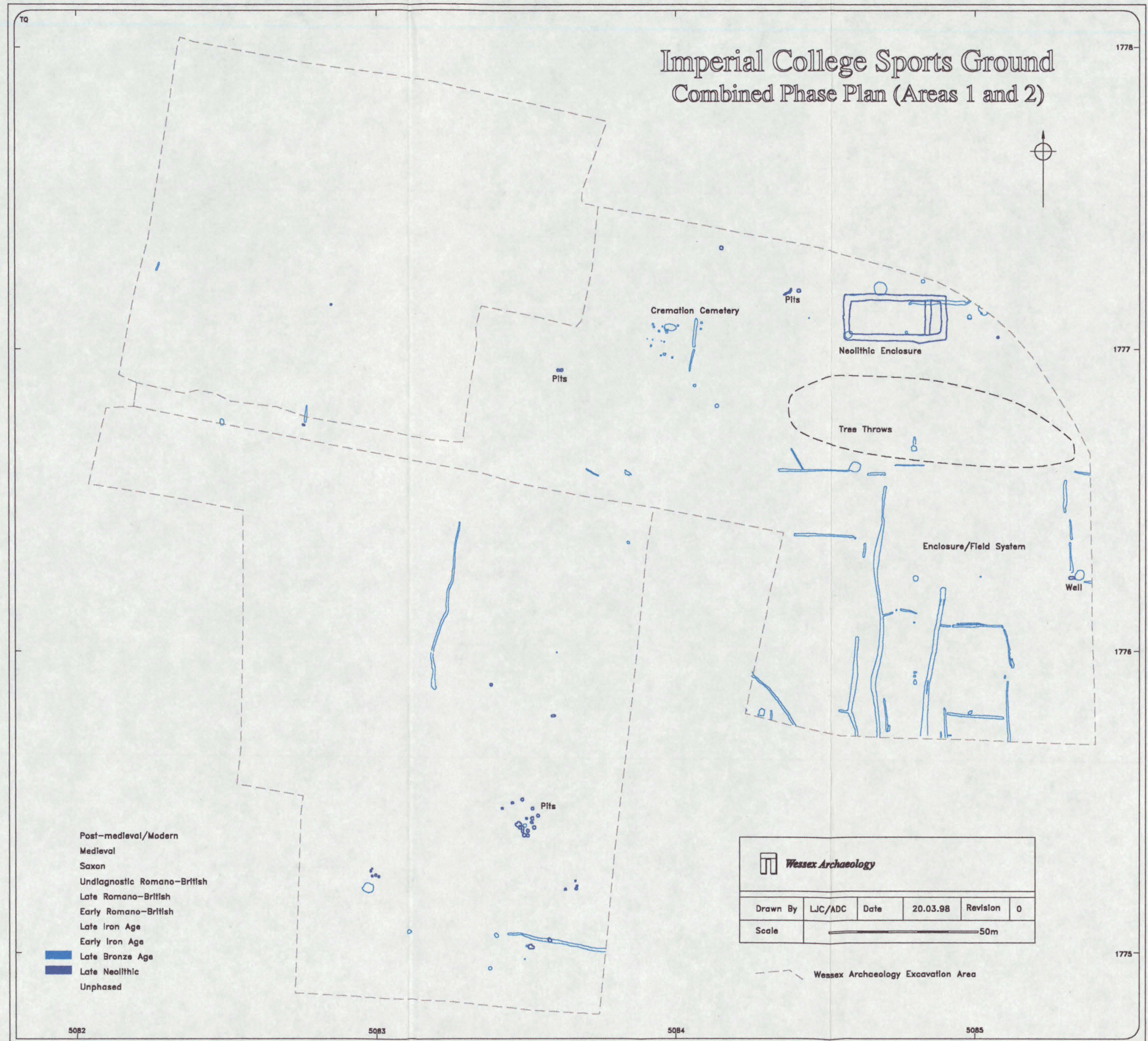


Figure 4: Plan of Neolithic, Bronze Age and Unphased features

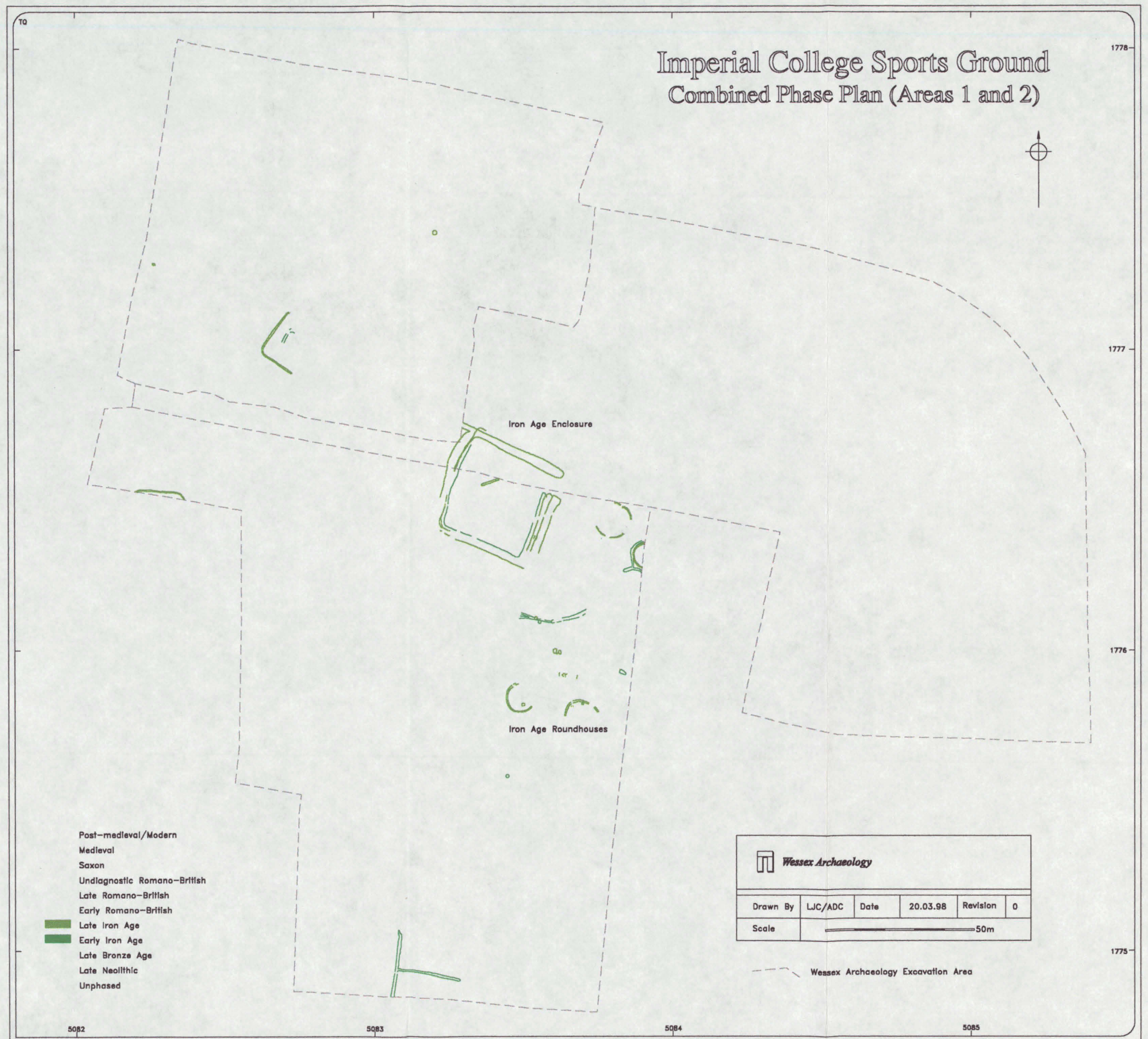


Figure 5: Plan of Early Iron Age and Late Iron Age features

Imperial College Sports Ground Combined Phase Plan (Areas 1 and 2)

