



Hay Green Lane

Birdwell

South Yorkshire

Trial Trench Evaluation

Report no. 3909

February 2023

Client: BWB Consulting



Hay Green Lane, Birdwell

South Yorkshire

Trial Trench Evaluation

Summary

Archaeological services WYAS carried out the excavation of seventeen trial trenches at Hay Green Lane, Birdwell ahead of a proposed residential development. The evaluation produced little evidence archaeological remains, apart from plough furrows of a likely post-medieval or early modern origin. Field boundaries recorded on historic mapping and identified on the geophysical survey were not present within the trenches, suggesting that preservation of archaeological remains on the site is poor.



Report Information

Client: BWB Consulting (on behalf of Avant Homes)
Address: Whitehall Waterfront, 2 Riverside Way, Leeds, LS1 4EH
Report Type: Trial Trench Evaluation
Location: Hay Green Lane, Birdwell
County: South Yorkshire
Grid Reference: SE 3485 0125
Period(s) of activity represented: Post-medieval or early modern
Report Number: 3909
Project Number: XC30
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Illustrations: Steffan Golby
Photography: ASWYAS staff

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distribution: _____



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Document Issue Record

Ver	Author(s)	Reviewer	Approver	Date
1.0	SG	DW	JR	Feb – 23

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1 Introduction

Archaeological Services WYAS (ASWYAS) was commissioned by BWB Consulting on behalf of Avant Homes to undertake the excavation of seventeen trenches at Hay Green Lane, Birdwell, South Yorkshire. The trenches were investigated between the 7th and 10th February 2023. The work was undertaken in accordance with the National Planning Policy Framework (NPPF) and a Written Scheme of Investigation (WSI) produced by BWB (Appendix 1) and approved by the South Yorkshire Archaeology Service (SYAS).

Site location, topography and land-use

The site comprises approximately 3.6ha of rough pasture and allotments situated to the south of Hay Green Lane, to the south of Birdwell in South Yorkshire (SE 3485 0125; Fig. 1). The site is bounded to the north by Hay Green Lane, to the west by Sheffield Road, and to the east and south by pastoral fields (Fig. 2).

The ground within the site slopes gradually downward towards the east, ranging from a height of around 132m above Ordnance Datum (aOD) in the west, to around 121m aOD in the east.

Soils and geology

The bedrock geology across the site comprises the Pennine Middle Coal Measures Formation comprising mudstone, siltstone and sandstone, a sedimentary bedrock formed between 318 and 309.5 million years ago during the Carboniferous period. Superficial deposits are not recorded (BGS 2021). The overlying soils are recorded as Soilscape 18 - slowly permeable seasonally wet acid loamy and clayey soils (Landis 2023).

2 Archaeological and Historical Background

The following background is taken from the WSI (Appendix 1) and an archaeological assessment of the site produced by Prospect Archaeology (2019), as well as a geophysical survey of the site carried out by ASWYAS (Brunning 2020).

The assessment determined the presence of eight designated assets within the wider area, all of which are grade II listed including a listed barn (NHL1315079) located adjacent to the site.

Two undesignated assets have been recorded locally, a post-medieval bath house and a cropmark enclosure of late Iron Age/Roman date. Ridge and furrow and anomalies possibly relating to buildings and mining have been identified within the site. Coal pits are shown on historic Ordnance Survey (OS) maps near to the site.

Documentary evidence for settlement at Birdwell is limited, however, it is recorded in Yorkshire Diaries of 1642 as 'the Birdwell' (Smith 1961). The place-name is traditionally believed to have originated from a large bird seen drinking from a well (Hudson 1965).

Trial trenching was undertaken on land off Sheffield Road to the south of the site. No archaeological features were found other than those relating to drainage (McNaught 2000).

Archaeological Services WYAS (Brunning 2020) were commissioned to carry out a magnetometer survey to further determine the potential for archaeological features and/or deposits to occur within the site. The survey was undertaken using Bartington Grad601 magnetic gradiometers.

The survey determined the presence of possible post-medieval ridge and furrow and field boundaries that relate to those depicted on earlier OS maps. Other possible anomalies of uncertain origin were recorded. In addition to this magnetic disturbance was recorded around the edges of the survey area.

3 Aims and Objectives

The general aim of the trial trench evaluation was to determine the presence or absence of archaeological remains on the site. In particular it aimed to determine the character, date, function, quantity and level of preservation of any surviving remains, to establish the potential impact of development, and to assess the potential and significance of remains in a local/regional/national context.

- A total of seventeen 20m by 2.0m trial trenches were excavated that targeted the locations of geophysical anomalies and ‘blank’ areas of the site.
- The removal of top and subsoil horizons was carried out by a 360 excavator and monitored by the archaeological supervisor.
- A written, drawn and photographic archive was produced including a GPS survey which will be used to present the results in the form of a full project report.

The objective of the work was to monitor the removal of top and subsoil horizons and assess the resultant areas for their archaeological potential. Any remains were then subject to archaeological excavation. Recovered artefacts were subject to analysis and environmental data were sampled.

4 Methodology

The work involved the excavation of seventeen trenches, all of which measured 20m by 2m. The trenches were positioned to target potential archaeological anomalies identified during the previous geophysical survey (Brunning 2020), as well as to provide a wide sample across the remaining areas of the site (Fig. 2).

All work was undertaken in accordance with accepted professional standards and guidelines (Historic England 2008; CIfA 2020), in accordance with the ASWYAS site recording manual (ASWYAS 2020) and in compliance with the WSI (Appendix 1).

