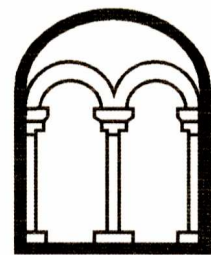


LAND AT GOLF LANE
WHITNASH
WARWICKSHIRE

ARCHAEOLOGICAL FIELD EVALUATION

Albion
archaeology



**LAND AT GOLF LANE
WHITNASH
WARWICKSHIRE**

ARCHAEOLOGICAL FIELD EVALUATION

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Compiled by	Checked by	Approved by
Mark Phillips, Slawomir Utrata, and Jackie Wells	Gary Edmondson	Drew Shotliff

Prepared for:
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Preface

All statements and opinions in this document are offered in good faith. Albion Archaeology cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party, or for any loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in this document.

This document has been prepared by Mark Phillips (Project Officer), Slawomir Utrata (Project Supervisor), Jackie Wells (Artefacts Officer) and Gary Edmondson (Project Manager) and approved by Drew Shotliff (Operations Manager).

Albion Archaeology

St Mary's Church

St Mary's Street

Bedford, MK42 0AS

☎: 0300 300 6867

Fax: 0300 300 8209

E-mail: g.edmondson@albion-arch.com

Website: www.albion-arch.com

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Structure of this Report

Section 1 serves as an introduction to the project, describing the site's location, its archaeological background and the aims of the archaeological work. Section 2 describes the earthwork survey and trial trenching methodologies and Section 3 summarises the results of the evaluation and the historical setting of the site. Section 4 is a bibliography. Appendix 1 (Section 5) contains trench summary information and detailed contextual data.

Key Terms

Throughout this document the following terms or abbreviations are used:

Albion	Albion Archaeology
Client	CgMs Consulting Ltd on behalf of Bovis Homes Ltd
DCLG	Department for Communities and Local Government
HER	Warwickshire Historic Environment Record
IfA	Institute for Archaeologists
NHLE	National Heritage List for England
PA	Planning Archaeologist
PDA	Proposed Development Area
WCC	Warwickshire County Council



Non-Technical Summary

CgMs Consulting Ltd commissioned Albion Archaeology to undertake a programme of earthwork survey and archaeological evaluation in order to discharge a pre-commencement condition (Number 11), attached to outline planning permission, granted by Warwick District Council (application ref. W/13/0858) for a residential development at Golf Lane, Whitnash.

The site is located at the southern margin of the village, which lies to the south of Leamington Spa, Warwickshire.

The proposed development area (PDA) is located on sloping ground to the east of Golf Lane, centred on grid reference SP (4)3300 (2)6271, defined by Golf Lane to the west, the railway to the east, Fieldgate Lane to the north, and land associated with Hazelmere, a property to the south. No heritage assets are recorded within the PDA.

The field contains ridge and furrow earthworks; two contrasting alignments follow the slope of the land. The nature of the earthworks indicates that the field has been grassland in modern times, with no evidence of recent ploughing. Immediately prior to the evaluation the grassland was being grazed by sheep. The ground is at c. 70m OD in the SW corner of the field, sloping down to c. 60m OD in the NE corner; there is also a lesser slope down to the north.

The evaluation was undertaken in mid-December 2013, commencing with the earthwork survey, followed by the trial trenching.

The earthwork survey plotted a series of cultivation strips or 'lands' on perpendicular alignments, defining elements of two furlongs. These earthworks would appear to be less sharply defined when compared to aerial photographs taken in 1999. It was possible to correlate a number of the furrows with land parcels depicted on the 1843 Tithe Map. However, the Tithe Map appears to depict greater subdivision of several of the strips in the east, than was apparent on the earthwork survey.

During the survey a boundary marker for the Great Western Railway, dated 1880, was identified at the eastern margin of the site. This previously unrecorded heritage asset incorporates a segment of reused early railway line, part of a 'Baulk road' relating to the early development of the railway.

The trial trenching revealed considerable variation in the thickness of the old ploughsoil across the site. In the steepest part of the site, towards the NE corner of the field, erosion had resulted in the downslope movement of soil, burying the original ploughsoil. Only a small quantity of post-medieval pottery was recovered from the ploughsoil, suggesting that this area was some distance from the contemporary settlement and not receiving middening deposits which would have contained domestic waste.

No archaeological features were identified, even though a number of the trenches were targeted on geophysical anomalies, which were judged to be possible archaeological features in the survey report. The intermittent curvilinear anomaly with an apparent



diameter of some 150m would appear to correlate with geological variations particularly with the boundary between the grey silt clay (Blue Lias) on the high ground and the red clay (Merica Mudstone Group), which extended across the majority of the PDA. This extensive red mudstone deposit was dissected by a number of linear features, which excavation showed to be natural in origin — probably periglacial features, forming at the end of the last Ice Age.

In summary, the evaluation has recorded the earthworks of two strips of 'lands', forming elements of two furlongs — part of the medieval field system of the village. These were incorporated into the post-medieval land-use pattern prior to enclosure, which created the present field system. During the survey a boundary marker for the railway, located at the eastern margin of the site was identified. The evaluation revealed no archaeological features, only evidence for geological processes.



1. INTRODUCTION

1.1 *Planning Background*

Outline planning permission has been granted by Warwick District Council (W/13/0858) for residential development on land at Golf Lane, Whitnash, Warwickshire. A series of pre-commencement conditions were attached to the permission; this report has been prepared to address condition 11. The archaeological aspects of the application are being dealt with by CgMs Consulting Ltd.

Local planning policy is provided by the Warwick District Local Plan (1996-2011), which is currently in the process of being replaced by a new local plan. A number of policies have been ‘saved’ for planning purposes, including those relating to the historic environment — **DP3** and **DP4** which are detailed in the Written Scheme of Investigation (WSI) (Albion Archaeology 2013).

Utilising an earlier desk-based heritage assessment (Northamptonshire Archaeology 2013) and geophysical survey (Stratascan 2013), the evaluation strategy was formulated by CgMs Consulting Ltd in consultation with the Planning Archaeologist (PA). It comprised survey of the ridge and furrow earthworks and trial trenching to investigate both the geophysical anomalies as well as the rest of the site. The strategy was detailed in the WSI, which was approved by the PA prior to the commencement of the investigation.

The objective of the investigation was to identify and assess the significance of any surviving archaeological deposits, features and structures within the PDA, so that sufficient information would be available to determine the need for and development of design solutions and / or mitigation schemes.

1.2 *Site Location and Description*

The PDA comprises a pasture field of 4ha, centred at NGR SP 3300 6271 (Figure 1), to the south of the village of Whitnash. It is bounded to the south by land associated with Hazelmere; to the west by Golf Lane, and beyond by the Leamington and County Golf Club; to the east by a railway; and to the north by Fieldgate Lane, with modern housing development beyond. Further to the east lies Whitnash Brook which forms the eastern boundary of the parish. The field slopes down to the NE towards the railway line, falling from *c.* 70m OD in the SW corner of the field to *c.* 60m OD in the NE.

The geology of the area is varied (BGS 1984), particularly to the south of the village, which is affected by the Whitnash Fault, aligned roughly N-S, located a short distance to the west of the PDA. In the vicinity of the PDA east of the fault, the geology is Blue Lias, comprising argillaceous limestones alternating with mudstones and shale. To the south there is Lower Lias, composed of dark grey mudstones. At the eastern margin of the area are First Terrace River Deposits, whilst red brown blocky mudstones of the Mercia Mudstone Group are mapped in the area immediately to the east, beyond which is a sinuous band of alluvium associated with the Whitnash Brook.



