

Northamptonshire Archaeology

Archaeological evaluation at Forty Hall, Enfield



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Joe Prentice Report 10/119 August 2010

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OASIS REPORT FORM

PROJECT DETAILS

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Project name	Archaeological eva	luation at Forty Hall, Enfield	
Short description	Northamptonshire Archaeology undertook archaeological evaluation at Forty Hall, Enfield within the Pleasure Grounds surrounding the Hall and in an area of grassland to the north of the present car park. Trenches in the Pleasure Grounds identified the presence of former paths on the mound to the west of Top Lake, the depth and infill of a former pond at the south-east corner of the grounds along with evidence of post-infilling water management. No conclusive evidence was found of features located on the Circuit Path within the Pleasure Grounds. Geophysical survey and trial trenches in grass to the north of the present car park did not identify significant archaeological remains or artefacts. A basic topographic survey was carried out within the gardens and assessment was made of the edging to Top Lake.		
Project type	Evaluation (FFH 10	0)	
Site status		rade I, Park registered Grade II	
		of Scheduled Ancient Monument	
Previous work	None within those areas investigated		
Current Land use	Open access park		
Future work	Unknown		
Monument type/ period		se and associated park and gardens	
Significant finds	None		
PROJECT LOCATION	NAL JULY		
County	Middlesex	II. Enfinite Middlenner END OLIA	
Site address	Forty Hall, Forty Hill, Enfield, Middlesex, EN2 9HA		
Study area OS Easting & Northing	Approximately 5.6 hectares		
Height OD	TQ 33710 98525 (centre of site) c 40-47m OD		
PROJECT CREATORS	040-4711100		
Organisation	Northamptonshire	Archaeology (NA)	
Project brief originator	Paul Drury Partner		
Project Design originator	Joe Prentice		
Director/Supervisor	Joe Prentice		
Project Manager	Steve Parry		
Sponsor or funding body	London Borough o	f Enfield	
PROJECT DATE			
Start date/end date	23 June and 5 July - 9 July 2010		
ARCHIVES	Location	Content	
Physical	3 cardboard boxes, 1 Stewart box	Pottery, tile, brick, bone, glass, stone, metalwork	
Paper		Site records, photographic, drawings	
Digital		Mapinfo GIS data, photographs	
BIBLIOGRAPHY	Unpublished client		
Title	-	luation at Forty Hall, Enfield	
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ARCHAEOLOGICAL EVALUATION AT FORTY HALL, ENFIELD JULY 2010

ABSTRACT

Northamptonshire Archaeology undertook archaeological evaluation at Forty Hall, Enfield within the Pleasure Grounds surrounding the Hall and in an area of grassland to the north of the present car park. Trenches in the Pleasure Grounds identified the presence of former paths on the mound to the west of the Upper Lake, the depth and infill of a former pond at the south-east corner of the grounds along with evidence of post-infilling water management. No conclusive evidence was found of features located on the Circuit Path within the Pleasure Grounds. Geophysical survey and trial trenches in grass to the north of the present car park did not identify significant archaeological remains. A basic topographic survey was carried out within the gardens and assessment was made of the edging to the Upper Lake.

1 INTRODUCTION

In June 2010 Northamptonshire Archaeology (NA) was commissioned by the Paul Drury Partnership (PDP), on behalf of the London Borough of Enfield, to undertake trial trench evaluation and topographic survey on land at Forty Hall, Enfield (NGR TQ 33710 98525, Fig 1). The work was undertaken to support an application for Heritage Lottery Funding for improvements to the park.

The evaluation complied with a Project Design formulated by Northamptonshire Archaeology (Prentice 2010) with geophysical survey being carried out on 23 June and the remaining fieldwork being undertaken between 5th and 9th July 2010. In total, seventeen trenches were opened using a combination of mini-digger and hand excavation. A visual inspection was made of the constructional materials used in the edging of the Upper Lake, and a brief topographic survey was carried out within the confines of the Pleasure Grounds (Fig 2).

Prior to commencement of fieldwork a site code, **FFH 10**, was allocated to the project by Kath Maloney, Archivist, Department of Archaeological Collections and Archive, LAARC, Museum of London.

2 BACKGROUND

2.1 Historical and archaeological background

The history of the property currently known as Forty Hall begins (in recorded history at least) with the medieval Manor of Elsyng which stood to the north of the current house close to the Turkey Brook (Peats and Drury 2007). The first documentary reference to this site dates from 1374 when Jordan de Elsyng is recorded as holding part of the King's fee in Enfield, and the earliest record of the manor is in 1381. Excavations carried out between 1963 and 1971 by the Enfield Archaeological Society suggest that the earliest phases of building were timber framed, later replaced by red brick on a massive scale, almost certainly by Sir Thomas Lovell to whom the manor passed in 1492. He also merged the existing land holding with that of the adjoining manor of Worcesters. It is probable that both Henry VII and VIII were entertained there. After Lovell's death in 1524 the estate was bequeathed to Thomas Manners, later Earl of Rutland, who created a 375 acre deer park around the manor.

In 1539-40 Manners exchanged the Manor of Worcesters, including Elsyng Hall, with Henry VIII for lands in the Midlands. The site was only occasionally used by the King, but was used by his children Edward and Elizabeth, both future monarchs, and it was to this palace that they were brought in 1547 to be told of their father's death. Edward, after his accession, extended the building and gave it to Elizabeth in 1550, though it reverted to the Crown in 1558 after her accession. Elizabeth visited roughly every four years until 1572, and paid her last visit in 1596 during which time it was clearly maintained to some degree, yet by 1597 the buildings were reported to be in danger of collapse. After James I became king, the palace was tidied for a visit in 1605-06, but in 1607 the site became redundant after James' acquisition of Theobalds from Robert Cecil, First Earl of Salisbury. In 1608 a Royal Warrant was issued for the house to be dismantled with a view to using materials at Theobalds. However, whilst some demolition appears to have taken place, most of the palace buildings seem to have remained and were repaired in 1609-10 at the behest of its keeper, Philip Herbert, Earl of Montgomery, and improvements were made to the gardens. The palace was in good enough repair in 1612 for a visit by James. Herbert was created Earl of Pembroke in 1641 and bought the palace and park from Charles I at the same time. It is assumed he lived there until his death in 1650.

The current Forty Hall was built by a wealthy London merchant, Nicholas Rainton (1569-1646), in c1629 (the date of a carved brick set into the north-east corner of the house) on land purchased form Robert Cecil, Earl of Salisbury in 1616 (Gillam 1997). Rainton had made his money importing satin and taffeta from Florence and velvet from Genoa and was one of many self-made men who created country houses and estates from their new-found monies. The house he built has been the subject of extensive research by PDP (Peats and Drury 2007), and work in progress by Martin Deane has shown that it occupied the site of a substantial building of at least sixteenth-century date. By 1656 Nicholas Rainton II (nephew of the first Nicholas) acquired the site of Elsyng Palace which he demolished and incorporated the park with that attached to the Hall. The property remained in the hands of Nicholas Rainton's descendants until 1773 when the house and park were offered for sale at auction, but they failed to sell due to the high reserve set (Fig 3). In 1787 the estate was again offered for sale, and Lot 1 comprising 'The Mansion House, with the Yards, Courts, Outbuildings, Gardens, Ponds, Lawns, Walks, Plantations, &c, &c, ..' was purchased by Edmund Armstrong (Fig 4). He died in 1797 leaving enormous debts. The Hall was again put up for auction in 1799 when it was bought by James Meyer. In 1895 following the death of James Meyer II the property was bought by Henry Carrington Bowles for his eldest son, Henry Ferryman Bowles who lived there until his death in 1943 when it passed to

his grandson, Derek Henry Parker Bowles who decided to sell and move elsewhere for the benefit of his health. In 1951 the Forty Hall estate was purchased by the Enfield Urban District Council who retain it today as the London Borough of Enfield. The house is a museum and the grounds are a public open space.

The area surrounding the site of the former palace of Elsyng in now a Scheduled Ancient Monument (No LO59). It is within this area that previous archaeological investigation has largely concentrated, although smaller excavations have been carried out close to the north side of the hall in 1993 when part of the lake revetment collapsed, and elsewhere within the confines of the park (Gillam 1997). No previous archaeological excavation has been carried out in the areas which are the subject of this investigation.

3 OBJECTIVES

The principal aim of the archaeological evaluation was to quantify the extent, character, date, state of preservation and depth of burial of the archaeological resource and inform further decisions regarding the archaeological strategy for the site.

The overall aim was to inform the restoration and improvement of the historic landscape of Forty Hall Park, and specifically to:

- Establish whether any archaeological deposits exist in the areas investigated with particular regard to any which merit preservation *in situ* or inform restoration of historic landscape features.
- Identify the date, form and function of any archaeological deposit, together with its extent, depth and quality of preservation.
- Evaluate the likely impact of past land use and possible presence of masking colluvial or alluvial deposits.
- Establish the potential for the survival of environmental evidence.
- Provide sufficient information to construct an archaeological mitigation strategy, dealing with preservation, the recording of archaeological deposits, working practises, timetables and overheads.

4 METHODOLOGY

A geophysical survey (magnetometry) was undertaken in the area to the north of the present car park where it was thought brick clamps or other archaeological features might be situated, since a clamp has previously been revealed a short distance to the north. Geophysical prospection was not carried out in the remaining areas to be evaluated due to tree and shrub cover. Trenches 1-8 and 14 were opened by minidigger under archaeological supervision, the remainder (Trenches 9-12 and 15-18) were excavated by hand. Trench 13 was not excavated due to the presence of a large tree in the location of the proposed trench, and since this was to be positioned over a suspected feature, moving the trench was not an option.

The location of the trenches were plotted on the ground and tied into the Ordnance Survey by a combination of GPS and hand survey, and all site levels were related to

Ordnance Datum.

The topsoil, subsoil and non-structural garden soils and modern overburden were removed under archaeological supervision by mechanical excavator, where used, fitted with a toothless ditching bucket. Where no significant archaeological remains were present, the natural substrate was consequently revealed. The excavated areas, including all sections, were cleaned by hand sufficiently to enhance the definition of features and deposits.

