NEW ACCESS ROAD AT HAYNES PARK, HAYNES CHURCH END

ARCHAEOLOGICAL EVALUATION

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Report 93/18

Produced for:

RSSB (British Isles)
Haynes Park Estate

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Preface

This report has been prepared by Bedfordshire County Council Archaeology Service (Contracts and Consultancy). The project was directed by Drew Shotliff (Senior Archaeological Field Officer) and Evelyn Baker (Assistant Principal Archaeological Officer Excavation) with the assistance of Chris Moore (Archaeological Supervisor). The earthwork survey was carried out by Steve Coleman (Historic Environment Record Information Officer) who also researched the historic map and documentary evidence. Finds research was carried out by Anna Slowikowski (Finds Officer) and Jackie Wells (Finds Officer). The drawings in this report were produced by Cecily Marshall (Archaeological Illustrator).

We are indebted to RSSB (British Isles) for the generous assistance and hospitality afforded during the Evaluation work.

1. INTRODUCTION

1.1. Background to the Project

Planning Application 93/634, submitted to Mid Bedfordshire District Council, proposes the construction of a new access road to Haynes Park House. The area affected by the proposed development was known to be of archaeological interest and, accordingly, the planning authority requested an Archaeological Field Evaluation. This was carried out during August and September 1993 by Bedfordshire County Council Archaeology Service (Contracts and Consultancy) on behalf of RSSB (British Isles).

The aim of the Evaluation was to define the character, extent and state of preservation of the archaeological remains within the study area, and to provide an assessment of their local and regional significance, in order that a fully informed planning decision could be taken. This report presents the results of the Archaeological Field Evaluation.

1.2. Structure of the Report

Post-excavation analysis of all the data recovered during the Evaluation has allowed the identification of four phases of past activity within the development area. These are summarised and their significance assessed in the Synthesis of Fieldwork Results and Significance of Archaeological Deposits (Section 3). The detailed presentation of the fieldwork results and the finds assemblages (Section 2) is based on this phasing structure, which, for convenience, is presented here in outline, together with approximate date ranges for each phase.

Phase 1: Late Iron Age / Early Roman, ca. 150BC - AD200
Phase 2: Late Roman, ca. AD200 - AD400
Phase 3: Saxo-Norman ca. AD1000 - AD1100
Phase 4: Post-medieval, ca. AD1500 - AD1800

Following examination of the introductory sections, it is recommended that the summarising Section 3 be read in advance of the more detailed results presented in Section 2.

The following abbreviations are used in this report:
- CRO Bedfordshire County Record Office
- HER Bedfordshire County Council Historic Environment Record

1.3. Site Location and Description

Haynes Park lies immediately to the north of Haynes Church End, approximately five miles south-east of Bedford. The new access road is centred on TL079414.

The route of the proposed road runs from a generally flat hill crest (100m OD) down a north-facing slope to a shallow valley bottom (85m OD), where it crosses an east-west stream, before rising up a south-facing slope towards Haynes Park House (95m OD).

The study area is located on the Lower Greensand ridge. There is a narrow band of alluvium associated with the stream, to the north of which are more extensive deposits of chalky boulder clay. As a result there are well drained, sandy soils to the south of the stream and calcareous gley soils to the north.

1.4. Archaeological and Historical Background

Approximately 500m to the west of St Mary's Church, at TL075412, a Late Iron Age ditch and occupation deposits were found during the construction of the Southern Feeder Gas Pipeline (HER 1637).

Haynes Church End was the centre of medieval settlement in the parish. The settlement extended to the east of St Mary's Church where cropmarks (HER 5481), identified by aerial photography, indicate the survival of ditched properties fronting onto Church End Road and extending approximately 200m to the north of the road. Immediately to the north of the church medieval village earthworks survive and fieldwalking has identified the remains of a stone-roofed building complex, at TL080413, associated with 12th-15th century pottery (HER 8346).

An area of earthworks (HER 13958) to the south of Haynes Park House appear to represent the remains of post-medieval garden features.

1.5. Design of the Road Scheme

On the basis of drawings pps 921581 and HPE 200 the initial design of the road scheme is as follows.

For most of its length the road consists of two carriageways, which are separated by a footpath, itself flanked by two lines of trees. A further line of trees is to be planted along the outer edge of each carriageway. At the road's northern and southern extremities the two carriageways merge into one and the tree planting is discontinued.

Each carriageway is approximately 5.50m wide (including drainage runs). The total depth of carriageway make-up is 450mm. The drain trenches are 300mm wide and 600mm deep.

The central footpath is approximately 4.80m wide, including the sub-base which extends beyond the edges of the path at the surface. The total depth of footpath make-up is 350mm at the edges and 230mm over the majority of its width.

Silt traps are to be dug at 100m intervals; their dimensions are 1.50m x 1.50m x 1.50m.

2. THE EVALUATION

2.1. Methodology

The Evaluation was structured around a sequence of investigative techniques, each of which informed and partly determined the next stage of the operation. Figure 1 indicates the areas covered by each technique.

An earthwork survey of the south-facing slope between Haynes Park House and the stream was carried out.

A detailed magnetometry survey was carried out by Stratascan Geophysical and Specialist Survey Services of Upton-upon-Severn, Worcestershire. This covered four 50m x 50m blocks; an additional 30m x 50m area was examined at the south end of the most northerly survey block (Area 4) in the light of on-site plotting.

Following completion of the earthwork and geophysical surveys, a total of seven trial trenches were opened. These were designed to investigate geophysical anomalies of possible archaeological origin, while avoiding modern pipeline runs. Trenches were also located to confirm the absence of archaeology where the geophysical survey was blank, and also to examine parts of the route outside the geophysical sample area. Where significant archaeological remains were revealed, additional trenching was carried out in order to define more precisely the extent and nature of the deposits.

2.2. Earthwork Survey

Two baselines were established across the field's longest diagonals and all surviving earthworks were recorded at 1:1000 by means of measured perpendicular offsets. Significant features and variations in level were tied into the Ordnance Survey Newlyn datum.