1.3 **Archaeological Background**

The archaeological background to the PDA is summarised in a recent desk-based heritage assessment (Northamptonshire Archaeology 2013). The study was based on a 1km-radius search of the Warwickshire HER. Only a summary account is presented here.

No designated heritage assets were identified within or close to the PDA. The closest designated assets are listed buildings associated with the historic core of Whitnash, located at least 650m to the north of the site.

There has been little previous archaeological investigation in the vicinity. An archaeological watching brief at 6, Whitnash Road found no archaeological features or deposits. Similarly, an evaluation at St Margaret's Church Centre recorded only medieval ploughsoil, indicating that this area was outside the area of medieval settlement. There are few recorded cropmarks nearby, but this may be due more to the ridge and furrow masking any earlier remains, than a genuine absence of pre-medieval activity.

There is little available information regarding prehistoric activity within the area, although an Iron Age banjo-type enclosure (MWA4561) is known some 2km to the north-west. Some Roman pottery and building material (MWA4582) has been found 900m to the west of the PDA and the remains of a 2nd-century AD villa (MWA1905) are known to lie 1.2km to the east.

During the medieval period onwards, the site lay within the open fields associated with the village of Whitnash (located *c.* 800m to the north of the PDA), which were not enclosed until the mid-19th century. Remains of ridge and furrow earthworks, survive with the PDA. Historical map evidence suggests that the PDA was under arable cultivation until enclosure, indicating that the earthworks date from the period prior to enclosure.

Geophysical survey in the form of detailed magnetometry was carried out across the PDA (Stratascan 2013). An interpretive plan of the recorded geophysical anomalies is shown in Figure 7. In general, the site is relatively quiet in magnetic terms. The ridge and furrow earthworks along the western edge of the PDA produced a magnetic response. There was a large, intermittent linear anomaly forming a curving feature some 150m across, which was interpreted as of possible archaeological origin. The central northern part of the site contained an extensive, elongated area of amorphous magnetic variation, extending some 80m NW-SE by up to 20m wide. The approved trenching strategy targeted both of these anomalies with a number of trenches (Figure 7).

1.4 **Historical Maps**

A series of maps dating from the early 19th century onwards, depict the changing landscape. These indicate that the track corresponding to Golf Lane was established by at least 1816. The PDA is at the northern limit of an elongated, roughly N-S aligned field, recorded as Nine Lands Pasture, which the early maps indicate was subdivided into a series of strips in individual ownership. The 1843 Tithe Map indicates that the PDA was composed of two perpendicular alignments



of strips or 'lands', which were still in the ownership of a number of different individuals. These probably originated in the medieval period as cultivation strips, being retained subsequently, as there is a good correlation with the surviving earthworks (Figure 2 – highlighted furrows). It is possible to correlate a number of these strip divisions with furrows, though in two places in the eastern part of the PDA, the land divisions appear to be more closely spaced than the furrows.

Enclosure of the land did not occur until 1849. By the time of the First edition Ordnance Survey map of 1889-90, a regular pattern of fields was established, with the boundaries of the PDA being defined as a land parcel by this time. The railway line defining the eastern boundary of the PDA had also been established. Subsequently there was little change in the vicinity, apart from the gradual expansion of the village, the pace of which increased in the latter half of the 20th century.

1.5 Project Objectives

The PDA had unknown potential to preserve archaeological remains beneath the extant ridge and furrow earthworks, whilst the geophysical survey had hinted at the presence of possible archaeological remains, but this needed to be tested by trial trenching.

The purpose of the archaeological field evaluation was to:

- record the ridge and furrow earthworks;

and recover information on the:

- location, extent, nature, and date of any archaeological features or deposits that may be present within the application site;
- integrity and state of preservation of any archaeological features or deposits that may be present within the application site;
- nature of palaeo-environmental remains to determine local environmental conditions.

The relevant research framework is the *West Midlands Regional Research Framework for Archaeology* which is in the process of being formulated. The aim of the document is to produce an archaeological research framework for the region that will provide a viable, realistic and effective academic basis for undertaking archaeological intervention, either as a result of development-related operations or to underpin future research designs.

The process consists of a Resource Audit, a Research Assessment, and a Research Agenda and Strategy which will comprise the final publication to come out of the process. So far the first two stages of the process have taken place and the papers given during a period of seminars assessing the archaeological resource for each



period are published on the Birmingham University website¹. A Research Agenda and Strategy are yet to be finalised.

¹ <http://www.birmingham.ac.uk/schools/iaa/departments/archaeology/research/wmrrfa/index.aspx>
[Accessed 4 December 2013]



2. METHOD STATEMENT

The methodological approach to the project is summarised below and detailed in the Written Scheme of Investigation (Albion Archaeology 2013).

2.1 Standards

Throughout the project the standards and requirements set out in the following documents were adhered to:

• WCC	<i>Generic Archaeological Fieldwork Guidelines (2012)</i>
• IfA	<i>By-Laws and Code of Conduct</i>
	<i>Standard and Guidance for archaeological field evaluation (2008) and finds (2008)</i>
• English Heritage	<i>Management of Research Projects in the Historic Environment PPN3: Archaeological Excavation (2008)</i>
	<i>Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation. 2nd ed. (2011)</i>
	<i>Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice (2007)</i>
• RCHME	<i>Recording Archaeological Field Monuments: A Descriptive Specification 1999</i>
• Albion Archaeology	<i>Procedures Manual: Volume 1 Fieldwork (2nd ed, 2001).</i>

The approved evaluation strategy was designed to record the ridge and furrow earthworks and characterise the archaeological potential of the PDA, utilising 16 trenches each 50m in length. These targeted geophysical anomalies, particularly an intermittent curvilinear anomaly with a diameter of some 150m, identified as of possible archaeological origin, as well as areas devoid of geophysical anomalies.

The trenches were set out using dGPS to ensure accurate positioning. Opening of the trenches was undertaken with a tracked mechanical excavator, fitted with a toothless ditching bucket, under the control of an experienced operator, under archaeological supervision.

Any possible archaeological deposits were noted, cleaned, excavated by hand and recorded using Albion Archaeology's *pro forma* sheets. All archaeological excavation and recording was carried out by experienced Albion Archaeology staff. Following updates to PA by CgMs Consulting Ltd regarding the on-going investigation, it was determined that a site visit by the PA was not necessary and the trenches were backfilled.

On completion of the project, the archive will be deposited at Warwick Museum; an accession number has been requested.



3. RESULTS

3.1 Introduction

Initially the earthwork survey was undertaken and the trenches marked out using a RTK dGPS instrument with a horizontal precision of 30mm and a vertical precision of 50mm. This was followed by opening of the 16 trenches.

The results of the evaluation are summarised below, commencing with the earthwork survey, followed by the trial trenching, integrating the finds data as appropriate. However, little datable material was recovered from the recorded deposits. More detailed information on the deposits revealed can be found in Appendix 1, with finds data contained in Table 1. The figures are bound at the back of the report. Figures 2–6 relate to the earthwork survey; Figures 7–11 relate to the trial trenching; and Figures 12-13 relate to a railway boundary marker.

Contexts in brackets refer to deposits recorded on site. Cut features are in square brackets, for example [1003], which defines a possible ice wedge in Trench 10; deposits or layers are in curved brackets, for example (101) defines the subsoil in Trench 1.

Where possible the archaeological features are discussed from latest to earliest.

3.2 Earthwork Survey

The PDA contains two perpendicular series of strip or ‘lands’, defining elements of two furlongs, which utilised the slope of the land for drainage (Figures 2 and 3).