All trenches were set out and the limits resurveyed using a Trimble VRS differential GPS accurate to ± 0.01 m. The trenches were opened in a controlled manner using a 360 excavator

using a flat-bladed ditching bucket under direct archaeological supervision. All topsoil deposits were removed in level spits (not more than 0.20m) with the topsoil and subsoil being separated to allow for re-instating in reverse order. Machining stopped at the first archaeological horizon or natural deposits, whichever was encountered first. All excavations of archaeological deposits were undertaken manually with the stripped surface being cleaned and investigated for archaeological remains.

An appropriate sample was excavated through all archaeological features with at least a 20% sample through linear features (with a minimum sample of 1m) and a 50% sample through discrete features. These were undertaken to investigate the full depth, profile and fills, where possible, and to recover dating evidence from the fills. All excavated sections were, where possible, located adjacent to the trench edge in order to provide a full stratigraphic sequence.

A soil sampling programme was in place for the identification of plant macro-fossils, small animal bones and other small artefacts in accordance with the WSI and Historic England guidelines, however no appropriate deposits were encountered.

All archaeological features were accurately recorded in plan at a scale of 1:20 or 1:50. Feature sections were drawn at a scale of 1:10 or 1:20. All plans and sections include spot heights that relate to Ordnance Datum in metres.

A full written, drawn and photographic record was made of all archaeological work undertaken. An inventory of the primary archive is presented in Appendix 2 and trench results are given in Appendix 3. ASWYAS currently hold the site archive in a stable and secure location.

5 Results

Below is a description of each trench containing archaeological remains. Trenches devoid of archaeological features or deposits are not discussed further but tables displaying the depths and widths of each context, together with a brief description, are shown in Appendix 3.

All features were sealed by a soft, dark grey-brown clayey-silt topsoil with occasional stone and pebble inclusions. A reddish or orange-brown clay-silt subsoil was only encountered in the centre and east of the site in Trenches 8-16. The underlying geology comprised medium greyish-yellow to dark reddish-brown silty-clay with limestone inclusions and outcroppings (Fig. 3; Plates 1-3).

Few archaeological features were encountered during the evaluation and these consist of the remains of plough furrows, which are described below. A small number of modern drainage features (field drains and a modern brick manhole (Plate 4) in Trench 1) and modern demolition material within a possible pit in Trench 3 and within the topsoil in Trenches 4 and 6 were encountered and are noted in Appendix 3. It is worth noting that the brick manhole and demolition material was all identified in the west of the site.

Trench 11 (Fig. 4)

Trench 11 contained a single northwest to southeast aligned plough furrow (1103, Fig. 4; S. 20, Plate 5). It had a shallow and concaved profile measuring 1.24m wide and 0.18m deep, and contained a single mid-grey-brown silty-clay deposit.

The furrow corresponds with a linear anomaly interpreted in the geophysical survey as agricultural or ridge and furrow.

Trench 15 (Fig. 5)

Trench 15 contained a single northeast to southwest aligned plough furrow (1503, Fig. 5; S. 22). It had a shallow and concaved profile with a flat base measuring 1.3m wide and 0.06m deep. It contained a single mid-grey-brown silty-clay deposit.

The furrow corresponds with a linear anomaly interpreted in the geophysical survey as agricultural or ridge and furrow.

Trench 16 (Fig. 6)

Trench 16 contained two parallel east to west aligned furrows (1603, Fig. 6; S. 24, and 1605, Fig. 6; S. 25, Plate 6).

Both furrows had very shallow and concaved profiles with flat bases, each measuring 0.1m deep. Furrow 1603 was 1.3m wide, whereas furrow 1605 was notable wider at 2.36m. Each contained a single mid-grey-brown silty-clay deposit (1604 and 1606 respectively).

The furrows correspond with linear anomalies interpreted in the geophysical survey as agricultural or ridge and furrow.

6 Discussion

The archaeological features identified in the evaluation were reasonably visible against the geological background of the trenches. The four furrows that were recorded all correspond with the orientation of possible ridge and furrow as identified in the geophysical survey.

Two linear anomalies that were interpreted as former field boundaries in the geophysical survey, correspond broadly to boundaries recorded on the 1854 OS map. These were targeted by Trenches 10, 12 and 14 but not identified during the evaluation. Effort was made to locate these features including revisiting the trench after a period of 'weathering', cleaned and tested with hand tools, however, they were not observed. These boundaries may have been shallow or temporary features and were simply imperceptible within the trenches. Disturbed magnetic material from the deposits of these features may be responsible for their identification on the geophysical survey.

The furrows that were recorded produced no dateable material although it is likely that they are of a post-medieval or modern in date due to their alignment with the post-medieval field boundaries. They indicate that arable agriculture was practiced in the central and western parts of the site. The absence of furrows in the east is likely related to the presence of the

allotments and associated structures here, possible evidence for which was identified as demolition rubble and a brick manhole.

7 Conclusions

The trial trench evaluation at Hay Green Lane has produced no evidence of archaeological remains, apart from plough furrows of a likely post-medieval or modern origin in three trenches. These correspond well with the results of a geophysical survey and are of minimal archaeological significance. Field boundaries recorded on historic mapping and identified on the geophysical survey were not present within the trenches, further suggesting that presence of archaeological activity on the site is very low.