The results of the survey are reproduced as Figure 2. All the earthworks are of post-medieval or later date and appear to represent the remains of garden features. The principal elements consisted of two approximately parallel, east-west running terraces. One ran close to the northern edge of the field; the other was approximately 120m south of the present-day Haynes Park House and at its eastern extremity curved round to the north. The two terraces were bi-sected by a former drive- or carriageway, which ran upslope directly towards the house.

In the south-west corner of the field a substantial bank or levée had been created in order to move the line of the stream slightly upslope to the south. Two possible former stream courses survived in the lowest part of the survey area. Variations in the adjoining vegetation, suggestive of infilled linear features, indicated that they had once been longer than at present.

The significance of the earthwork survey in relation to evidence from historic maps, the geophysical survey and trial excavation is discussed below in Section 3.4 of the Synthesis.

2.3. Geophysical Survey

Technical data and the detailed results of the magnetometry survey are contained in the appended specialist report. The survey was dominated by modern service runs, principally gas and water. In Areas 3 and 4 a number of linear anomalies (M3-1, M4-3, M4-4) were detected. On excavation these proved to be post-medieval brick wall footings, representing garden features.

In Area 1 a large, circular anomaly, identified as being of possible archaeological origin (M1-2), proved on excavation to be the result of the grubbing out of trees.

The significance of the magnetometry survey in relation to evidence from historic maps and the trial excavation is discussed at greater length in Section 3.4 of the Synthesis.

2.4. Trial Excavation

A total of seven trial trenches were opened by a JCB 3CX/ Sitemaster, equipped with a toothless ditching blade and working under archaeological supervision. Trenches 5 and 7 were subsequently extended to allow further investigation of significant archaeological deposits. The locations of the trenches are shown on Figure 1.

Trench 1

Trench 1 was 50m long and was located at the northern end of the proposed access road. It was situated to examine an area of raised ground in front of Haynes Park House at the top of a slope overlooking the ornamental lake.

Some 250mm of topsoil was removed; beneath this was a layer of post-medieval brick rubble in an orange-brown sandy silt matrix. This extended over most of the trench and varied in thickness, being c.250mm thick at its deepest at the western end of the trench. Beneath the rubble layer at the western end of the trench was a layer of blue-grey clay varying in depth from 300 to 500mm. Natural orange-brown sandy silt subsoil was found beneath this clay. The clay was restricted to the western 10m of the trench. Elsewhere in the trench, natural subsoil was encountered beneath the brick rubble at a depth of 500-600mm, and contained fragments of charcoal, chalk, mortar and tile and brick derived from the overlying rubble. At the eastern end of the trench, a group of post-medieval brick footings was discovered beneath the topsoil.

These deposits are interpreted as the remains of post-medieval garden features. The extensive deposit of blue-grey clay appeared to have been deliberately laid during construction of the terrace. This material may have been derived from the digging of the nearby ornamental lake.

Trench 2

Trench 2 was 65m long and lay along the western edge of geophysical survey Area 4, on the lower part of the south-facing slope in front of the Haynes Park House. The location and orientation of the trench was designed to investigate linear magnetic anomalies located by the geophysical survey.

At the south end of the trench approximately 500mm of topsoil was removed to reveal an orange-yellow natural sandy silt subsoil. Cut into this were two post-medieval brick garden features. One, roughly circular in plan, was of clay containing brick rubble; the other, of irregular plan, consisted of brick rubble which was apparently the remains of a footing. These features appeared to be elements of the linear anomalies located by the geophysical survey.

In the remainder of the trench, a series of varying natural silts and clays were recorded beneath topsoil. Intrusive fragments of chalk and ironstone suggest that these may have been partly redeposited during landscaping work. No further archaeological deposits were encountered.

Trench 3

Trench 3 was 50m long and was located within geophysical survey Area 3, between two modern service pipes and crossing two linear magnetic anomalies of possible archaeological origin. Topographically, the trench was located on the flat valley bottom south of the stream.

Topsoil, some 300mm thick, was removed to reveal the linear anomalies located by the geophysical survey. These comprised two post-medieval brick wall footings, interpreted as part of a formally laid out garden. One was aligned north-south, with the other at right angles to this. The footings were cut into a series of mixed clays, apparently redeposited during landscaping. The trench was excavated to a total depth of c.600mm to clarify this.

No further archaeological deposits were identified in this trench. An additional modern, machine-cut service trench was noted at the southern end of the trench, running northeast-southwest.

Trench 4

Trench 4 was 50m long and was located approximately 17m to the south of geophysical survey Area 3. The trench was designed to test for the continuation of the linear magnetic anomalies located by the geophysical survey. A 6m baulk was left towards the centre of the trench in order to avoid a modern service pipe identified in Area 3.

In the eastern section of the trench, which was 28m long, 300mm of topsoil was removed to reveal a north-south running post-medieval brick wall footing, on the same alignment as that encountered in Trench 3. The footing was cut into a series of mixed deposits, principally redeposited clay. No archaeological deposits were encountered beneath this material.

20m to the west, in the second part of Trench 4, a further parallel post-medieval brick wall footing was recorded, beneath a similar depth of topsoil. Again, the footing was cut into mixed, redeposited clays. No archaeological deposits were encountered beneath this material.

Trench 5

In the following descriptions the context numbers of cut features (ditches, pits etc) appear in square brackets and can be located on the all feature trench plan, Figure 3. Context numbers in round brackets indicate layers or the fills of cut features; the latter can be cross-referred to the finds assemblage Tables 1, 2 and 3.

Trench 5 was located immediately to the south of geophysical survey Area 2; it was oriented northeast-southwest and was designed to test for the presence of archaeological deposits at the top of the north-facing slope. The trench was dug in two sections with a baulk left to avoid a service pipe detected in geophysical survey Area 2; its overall length was 70m.

Three extensions, centred on a Late Roman drying oven, were subsequently machined in order to further define the extent of archaeological deposits in this area. The first involved widening the trench by about 3m over a 5m length. The two other extensions, respectively 9m and 37m long, were opened to the east and west.