3.2.1 Roughly E-W furrows

A series of 22 furrows define the main component of the earthworks, extending across the central and eastern parts of the PDA. These were regularly spaced and aligned ENE-WSW, though several particularly in the extreme NW had a slightly curving western extent. These ‘lands’ followed the main slope of the land down to the east, where they were interrupted by the railway line easement (Figures 2 and 3, Figure 4: images 1 and 2 and Figure 5: images 3 and 4). The individual ‘lands’ were some 120m long, merging into the western side of the first N-S furrow in the west. Generally the spacing of the furrows ranged from 7.5–8.5m centre to centre, increasing to 9m in the northern part of the area.

The ground dropped some 9m from the southern to the northern boundaries of the PDA, which affected the preservation of these earthworks. The ridges were relatively shallow, often *c.* 0.1m high, though several examples were up to 0.2m high, with better definition downslope to the east (Figure 3: profile 4 and 5). Definition was poorer both to the south and west on the higher ground compared to the east. Those furrows which appear to correlate to land divisions on the 1843 Tithe Map do not show any contrast in their morphology to the adjacent examples. These earthworks were particularly well defined in the 1999 aerial photograph (NA 2013: Figure 15) compared to more recent images.



3.2.2 N-S furrows

A series of 9 'lands' and 8 furrows were defined, aligned N-S at the western margin of the PDA, sloping down to the north (Figure 2 and Figure 3: profiles 1-3). In this area the main slope of *c.* 10m was down to the north, with a lesser slope down to the east. These strips had a slight curve to the NW, towards the northern limit, indicating that they were the ends of the 'lands', with a separate field immediately to the north, recorded as Brier Hill Field on early 19th-century maps. Generally, the furrows were *c.* 9m apart centre to centre, the spacing occasionally reducing to 7m apart.

The ridges were best defined downslope in the north, where they were often some 0.2m above the furrows (Figure 3: profile 1 and Figure 5: images 3 and 4 and Figure 6: image 6), whilst upslope to the south they were very poorly defined (Figure 4: profile 3). No headlands were defined. The eastern furrow was relatively narrow, with the perpendicular ridges merging into it, with no defined headlands (Figure 6: image 5). It is possible that this functioned as a balk, providing access. This is characteristic of the later medieval period; such balks often became rights of way. The 1999 aerial photograph does not emphasise these furrows due to the direction of the sunlight; however, it would appear to show a defined separation between the two sets of furrows. This is not so clear today — the perpendicular 'lands' appear to merge, with no headlands.

3.3 Trenching

3.3.1 Overburden and modern deposits

Topsoil

This 0.12–0.35m thick deposit was seen in all trenches. It comprised dark brown grey sandy silt with occasional small stones and rare flecks of charcoal. Only a small quantity of finds was recovered (Table 1). Due to the presence of well preserved ridge and furrow its thickness varied considerably, reflecting the ploughing activity which had taken place on site before its usage was changed to grazing.

Subsoil

A subsoil horizon was identified in all trenches, though it varied across the PDA. In the central and north-eastern areas (Trenches 1-4 and 7-11) it comprised mid brown orange silty clay with occasional stones. This material was 0.2–0.5m thick, increasing towards the SE. In the south-western and southern parts of the PDA (Trenches 5-6 and 12-16) the subsoil comprised mid grey brown clay silt, 0.1–0.21m thick. No finds were recovered from these deposits.

Colluvial deposit

Deposits (301) and (401) in the trenches located close to the NE margin of the PDA comprised distinctive mid orange brown to mid brown orange material, up to 0.2m thick, which contrasted with darker deposits both above and below. Traceable for some 27m in the NE part of Trench 3, located at the lowest part of the field, deposit (301) separated two darker cultivation soil deposits (Figure 10: image 9). No finds were recovered from these deposits. This material was



probably derived from erosion of the unstable subsoil, exposed upslope during ploughing.

Buried ploughsoil

Identified in the NE part of Trench 3 (303) and in Trench 4 (402), this mid grey brown silty clay was 0.36–0.38m thick, sealed by colluvial deposits. These would appear to be the original soil horizon, buried by unstable material eroded from upslope.

3.3.2 Geological strata

Two main undisturbed geological strata were observed across the PDA. On the high ground towards the NW corner of the field, as well as to the SW of the land parcel, light blue clay was revealed (Figure 7 pecked line and Figure 9: image 7). This deposit would appear to be a component of Blue Lias. It was observed in the Trenches 1, 15-16 and in the southern parts of Trenches 12-14.

Over most of the central and NE parts of the PDA a distinctive mid orange red to mid red brown deposit, which appears to be an element of the Mercia Mudstone Group, was predominant (Figure 9: image 8). This included bands of firm blue clay (most notably in Trenches 10 and 11) as well as lenses and pockets of gravel (especially in Trench 3) which most likely gave rise to the geophysical anomalies. Gravel inclusions in Trenches 4, 7 and 9 can plausibly be linked to the amorphous magnetic variation observed in the central part of the field. These deposits were dissected by a series of linear features, filled with lighter deposits; sometimes perpendicular patterns of these features were observed. They are described below (Section 3.3.3).

The interface between Blue Lias and the Mudstone deposits approximates to the main arc of intermittent geophysical anomalies which Trenches 13 and 14 investigated (Figure 7 - black pecked and yellow lines respectively).

3.3.3 Geological features

Several linear features were investigated in Trenches 10-13 — [1003], [1103], [1204], and [1304] (Figure 7). These are considered to be periglacial in origin, in the area of the orange red to red brown mudstone deposits. Generally they were roughly linear features, traceable for several metres, with random orientations. The width of these well-defined features varied from 0.2–1.15m (Figure 10: image 10 and Figure 11: images 11 and 12). Only one of them [1204] was bottomed, at a depth of 1.1m (Figure 8: sections 1 and 2). All had steep to near vertical sides. These features were associated with veins of material, such as blue grey clay, which on occasion undercut the apparent sides of the feature, e.g. [1204]. All features had very similar main fills of light brown orange clayey sand mottled with light grey clay. These fills were devoid of any finds.

In Trench 3, a feature was initially considered to be a tree-throw, but further investigation indicated that its form and sterile nature of its fill were more characteristic of a variation in the geological strata.



3.3.4 Boundary Marker

Located at the eastern margin of the PDA, some 100m from the SE corner of the field (Figure 2), was an old Great Western Railway Boundary Marker constructed of two components (Figure 8: elevation 3 and Figure 12: image 13): an upright element standing 42cm above the ground, surmounted by a drum 19.8cm in diameter (8") and 6.6cm thick (2.6"). The cast drum was dated 1880 and identified as a 'Great Western Railway C^{os} Boundary' (Figure 12: image 14). The upright component is of interest as its form indicates that it is a segment of 'bridge rail' from a 'Baulk Road', an early form of track utilised by the Great Western Railway for its original broad gauge railway. The bridge rail would have been bolted to substantial longitudinal baulks of wood, with only occasional cross-pieces, comprising wooden transoms and iron spacers employed to maintain the gauge of the track.

The rail is 6" wide, comprising two flanges with bolt holes, with the back revealing a hollow longitudinal cavity (Figure 13: image 15). Early wrought iron rails were prone to fracture due to problems with cooling the mass of iron forming the rail. This form of construction with its distinctive U-shaped profile provided a smaller rail cross-section, which facilitated cooling of the iron mass and made the rail more reliable. The opposed 25mm diameter (1") bolt holes, spaced 20cm (8") apart, centre to centre along the flanges of the track are a characteristic of 'Baulk Road' rails to ensure stability. The top of the rail shows deformation, probably due to use (Figure 13: image 16). It is possible that this was an original piece of the track dating to the early 1850s when this section of the Oxford to Birmingham line was constructed, with it subsequently being reused to redefine the track easement when the line was converted to standard gauge.