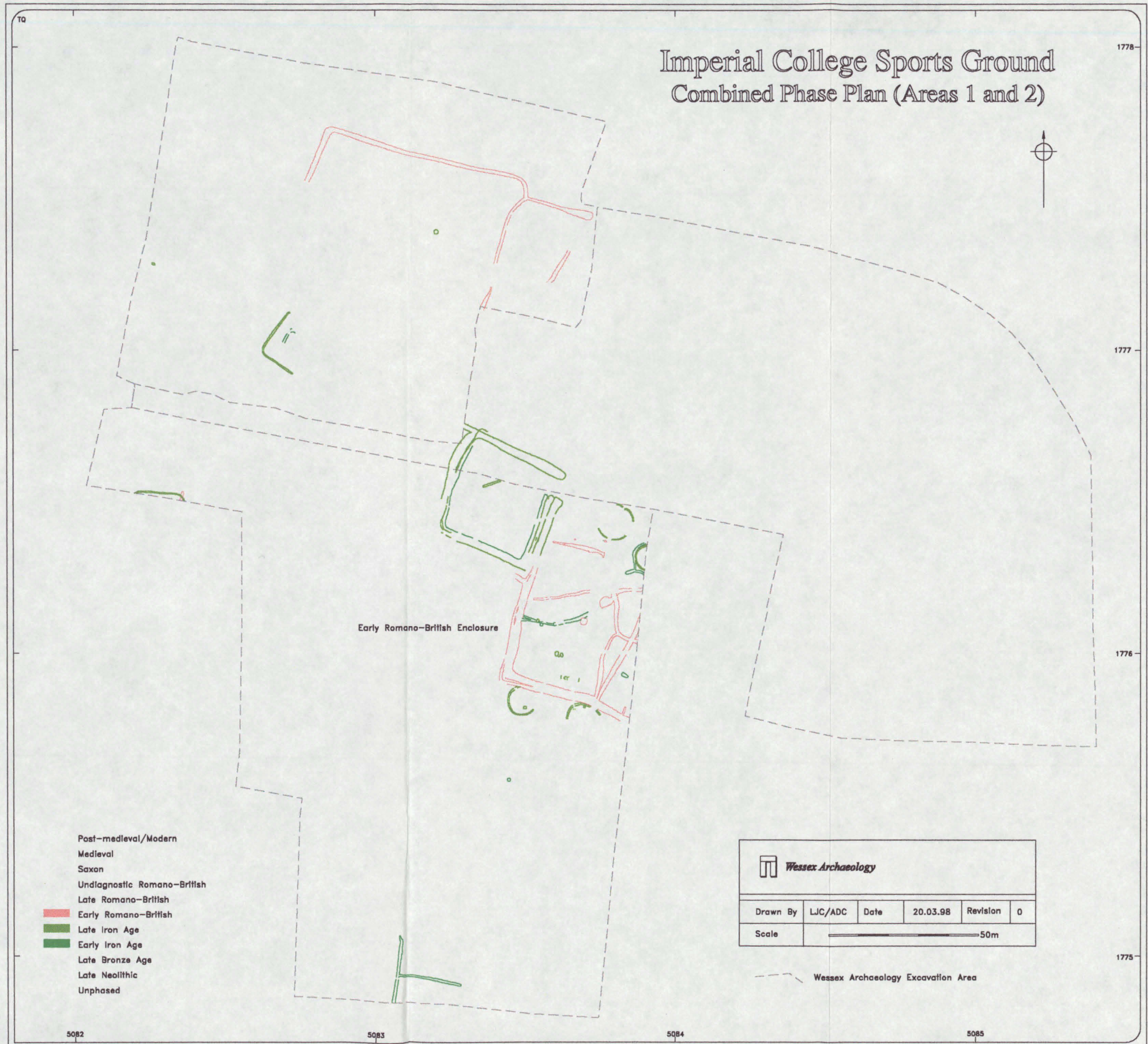


Figure 6: Plan of Early and Late Iron Age and Early Romano-British features

Imperial College Sports Ground Combined Phase Plan (Areas 1 and 2)