Approximately 200-250mm of topsoil was machined off over the length of Trench 5. Beneath this, in the northern 28m of the main trench, the whole of the eastern extension and the first 15m of the western extension, was 300-400mm of an orange-brown colluvial deposit (161). This appeared to have accumulated just below the crest of the ridge. This material sealed archaeological deposits, which were cut into a granular, orange-brown silty sand (160).

Late-Roman

Approximately 10m from the northern end of Trench 5, machine excavation partially revealed an apparently rectangular structure [152], containing large quantities of burnt clay. Initial trowelling revealed what appeared to be a burnt clay lining along the western edge of the structure and the presence of a clay-lined projection on the northern edge. At this stage the trench was widened so that the full extent of the structure could be examined. Two opposing quadrants of the structure were subsequently investigated. The fills were completely removed but the substructure itself was left intact. Post-excavation analysis has demonstrated that this structure functioned as a drying oven for the processing of spelt wheat.

In plan the structure was 2.90m square and was oriented approximately north-south. The 0.60m projection on the northern edge opened out into a T-shaped flue, surviving to a maximum height of 0.25m, which lay in the centre of the structure (see Figure 4). Several hollows in the cross-piece of the T appeared to be vents, which would have allowed hot air to pass into the outer chamber. The walls of both the flue and the outer chamber were constructed of clay, which had been oxidised to varying degrees by the heat of the fire. The walls of the outer chamber survived to a maximum height of 0.30m.

Both the flue and the outer chamber had a clay floor. At the northern end of the stem of the flue this had been blackened and vitrified by intense heat, indicating the seat of the fire, which provided warm air for the drying oven. The base of the flue was covered by a thin charcoal-rich layer (162), representing residue from burning which had not been raked out of the structure. By contrast, the base of the outer chamber was covered by a $\leq$20mm thick layer (183) (184) of carbonised grain and charcoal. The nature and significance of this material are discussed more fully in the Section 3.2 of the Synthesis.

No *in situ* structural evidence survived to give an indication of the nature of the superstructure of the drying oven. Burnt daub and iron nails found in the backfill (154) (155) (179) (182) (183) of the structure and in the fills (174) (175) of an adjacent ditch [173] suggest the presence of a wooden floor and a wattle and daub superstructure. The original appearance of the drying oven and its *modus operandi* are discussed more fully in Section 3.2 of the Synthesis.

The disuse of the structure was represented by a number of fills in the flue (153) (185) and the outer chamber (190) (179). Amongst this material was a considerable quantity of daub and burnt clay (see Table 2), derived from the walls and superstructure of the drying oven.

Following its disuse the site of the drying oven was used for the dumping of a layer (155) of domestic rubbish, which included animal bone and a large quantity of pottery.

Immediately to the southeast of the drying oven was the terminal of an east-west running ditch [173]. This butt-ended close to the oven and the association of the two features is re-inforced by the presence in the ditch of pottery, burnt daub and charred grain (from contexts (174) and (175)), very similar to that recovered from the drying oven.

Downslope of the drying oven at the extreme northern end of the trench, was a shallow pit or natural hollow [169], which again contained small fragments of burnt daub and charred plant remains in its lower fills (170) and (171). Late Roman pottery was also recovered from the upper fills (172) of this feature.

Some 3m northeast of the drying oven was a steep sided feature [186] with a V-shaped profile. This may represent part of a northwest-southeast running ditch . Its fill (187) contained charcoal and late Roman pottery.

Saxo-Norman

Much of the evidence for Saxo-Norman occupation in this area came from the western extension of Trench 7. A southwest-northeast running ditch, recorded as [197] and [177], produced pottery of Saxo-Norman date from fills (198) and (199). A later re-cut [203] produced pottery of similar date from fill (204). Both these features cut layer (202) which also produced Saxo-Norman pottery. The ditch itself was paralleled by a similar feature [158], which lay approximately 25m to the northeast and was cut into earlier Roman deposits.

Six apparently isolated postholes of varying size were recorded in the western extension of Trench 5. Only one of these [193], contained a fill (194) with datable (Saxo-Norman) pottery.

Post-medieval

The majority of Late Roman and Saxo-Norman deposits were sealed by the extensive colluvial deposit (161). This material was cut by a relatively modern drainage ditch [167].

Trench 6

Trench 6 was 50m long and oriented roughly east-west. Located on top of the hill at the southern end of the study area, this trench was designed to investigate an anomaly of possible archaeological origin in geophysical survey Area 1.

Approximately 250mm of topsoil and 250mm of an orange-brown silty clay overburden were removed to reveal clay with flints at the western end of the trench and an orange-brown natural subsoil elsewhere. The anomaly shown on the geophysical survey was visible as an area of disturbed ground consisting of patches of topsoil-like material together with patches of yellow-brown sandy clay and frequent partially rotted tree roots. An indistinct layer of ash, charcoal and other burnt material was observed within and beneath the topsoil to the east of this disturbed ground. The geophysical anomaly appears to represent the remains of one or more trees, grubbed out in the recent past.

Several unstratified potsherds of late Roman date were recovered from this trench.

Trench 7

Trench 7 was 30m long and oriented roughly east-west. It was located at the extreme southern end of the study area, close to Church End Road. This trench was designed to test for the presence of medieval roadside occupation or structures.

Topsoil was removed to a depth of c.220-300mm, revealing an orange-brown overburden (102), $\leq$190mm thick, across most of the trench. This was removed to reveal an orange-yellow sandy silt natural subsoil. At the western end of the trench a number of irregular clay patches proved, on investigation, to be natural boulder clay.

At the western end of the trench, three features [120], [124] and [126] were recorded in section. These appeared to be intercutting pits. One of the fills (122) of feature [120] produced Late Iron Age pottery.

At the eastern end of the trench a number of intercutting archaeological features were recorded. The earliest was a small pit or posthole [106] cut into the yellow natural subsoil. This was in turn cut by a larger pit [109] of uncertain plan or function. Neither of these features produced any finds. Above the larger pit was a series of three deposits (111), (112) and (114); it was not possible to determine whether these were the fills of a cut feature [115], or layers. The lowest of the deposits (111) produced considerable quantities of pottery of Late Iron age date. The uppermost deposits were cut by a northeast-southwest running ditch [103] some 2m wide with a shallow (350mm) profile. The ditch contained several fills representing, successively, slumping of the sides (105), deliberate dumping of burnt material (107) and natural silting (107). These ditch fills produced both Late Iron Age and Early Roman pottery.