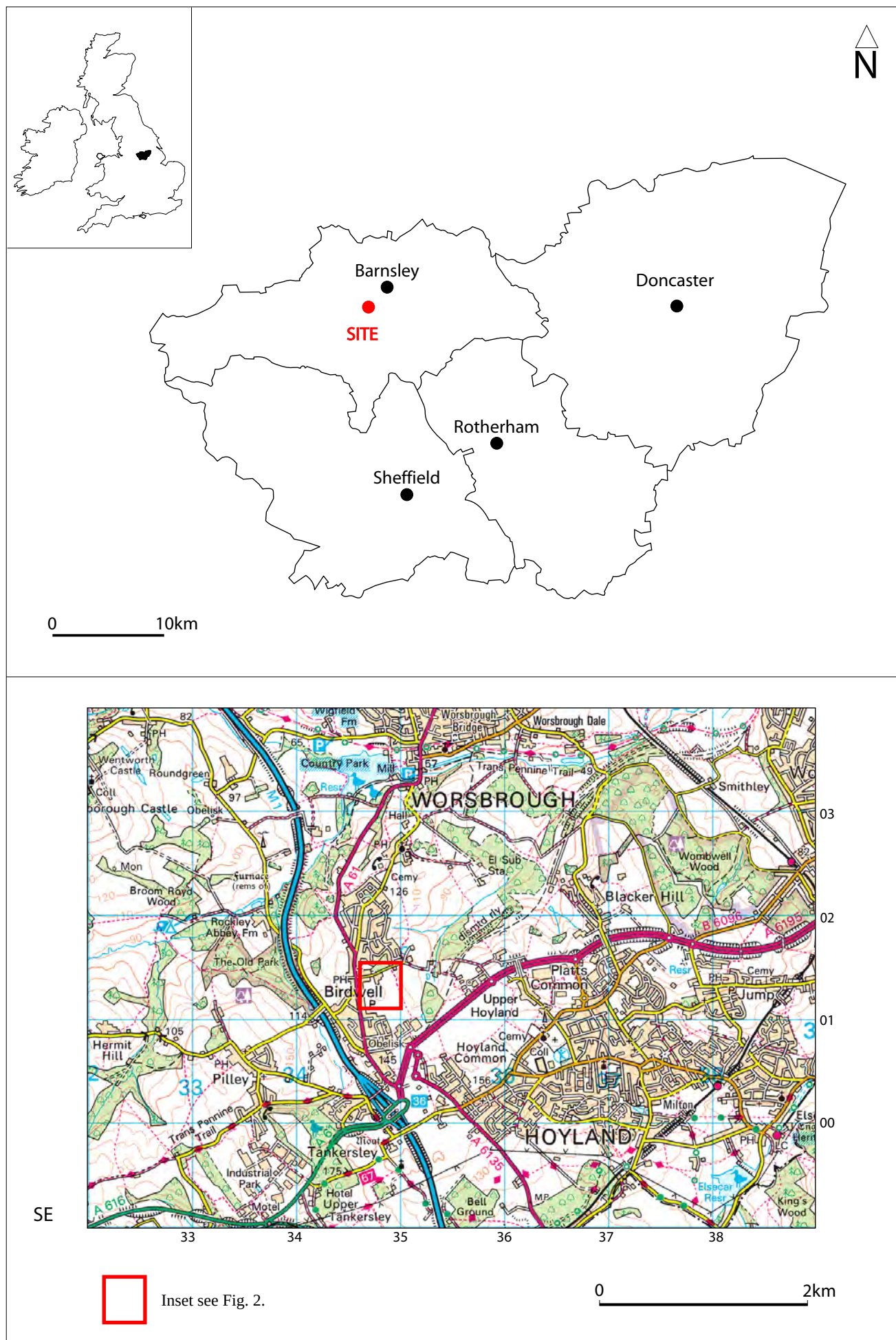
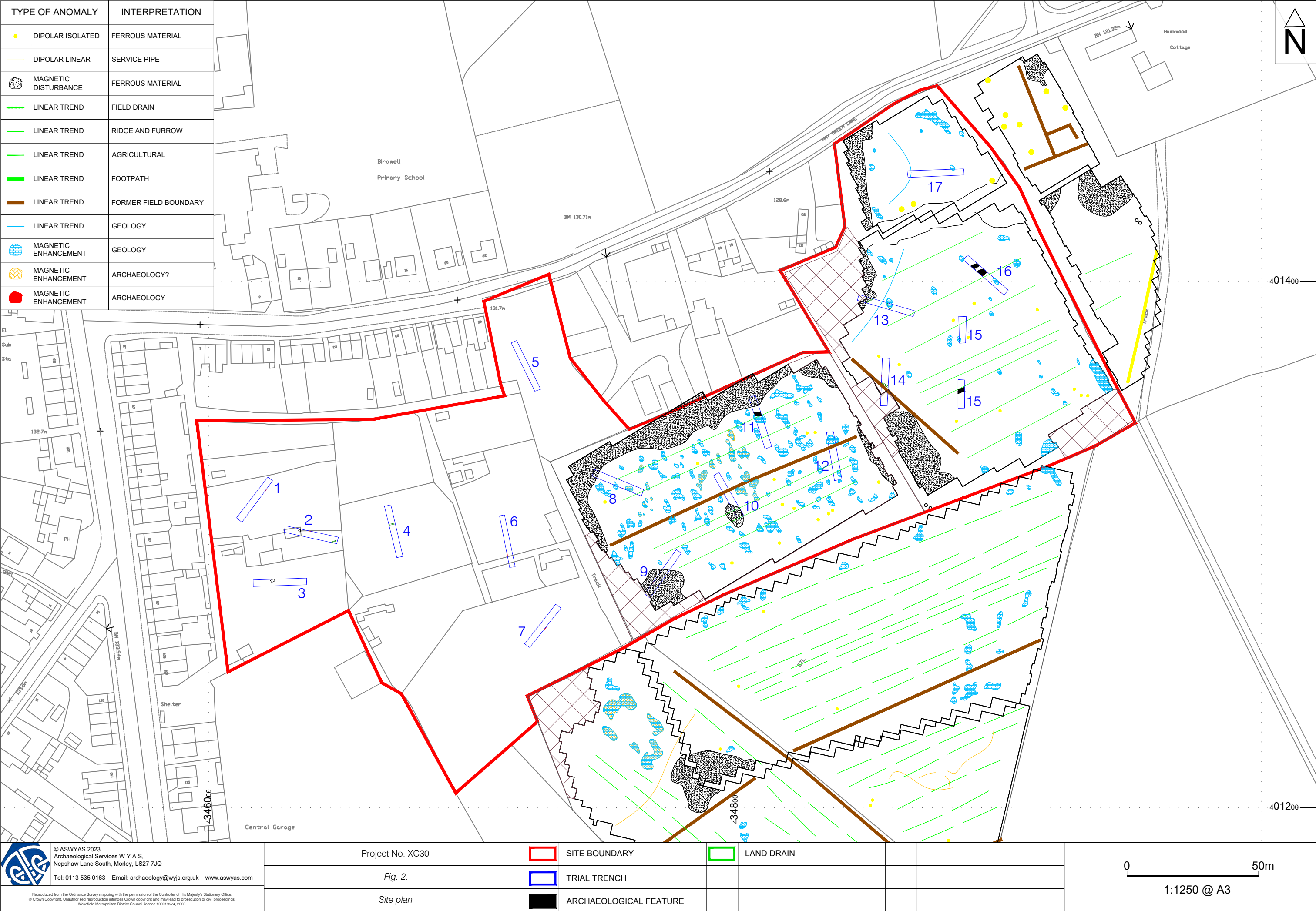
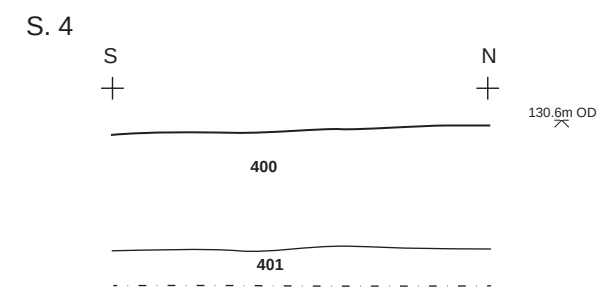
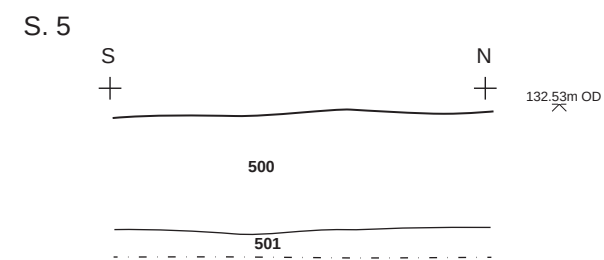