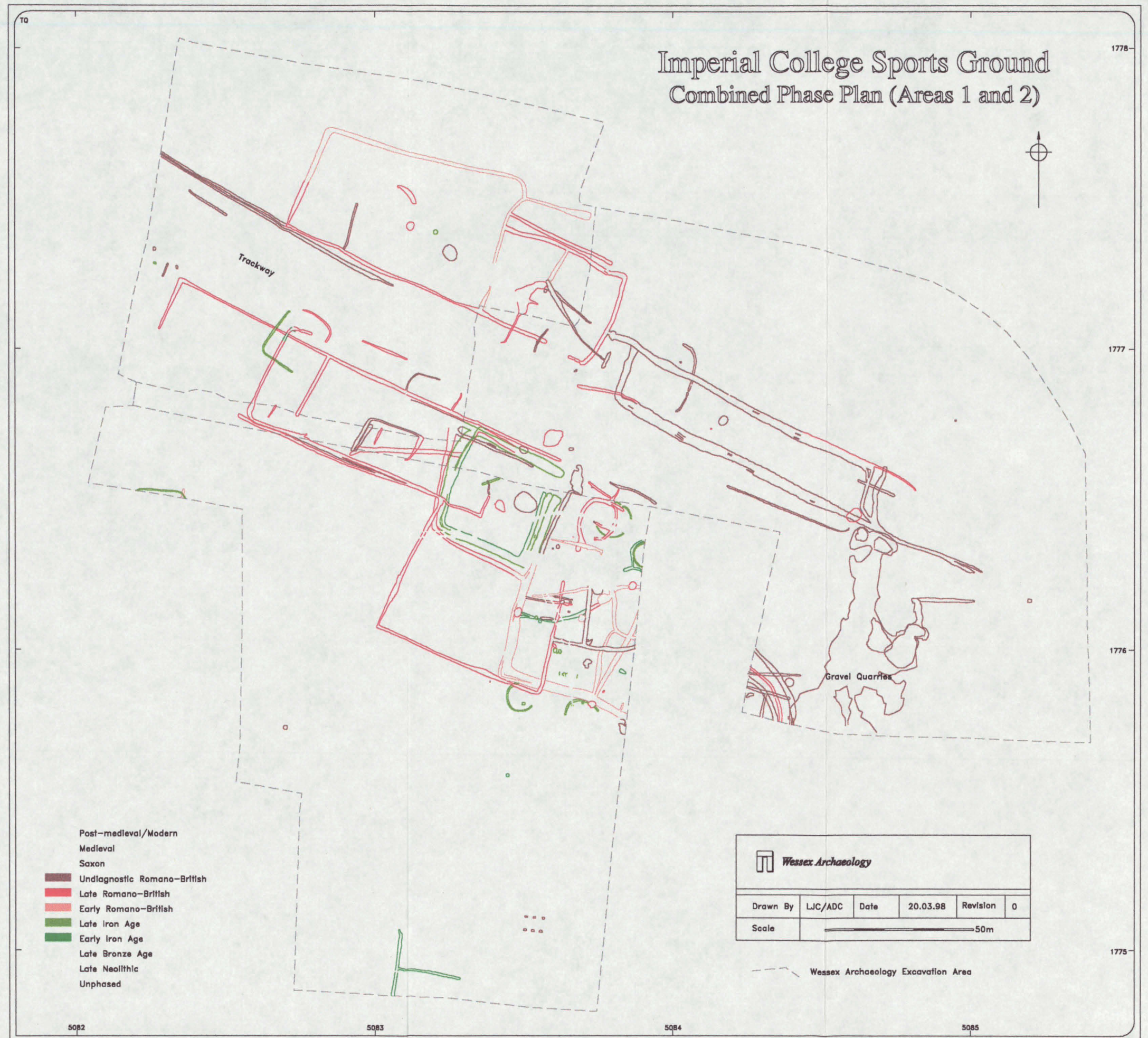


Figure 7: Plan of Early and Late Iron Age, and Early and Late Romano-British features

Imperial College Sports Ground Combined Phase Plan (Areas 1 and 2)



- Post-medieval/Modern
- Medieval
- Saxon
- Undiagnostic Romano-British
- Late Romano-British
- Early Romano-British
- Late Iron Age
- Early Iron Age
- Late Bronze Age
- Late Neolithic
- Unphased

Wessex Archaeology					
Drawn By	LJC/ADC	Date	20.03.98	Revision	0
Scale	————— 50m				