All features and layers of potential significance were sampled by hand excavation to determine their date and character.

All archaeological deposits and artefacts encountered during the course of excavation were fully recorded in order to characterise and interpret their date and relationships to any features. Recording followed standard Northamptonshire Archaeology procedures (NA 2006), the standards of the Institute for Archaeologists (IfA 2008, 2010) and English Heritage (1991, 2006). All archaeological deposits were given individual context numbers and were described on *pro-forma* context sheets, including details of the context, its relationships, interpretation and a checklist of associated finds.

The surface of features were cleaned by hand to enhance their definition and planned to scale. The trench section and profiles through features were drawn at a scale of 1:10 or 1:20 as appropriate. All drawings included levels that were related to Ordnance Datum.

Artefacts and ecofacts were collected by hand and retained, receiving appropriate care prior to removal from site (IfA 2008; Walker 1990; Watkinson 1987). Unstratified animal bones and modern material were not collected.

No samples were taken since no deposits within features were identified as having potential for environmental analysis.

Photographs were taken as 35mm monochrome negatives, and colour transparencies in the traditional manner. The photographic record was compiled into a site archive with appropriate cross-referencing. Digital photographs supplemented the record for reporting purposes.

The excavated area and spoil heaps were scanned by metal detector to ensure maximum finds retrieval.

All records compiled during fieldwork will be filed into a comprehensive and fully crossreferenced site archive.

All trenches, once opened, were temporarily fenced using orange polythene netting to ensure safety for the park and gardens users. On completion all trenches were backfilled either by mini-digger or by hand and the surface made as even as possible, though no special reinstatement needs (such as re-seeding or turfing) were undertaken.

5 THE EVALUATION

5.1 General comments

Forty Hall stands slightly to the east of the highest point of Forty Hill which is a remnant of the upper terrace of the River Lea where the natural geology is London Clay with a capping of Boyne Hill Gravel (Gillam 1997). Subsoil was a light orange/brown sandy loam, distinct from a thin topsoil which comprised dark grey/brown sandy loam. Trenches 1-8 were placed within an area of short, mown grass with ferrous picnic tables to the immediate north of the present tarmac car park, the remainder of the trenches were placed throughout the landscaped gardens close to the house (Fig 2). Historic Estate plans and Ordnance Survey maps were used to inform the locations of some of the trenches, primarily those of 1773, 1787 and 1881 (Figs 3, 4 and 5). Site constraints comprised trees and shrubs within the garden area, and since across the site it had been noted that both badgers and newts might be present. Care was taken to inspect each trench location prior to excavation but no protected species were identified during the evaluation.

The italic headings used in the subsequent evaluation descriptions are those indicated in the original Brief for the works which locate the trenches and describe the purpose of the investigation.

5.2 Trenches 1-18

Car park overflow. Task: Field evaluation (trial trench(es) through topsoil) given known presence of brick clamps to the north on northern edge of woodland which covers an area of brick clamps. Trenches 1-8, Fig 2.

Geophysical survey by John Walford, Fig 6. The geophysical survey was undertaken with a Geoscan FM256 fluxgate gradiometer on 23 June. Although this instrument has been largely superseded for professional survey, there were special circumstances which justified its use in this case. It is a small and manoeuvrable instrument which is easy to operate around trees and other obstacles, and it often collects cleaner data from around ferrous obstructions than the more commonly used Bartington Grad 601-2. Furthermore, the FM256's main disadvantages – sensor instability and relatively slow data collection – were not expected to be significant when investigating such a small survey area.

The survey data was collected at regular intervals within contiguous 20m grid units. These grids had been set out manually by tape measure and optical square, and had been tied in by measurement to the edge of the adjacent car park.

The magnetometer was carried in a zig-zag pattern through each grid, along traverses spaced at 1m intervals. Readings of magnetic field strength, to a precision of 0.1nT, were automatically triggered at 0.25m intervals along each traverse.

The data was downloaded and processed using Geoplot 3.00u software. Processing was minimal, comprising only the use of the 'zero mean traverse' function to remove the effects of sensor drift. The processed data is presented here as a greyscale plot (scale -5nT ~ +5nT, white ~ black), which has been scaled, rotated and displayed against Ordnance Survey base mapping. An interpretive overlay has also been produced.

Results

The survey data is dominated by large ferrous anomalies, many of which relate to picnic benches and other surface objects (see interpretation plot). Smaller ferrous anomalies are also present, appearing as small speckles in the data. These will mostly represent insignificant pieces of buried iron scrap.

There is a slightly increased level of magnetic noise towards the eastern corner of the survey area. This could be indicative of disturbed ground, but the evidence is too slender for this to be more than a very tentative suggestion.

None of the anomalies in the data are considered to be of any archaeological significance.

Conclusion

The survey results demonstrate that no brick clamps or other substantial industrial remains lie within the area investigated. This conclusion can be drawn with a high degree of confidence because had such features been present, they would have produced very large and distinctive magnetic anomalies.

Excavation

Opened by mini-digger under archaeological supervision, eight trenches, each 4 sq m in size (giving a total area of 32 sq m, approximately 2% by area of the proposed car park extension), these trenches were placed in a scatter across the area avoiding the canopies of trees in order that their roots should not be disturbed. The trenches were also located away from the route of a drain which could be observed as a parch mark in the grass lying across the area from a manhole on the edge of the car park. All trenches displayed the same stratigraphy which comprised natural geology containing water worn gravels and pebbles (up to 600mm) in a matrix of buff coloured sandy clay at a depth of between 150mm -250mm overlaid by a subsoil of the same colour but with almost no inclusions. This in turn was overlain by a thin topsoil, varying in depth between 80-140mm, which contained occasional small gravels and fragments of pottery, brick and roof tile.

In only one trench, Trench 8, was any feature identified. This comprised a shallow, irregular sub-circular feature located in the north-western corner, (Figs 7 and 8, [8/04]). It was cut into the natural gravels [8/02] and filled with brownish/grey sandy clay [8/03]. This fill also contained fragments of seventeenth-century (Martincamp) pottery, tile and a single iron nail. The full dimensions of the feature were not determined.

None of the other trenches contained any archaeological features nor was any indication of burning or scorching identified which might indicate the presence of brick clamps.

Pond in south-east corner of Pleasure Gardens. *Task: Excavation sufficient to establish outline, depth, edge details and evidence for any surrounding structure, inflow and outflow*. Trenches 9-12, Fig 2.

Four trenches, excavated by hand, were positioned to identify a pond depicted on the sale plans of 1773 and 1787 when it was shown as narrow rectangular feature. The later period Ordnance Survey maps dating from 1881 show a larger oval pond (Fig 5). By 1896 it was not shown, indicating that it had been backfilled (or at least was no longer a water-filled feature) by that date (Fig 5). The area, though dry at present, is understood to be wet or to occasionally accommodate standing water during the winter or prolonged wet periods. A narrow rill enters the area from the north-east which is also understood to contain water during similar conditions; it is reported that this rill was fed by rainwater run-off from the roof of the Hall via a pipe lying beneath the eastern lawn.

Trench 9 was positioned against a line of large stones set into the ground and partly obscured by planting (Figs 9 and 10). It was thought that this stonework may represent the northern limit of the former pond as the ground level to the north of the line of stones was approximately 150mm higher than to the south. No gravel layer was

uncovered at the bottom of this trench, which was terminated at 1.05m below ground level. The lowest layer comprised a loose, grey, ashy layer containing domestic china, glass, brick tile and animal bone and which appears to represent domestic refuse, deliberately introduced as backfilling [9/05]. A similar layer above [9/04] contained more ash and charcoal, and also concrete blocks, perhaps fragments of paving slabs, and this in turn was covered by another ashy layer [9/03] with large quantities of clinker, coal and domestic refuse. Above this another layer, [9/02], though with less clinker and charcoal but otherwise very similar, represents another dump of infilling The uppermost layer [9/01] comprised a dark brown loamy soil which material. appears to represent a capping of organic material deliberately enriched to provide a more suitable growing medium for planting. No lateral limits to the layers were identified, and the location of the trench was clearly well within the centre of the former pond, not close to an edge, neither was a bottom located which indicates that in this location, the pond was more than 1.05m in depth. Lavers [9/3, 4 and 5] also continued beneath the large stone set on edge within the soil, and against which the upper layers were deposited indicating that the stone had been included in the backfill, perhaps with the intention of creating a rockery/bog garden during the backfilling. The type of stone is unidentified, but must surely be a non-local introduction comprising as it does a hard, grey, fine grained matrix with no visible fossiliferous inclusions.

Trench 10 (Figs 11 and 12). This trench was located at the point where the rill enters the former pond and revealed a shallow, U-shaped profile cut into what appears to be natural [10/1], comprising buff coloured sandy clay loam with occasional small gravels. A thin dark grey/brown silt layer [10/2], apparently organic rich, appears to be a remnant of primary fill and represents natural sediment within the pond or rill. Cutting through both [10/1 and 2] were two unglazed earthenware field-drain pipes, both blocked with soil. These appear to have been inserted after the pond was backfilled to carry water across the infilled pond though the point of exit for this drainage has not been established. Above these pipes a more recent, spun tubular iron pipe was aligned in the same direction as the earlier pipes. It was set within the upper fill, a topsoil of dark grey/brown sandy loam [10/3]. No cut was apparent for the insertion of this metal pipe suggesting that the layer in which it is placed was infilled around it, perhaps after excavation to investigate the lower pipes; it may be that if these were found to have been blocked and could not be cleared, the later pipe was inserted as a replacement. The topsoil contained modern (early twentieth-century) material including domestic china and glass, brick, tile and pieces of electrical cable of a form used in the early part of the century (copper wires encased in a lead sheathing, small find No 5), so potentially discarded in the mid twentieth-century when such wire became obsolete.