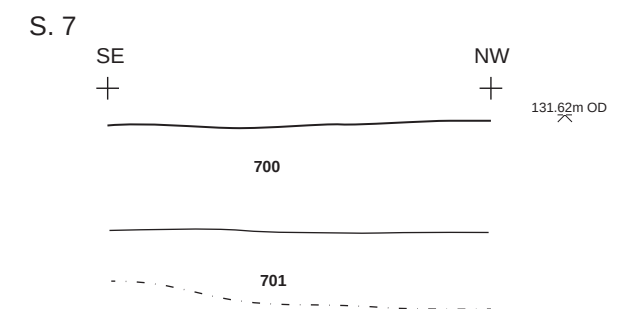
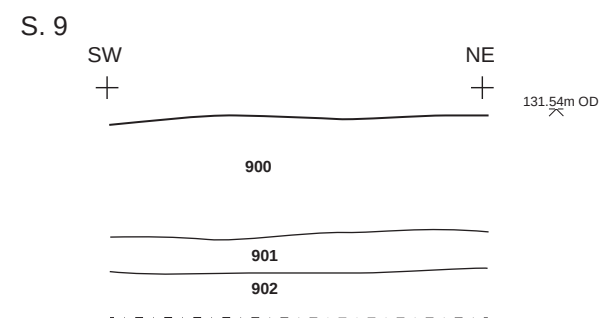
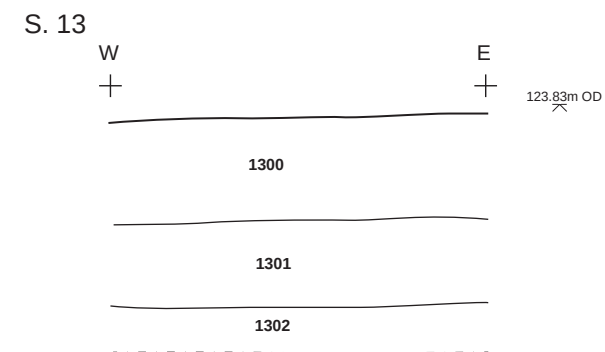
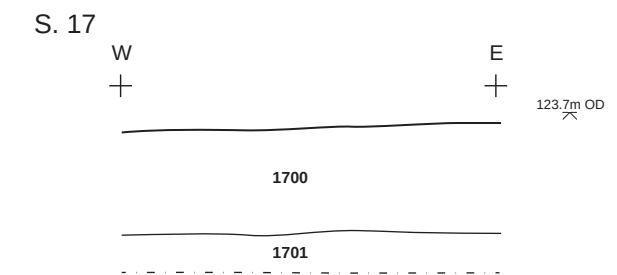