3.4 Artefacts

The finds assemblage is entirely unstratified, and comprises 15 pottery sherds (355g) representing six vessels ranging in date from the 17th to mid-19th century (Table 1). The pottery displays some abrasion, although survives in fair condition, with an average sherd weight of 24g. All wares are commonly occurring, and are represented in the Warwickshire Post-medieval pottery type series.

Tr.	Feature	Date range	Finds Summary
1	Topsoil (100)	C18-19	Transfer-printed ware: Chinese-style 'Blue-Willow' plate: 2 sherds (39g)
5	Topsoil (500)	Mid C19	Transfer-printed ware: Blue-printed floral style: 10 sherds (70g)
11	Topsoil (1100)	C19	Pearlware base: 1 sherd (21g) Transfer-printed ware: Brown-printed floral-style; abraded plate rim: 1 sherd (22g)
14	Topsoil (1400)	C17-18	Black-glazed earthenware: large bowl: 2 sherds (203g)

Table 1: Artefact Summary

3.5 Summary

The various components of the fieldwork have revealed variable results. Whilst the survey recorded the ridge and furrow cultivation furrows and located a railway boundary marker, the trial trenching identified no archaeological features; only geological variations, a number of which would appear to be associated with the identified geophysical anomalies.



The earthwork survey plotted a series of cultivation strips or 'lands' and associated furrows of two perpendicular furlongs. These earthworks would appear to be less sharply defined than they appear on aerial photographs taken in 1999. It was possible to correlate a number of the furrows to land parcels depicted on the 1843 Tithe Map, although there was no evidence for enhancement of the correlated earthworks.

During the survey a Boundary Marker for the Great Western Railway, dated 1880, was identified at the eastern margin of the site. This previously unrecorded heritage asset incorporates a segment of reused early railway line, a 'bridge rail' forming part of a 'Baulk road', relating to the early development of the railway.

The trial trenching revealed considerable variation in the thickness of the old ploughsoil across the site, with evident erosion, resulting in the downslope movement of soil, particularly towards the NE corner of the field where the original ploughsoil was buried. Only a small quantity of post-medieval pottery was recovered from the cultivation soils, suggesting that this area was some distance from the contemporary settlement.

No archaeological features were identified, even though a number of the trenches were targeted on geophysical anomalies. The geophysics report had classified these as possible archaeological features, indicating a lower level of certainty in their origin. However, the intermittent curvilinear anomaly with an apparent diameter of some 150m, would appear to roughly correlate with geological variations, particularly with the boundary between the grey silt clay (Blue Lias) on the high ground and the orange red clay (Merica Mudstone Group), which extended across the majority of the PDA. This extensive deposit was dissected by a number of linear features, which in places formed intersecting patterns. Investigation of a number of these features suggested that they were periglacial in origin (ice wedges), which probably formed at the end of the last Ice Age.



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5. APPENDIX 1: TRENCH SUMMARIES



Trench: 1

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 32943: Northing: 62769)

OS Grid Ref.: SP (Easting: 32896: Northing: 62752)

Reason: To assess archaeological potential of the area.

Context:	Type:	Description:	Excavated:	Finds Present:
100	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones Up to 0.25m thick. A small quantity of pottey was recovered from this deposit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
101	Subsoil	Firm mid brown orange silty clay occasional small stones Increases from 0.23m to 0.43m thick in the east.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
102	Natural	Firm light brown grey silty clay With occasional blue lenses.	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 2

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 33008: Northing: 62799)

OS Grid Ref.: SP (Easting: 32961: Northing: 62781)

Reason: To assess archaeological potential of the area.

Context:	Type:	Description:	Excavated:	Finds Present:
200	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones Generally c. 0.2m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
201	Subsoil	Firm mid brown orange silty clay occasional small stones The deposit was up to 0.11m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
202	Natural	Firm mid orange red silty clay With patches of firm blue clay.	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 3

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 33052: Northing: 62820)

OS Grid Ref.: SP (Easting: 33025: Northing: 62779)

Reason: To investigate geophysical anomaly.

Context:	Type:	Description:	Excavated:	Finds Present:
300	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.29m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
301	Colluvium	Firm mid brown orange silty clay The deposit was up to 0.2m thick. This sealed earlier ploughsoil (303).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
302	Natural	Firm mid orange red silty clay With patches of firm blue clay. There are also lighter roughly linear bands of brown orange silt sand.	<input type="checkbox"/>	<input type="checkbox"/>
303	Buried topsoil	Firm mid grey brown silty clay Earlier ploughsoil up to 0.38m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Trench: 4

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 32988; Northing: 62770)

OS Grid Ref.: SP (Easting: 32968; Northing: 62724)

Reason: To investigate area of geophysical anomaly - amorphous magnetic variation.

Context:	Type:	Description:	Excavated:	Finds Present:
400	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.17m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
401	Colluvium	Firm mid brown orange clay silt The deposit was up to 0.21m thick. Seals (402).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
402	Buried topsoil	Firm mid grey brown silty clay occasional small stones Earlier ploughsoil up to 0.36m thick. Sealed below (401).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
403	Natural	Firm mid orange red silty clay With patches of firm blue clay as well as orange gravel lenses and linear bands.	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 5

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 32942: Northing: 62755)

OS Grid Ref.: SP (Easting: 32918: Northing: 62712)

Reason: To assess archaeological potential of the area.

Context:	Type:	Description:	Excavated:	Finds Present:
500	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.23m thick. A small quantity of pottery was recovered from the deposit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
501	Subsoil	Firm mid brown grey clay silt The deposit was up to 0.21m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
502	Natural	Firm mid orange red silty clay with large patches of blue and brown grey silty clay.	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 6

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 32964: Northing: 62711)

OS Grid Ref.: SP (Easting: 32918: Northing: 62691)

Reason: To assess archaeological potential of the area.

Context:	Type:	Description:	Excavated:	Finds Present:
600	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.27m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
601	Subsoil	Firm light brown grey clay silt The deposit was up to 0.14m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
602	Natural	Firm mid orange red silty clay With patches of blue and grey silty clay. Traces of furrow scars	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 7

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 33020: Northing: 62726)

OS Grid Ref.: SP (Easting: 32978: Northing: 62700)

Reason: To investigate area of geophysical anomaly - amorphous magnetic variation.

Context:	Type:	Description:	Excavated:	Finds Present:
700	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.19m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
701	Subsoil	Firm mid brown orange silty clay occasional small stones The deposit was up to 0.2m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
702	Natural	Firm mid orange red silty clay The deposit contains orange gravel lenses and linear bands.	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 8

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 33055: Northing: 62757)

OS Grid Ref.: SP (Easting: 33009: Northing: 62736)

Reason: To assess archaeological potential of the area.

Context:	Type:	Description:	Excavated:	Finds Present:
800	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.24m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
801	Subsoil	Firm mid brown orange silty clay occasional small stones The deposit was up to 0.33m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
802	Natural	Firm mid orange red silty clay	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 9

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 33045: Northing: 62733)

OS Grid Ref.: SP (Easting: 33017: Northing: 62692)

Reason: To investigate area of geophysical anomaly - amorphous magnetic variation

Context:	Type:	Description:	Excavated:	Finds Present:
900	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.17m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
901	Subsoil	Firm mid brown orange silty clay occasional small stones The deposit was up to 0.36m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
902	Natural	Firm mid orange red silty clay Contains lenses and bands of orange gravel.	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 10

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 33050: Northing: 62718)

OS Grid Ref.: SP (Easting: 33095: Northing: 62696)

Reason: To investigate linear geophysical anomaly.