Trench 11 was placed close to the supposed southern edge of the former pond adjacent to the present path (Figs 13 and 14). A compact buff coloured and gravel rich sandy clay, gently sloping downwards to the north appears to be the base of the former pond [11/04]. This was overlaid by a similar, but distinct, gravelly sandy clay layer which might represent a secondary lining [11/03]. It contained no finds. Above this a mid/dark brownish/grey sandy loam containing gravels and small pebbles, domestic china, glass brick and tile was uncovered which appears to represent backfilling [11/02]. The uppermost layer was a dark brown loam which seems to represent modern composting, perhaps introduced to enrich the planting of this area [11/01]. No silt layers were present at the base of the fills uncovered and no clear edge of the pond was revealed.

Trench 12 was located at what was thought to be the western limit of the former pond, as indicated by a slight break of slope in the current ground level (Figs 15 and 16). A similar series of ash, clinker and domestic refuse as was found in Trench 9 was uncovered, however, the lowest uncovered layer might represent the bottom of the

pond consisting a buff/ orange sandy clay with gravels and pebbles [12/06], though it did also contain a lense of soft ashy material [12/07] which could not be present if the material were natural. Above this a series of layers and lenses comprising clinker, ash and domestic refuse were revealed [12/02, 03, 04 and 05]. The uppermost layer comprised a modern introduced loam planting medium [12/01]. No edges were found to any of the layers which would indicate that this fill was not close to the western limit of the pond.

Circular walk in Pleasure Grounds. *Task: Excavation needed to establish position/nature of objects in clearings in path shown on 1773 plan and materials and construction of (including drainage) of paths.* Trenches 13 and 14, Fig 2.

Two trenches were proposed to investigate both of the features indicated on the 1773 and 1787 plans and which appear to show two sub-circular clearings within the shrubbery area on the outer, western side of the circuit path (Figs 3 and 4). Each circular clearing also has a small feature indicated at its centre (simply depicted as a dot on the plans), although the nature of those features is unknown. The two historic maps were overlaid on the modern survey of the Pleasure Grounds and the trenches were located from this overlay, measured in from fixed boundaries which are present on both historic and modern plans.

Trench 13 was not excavated since the location measured in on the ground placed the trench at the base of a large sycamore tree (Fig 17). Such was the size of the tree that root disturbance would have prevented excavation, and it is unlikely that any archaeological features would be undisturbed.

Trench 14, when measured in on the ground, was located in an area of grass and was opened by mini-digger. The trench measured 2m x 3m and after removal of turf a sandy, buff coloured soil with gravels was revealed (Figs 18 and 19). A modern tree stump was located towards the western edge and on the western side of the stump the base of an iron Estate Fence post was located, presumably used as a stake for the tree. Another Estate Fence post base was located towards the south-eastern corner of the trench, but no associated stump or planting pit was uncovered. Both posts must be of nineteenth-or twentieth-century date. No gravel surface was uncovered suggesting that, if this location is that of the sub-circular clearing, the area was not gravelled. The only feature identified was a small shallow pit cut into the upper surface of the natural [14/02]. The fill was a dark grey/brown loam [14/03] which contained pieces of broken terracotta flower pot, perhaps used as crocking. If this is the case it indicates that this feature was a planting hole, and since its location is approximately 0.5m away from where the feature identified from the historic plans was located by scaling from them, might suggest that the feature was not a plinth base as had been previously thought, but might have been a specimen plant. It is also possible that the planting hole was used for seasonal setting out of exotics, perhaps oranges from the nearby orangery, whereby plants were half-set into the ground in pots during the summer months before being returned indoors.

It is also possible that the planting pit is nothing to do with the feature indicated on historic plans and that the overlay is inaccurate, or any evidence for the sub-circular feature has been removed by later alterations to the gardens. The location of the trench, as determined by map overlay, was across an indistinct linear ridge which might indicate that there has been subsequent landscaping, perhaps in the form of a raised border or shrubbery bed parallel to the adjacent holly hedge to the west. It is possible that this potential later landscaping has removed traces of the earlier feature identified from the eighteenth-century maps. The trench was located adjacent to the east side of the walled kitchen garden, and whilst the north, south and west sides of this area are enclosed by brick walls, the east side is currently a hedge. No indication was found within the trench of demolition debris, such as brick or mortar, to suggest that the eastern side was originally brick. However, if there was originally a brick wall which has been removed, demolition and subsequent soil removal/re-deposition might also explain the slight ridge in the ground and the lack of evidence for the sub-circular feature.

Mound west of Upper Lake. *Task: Establish layout of paths and other features after selective clearance of undergrowth.* Trenches 15-18. Figs 2 and 20.

The mound located at the western end of the Upper Lake appears to have been created from the upcast of soil excavated when the lake was dug, and provided an elevated viewing platform from which to take the view across the water and also, perhaps, into the wider parkland to the north. It is shown on both the 1773 and 1787 plans and is crossed by a series of serpentine paths which mainly lie across the slope but loop at either end to join with the adjacent path, thus creating a series of connecting walkways allowing access from top to bottom of the mound (Figs 3 and 4). The mound is currently densely planted with a mixture of hollies, chestnuts, elder and other species, some of which are clearly deliberate, others self-seeded weeds trees and shrubs. Some clearing of fallen or dead trees had previously been undertaken but in general, space for excavation was limited, and therefore trenches were positioned where they could be, rather than where they were best placed to investigate potential archaeology. As on the Circuit Path, the historic plans had been overlaid on the modern survey, however, this did not prove useful since nowhere was it possible to locate the trenches in regard to this overlay. Four trenches were placed in small clearings. Towards the south-east corner of the mound are four dog graves, marked by headstones, all twentieth century in date. Trenching was placed so as to avoid close proximity with this area.

Trench 15 was approximately 4m in length and was aligned roughly east-west lying down the slope (Fig 2). Beneath a thin layer of leaf mould [15/01], the upper surface of re-deposited natural, comprising fine sands and gravels, was uncovered [15/02], (Figs 21 and 22). No indications were found of any path material, and it appears that this trench was located between the upper and middle paths, though when positioned on the modern survey with the overlay of the historic plans included, it appears that the western end should impinge slightly on the upper path.

Trench 16 was located towards the southern end of the mound in a small clearing where a distinct break of slope indicated some deliberate landscaping (Fig 2). The trench was 4m in length and like Trench 15, lay down the slope, from one flat level at the west to another, lower level, at the east (Figs 23 and 24). There was no clear layer of leaf mould, but a thick deposit of soft black material, thought to be largely soot [1601], containing broken glass, domestic china, fragments of lead window came (small find Nos 6 and 7), concrete and a piece of a modern cast iron manhole cover. Thus, it became clear that the topographic feature across which the trench was located was in fact a dump of modern material. At the eastern end of the trench two fragments of York stone paving were also found, but these did not represent a path surface, both lying on top of the sooty layer. Beneath the soot layer the upper surface of the mound was uncovered, and this did present a stepped profile, however, it is not clear if this is an historic profile or a result of clearing prior to the dumping of rubbish, since it is not located close to a break of slope as indicated by the historic plans.

Whilst the break of slope visible at present is clearly a relatively modern creation, a line of holly trees, etiolated now and leaning heavily to the east, suggest that there was

deliberate planting in a linear fashion on the eastern side of the upper break of slope, perhaps indicating that there was a later path in this location. These smaller trees are not at present plotted on the survey of the area, which includes only larger tree girths.

Trench 17 was positioned towards the northern end of the mound where a slight hump of gravelly material was seen (Fig 2). On either side (east and west) a layer of leaf mould was removed [17/01] to reveal the upper surface of re-deposited natural [17/04], comprising the mound material. The slight hump appears to be the path surface [17/03], with a distinctly cambered upper surface, set within a clear, U - shaped cut [17/05], (Figs 25 and 26). The surface comprised a matrix indistinct from the mound make-up but with a higher concentration of sands and gravels, perhaps indicating that for this surface the natural material from the excavation of the Upper Lake had been sieved and gravels retained to provide a freer draining surface. The location of the path does not correspond exactly with the position indicated from overlaying historic plans, however, the disposition of the paths on the eighteenth-century plans may be more indicative than accurate. More extensive uncovering of the path network is likely to allow a detailed appraisal of the of accuracy of the historic plans.

Trench 18 was positioned close to the western edge of the mound in a small clearing (Fig 2). Beneath a leaf mould layer, the upper surface of the mound material was uncovered but no path material was located, and when overlain on the historic plan this trench falls between two loops of path close to a point where they meet in a cross (Figs 27 and 28). A slightly more gravelly area towards the north-western end of the trench, initially thought perhaps to be path material, seems most likely to simply be a more gravelly deposit within the make-up of the mound since here the surface of the mound appears to be denuded of surface soils.

Upper Lake. Task: Research on revetting of banks (non-intrusive).

A visual inspection was made of the circuit of the lake to comment on the materials which revet the edge, probable dates and the general condition (Figs 2 and 29). The weather had been dry for a number of weeks before this assessment was carried out after an unusually dry spring, hence the water level was fairly low as indicated by 'tide marks' visible on some of the edging. The lake is depicted on both the 1773 and 1787 Estate plans, and is thought to have originally been a smaller, circular, pond axially positioned at the southern end of the avenue which extends northwards across the park (Figs 3 and 4). Two small inlets located at the north-west and south-west corners of the lake are no longer present having been infilled, although an indication of the one at the north-west corner is depicted on the 1913 Ordnance Survey map.

The most obviously different section of edging is that along the southern side, closest to the Hall. It comprises large machine sawn sections of timber, bolted together with a reddish mastic in the joints (Fig 30). The long lengths of timber present a jagged, angular profile to this section, quite at odds with the remainder of the edging where curves predominate. This edging was inserted after 1993 when the earlier edging collapsed. It is not clear if the earlier revetting was of brick, though this is most likely (Gillam 1997, 47).