Fig. 1. Site location





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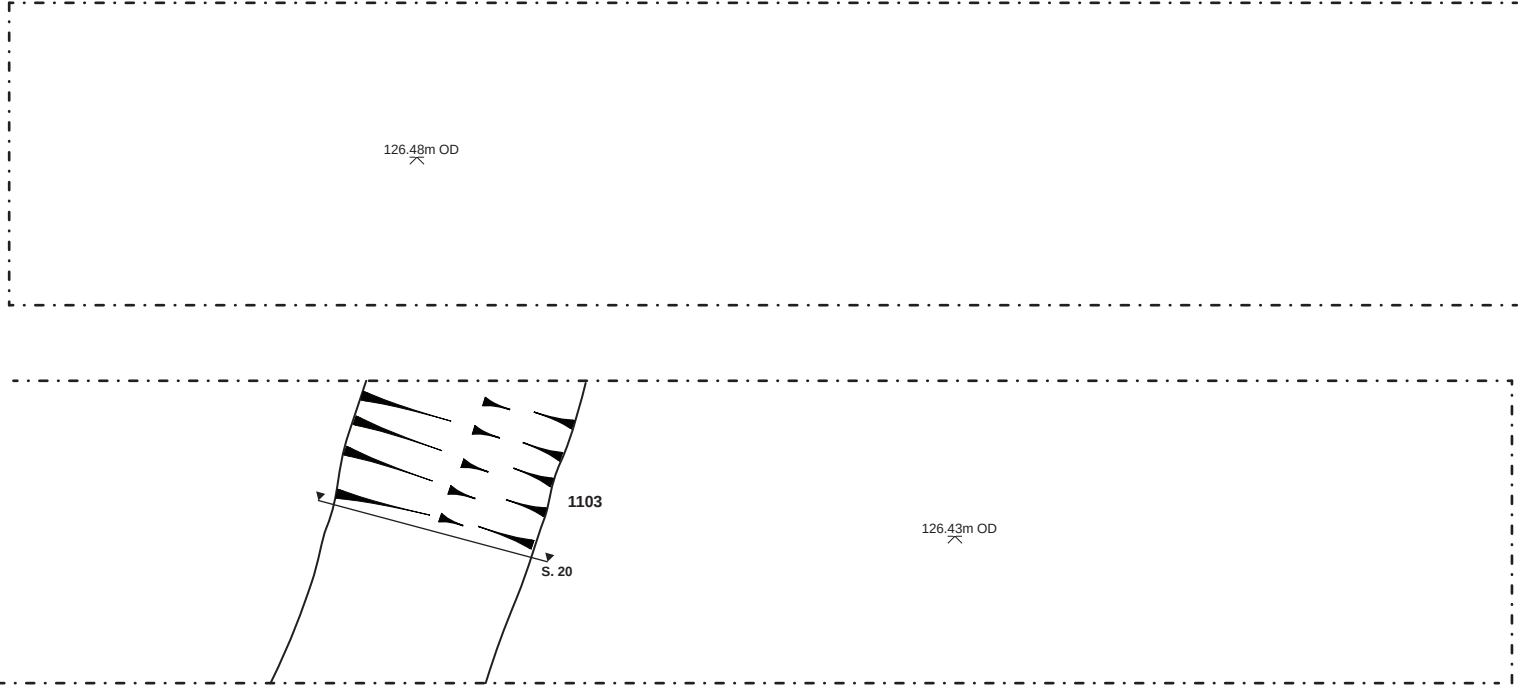
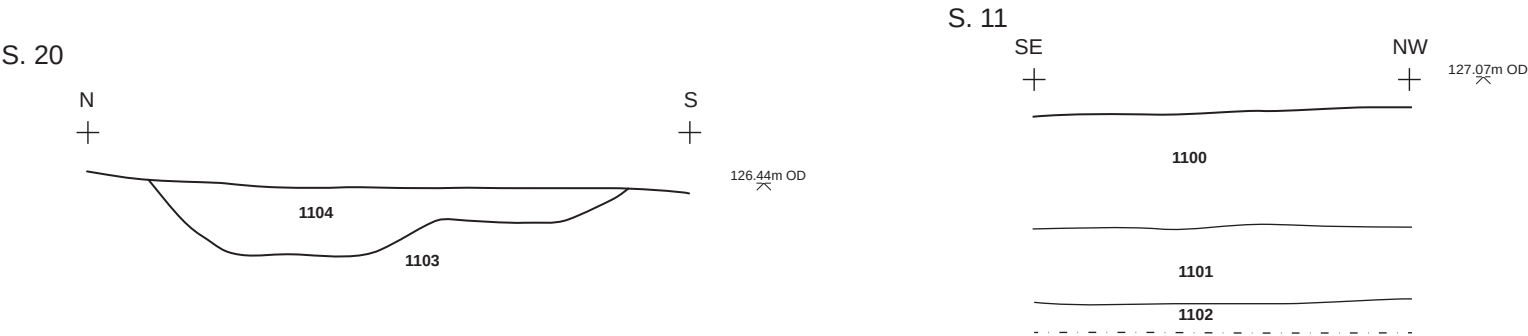
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Fig. 3

Representative trench sections

0 1m (1:20)