Context:	Type:	Description:	Excavated:	Finds Present:
1000	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.22m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1001	Subsoil	Firm mid brown orange silty clay occasional small stones The deposit was up to 0.5m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1002	Natural	Firm mid orange red silty clay A series of linear orange brown bands were clearly delimited, probably defining periglacial activity.	<input type="checkbox"/>	<input type="checkbox"/>
1003	Feature	Linear NE-SW sides: near vertical dimensions: max breadth 0.58m, min depth 0.42m, min length 1.8m Feature not bottomed. Probable ice wedge cast.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1004	Fill	Loose mid brown orange silty sand	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Trench: 11

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 33059; Northing: 62687)

OS Grid Ref.: SP (Easting: 33100; Northing: 62659)

Reason: To investigate linear geophysical anomaly.

Context:	Type:	Description:	Excavated:	Finds Present:
1100	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.35m thick. A small quantity of pottey was recovered.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1101	Subsoil	Firm mid brown orange silty clay occasional small stones The deposit was up to 0.4m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1102	Natural	Firm mid orange red silty clay A series of linear orange brown bands were clearly delimited, probably defining periglacial activity.	<input type="checkbox"/>	<input type="checkbox"/>
1103	Feature	Linear NE-SW sides: near vertical dimensions: max breadth 0.95m, min depth 0.41m, min length 1.8m Feature not bottomed. Probable ice wedge cast.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1104	Fill	Loose mid brown orange silty sand	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Trench: 12

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 33028; Northing: 62682)

OS Grid Ref.: SP (Easting: 33064; Northing: 62648)

Reason: To assess archaeological potential of the area.

Context:	Type:	Description:	Excavated:	Finds Present:
1200	Topsoil	Friable dark brown grey sandy silt occasional small charcoal, occasional small stones The deposit was up to 0.2m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1201	Subsoil	Firm mid grey brown clay silt The deposit was up to 0.1m thick. Not observed in SE end of the trench.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1202	Natural	Firm mid red brown silty clay A series of linear orange brown bands were clearly delimited, probably defining periglacial activity.	<input type="checkbox"/>	<input type="checkbox"/>
1203	Natural	Firm light blue grey clay	<input type="checkbox"/>	<input type="checkbox"/>
1204	Feature	Linear NE-SW sides: Assymetrical base: concave dimensions: max breadth 1.15m, max depth 1.1m, min length 2.m Probable ice wedge cast.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1205	Fill	Loose light brown orange clay sand	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Trench: 13

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 32995; Northing: 62681)

OS Grid Ref.: SP (Easting: 32986; Northing: 62631)

Reason: To investigate linear geophysical anomaly.

Context:	Type:	Description:	Excavated:	Finds Present:
1300	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.2m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1301	Subsoil	Firm mid grey brown clay silt The deposit was up to 0.15m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1302	Natural	Firm mid red brown clay With patches of blue clay.	<input type="checkbox"/>	<input type="checkbox"/>
1303	Natural	Firm light grey blue clay	<input type="checkbox"/>	<input type="checkbox"/>
1304	Feature	Curving linear sides: irregular dimensions: max breadth 0.47m, min depth 0.6m, min length 1.8m Feature not bottomed. Probable ice wedge cast.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1305	Fill	Loose light brown orange clay sand	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Trench: 14

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 32953; Northing: 62683)

OS Grid Ref.: SP (Easting: 32928; Northing: 62640)

Reason: To investigate linear geophysical anomaly.

Context:	Type:	Description:	Excavated:	Finds Present:
1400	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.24m thick. A small quantity of pottey was recovered from this deposit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1401	Subsoil	Firm mid brown grey clay silt The deposit was up to 0.12m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1402	Natural	Firm mid red brown silty clay	<input type="checkbox"/>	<input type="checkbox"/>
1403	Natural	Firm light brown grey silty clay With occasional blue lenses.	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 15

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 32939; Northing: 62623)

OS Grid Ref.: SP (Easting: 32989; Northing: 62620)

Reason: To assess archaeological potential of the area.

Context:	Type:	Description:	Excavated:	Finds Present:
1500	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.14m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1501	Subsoil	Firm mid grey brown clay silt The deposit was up to 0.18m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1502	Natural	Firm light brown grey silty clay With occasional blue lenses.	<input type="checkbox"/>	<input type="checkbox"/>



Trench: 16

Max Dimensions: Length: 50.00 m. Width: 1.80 m. Depth to Archaeology Min: m. Max: m.

Co-ordinates: OS Grid Ref.: SP (Easting: 33046: Northing: 62637)

OS Grid Ref.: SP (Easting: 32998: Northing: 62621)

Reason: To assess archaeological potential of the area.

Context:	Type:	Description:	Excavated:	Finds Present:
1600	Topsoil	Friable dark brown grey sandy silt occasional flecks charcoal, occasional small stones The deposit was up to 0.12m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1601	Subsoil	Firm mid grey brown clay silt The deposit was up to 0.16m thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1602	Natural	Firm light brown grey silty clay With occasional blue lenses.	<input type="checkbox"/>	<input type="checkbox"/>