At the south-west corner the timber returns sharply to meet with a section of modern, frogged, red brick revetment, inexpertly laid (Fig 31). The bricks measure 210mm x 60-65mm x 100mm and in the frogs are stamped the names WARNHAM SBC and WARNHAM RB. Warnham bricks are currently available, and are easily found on websites. They are bonded in a hard grey (presumably Portland) cement. A drain pipe outlet, presumably carrying rainwater from the stable yard to the south, is set into the wall on the south side of the corner.

The western side of the lake is bounded with London stock bricks, mostly in Flemish bond, but with some repairs irregularly laid. The term 'stock brick' has three main meanings: one being the name given to any brick made with the aid of a stock board, another the ordinary brick of any particular locality, the third more specifically the yellowish common bricks of the London area (Brunskill 1990). The latter is relevant here. The bricks are 220mm x 60-70mm x 95-105mm in size. This section has been variously re-pointed with cement, though in many places the cement, and possibly earlier mortar (though this cannot at this stage be proved), has eroded out leaving gaps between the courses. The wall is one brick thick (i.e. a nine inch wall) and the upper course consists entirely of headers. Tree roots have grown between some sections forcing apart the courses causing sections to be lifted (Fig 32). Along this length six courses is slightly offset to form a narrow plinth. It is not known if this plinth continues around the entire stock brick section. Both the north-west and south-west corners of the lake are heavily silted.

The north side of the lake is of varying condition, with some sections complete with the upper course of headers intact, whilst other sections are almost entirely missing through erosion. Much of the upper edge of this length is overgrown with tree sucker growth which not only hides the revetment, but also obscures the view across the lake in both directions, perhaps most importantly from the main entrance of the Hall northwards across the lake and originally down the avenue in the wider park. The sucker growth along the lake edge has caused considerable damage to the brickwork, forcing apart courses (particularly towards the eastern end), and much of the pointing is missing. In places there is almost total loss of the revetment and it is assumed that at times when the water table is high, wave action erodes away the soft sands and gravels which are present behind the walling (Fig 33). This is no doubt exacerbated by waterfowl entering and leaving the lake through these breaches.

At the eastern end of the lake where the shape narrows and then bulges, there is almost no edging visible, and the majority of the bulge is without edging at all (Fig 34). Large trees shade much of this section and their roots reach into the water. Some sections of the soil edging are undercut by wave action, and there is almost no other vegetation to hold the sandy, gravelly soil together which is presumably also vulnerable to surface erosion during wet weather. Lack of surface vegetation, partly caused by the grazing of geese, and the large numbers of the public which use the park has presumably allowed the edges to further deteriorate. Most of the eastern end of the bulge is choked with organic material comprising branches and leaves which present an unpleasant image of rotting debris (Fig 35). On the south side of the bulge small sections of very eroded stock bricks are present, mostly in poor condition with root penetration and little or no pointing.

Where the eroded section at the neck of the bulge meets the 1990s timber edging, the eastern end of the latter is terminated with a concrete block.

An island in the lake is a modern creation and is revetted with concrete filled sacks; it has no historic value but is a valuable refuge for nesting birds.

The stock brick edging most likely dates to the nineteenth century, though no closer dating can be suggested at this stage since this type of brick is ubiquitous in the London area from the mid eighteenth century. No frogged stock bricks were noted, though these have been recorded in the Hall and tend to be associated with the works of 1897 (Paul Drury pers comm). Investigation behind the present revetment may reveal dating evidence which helps to narrow the date range, and it is not impossible that the revetment is indeed late eighteenth century (though post 1787 after which the inlets were infilled) or conceivably even twentieth-century using re-claimed bricks. The

most easily accessible area for investigation would be at the north-west corner where one of the two small inlets shown on the 1773 and 1787 plans are located. It is possible that any revetment, if present, may have been left intact when these inlets were infilled, and the fact that the one present at the north-west corner of the lake is still partially present on the 1913 Ordnance Survey map may indicate that the stock brick edging is in fact twentieth century.

Topographic survey of the Pleasure Grounds. *Task: To identify archaeological features from earthwork or other indications of earlier garden layout.* Fig 2.

As has been previously stated, the weather conditions were very dry during the time of the evaluation, and this revealed, in some places throughout the lawned areas of the Pleasure Grounds, parch marks probably indicating buried stone, brick or 'hard' features, with other areas presenting a lusher growth, indicating the presence of buried earth-filled features. Whilst some are clearly modern service trenches, others may be garden features, though without intrusive investigation their exact nature cannot be determined. Photographs were taken from the top floor of the Hall over the south and north lawns, the east lawn was universally parched and no evidence could be discerned.

The south lawn is bordered on its eastern edge by a stock brick retaining wall and has a slight terrace on the south side, diminishing in size and clarity towards the west. Three circular areas of greener grass could be seen at the south-western corner of the lawn, perhaps indicating former island beds (Figs 2 and 36). Gillam suggests in his book that there is a circle of grass which remains green in dry weather on this side of the Hall, and which may indicate a well (Gillam 1997, 40). A fourth area of greener grass, this one slightly more square in shape, may be a further island bed. If these are indeed plantings beds, they do not appear to have been laid out in any symmetrical fashion, and are tucked away in the corner of the lawn. They would most likely be of nineteenth-century date and could be no more than grubbed-out tree stumps, with the holes backfilled with more humus rich soil. A very slight linear feature, discernible from the ground as a slight bank, but not from the upper floor of the house, aligns with the west side of the main Hall building and might indicate a former wall line or some other form of linear border. Additionally, a number of small undulations are present across this lawn, and that to the south-east. All appear to be former planting pits for trees or shrubs, but they were not recorded as they were frequent but without pattern. The nineteenth-century Ordnance Survey maps indicate that this area was more densely planted than at present, and these undulations appear to represent remnants of that phase of planting.

Similar undulations are present on the eastern side of the house, but in no discernible pattern.

The north lawn which is bounded by the tarmac Approach Drive to the Hall, and formerly round to the stableyard beyond, is criss-crossed by a number of service trenches, interrupted by modern benches, floodlighting and two stone lions (Figs 2 and 37). The area has also been the subject of excavation by the Enfield Archaeological Society (though this is understood to have been to the north of the present row of benches) carried out when the lake edge collapsed in 1993. What can apparently be seen is a wide parch mark which may indicate a path aligned north-south directly with the front door of the house, and leading northwards which corresponds with the results of the 1990's excavations which suggest that there was a low wall with a central flight of steps perpendicular to this alignment. This suggests a much more formal arrangement of this area at an early period, and if this is the case most likely dates to the later seventeenth-or early eighteenth-centuries when such formality was the

fashion. It is unlikely to have survived the mid eighteenth-century fashion for more naturalistic landscaping.

6 THE FINDS

6.1 **Pottery** by lain Soden

The pottery recovered from the evaluation trenches spans the period from the medieval to the nineteenth- or twentieth-centuries (Trenches 1- 8, 14 - 18).

Trench	Context	Material	Notable	Date range of	Further work
		(sherds and	material	material present	recommended
		weight)	included?		on ceramics?
2	Topsoil	1/5	Blackware	C17	No
5	Topsoil	4/26	None	Medieval to C17	No
6	Topsoil	5/37	Frechen	C17-19	No
7	Topsoil	8/90	Westerwald	C17-18	No
8	Topsoil	6/27	Surrey	C15-19	No
	-		whiteware		
8	03	4/20	Martincamp	C16-17	No
14	Topsoil	1/5	Porcelain	C18	No
14	03	9/250	Flower pot	C19	No
16	Topsoil	6/690	Feathered	C17-19	No
	-		slipware		
17	03	6/55	None	C19-20	No
17	04	1/13	None	C19-20	No
18	Topsoil	8/138	None	C19-20	No
Total		59/1356			No

 Table 1: The material from Trenches 1- 8 and 14 - 18

Although a few sherds of material derive from stratified contexts, only 8/03 can possibly be said to predate the nineteenth-century on ceramic grounds. Overall, this is an assemblage which might suggest that some early post-medieval or late medieval activity may have taken place not far from Trenches 2, 5, 6, 7 and 8, all part of the investigation of the extension to the Car Park overflow. The fact that the majority of types derive from topsoil may indicate that they have been imported or moved around in episodes of landscaping. None of the material is of intrinsic interest and its value is in dating alone, most of the earlier material being residual beside later material. It does not warrant further analysis.

Further pottery, dating entirely from the end of the nineteenth-century comes from a pond filled-in during the period 1881-96 (Trenches 9-12). This latter material comprises contemporary flower pot fragments and plain white-glazed earthenwares (machine-made tablewares). It has not been further analysed.

6.2 Other finds by Tora Hylton

Ceramic tile and brick

The evaluation produced thirty-eight fragments of ceramic tile with a combined weight of 1.657kg and eight abraded fragments of ceramic brick weighing just 0.812kg. None of the brick and tile fragments were of sufficient size to determine original dimensions. The majority of the tile was recovered from topsoil deposits overlying Trenches 2 - 8, while smaller amounts were recovered from the fill of the pond (9/02, 10/03, 12/06) and

a pit (8/03). Much of the assemblage appears to be of twentieth-century date and generally comprises undiagnostic fragments of roof tile in a hard sandy fabric with sparse inclusions and fired to an orange colour (sometimes with a grey core). Nine fragments from Trenches 7 and 8 appear to be of earlier date, possible late medieval/early post-medieval. The fabric is orange and the surfaces are powdery and slightly soapy to touch. Five fragments are furnished with vestiges of circular/square peg holes, though pegtiles were the norm in this area from the mid thirteenth-century to the nineteenth-century and are virtually undateable between these limits.

Clay tobacco-pipes

Four clay tobacco-pipe fragments were recovered from topsoil and subsoil deposits overlying Trenches 8 and 9. This small group includes one pipe-bowl fragment and three extremely abraded stem fragments. The bowl has been classified according to Atkinson and Oswald (1969), the standard typology for the pipes of south-east England and it represents a Type 25 bowl. This was a common form in the first half of the eighteenth- century, the lip of the bowl is parallel to the stem and there is no milling around the top of the bowl.