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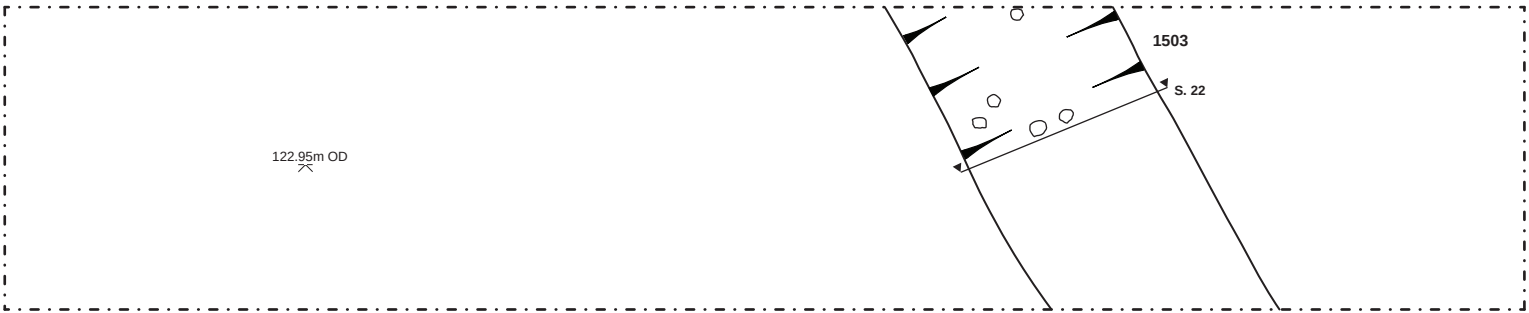
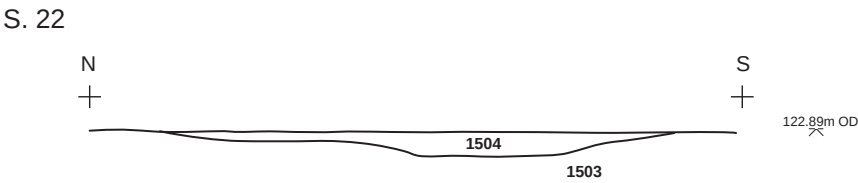
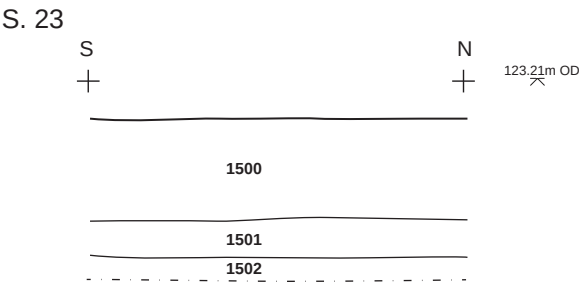
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Fig. 4

Trench 11 plan and sections

Plans 0 2m (1:50)
Sections 0 1m (1:20)



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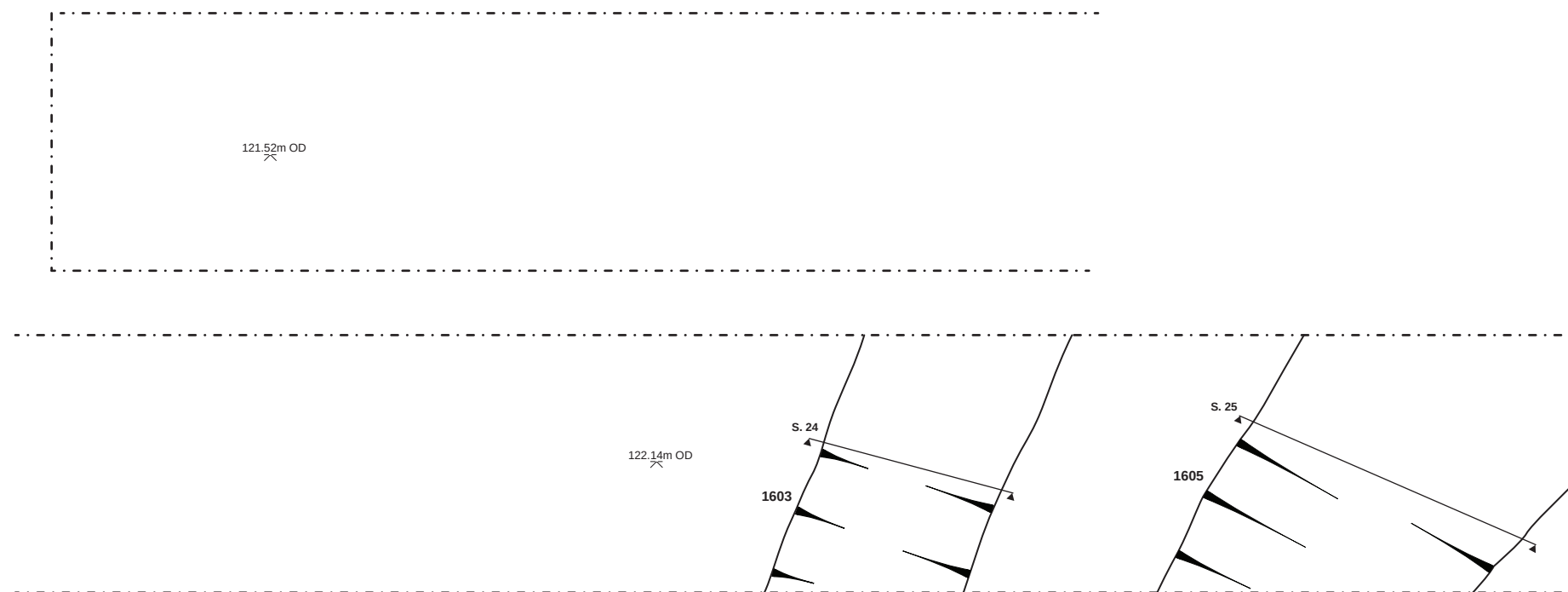
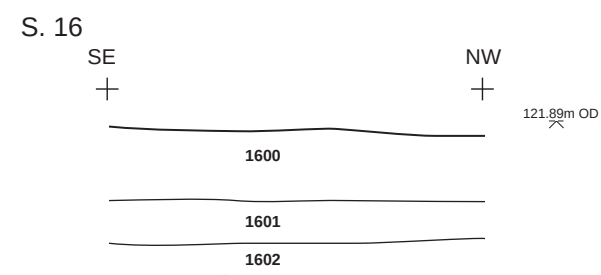
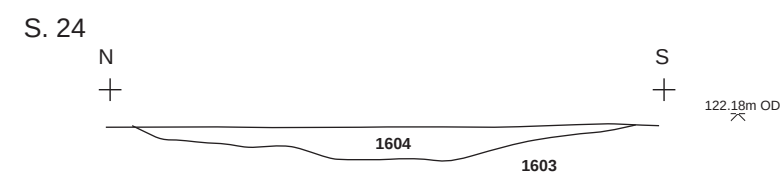
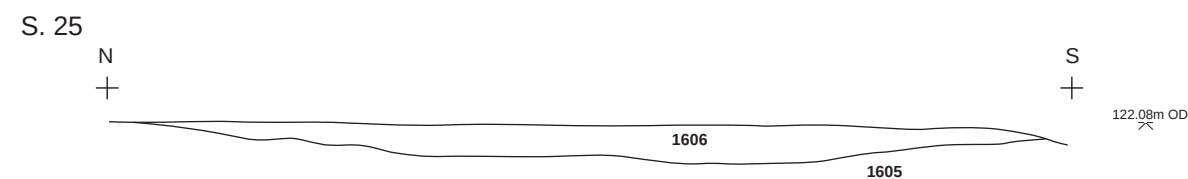
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Fig. 5