Two short trench extensions were dug to try to locate the continuation of ditch [103] and to test for the presence of any additional Late Iron Age/Early Roman features or structures. These were located 13m from the western end of the trench and extended at right angles, 6.8m to the south and 8.5m to the north. The southern extension was machined to a depth of 500mm and located a ditch [118] running approximately east-west. This feature was on the same approximate alignment as [103] but was narrower (c.1m), deeper (c.500mm) and had steeper sides. The overburden layer which sealed the eastern ditch appeared to be absent here, and the feature was apparently cut from beneath the topsoil. Late Iron Age pottery was recovered from fill (179) of this ditch.

The northern trench extension was also machined to a depth of 500mm; no archaeological deposits were found.

2.5. Finds Assemblages

2.5.1 Ceramics

A total of 267 sherds (representing the remains of 171 vessels and weighing 2484 g.) was recovered. Seventeen pottery types were recognised, falling into three broad chronological phases: late Iron Age/Early Roman; Late Roman, and Saxo-Norman. These types are listed below and are identified by the standard codes in the Bedfordshire Pottery Type Series. Quantification was by vessel count, sherd count and weight; the vessel and sherd count are presented in Table 1.

Type Series

Late Iron Age/Early Roman

F28 Handmade sandy
F19 Sand and organic
F06 Grog-tempered
F05 Grog and shell
F03 Grog and sand
F07 Shelly (Iron Age)
R03 White Ware
R03A Verulamium Region ware
R07 Black sandy

Miscellaneous Roman

R06 Greyware
R Miscellaneous sandy

Late Roman

R12 Nene Valley Colour coat
R11 Oxford Redware
M Oxford Mortaria
R13 Shelly (Roman)

Saxo-Norman

C12 Stamford ware
B01 St. Neots type

The 81 sherds of Iron Age pottery are tempered with grog, sand or shell, or combinations of these three. Few vessels had sherds diagnostic of form, although the presence of cordons on a jar in context (119), and the channel grooved rim of a bowl in context (111), indicate a late Iron Age date. Decoration was rare; horizontal burnished lines were present on a sherd of grog and sand type from context (111) and combing and stabbing on a sherd of grog tempered type from context (119).

The predominant Roman type in the pottery assemblage is shelly ware (R13). The kilns at Harrold, north Bedfordshire, were producing this type throughout the Roman period, but the industry expanded in the 4th century and shelly pottery was exported beyond the boundaries of the present county. It is likely that Harrold is the source of the Roman shelly wares from this site.

Shelly wares were in use from the Iron Age to the medieval period. It is particularly difficult to distinguish wheel thrown Roman shelly wares from those of the medieval period. Only the presence of diagnostic forms can help make a positive identification. One type of late Roman shelly form is the triangular rimmed jar with or without horizontal rilling on the body. Such rims are present in fill (155) of the drying oven and a single body sherd with rilling is also present.

Other late Roman types include the Oxfordshire redwares (R11), one of which has painted white dots, from context (155), and Nene Valley Colour Coat wares (R12), one sherd of which was found in context (155). Other examples of Nene Valley Colour Coat were found in the topsoil (151) (not quantified in Table 1), one of which was badly abraded but still had the remains of white paint on its surface.

The Roman forms, all simple jars and bowls, together with a mortarium fragment suggest a domestic assemblage. Sooting on the exterior of some of the substantial vessels in context (155) indicate the probability that they had been used as cooking pots.

Despite the difficulties of distinguishing Roman from Saxo-Norman shelly wares, some diagnostic St Neots (B01) forms were recognised. A bowl with inturned rim was the only sherd recovered from (194), the fill of post-hole [193]. Fill (204) of ditch [203] produced six sherds from a single St Neots bowl of 'top hat' shape. This form is particularly common in the Northamptonshire and Bedfordshire region and can be dated to the late 10th-11th centuries. A single sherd of Stamford ware (C12), with the characteristic fine white fabric and lemon yellow glaze, was recovered from fill (199) of ditch [177].

A single cross context (ie sherds from the same vessel, recovered from different contexts) was identified. The bulk of a late Roman shelly jar was found in context (155) but one and two sherds respectively were recovered from contexts (179) and (182). This pattern of deposition suggests that when the domestic debris (155) was dumped into the remains of the disused drying oven, the backfill of the latter was still sufficiently loose and uncompacted to allow a few sherds to settle into the lower fills (179) and (182).

2.5.2 Daub and Baked Clay

A total of 108 fragments of daub and baked clay, weighing over 10kg, was recovered. Two fabric types were identified:

A Coarse mid-dark orange/red fabric with variable dark grey/black patches where reduced. Inclusions: abundant sub-rounded, sub-angular quartz c.0.1-0.5mm; rare patches of powdery buff/white material (?grog) c.0.5-2.0mm; rare red inclusions (?iron ore) c.0.5mm; some larger fragments contain sub-angular/angular flint or chert pebbles ranging in size between 10-20mm

B Denser and finer than fabric A. Pale yellow/orange/buff fabric, dark blue/grey where reduced. Inclusions: frequent, well-sorted sub-rounded, sub-angular quartz c.0.1-0.5mm, occasionally ranging to 1.0mm, predominantly milky/white in colour; occasional red and black inclusions (?iron ore) 0.5-1.0mm and rare angular flint or chert c.1.0mm.

The incidence of daub and baked clay is presented in Table 2. The largest individual fragments and most substantial group of daub (51 fragments, 7.3kg) were recovered from contexts (179) and (182), fills of the drying oven. They appear to represent part of the demolished superstructure. All were of fabric type A. The fills (174) (175) of the adjacent and contemporary ditch [173] produced 42 fragments (2.8kg) of daub and baked clay in both fabrics A and B. The type A fragments appear to represent dumped demolition debris from the superstructure of the drying oven. In addition much smaller amounts of material were recovered from contexts (154), (155), (182), (189) and (204) (Trench 5) and (104) and (119) (Trench 7).