Small finds

In total seven small finds were recovered from six deposits in Trenches 7-10 and 16. With the exception of four iron nails, two from a pit in Trench 8 (8/03) and two from topsoil deposits overlying Trenches 7 and 8, the assemblage is represented by a fragment of metal-sheathed wire and a whetstone from the infill of the pond (9/04, 10/03), and two pieces lead window came from topsoil overlying Trench 16.

The metal sheathed wire measures c170mm in length, it is a three core version wrapped in a flexible lead sheath (Diameter: 6mm). The lead would have protected the wires from moisture. In the United Kingdom insulated cables covered in lead were introduced in 1896 and were in use until the early twentieth century. Three core was used primarily for two-way switching of lights, and is not very early in date (Paul Drury pers comm). No insulation can bee seen, either impregnated paper, or later rubber. The sandstone whetstone has a circular cross-section and stylistically it is post-medieval in date. Finally there are two lengths (c400mm) of badly damaged and corroded H-sectioned milled came originating from leaded windows. They are unmarked.

Glass

A small assemblage of post-medieval glass was recovered from eight separate deposits. The majority were located within the infilling of the pond (9/02, 9/04, 9/08,12/2, 12/4, 12/6), while small amounts were recovered from the path (17/3) and topsoil overlying Trench 8.

Chronologically the earliest fragments were recovered from topsoil deposits indicating the majority is residual. They comprise five fragments in a pale green glass with worn iridescent surfaces. One undiagnostic bodysherd is furnished with a vestige of a mould blown mesh pattern (cf. Charleston 2005, fig 124, 187) and dates to the late sixteenth-early seventeenth-century. In addition there is a rim fragment from a small jar and 3 fragments of plate glass measuring no more than 30 x 20mm.

The material from the pond infill is represented by a range of late nineteenth and early twentieth century glass vessels for domestic use. They include vessels for food use, alcohol and cosmetics. A complete Bovril jar in brown glass manufactured by Forsters Glass Co. (based in St Helens in the late nineteenth and early twentieth century) and part of a Daddies brown sauce bottle which was produced from 1904. Other complete vessels worthy of note include tall cylindrical bottles, one a rickets mould bottle in

brown glass dating to c1860 and a wine bottle with high kick in green glass. In addition there are two small bottles with metal lids marked with 'Eastern Foam', they appear to contain the remnants of a white powder, possibly for cosmetic use.

Of particular interest is the presence of a glass 'pip top' light bulb. Although the terminal is missing, the filament is still intact and marked 1505 (hand written in white ink). The exterior surface of the bulb is marked with 'Royal Ediswan', together with 'by Royal Appointment' with the Royal crest above and above that '648'. Ediswan was established in 1883, with the merging of Edison and the Swan United Electric Light Company, they sold lamps made with a cellulose filament. From 1886 the bulbs were manufactured locally at Ponders End, North London.

7 ENVIRONMENTAL EVIDENCE

7.1 Animal bone by Laszlo Lichtenstien

Four pieces of animal bone were recovered during the evaluation, all from Trench 9/04 and 05. Those from 9/04 consist of two fragments of sheep tibia. From 9/05 two large pieces of cattle femur were recovered, each piece with both ends cleanly cut indicating that they had been butchered. Both contexts are within the backfill of the nineteenth-century pond and the bone most likely represents refuse from the dinner table.

8 CONCLUSIONS

The evaluation at Forty Hall has established that elements of designed landscaping within the Pleasure Grounds, known now only from documents, survive within the ground as buried features.

In the area to the immediate north of the present car park no significant archaeological remains were uncovered (Trenches 1-8), nor did geophysical survey detect any evidence of brick clamps in those areas between the test pits. The natural geology on this part of the site suggests that this would not have been an ideal place for brick clamps, as, at a time when such kilns were used, they tended to be constructed close to the areas where the clay was dug and prepared. Since only gravels were found in the evaluation area the area of known clamps down the slope to the north appears to be where such activity was centred. A small irregular pit may be a man-made feature, although it is possible that it is simply a tree bole or throw or an animal burrow filled with material which coincidentally contained artefacts. The shallowness of the topsoil suggests that this area has never been subjected to modern, or even historic, ploughing.

The pond, indicated from at least 1773, was identified at the south-east corner of the Pleasure Grounds (Trenches 9-12). Documentary evidence coupled with the artefacts recovered indicates that this feature was begun to be backfilled towards the very end of the nineteenth century, and was probably not finally infilled until the early years of the twentieth century. The reasons for this are uncertain; it may be that the water retention and level was insufficient (certainly during excavation the deposits were very dry, even at the base), the surrounding trees had grown to such a size that the water became too shaded, filled with leaves and stagnant and unable to support a good quality of water, or that it simply was no longer a desired garden feature.

The large quantities of generally low quality domestic refuse found in the backfilling suggest that it was not entirely sourced from the Hall; whilst by this period it is likely that the house was producing fairly large amounts of ash and clinker from open fires,

and there would be expected to be some natural wastage and breakage of household china and glass, the size of the pond indicates that material would have been brought in from the surrounding area. However, the presence of such items as electrical wiring and a light bulb, which indicate a well-to-do household, might suggest that some did indeed come from the Hall which, in 1896, had undergone extensive alteration and upgrading (though the author of this report does not know if electricity was installed at that time). The ash and clinker may have been deliberately chosen due to its open texture which would allow any water still feeding into the feature to drain through it relatively freely which may partly explain its dry nature during excavation. It might equally simply be a reflection of the fact that at this period this was the single largest component of household waste.

Field drains and a modern, twentieth-century, iron pipe indicate that rain water carried from the roof of the Hall might have been culverted across the backfilled pond although if so, its point of exit is not known. It might also be that the pipes do not lead across the former pond but simply proceed to the centre of it thus making the backfilled feature into a large soakaway for the rainwater from the Hall which might explain why at some times of the year this area appears wet. The presence of the very large pieces of clearly carefully laid stonework suggest that during the backfilling the area was intentionally turned into a rockery/bog garden, a popular feature at the end of the nineteenth and beginning of the twentieth centuries, and was not simply planted as an extension of the surrounding shrubbery.

Of the two sub-circular features situated on the outer edges of the circuit path and indicated on the 1773 and 1787 Estate plans only one (Trench 14) was investigated since the positioning of one appeared to be located immediately adjacent to a large sycamore tree. Of the second, no clear indications were revealed. It may be that a small planting hole is indeed the feature indicated at the centre of these clearings, but the evidence is inconclusive, and if the overlaying of the historic plans (always difficult given the accuracy of pre-modern surveys) is not entirely accurate, it may be that the area investigated has not located the exact position. It should also be remembered that the two eighteenth-century plans were both associated with sales of the estate and should therefore be considered as indications of what the property contained rather than an accurate survey. Almost certainly the 1787 version is simply a re-presentation of the 1773 plan, thus any discrepancies evident on the earlier version are likely to have been perpetuated on the later copy. Further evaluation based on map overlays would be limited by present day planting, although a small clearing to the south might provide an opportunity for further investigation if required. Given the known pitfalls of using historic maps compared to modern, accurate, surveys it may be that these present-day clearings are in fact the same clearings shown on the eighteenth-century maps, and the discrepancies are greater that has previously been thought.

To the west of the Upper Lake, remnants of gravel path surface are present on the mound buried beneath no more than natural build-up of leaf mould, indicating that most likely these serpentine paths were simply abandoned and the surrounding vegetation allowed to grow un-tended (Trenches 15-18). The mound itself does appear, as has previously been thought, to simply be constructed from the upcast of material excavated when the lake was dug out. The paths seem to have been formed of selected material rather than being deliberately engineered with hard-core bases, edges or non-site derived surface materials.

There is evidence of early twentieth-century dumping of refuse at the southern end of the mound which has created additional non-historic slope profiles, but in the areas investigated there does not appear to be disturbance to the original mound. Removal of such dumps of material could be easily achieved since the distinction between the original and later material is clearly defined. Detailed recording of the positions of the planting, (at present only large trees have been plotted), and in particular the hollies, might help indicate the lines of the former paths.

The present revetment of the Upper Lake is a hotchpotch of materials with repairs of different dates, styles and quality. Whilst not original, the earliest appears to be London stock brick laid for the most part in Flemish Bond with the upper course originally entirely of headers. Some of this retaining wall is in good condition, though much has been degraded by water and root ingress, loss of mortar and in places total collapse. In those areas the soil, which is either cut into or built up (on the north and east sides), has suffered from extensive erosion which has altered the outline of the lake. Whilst ironically this loss of hard edging gives the lake a more natural appearance, it might have an impact on water retention and is unlikely to be sustainable in the long term. Equally incongruous is the modern, post 1993, timber edging which gives the lake an angular outline on the south side closest to the Hall. Whilst this is at least less visible when viewed from the house looking north into the wider parkland, when viewed from the north facing towards the house it is much more obvious as a modern replacement. The Warnham red bricks at the south-west corner is limited in its visual impact due to the small length of walling, and during the summer months at least is obscured by vegetation. However, the bright, shiny red of the bricks is jarring compared to the mellow London stock bricks and in stark contrast to the soft reds of the adjacent stableyard. Silting appears to be a problem at the east and west ends only, and is particularly bad within the bulge at the eastern end, where the slightly narrow neck of the lake outline presumably traps weed, branches, rubbish and leaves perhaps blown in that direction by the prevailing south-westerly winds. Weed trees along the northern edge currently obscure the lower level of view into the park, especially along the avenue (as does the hedge immediately to the north) and neither lines of growth are historically correct. Their roots are causing extensive damage to the brickwork by forcing apart the courses.

What the original lake edging consisted of is not at present known. On the two eighteenth-century plans there are two distinct inlets at the north-west and south-west corners; these are no longer present and the London stock brick edging which remains at the former, and the Warnham bricks at the latter, are clearly laid across the necks of these inlets. Thus, even the earliest brickwork currently present, the stock bricks, clearly post-dates the infilling of these inlets though the date of that infilling is unknown. Original revetment and dating evidence may be preserved within these backfilled inlets.