Trench 15 (south) plan and sections

Plans 0 2m (1:50)

Sections 0 1m (1:20)



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Fig. 6

Trench 16 plan and sections

Plans 0 2m (1:50)

Sections 0 1m (1:20)



Plate 1. Trench 1, looking south



Plate 2. Trench 16, looking north

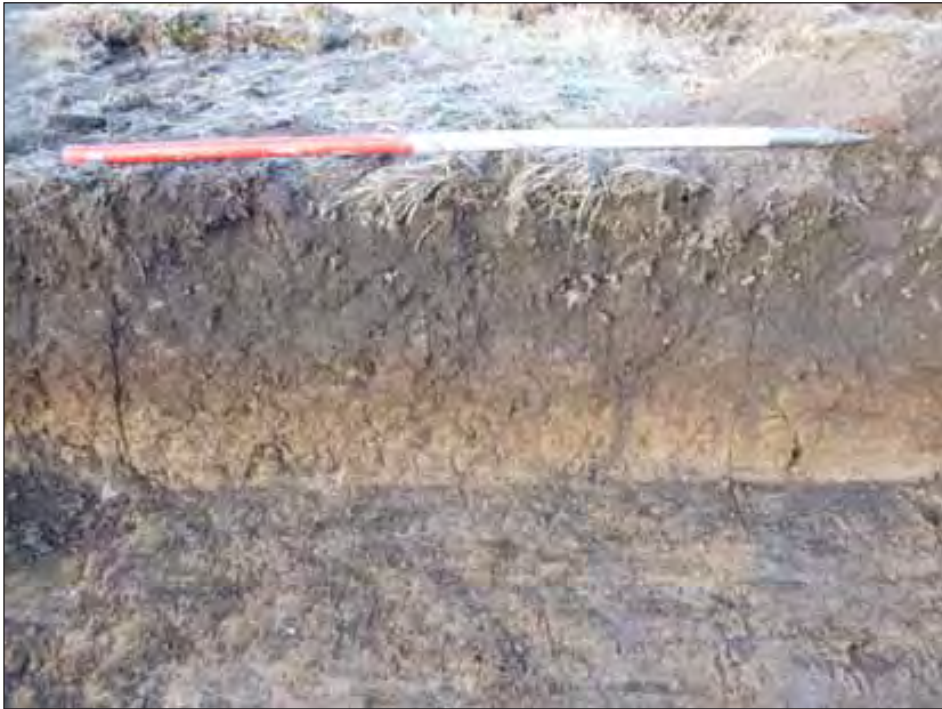


Plate 3. Trench 12 representative section, looking west



Plate 4. Modern brick manhole in Trench 2



Plate 5. Furrow 1103, looking southeast



Plate 6. Furrow 1605, looking northeast

Appendix 1: Written Scheme of Investigation

Appendix 2: Inventory of primary archive

Phase	File/Box No	Description	Quantity
Evaluation	File no.1	Digital photograph registers	2
		Photograph registers	2
		Trench record sheets	17
		Permatrace sheets	5
		Context sheets	8

Appendix 3: Trench tables

Trench 1					
General Description				Orientation	NE-SW
Trench devoid of archaeological features, however two field drains were identified.				Average Depth (m)	0.48
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
100	Layer	-	-	0.30	Topsoil – dark grey brown clay silt
101	Layer	-	-	-	Natural – mid grey orange silty clay and limestone

Trench 2					
General Description				Orientation	NW-SE
Trench devoid of archaeological features, however a land drain and a modern brick manhole were identified				Average Depth (m)	0.34
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
200	Layer	-	-	0.30	Topsoil – Dark grey brown clay silt
201	Layer	-	-	-	Natural – Mid yellow brown silty clay and limestone

Trench 3					
General Description				Orientation	E-W
Trench devoid of archaeological remains but a modern pit containing modern red brick was identified.				Average Depth (m)	0.44
				Width (m)	2.00
				Length (m)	30.00

Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
300	Layer	-	-	0.30	Topsoil – Dark grey brown clay silt
301	Layer	-	-	-	Natural – Mid yellow brown silty clay and limestone

Trench 4					
General Description				Orientation	N-S
Trench devoid of archaeological features, however one land drain was identified. Red brick, frogged and stamped “HOYLAND” noted from the topsoil.				Average Depth (m)	0.42
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
400	Layer	-	-	0.32	Topsoil – Dark grey brown clay silt, infrequent modern rubble inclusions.
401	Layer	-	-	-	Natural – Mid yellow brown silty clay and limestone

Trench 6					
General Description				Orientation	NW-SE
Trench devoid of archaeological features.				Average Depth (m)	0.40
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
600	Layer	-	-	0.30	Topsoil – Dark grey brown clay silt, frequent modern demolition material inclusions.
601	Layer	-	-	-	Natural – Mid yellow brown silty clay and limestone