All the fragments of daub and baked clay bear traces of organic matter (?straw/chaff), added during preparation to strengthen and bind the clay. These are most frequent in the coarser fabric A. Occasional, distinct grain impressions (contexts (119), (175), (179) and (182)) are also present. Traces of charcoal are present on the daub fragments from context (182).

Most of the larger daub fragments retain impressions of circular wattles and/or squared pieces of timber, which range in size from 25-30mm in fragments of fabric A and 10-15mm in fragments of fabric B. It was not possible to re-construct the superstructure from the fragments but the impressions do allow some conclusions to be reached regarding the construction and appearance of the drying oven.

Two fragments from context (175) have finished edges which represent either the top or bottom of a wall. One has the impression of a brace running behind and at right angles to a thinner wattle, while the second shows impressions of a pair of parallel struts of approximately 10mm diameter, although their orientation is uncertain. A single fragment from (179) appears to bear impressions of thin vertical beams and two horizontal braces.

The remaining fragments lack finished edges. However, the majority have one finished surface - the oxidised wall face, with wattle impressions on the reduced sides and reverse. A fragment from context (179) displays two alternately oxidised and reduced layers, each of approximately 30mm in thickness, which are indicative of rebuilding or a repair to the structure. There is a clear distinction between the rough and uneven surfaces of daub in fabric A and the smoother, higher quality of those in fabric B.

In summary, the fragments associated with the drying oven appear to indicate a simple construction, incorporating low daub walls, supported on structure of wattles, horizontal braces and vertical beams.

2.5.3. Iron Nails

Nineteen iron timber nails were recovered during excavation work: thirteen from the fills of the drying oven (contexts (155), (179), (182) and (183)) and the remainder from fills of ditch [173] (contexts (174) and (175)).

It was possible to classify fifteen of the nails according to head form, after Manning (1985). These were found to be mainly flat headed, round, square or rectangular in plan (type 1B- fourteen examples) with a single example of a flat, rectangular off-set head (type 4), although this could be a damaged example of type 1 form.
Type 1B nails are extremely prolific and examples are commonly recovered from Romano-British sites.

All have square or rectangular sectioned shanks, two of which, from contexts (179) and (182) were clenched. Those with intact shanks which could be measured (four examples), ranged between 90-95 mm in length. Of the three surviving points, two were rounded and one wedge-shaped.

Four examples from the lower fills of the drying oven (contexts (1790, (182) and (183)) bore traces of charcoal.

2.5.4. Charred Plant Remains

Eleven flots of charred plant material from the drying oven and associated features were examined. Each flot was the product of the flotation of a soil sample in water onto a 0.5mm mesh. After drying the flots were separated into size fractions using a series of sieves, and each fraction was scanned under a binocular microscope. The different species observed were identified and an estimate of their abundance was made on a four point scale. Detailed results are presented in Table 3.

The following soil samples were analysed:.

Sample	Context	Volume (ltrs)	Context description
1	153	5	Upper fill of flue of drying oven [152]
2	162	5	Lower fill of flue of drying oven [152]
3	170	4	Primary fill of pit [169]
4	171	6	Secondary fill of pit [169]
5	175	10	Primary fill of ditch [173]
7	179	15	Disuse backfill of drying oven [152]
8	179	5	(as sample 7)
9	162	5	(as sample 2)
10	182	14	(as sample 7)
11	179	16	(as sample 7)
12	183	5	Primary fill of outer chamber of drying oven

Excluding charcoal, all the flots are dominated by remains of spelt wheat. Grains of other cereals are so sparse that a combined total has been given in Table 3 for *Triticum spelta* + *Triticum* sp. + unidentified cereal grains, on the assumption that very few of these grains are in fact other than spelt wheat.

Many of the spelt grains show evidence that they had been charred as spikelets (clusters of grains in their glumes) with compressed ventral faces and glume impressions along their length. No sprouted grains were observed. Weed seeds are very sparse and they are almost all large, for example *Bromus* sp. (brome grass). It is likely that the charred grain assemblage resulted from the burning of spikelets of spelt wheat, amongst which *Avena* sp. (oats) and *Hordeum* sp. (barley) were present as minor contaminants. The grain had probably been cleaned of small weed seeds by sieving.

Samples 3 and 4 (from pit [169]) differ from the remainder in that glumes (ie husks) outnumber grain. In the other samples grain outnumbers wheat glumes by more that 20:1. This suggests that a minimum of two charring events took place to produce the recovered assemblage.

Samples 3 and 4 perhaps represent the burning of waste produced by the parching of spelt wheat spikelets. The latter would have been parched in the drying oven in order to de-husk them prior to milling. Such waste would, before burning, consist almost entirely of glumes. However, glumes are more susceptible to complete combustion than are grains, so that the relative abundance of any grain accidentally included amongst the waste would be exaggerated.

In the remaining samples the proportion of grain is so high that it is possible that they represent the accidental burning of spelt spikelets during the parching process.

Charcoal, presumably from fuel, is also present in most of the flots. *Quercus* sp. (oak) is the most abundant, but *Fraxinus* sp. (ash), *Alnus* / *Corylus* sp. (alder / hazel) and cf. Rosaceae (hawthorn, sloe etc) are also present.

3. SYNTHESIS OF RESULTS AND SIGNIFICANCE OF THE ARCHAEOLOGICAL DEPOSITS

3.1. Late Iron Age/Early Roman

Evidence for this phase of activity was largely confined to the southern end of the study area. A series of ditches and pits in Trench 7 produced a large assemblage of pottery, together with a dump of charcoal-rich burnt material. These feature types and finds are indicative of habitation, although no remains of structures were identified. The remains are similar to those found 450m to the northwest during the construction of the Southern Feeder Gas Pipeline (see above Section 1.4). No evidence for Late Iron Age/Early Roman activity was found in Trench 6; while only a small number of residual Iron Age sherds were found in later contexts in Trench 5. This suggests that the southern end of the study area lies on the periphery of a Late Iron Age/Early Roman settlement, which may extend westwards along the top of the ridge.