The topographic survey within the Pleasure Grounds has not identified with certainty any distinct garden features, though a group of less parched areas on the south lawn may indicate former planting beds, presumably the enriched soil retaining moisture longer. However, they may equally simply represent former tree positions. A faint ridge on the same lawn, perpendicular to the south side of the Hall might indicate the remnant of a more formal, and therefore earlier, phase of garden design. Apart from indications of former tree and shrub planting holes on the east lawn, no conclusive remains were identified. On the north front, an area of parching appears to represent the presence of a gravel path leading to the location of a low retaining, or forecourt, wall which had set within it a flight of steps, previously identified by excavation. This appears from that excavated evidence to date to early in the history of the gardens development, almost certainly the seventeenth century.

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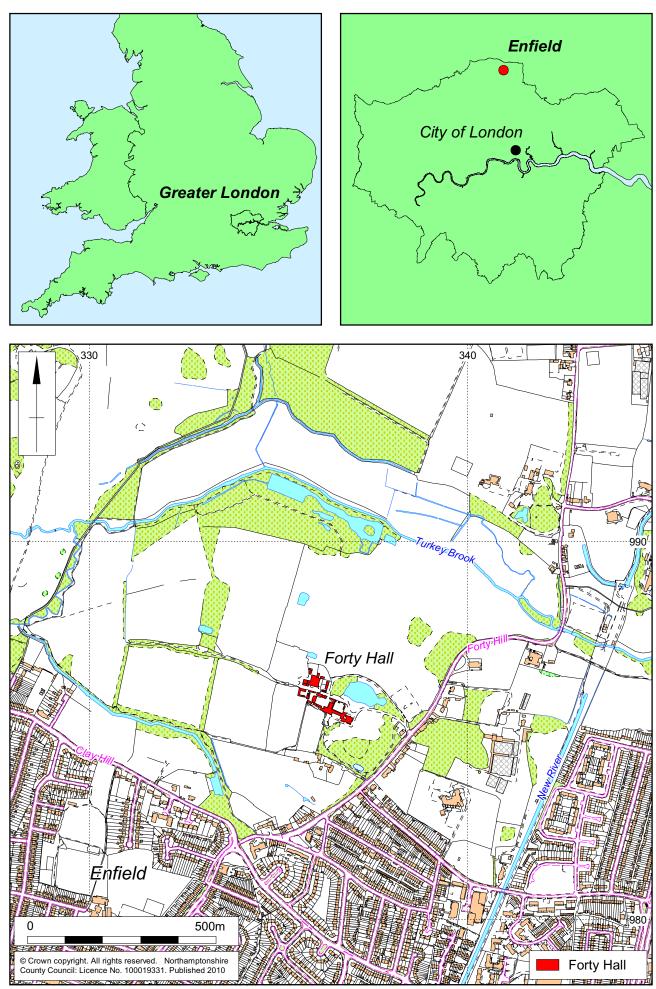
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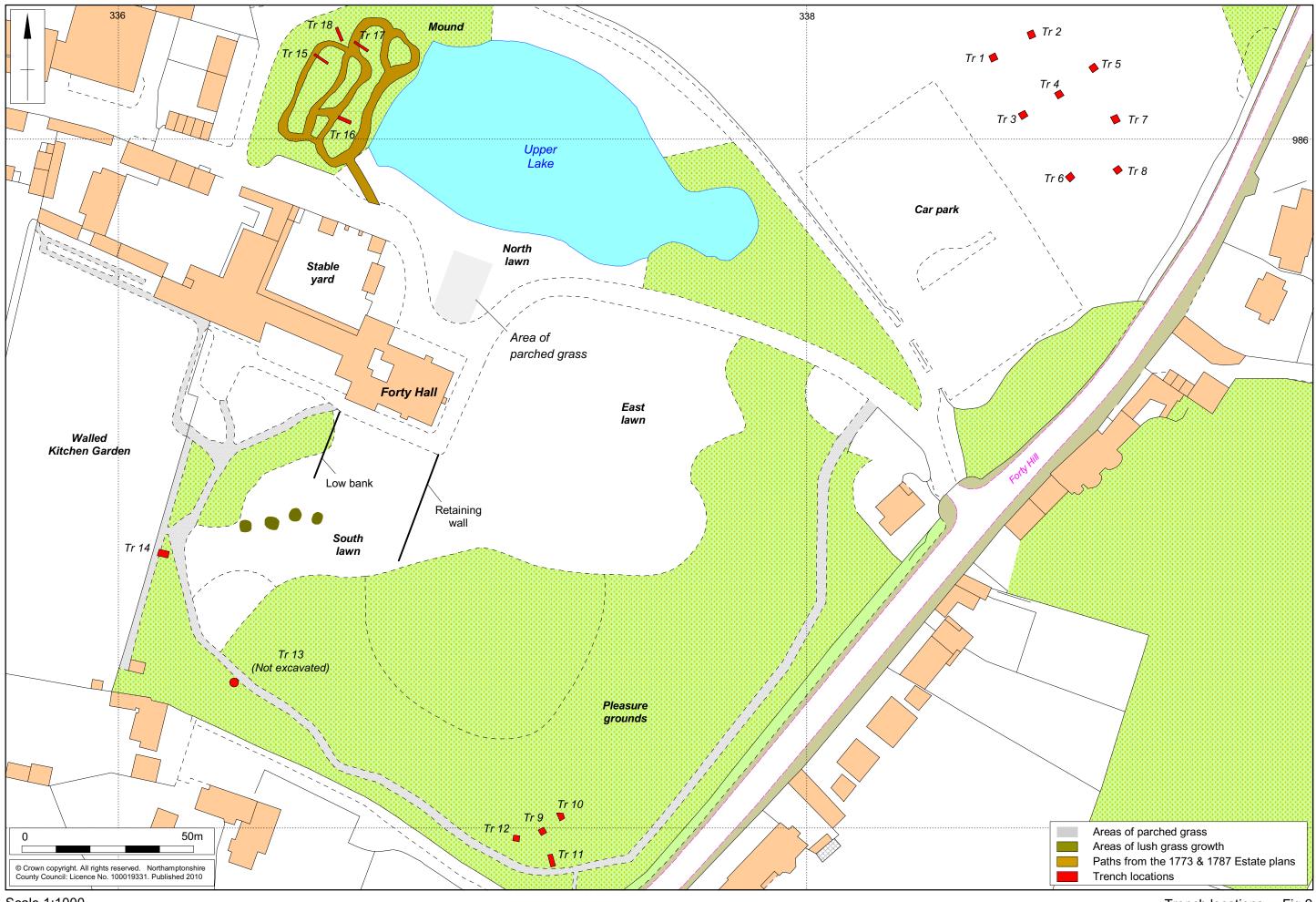
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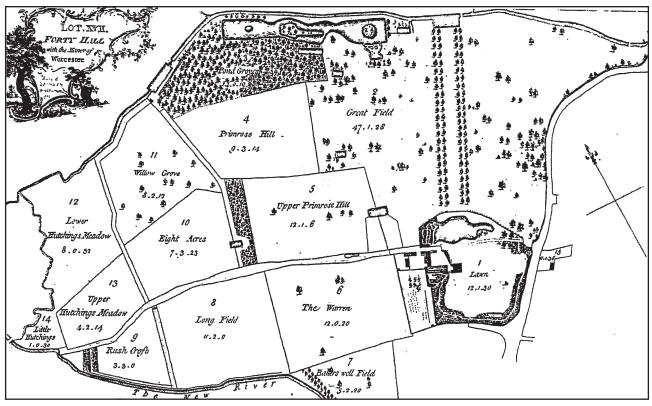
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Areas of investigation Fig 1

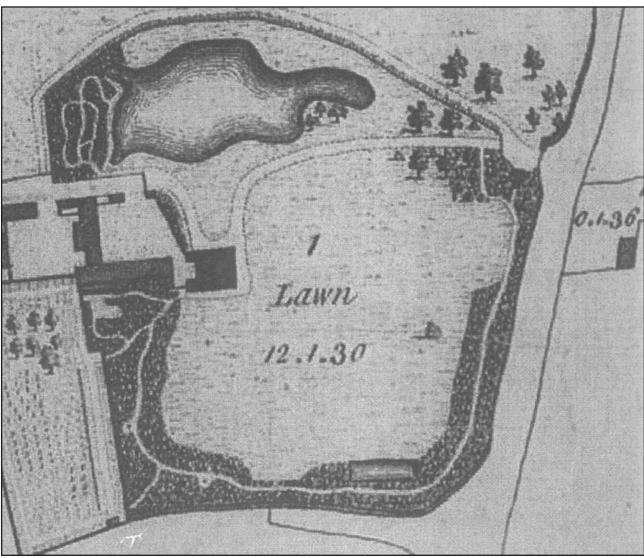


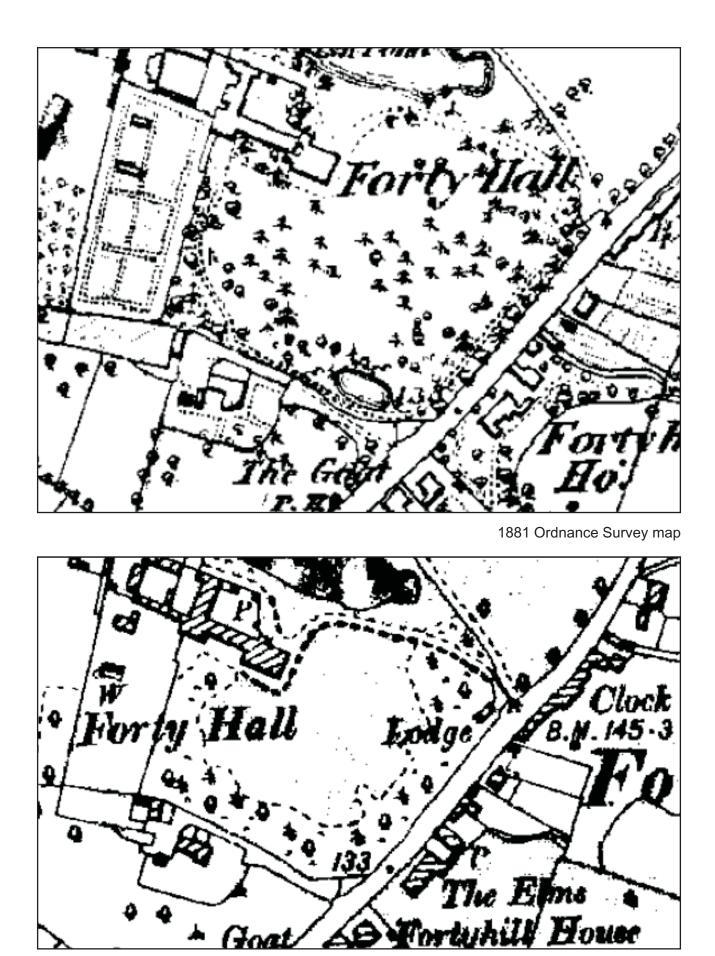
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Trench locations Fig 2