--- Wessex Archaeology Excavation Area

Figure 8: Plan of Saxon, Medieval and Post-medieval features

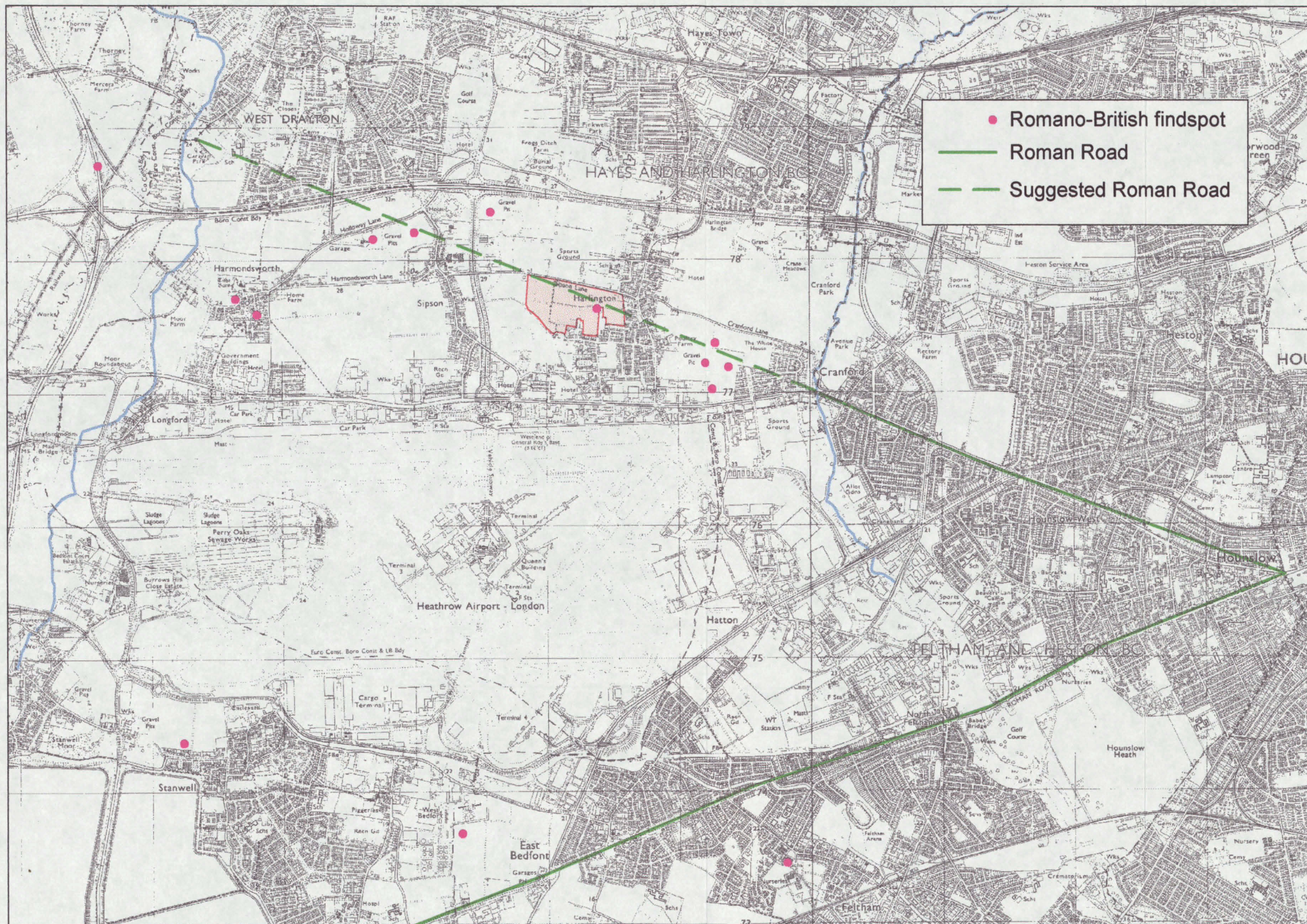


Figure 9: Postulated route of Roman roadway passing through Imperial College and between the River Crane and the River Colne