It has been suggested (Bigmore 1979) that long-term human occupation of the Lower Greensand ridge really only began during the Iron Age period. A cluster of settlements and hillforts were established to the east of Sandy, where the ridge is cut by the valley of the river Ivel. (Dyer 1971). A cremation cemetery and a number of stray finds, including a notable bronze mirror, are known from Old Warden (Simco 1973). A scatter of early Roman pottery has been recorded close to the village of Haynes at TL1041 (SMR 3468). It is clear, however, that the preferred settlement location during this period remained the gravel terraces of the river valleys, in particular the Great Ouse. The presence of a possible settlement site on the southern fringes of Haynes Park is, therefore, of considerable significance as it is in contrast to the predominating settlement pattern within the region.

3.2. Late Roman

Evidence for Late Roman activity within the study area was confined to Trench 5, where a drying oven had been sited at the top of the north-facing slope, in order to take advantage of the prevailing wind.

The oven appeared to have been deliberately demolished, following an accident that had lead to its destruction by fire. Significant quantities of daub and grain were both dumped into an adjacent ditch and left within the oven. The presence of grain, timber

nails and large fragments of daub within the outer chamber of the structure suggest the collapse of a timber floor and part of the superstructure into the oven. The very different type of debris in the T-shaped flue, in particular the complete absence of carbonised grain, suggests the latter was roofed over (either with daub, or with tiles, which were salvaged for re-use following the oven's destruction). Such a fully enclosed flue would allow greater control over the fire. The quantity and nature of the daub recovered are not indicative of a substantial superstructure, for example, a clay dome. It is more likely that a low dwarf wall, incorporating the timber floor, supported a removable lightweight superstructure, which could be put in place as required during processing.

The charred grain is almost entirely spelt wheat, which requires parching prior to dehusking and further processing. It is also clear that the glumes removed from the grains were used to help fuel the drying oven. Glume-rich charred material recovered from a pit, downslope of the structure, clearly represents rake-out from the flue of the oven. Similar evidence has been recovered from a number of Roman-period sites in Britain (Van Der Veen, 1989).

It is not unusual for drying ovens to be found in pairs or in association with barns or granaries where processed grain could be stored. The fact that two distinctive varieties of daub were recovered from the ditch next to the drying oven may well indicate that a second structure survives in the immediate vicinity.

Agricultural processing of this type is likely to be associated with a nearby farmstead site. The dump of domestic debris in the disused oven contained a sizeable ceramic assemblage. Many of the individual sherds are large, from the same vessel and in good condition, suggesting that the pottery was discarded directly from a nearby settlement and has not been subject to redeposition and wider dispersal.

The extent and location of this settlement is uncertain. Given that the western extension of Trench 5 produced comparatively little evidence for the Late Roman period, it is possible that the settlement lies to the east or southeast (on the flatter hill crest) of the study area. Despite the absence of any archaeological anomalies in geophysical survey Area 2, it is also possible that Late Roman deposits extend downslope to the north, where extensive deposits of topsoil and colluvium may have masked their presence.

The settlement pattern during this period remained similar to that of the Late Iron Age/Early Roman period. The most intensive settlement was still confined to the valley bottoms, in particular the rivers Flit and Great Ouse, where large estates

enabled a villa-based economy to flourish (Simco 1984). The Historic Environment Record lists eight other Roman settlements where drying ovens have been recorded. Four lie in the Great Ouse valley at Wyboston, Harrold, Bromham and Newnham; two lie in the Flit valley at Flitwick and Ruxox; two are on the chalk escarpment in the Dunstable area. This distribution pattern is partly a reflection of aerial photographic evidence and gravel extraction which together have revealed many more sites in the valley bottoms. However, it also reflects a genuine selection of settlement sites away from the lighter, less fertile soils produced by the Greensand ridge. It has been suggested (Jones, 1982) that the growth in numbers of drying ovens during the Late Roman period is a result of an increase in the scale of agricultural production, necessitating more processing, transport and storage of grain. The farmstead site at Haynes Park, established on relatively marginal agricultural land, appears to be a product of this expansion.

In conclusion, the presence of a Late Roman farmstead site at Haynes Park again represents a marked deviation from the prevailing settlement pattern. With the exception of a 2nd-3rd century pottery kiln site (HER 9156) on the actual Greensand escarpment in present-day Cardington parish (discovered during construction of the Southern Gas Feeder Pipeline) there is no previous evidence for Late Roman occupation of the area. This site is, therefore, of considerable regional significance.

3.3. Saxo-Norman

Evidence for Saxo-Norman activity in the study area was confined to Trench 5. Two parallel ditches, perpendicular to Church End Road, lay on the same orientation as the ditched property boundaries identified by aerial photography to the east of St Mary's Church (see above, Section 1.4) and clearly form part of the same village or hamlet. With the exception of a small number of postholes, no structural remains were identified.

This evidence together with the absence of Saxo-Norman deposits in Trenches 6 and 7 suggests that the study area lies close to the western boundary of the early medieval settlement. Any substantial dwellings associated with this settlement are likely to lie to the east of the study area on the Church End Road frontage. Some ancillary structures may lie in the vicinity of Trench 5, towards what would have been the rear of an individual property.

On the basis of an analysis of the numbers of pigs on Domesday manors, Darby and Campbell (1962) have suggested the existence of extensive areas of woodland

between Woburn, Flitwick and Clophill during the early medieval period. This is likely to have extended into the Haynes area where woodland for 500 pigs was recorded by the Domesday commissioners (Morris, 1977). The landscape would have been dominated by a complex pattern of small villages and hamlets, connected by an intricate system of roadways.

The limited nature of the evidence recovered during the Evaluation suggests that for the Saxo-Norman period, the study area contains deposits of local significance only.

3.4. Post-Medieval

The geophysical survey revealed a series of linear anomalies in Areas 3 and 4. On excavation (Trenches 2, 3 and 4) these proved to be shallow brick wall footings, the majority of which ran approximately north-south. The post-medieval date of these features and the fact that they lie on a similar alignment to the rectilinear layout of the main house, courtyards and gardens indicate that they are contemporary elements of the estate landscape. It is, however, uncertain whether they are associated with the present house (oldest surviving fabric ca. 1725) or with the earlier house which lay to the northwest.