1773 Estate plan Fig 3

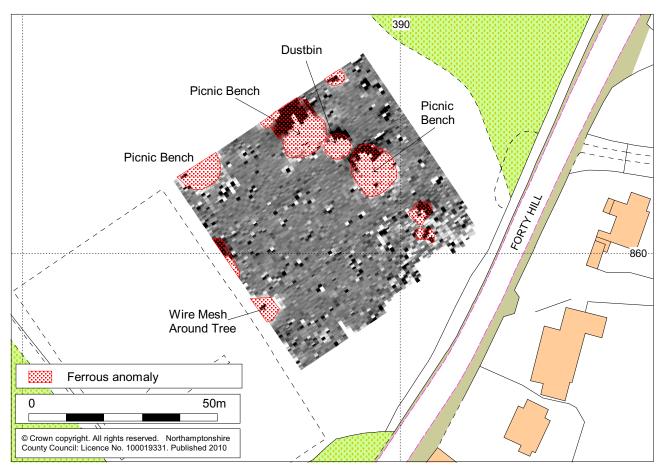




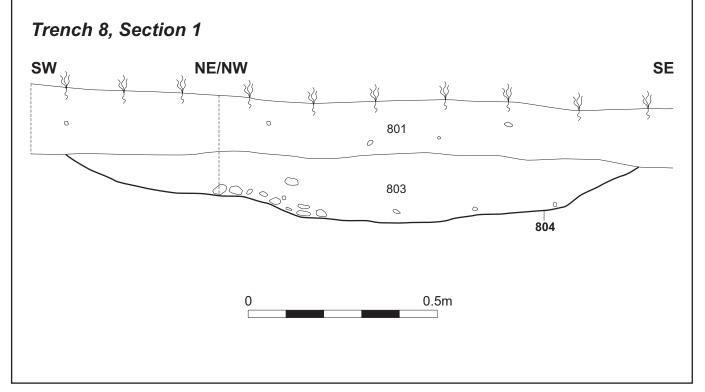
1896 Ordnance Survey map

Y





Magnetometer Survey Results (above) and Interpretation (below) Fig 6

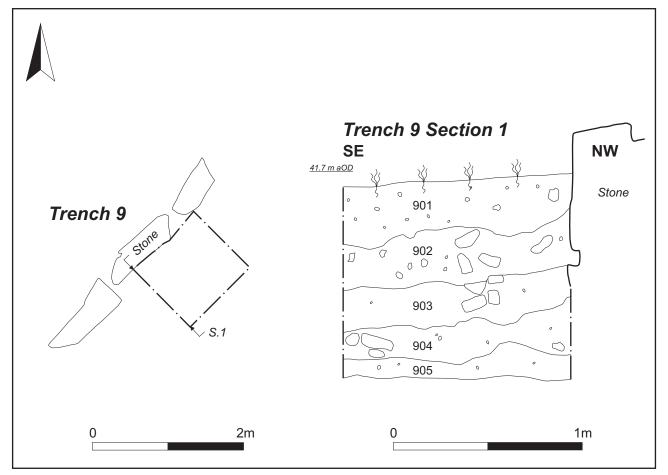


Scale 1:10

Trench 8, section Fig 7



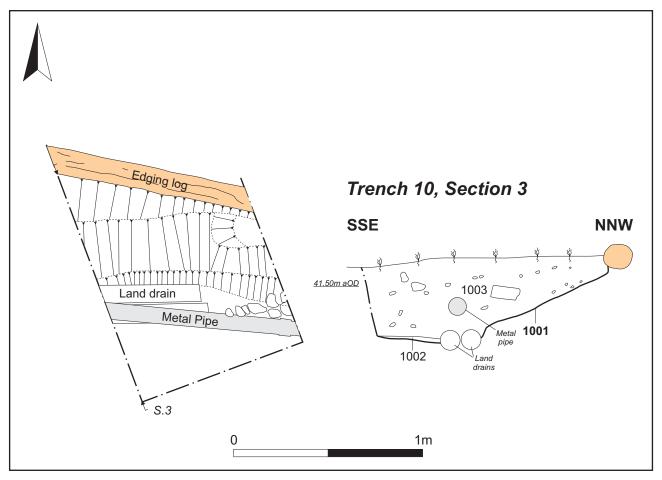
Trench 8, looking north Fig 8



Trench 9, plan and section Fig 9



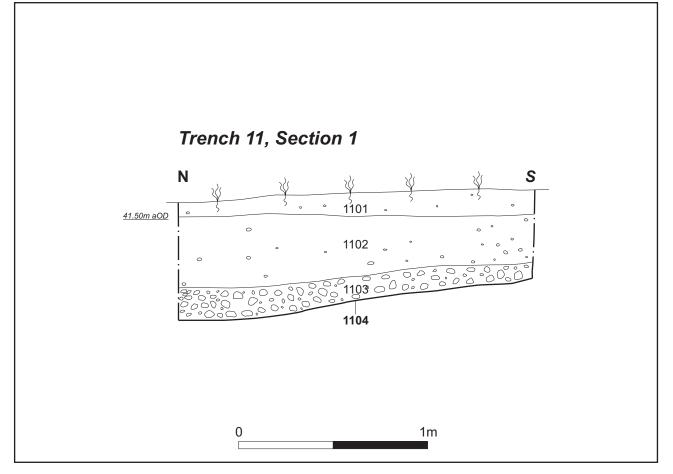
Trench 9, looking north- west Fig 10



Trench 10, plan and section Fig 11

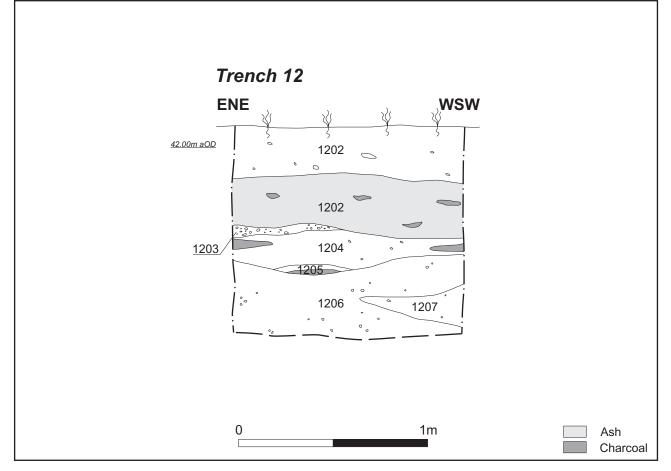


Trench 10 looking south Fig 12



Trench 11, section Fig 13



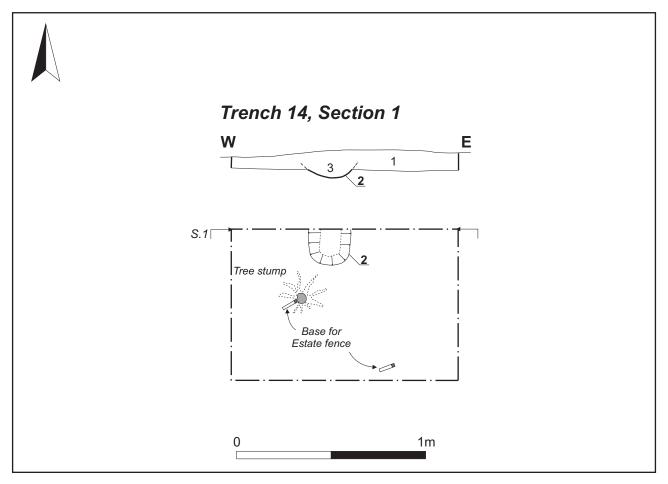


Trench 12, section Fig 15



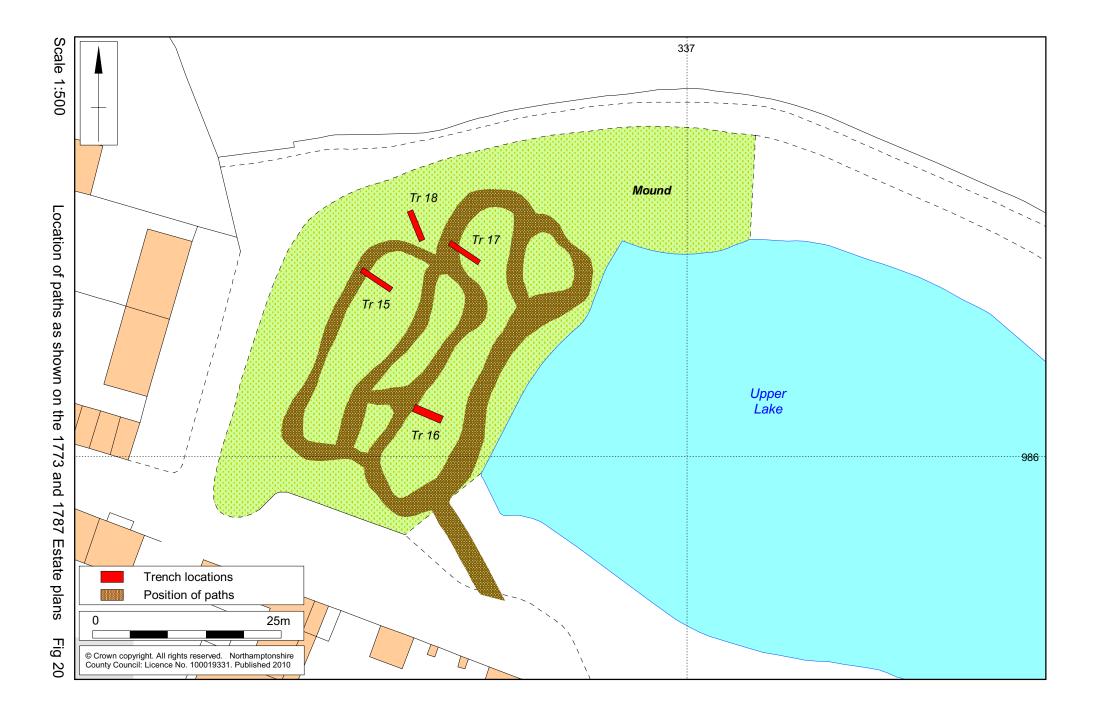


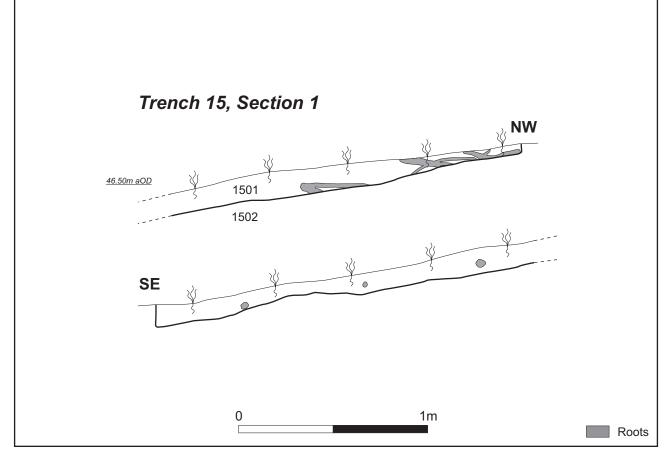
Location of unexcavated Trench 13 adjacent to large sycamore tree Fig 17



Trench 14, plan and section Fig 18



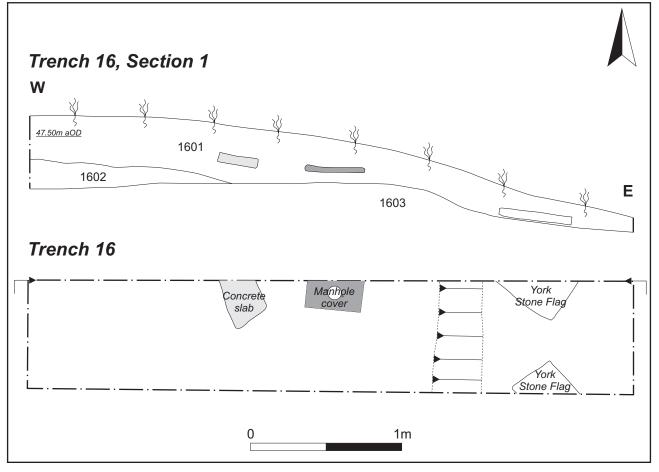




Trench 15, section Fig 21



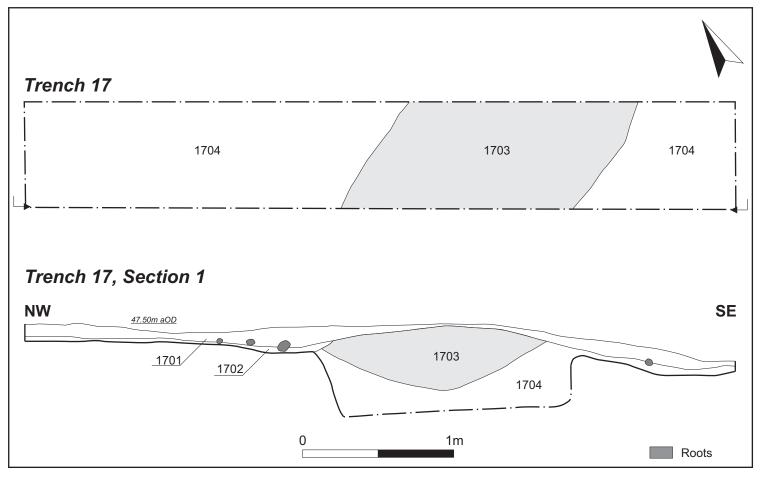
Trench 15 looking west Fig 22



Trench 16, plan and section Fig 23



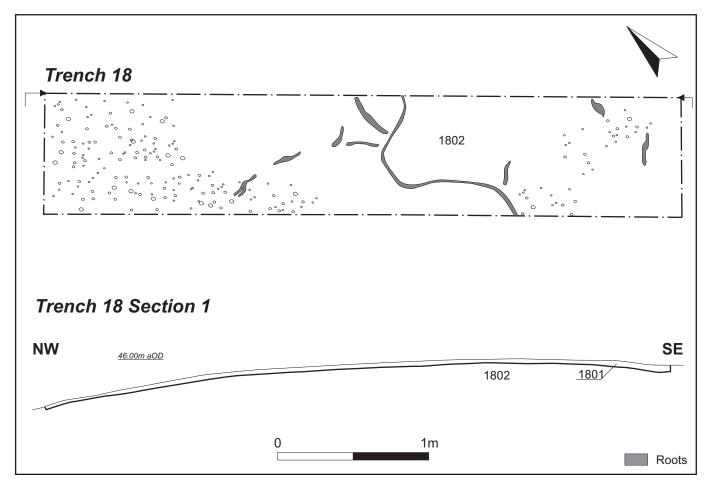
Trench 16 looking west Fig 24