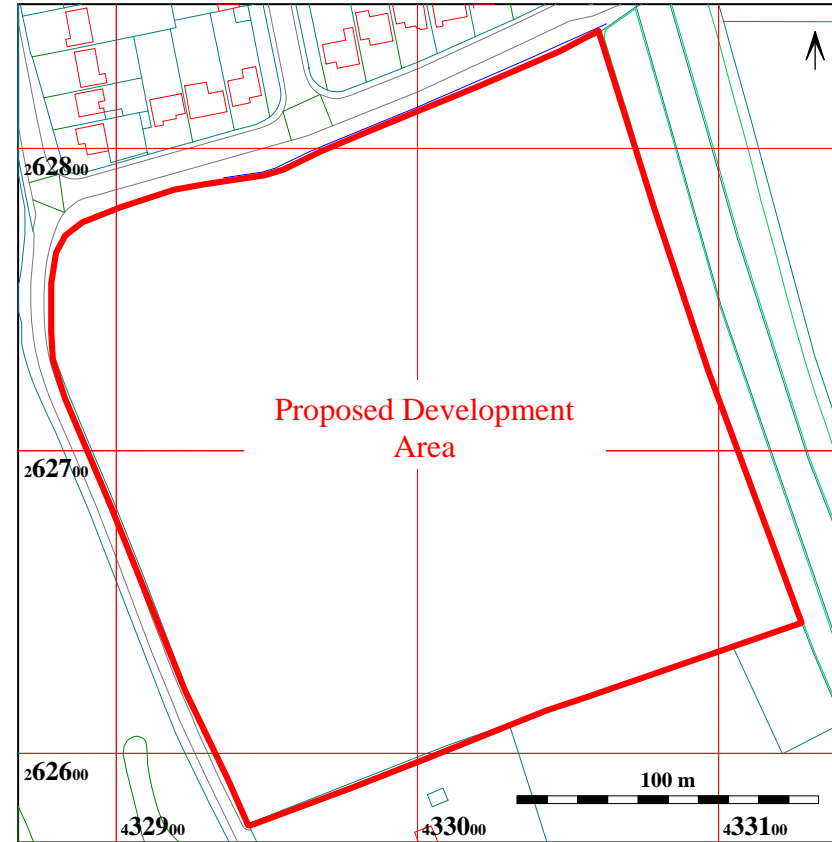
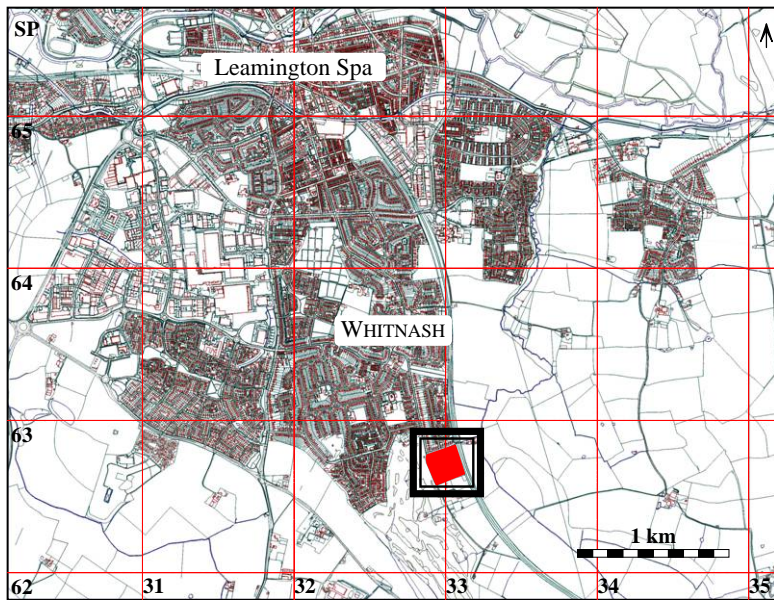
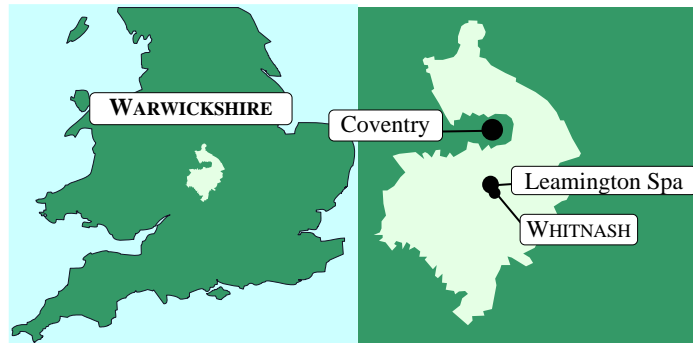
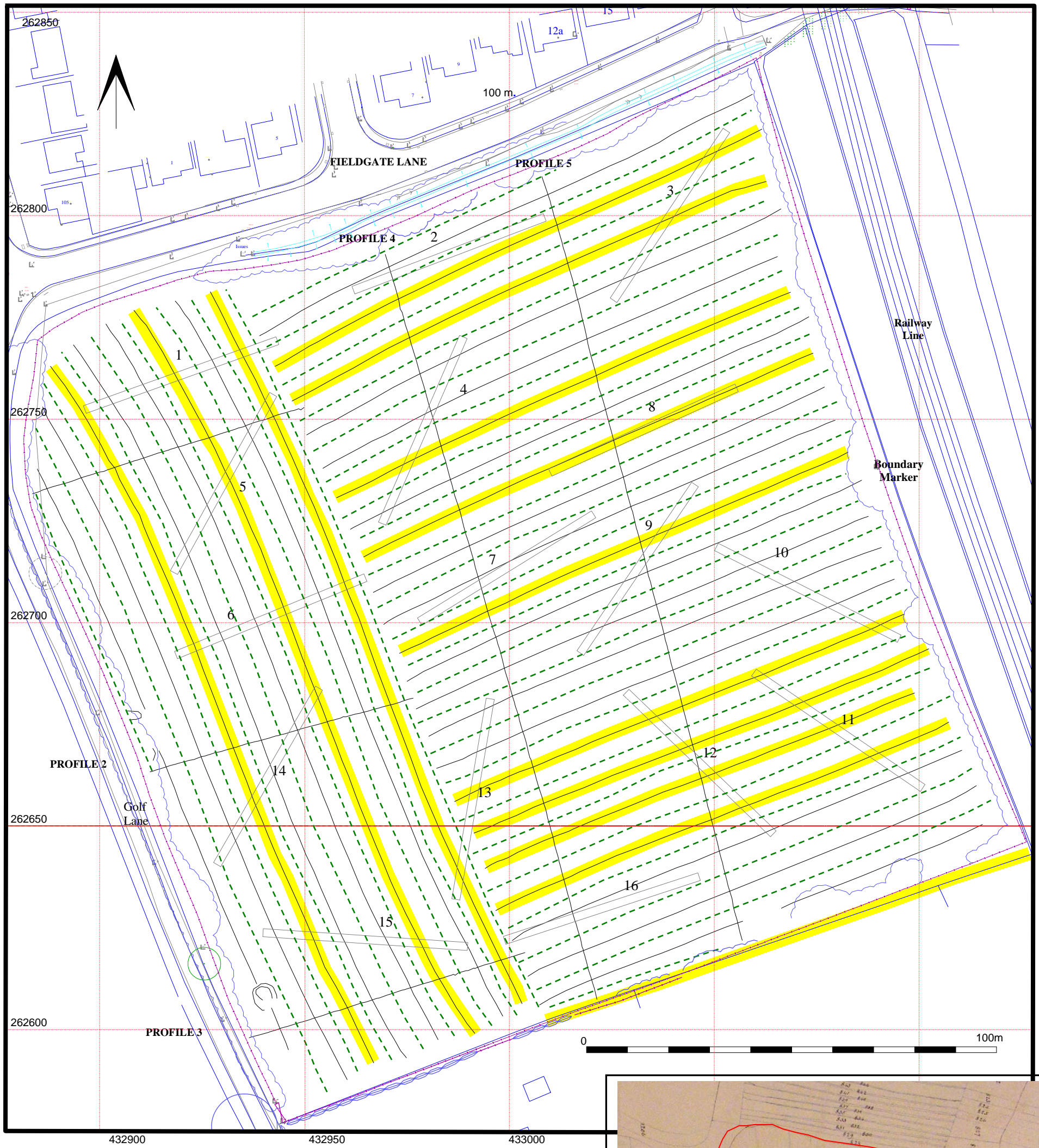


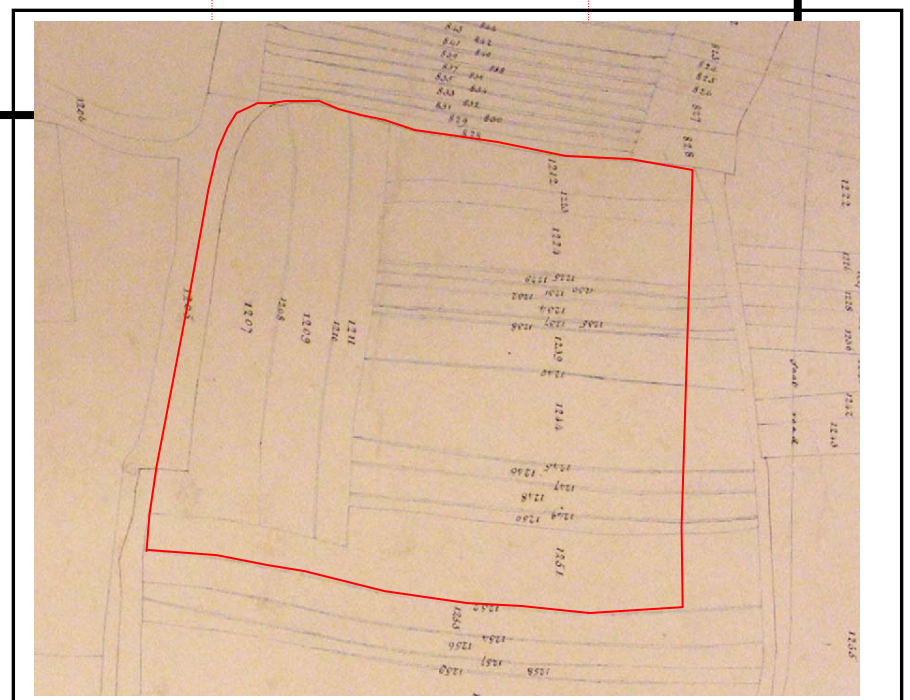
Figure 1: Site location

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- Furrow corresponding to 1843 Tithe map boundary
- Approximate centre of ridge
- Centre of furrow