The brick walls were probably laid out with respect to the driveway shown on both the 1676 estate map (CRO ref: Z 385/2) and the 1767 estate map (CRO ref: CRT 110/82). The line of this access route is still visible on the surface of the former arable field between the stream and St Mary's Church, to the east and west of which it successively ran. No trace of this route was recorded in the area of earthwork survey, suggesting that the main east-west terrace, which presumably now seals the former driveway, may be of relatively recent creation. Trench 1 provided an indication of the depth of this terrace and clearly demonstrated the extensive earthmoving and landscaping associated with post-medieval garden design.

It is also possible that the series of wall footings recorded in Area 4 and Trench 2 may be part of what appears to be a rectilinear water feature, shown on the 1676 estate map. This lies immediately to the north of the stream and the levée, recorded during the earthwork survey, may be associated with its construction.

The southwest-northeast running former drive- or carriageway, recorded during the earthwork survey, closely follows the line of an access route featured on Bryant's map of Bedfordshire, dated 1826. The absence of this feature from the earlier estate maps (1676 and 1767) may indicate that it was only created during the 19th century.

The Evaluation produced useful evidence, of some local significance, for the changing pattern of garden features to the south of Haynes Park House. In particular, the contrast between, on the one hand, the earthwork survey and, on the other, the geophysical survey and trial excavation, which together provided considerable additional information, demonstrated the existence of earlier configurations beneath the present landscape. To some degree it was possible to correlate this information with the historic map evidence.

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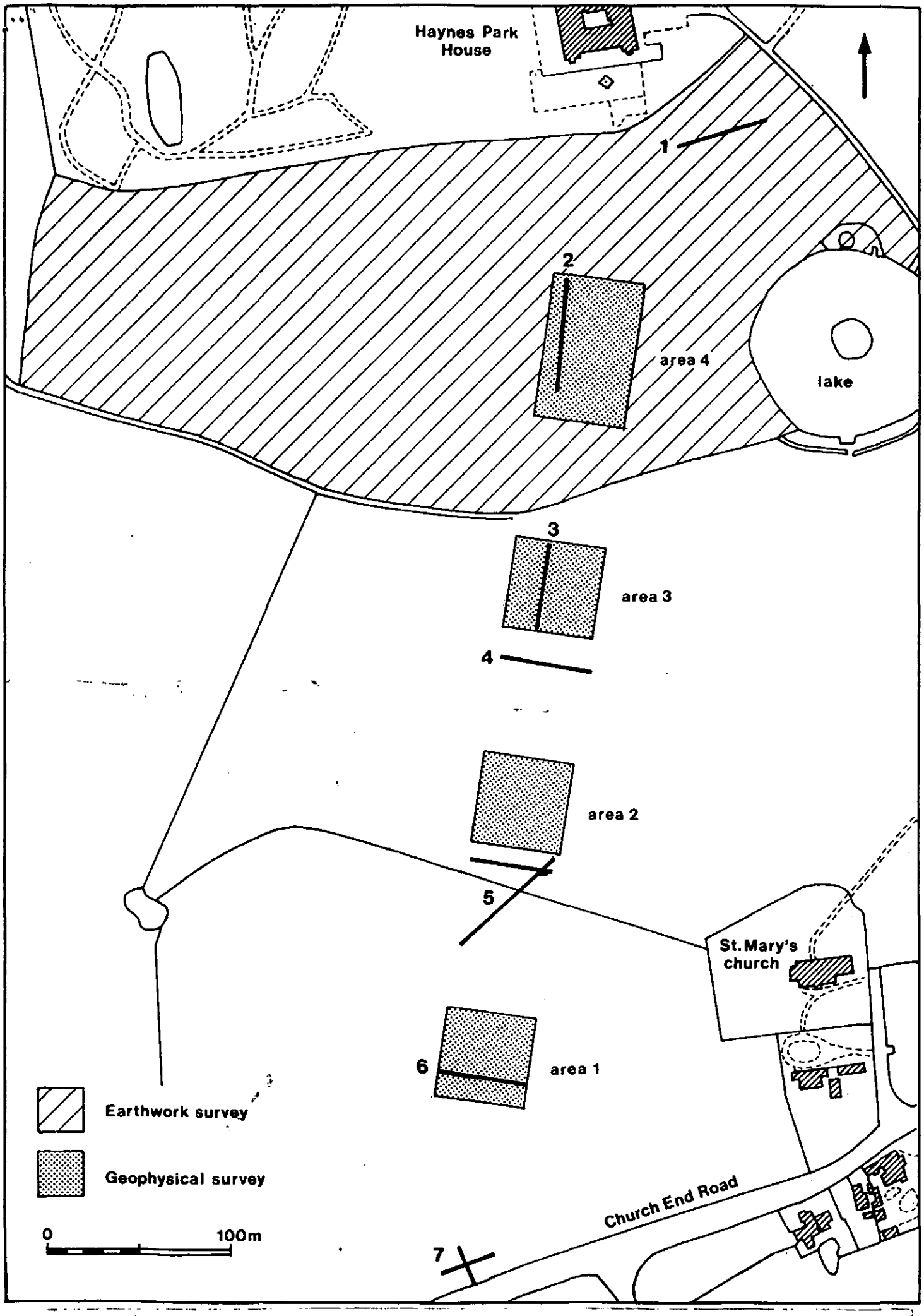

Figure 1. Study area showing extent of earthwork and geophysical survey, and location of trial trenches.