Trench 7					
General Description				Orientation	NE-SW
Trench devoid of archaeological features.				Average Depth (m)	0.45
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
700	Layer	-	-	0.28	Topsoil – Dark grey brown clay silt, frequent modern demolition material inclusions.
701	Layer	-	-	-	Natural – Mid yellow brown silty clay and limestone

Trench 8					
General Description				Orientation	NW-SE
Trench devoid of archaeological features. Two potential features were tested but were concluded to be bioturbation.				Average Depth (m)	0.52
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
800	Layer	-	-	0.30	Topsoil – Dark grey brown clay silt
801	Layer	-	-	0.10	Subsoil – Dark red brown clay silt
802	Layer	-	-	-	Natural – Mid yellow brown silty clay and limestone

Trench 9					
General Description				Orientation	NE-SW
Trench devoid of archaeological features.				Average Depth (m)	0.52
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
900	Layer	-	-	0.30	Topsoil – Dark grey brown clay silt
901	Layer	-	-	0.10	Subsoil – Mid red brown clay silt
902	Layer	-	-	-	Natural – Mid yellow brown silty clay and limestone

Trench 10					
General Description				Orientation	N-S
Trench devoid of archaeological features.				Average Depth (m)	0.56
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
1000	Layer	-	-	0.30	Topsoil – Dark grey brown clay silt
1001	Layer	-	-	0.10	Subsoil – Dark red brown clay silt
1002	Layer	-	-	-	Natural – Mid orange brown silty clay and limestone

Trench 11					
General Description				Orientation	N-S
Trench contained single plough furrow that was excavated and recorded				Average Depth (m)	0.56
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
1100	Layer	-	-	0.30	Topsoil – Dark grey brown clay silt
1101	Layer	-	-	0.20	Subsoil – Mid red brown clay silt
1102	Layer	-	-	-	Natural – Mid reddish brown silty clay and limestone
1103	Cut	>2.0	1.2	0.18	Cut of Furrow – Linear, shallow concave
1104	Fill	>2.0	1.2	0.18	Fill of Furrow 1103 – Mid grey brown silty clay

Trench 12						
General Description				Orientation		N-S
Trench devoid of archaeological features.				Average Depth (m)		0.56
				Width (m)		2.00
				Length (m)		20.00
Contexts						
Context	Type	Length (m)	Width (m)	Depth (m)	Description	
1200	Layer	-	-	0.36	Topsoil – Dark grey brown clay silt	
1201	Layer	-	-	0.10	Subsoil – Dark red brown clay silt	
1202	Layer	-	-	-	Natural – Mid reddish brown silty clay and limestone	

Trench 13					
General Description				Orientation	NW-SE
Trench devoid of archaeological features, however two field drains were identified				Average Depth (m)	0.60
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
1300	Layer	-	-	0.26	Topsoil – Dark grey brown clay silt
1301	Layer	-	-	0.24	Subsoil – Mid orange brown clay silt
1302	Layer	-	-	-	Natural – Mid orange brown silty clay and limestone

Trench 14					
General Description				Orientation	N-S
Trench devoid of archaeological features.				Average Depth (m)	0.54
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
1400	Layer	-	-	0.22	Topsoil – Dark grey brown clay silt
1401	Layer	-	-	0.10	Subsoil – Dark red brown clay silt
1402	Layer	-	-	-	Natural – Mid orange brown silty clay and limestone

Trench 15						
General Description				Orientation		N-S
Trench contained a single plough furrow that was excavated and recorded. Five small post-holes at the base of the furrow were identified and surveyed. Trench was split to avoid an existing sewer line				Average Depth (m)		0.44
				Width (m)		2.00
				Length (m)		20.00
Contexts						
Context	Type	Length (m)	Width (m)	Depth (m)	Description	
1500	Layer	-	-	0.28	Topsoil – Dark grey brown clay silt	
1501	Layer	-	-	0.10	Subsoil – Dark red brown clay silt	
1502	Layer	-	-	-	Natural – Mid orange brown silty clay and limestone	
1503	Cut	>2.0	1.3	0.06	Cut of Furrow- Linear, wide and shallow with flat base	
1504	Fill	>2.0	1.3	0.06	Fill of Furrow 1503 - Mid grey brown silty clay	

Trench 16						
General Description				Orientation		NW-SE
Trench contained two parallel plough furrows				Average Depth (m)		0.40
				Width (m)		2.00
				Length (m)		20.00
Contexts						
Context	Type	Length (m)	Width (m)	Depth (m)	Description	
1600	Layer	-	-	0.20	Topsoil – Dark grey brown clay silt	
1601	Layer	-	-	0.12	Subsoil – Dark orange brown clay silt	
1602	Layer	-	-	-	Natural – Mid orange brown silty clay and limestone	

1603	Cut	>2.0	1.3	0.10	Cut of Furrow- Linear, wide and shallow with flat base
1604	Fill	>2.0	1.3	0.10	Fill of Furrow 1603 - Mid grey brown silty clay
1605	Cut	>2.0	2.36	0.10	Cut of Furrow- Linear, wide and shallow with flat base
1606	Fill	>2.0	2.36	0.10	Fill of Furrow 1604 - Mid grey brown silty clay

Trench 17					
General Description				Orientation	E-W
Trench devoid of archaeological features.				Average Depth (m)	0.36
				Width (m)	2.00
				Length (m)	20.00
Contexts					
Context	Type	Length (m)	Width (m)	Depth (m)	Description
1700	Layer	-	-	0.26	Topsoil – Dark grey brown clay silt
1701	Layer	-	-	-	Natural – Mid brown orange silty clay and limestone

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