Figure 2: Earthwork survey, with detail of 1843 Tithe map



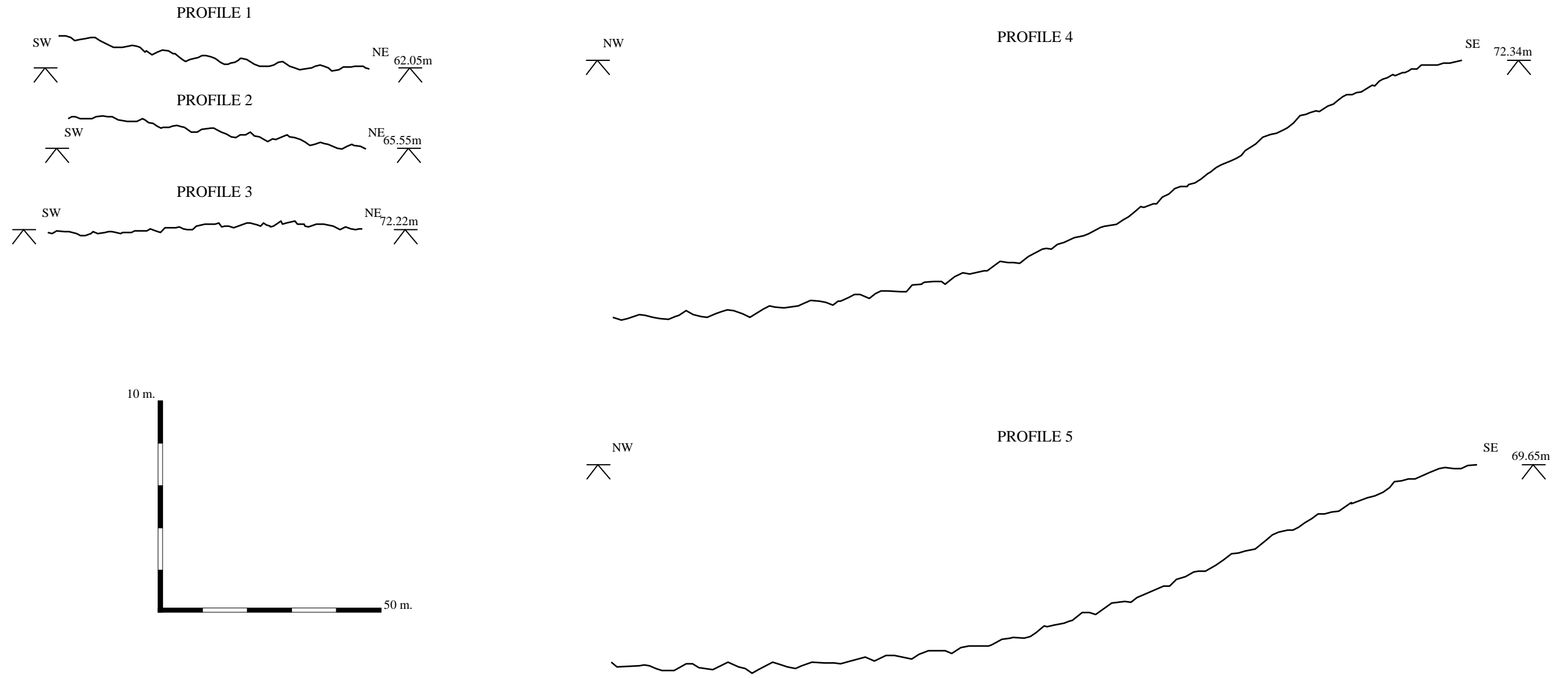


Figure 3: Earthwork survey profiles across ridge and furrow (vertical scale exaggerated x 5)



Image 1: General view of field from high ground towards central part of the southern margin, looking towards the NE corner.



Image 2: General view of field from SE margin, looking toward the NE corner.

Figure 4: Ridge and furrow earthworks — selected images 1 and 2



Image 3: General view from central part of the southern margin of the field, looking down towards the NW corner, with the roughly E-W furrows in the foreground and the perpendicular N-S furrows beyond.



Image 4: General view from SE margin of field looking to the NW, with the N-S furrows in the foreground and the roughly E-W furrows beyond.

Figure 5: Ridge and furrow earthworks — selected images 3 and 4



Image 5: General view along the intersection of the two perpendicular sets of 'lands', looking towards the NW corner of the field.



Image 6: General view of earthworks looking upslope towards the southern boundary of the field, showing the northern part of the well-defined N-S furrows.