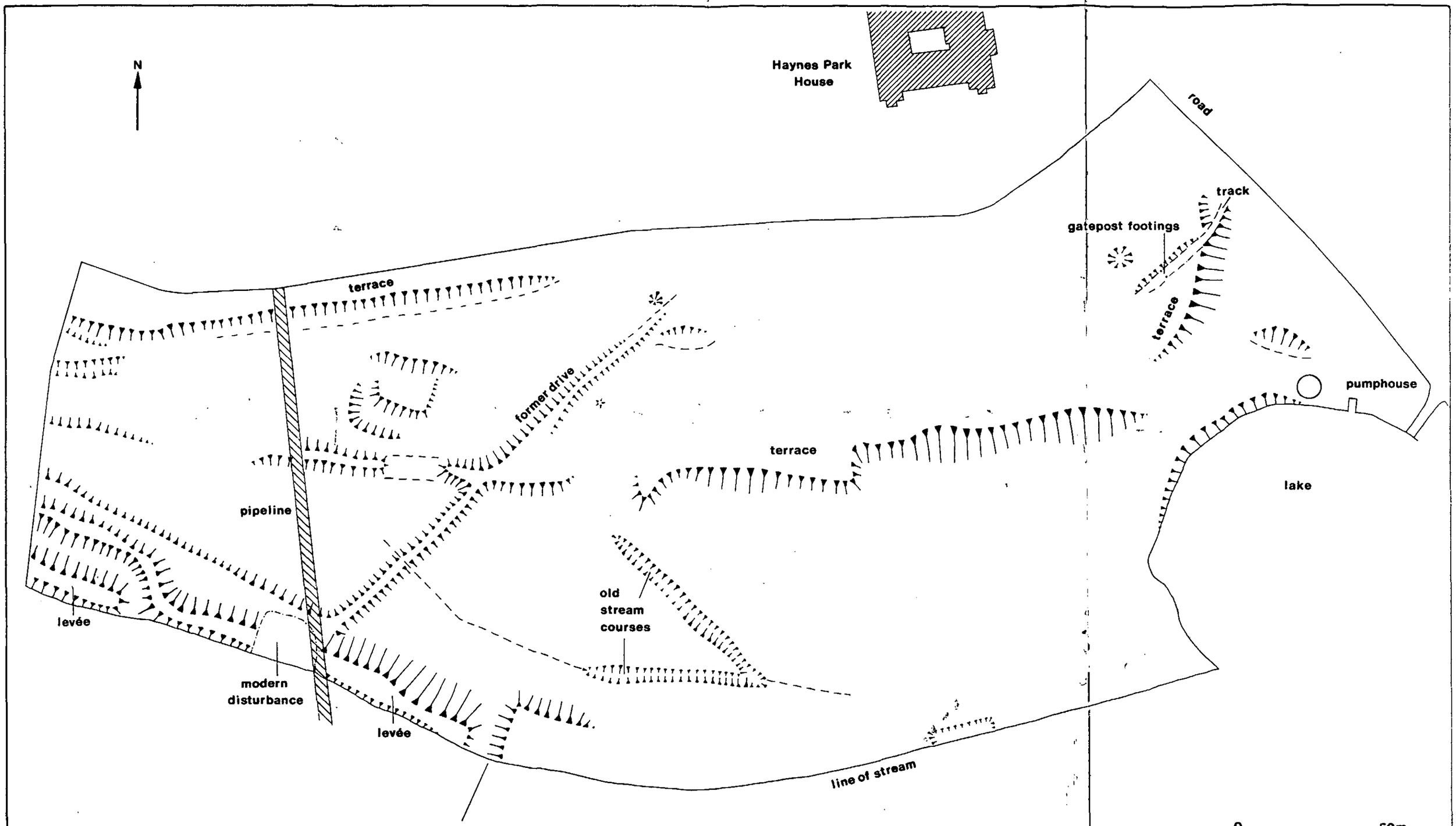

Figure 2. Earthwork survey

	Late Iron Age / Early Roman					Late Roman								Saxo-Norman							P-M	
Context	111	105	104	122	119	182	179	154	155	174	175	172	187	159	198	199	178	202	204	194	168	TOTAL
Fabric																						
F28							2:2															2:2
F19										1:1				1:1								2:2
F06	11:14		12:12	1:2	10:16																	34:44
F05	1:1																					1:1
F03	11:12		10:11																			21:23
F07	2:2		6:7																			8:9
R03			2:2																			2:2
R03A			1:1																			1:1
R07			6:6																			6:6
R06			6:15				1:1	1:1	12:13													20:30
R		1:3	4:7						1:1				2:2									8:13
R12									1:1													1:1
R11									1:1				2:2									3:3
M									1:1													1:1
R13						3:3	3:3	3:3	29:86	1:1	1:1	1:1	2:2	1:1			2:2					46:103
C12																1:1						1:1
B01															4:4	3:3		4:10	1:6	1:1	1:1	14:25
Total	25:29	1:3	47:61	1:2	10:16	3:3	6:6	4:4	45:103	2:2	1:1	1:1	6:6	2:2	4:4	4:4	2:2	4:10	1:6	1:1	1:1	171:267

Table 1 Ceramic Quantification (vessels:sherds).
P-M = post-medieval

	Late Iron Age/ Early Roman		Late Roman						S-N	Unph	
Context	104	119	154	155	174	175	179	182	204	189	TOTAL
Fabric A	4:23	2:23	1:10	3:85	8:208	13:1660	35:5332	16:1990	4:24	1:10	87:9365
Fabric B					4:30	17:874					21:904
Total	4:23	2:23	1:10	3:85	12:238	30:2534	35:5332	16:1990	4:24	1:10	108:10269

Table 2 Daub and Baked Clay Quantification (frags:wgt in grammes).
Unph = unphased

Sample	*Triticum spelta* & *Triticum* sp. & cereal indet. grain	*Triticum spelta* & *Triticum* sp. glumes	*Hordeum* sp. grain	*Avena* sp. grain	*Bromus* sp. seed	*Rumex* sp. seed	Other weed seeds
1	+	+					
2	+				+		
3	+++	+++		+	++	+	+
4	++	++			+		+
5	++++	++	+	++	++		+
7	++	+		+	+		+
8	++	+	+		+		
9	+						+
10	++	+			+		+
11	+++	++	+	++	+	+	
12	++++	++		++	++	+	+

+	1-9 items
++	10-99
+++	100-999
++++	1000-c.3000

Triticum spelta	- spelt wheat
Triticum sp.	- wheat
Hordeum sp.	- barley
Avena sp.	- oats
Bromus sp.	- brome grass
Rumex sp.	- dock

Table 3. Charred plant remains identification and quantification