Trench 17, plan and section Fig 25



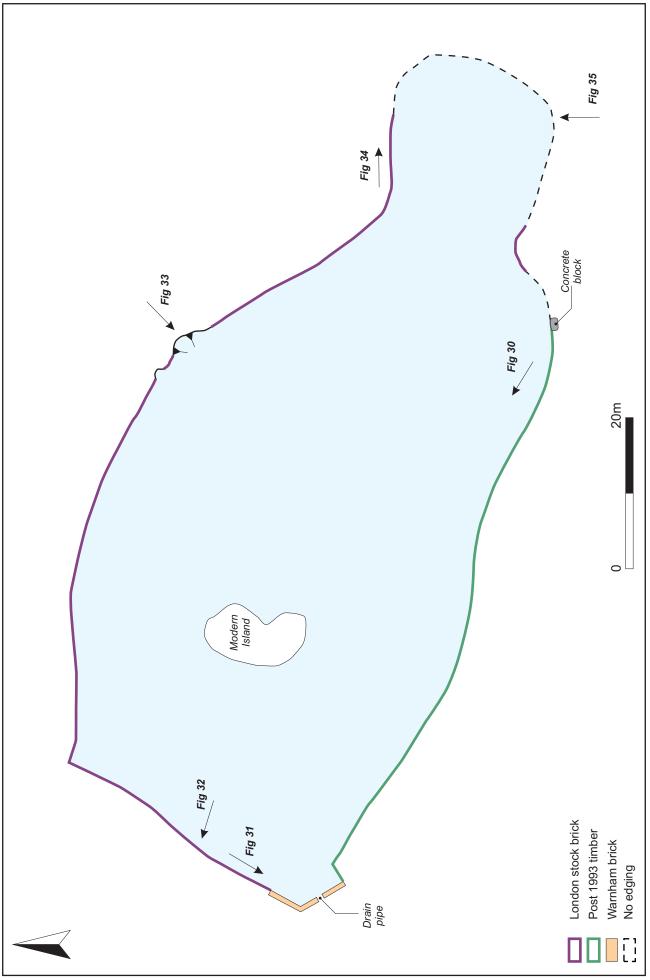
Trench 17, looking north-west Fig 26



Trench 18, plan and section Fig 27



Trench 18 looking north-west Fig 28



Scale 1:500 Upper Lake, plan showing different materials and locations of photographs Fig 29



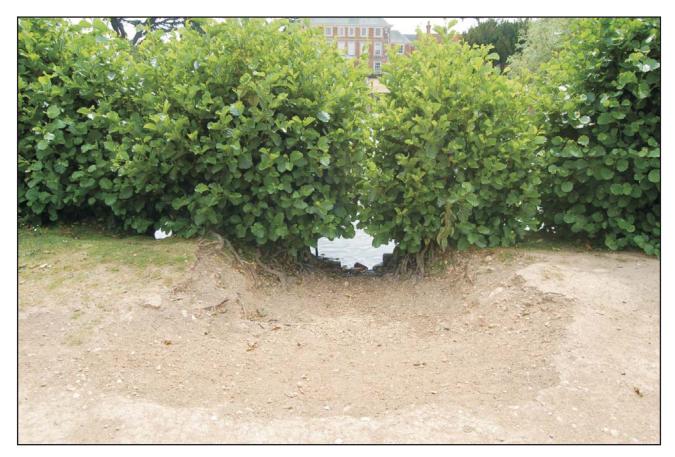
Upper Lake, modern timber edging looking west Fig 30



Upper Lake, Warnham brick edging looking south Fig 31



Upper Lake, London stock brick on western edge of lake showing root penetration, Fig 32 looking west



Upper Lake, eroded soil behind lost edging on north side of the lake, looking south



Upper Lake, north-eastern edge showing Fig 34 loss of stock brick edging



Upper Lake, silting at eastern end looking north-west Fig 35



South lawn from the top floor of the Hall looking south-west showing green areas, Fig 36 perhaps indicative of former planting beds in parched grass



North lawn from the top floor of the Hall looking north showing broad linear parch mark perhaps indicative of seventeenth century gravel path



Northamptonshire County Council

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