Figure 6: Ridge and furrow earthworks — selected images 5 and 6

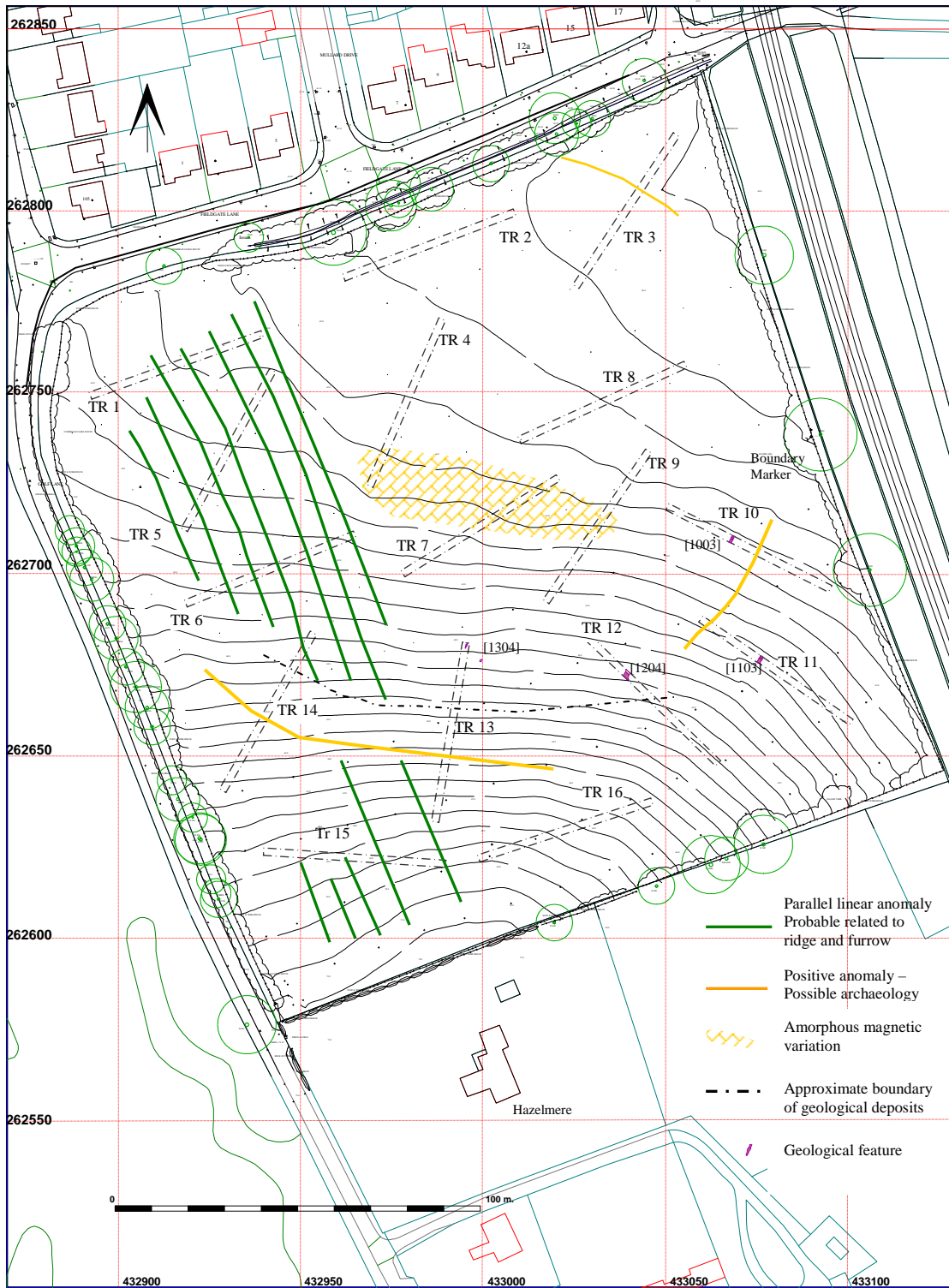


Figure 7: All features plan with interpretative geophysics plot and contours

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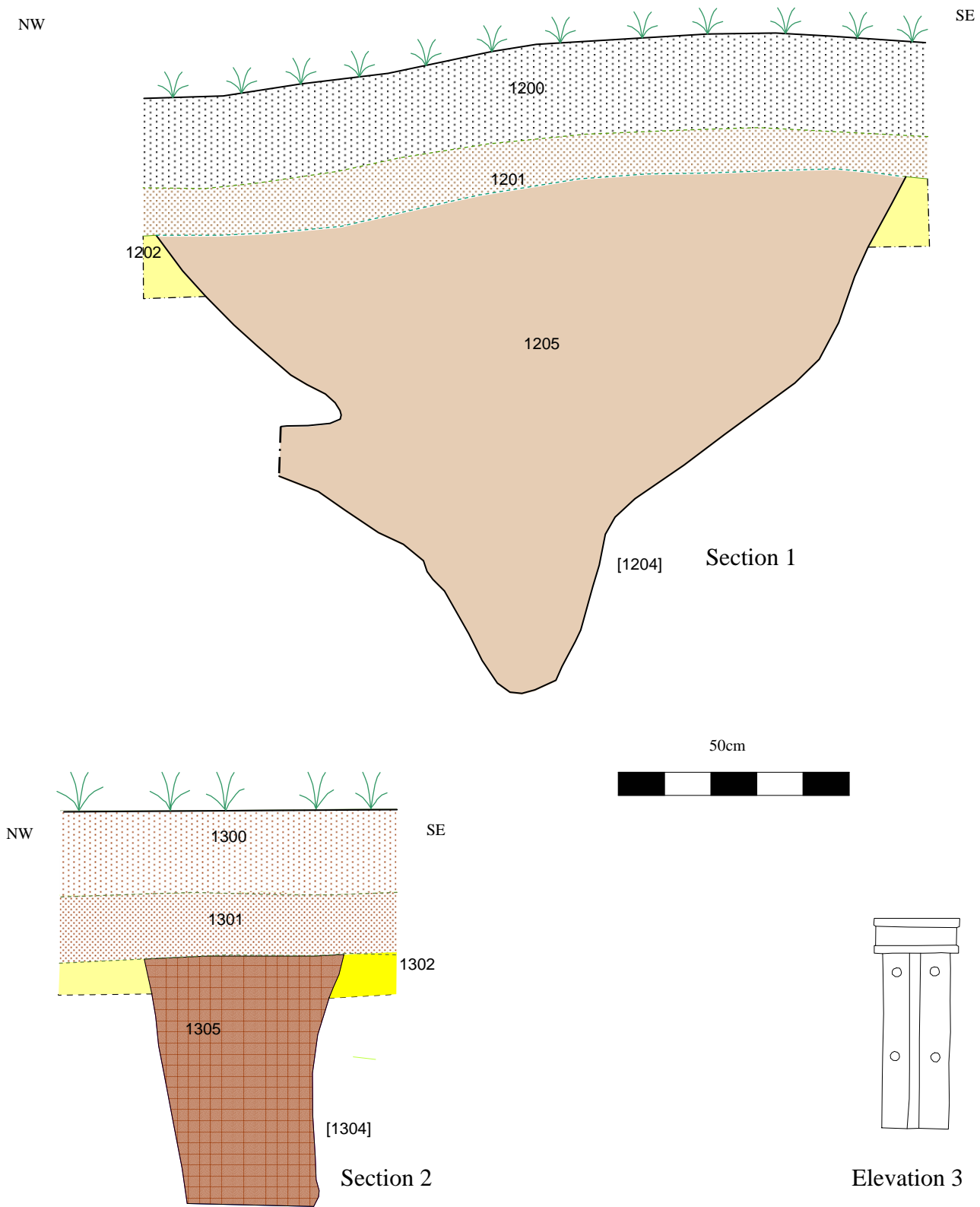


Figure 8: Selected sections through geological features and Boundary Marker elevation



Image 7: The light grey blue clay (1303) geological stratum on the upper slope within the southern part of Trench 13, with the mid red brown stratum (1302) visible towards the NNE limit of the trench. Scale 1m in 50cm



Image 8: The mid orange red geological stratum (1002) in Trench 10. Scale 1m in 50cm divisions.

Figure 9: Variations in the geological strata — selected images 7 and 8



Image 9: Section of Trench 3 towards eastern limit, showing the buried ploughsoil (303) separated from the topsoil (300) by a lighter band of material (301), interpreted as colluvium. Scale 1m in 50cm divisions.



Image 10: Unexcavated linear geological feature in Trench 12, showing banding. Scale 1m in 50cm divisions.

Figure 10: Geological features — selected images 9 and 10



Image11: Section through geological feature [1103] in Trench 11, showing both banding and 'marbling' of the fill. Scale 1m in 50cm divisions.



Image 12: General view of Trench 13 looking upslope to the SW, with a geological feature in the foreground. The presence of several linear bands of infilling may suggest a periglacial feature. The slope may explain the formation of stripes rather than polygons. Scale 1m in 50cm divisions.

Figure 11: Geological features — selected images 11 and 12



Image 13: General view of GWR Boundary Marker, which is located at the eastern margin of site.



Image 14: Detail of inscription on drum of Boundary Marker.

Figure 12: Boundary Marker — images 13 and 14



Image 15: Detail of back of rail forming marker, showing hollow, which allowed rail to cool more evenly during manufacture. Scale 0.3m in 10cm divisions.



Image 16: Detail of upper part of rail showing deformation; probably due to use.

Figure 13: Boundary Marker — images 15 and 16

Central
Bedfordshire

Albion
archaeology



Albion Archaeology
St Mary's Church
St Mary's Street
Bedford
MK42 0AS

Telephone 01234 294000
Email office@albion-arch.com
www.albion-arch.com