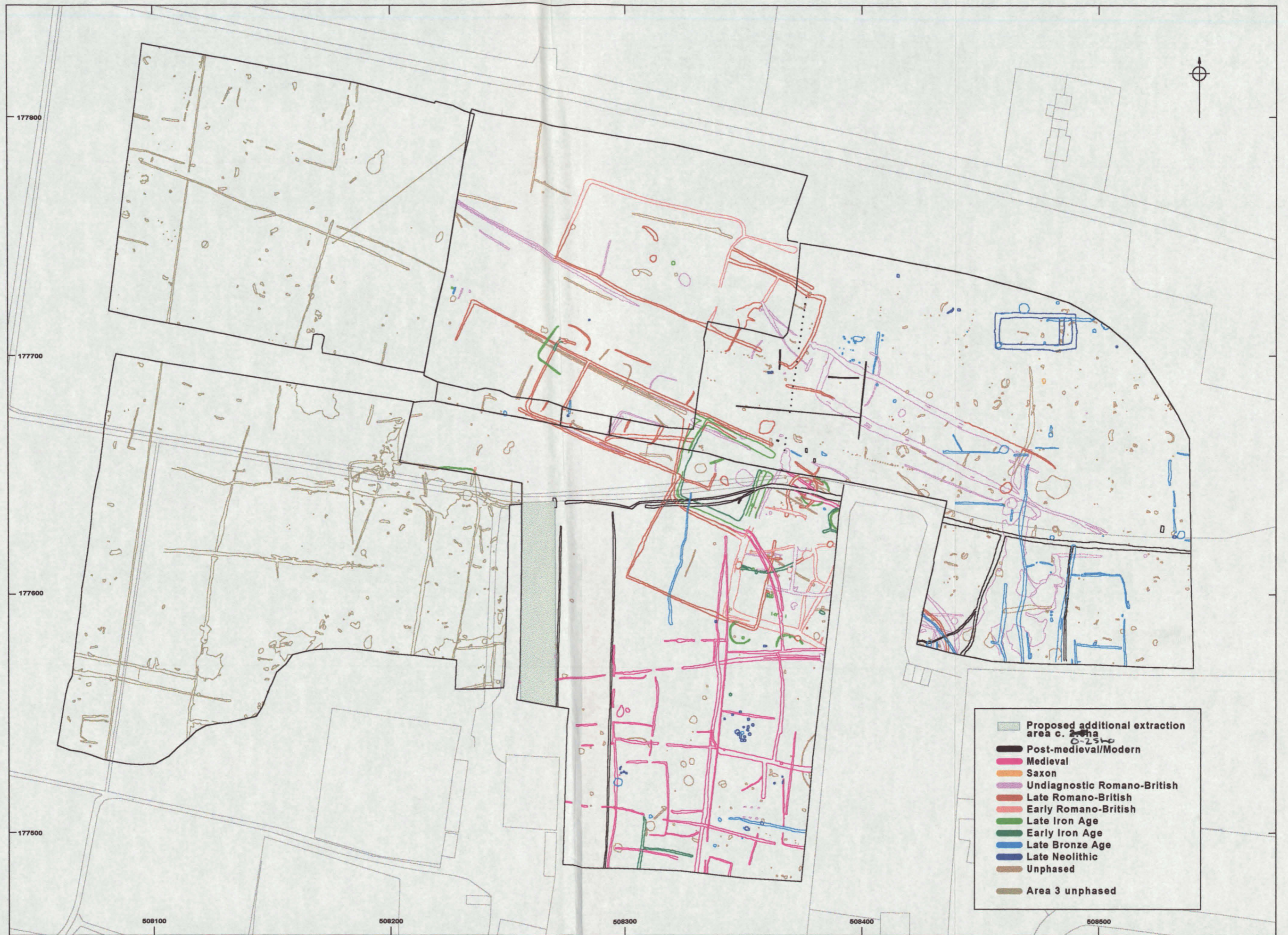
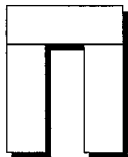


Figure 1: Additional proposed extraction areas (c.2.5ha)



THE TRUST FOR WESSEX ARCHAEOLOGY LTD.
Portway House, Old Sarum Park, Salisbury, Wiltshire SP4 6EB
Tel: (01722) 326867 Fax: (01722) 337562 E-mail: wessexarch@dial.pipex.com
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