

ARCHAEOLOGICAL
SERVICES
DURHAM UNIVERSITY

on behalf of
Trivselhus by ESH

Beech Crescent
Heighington
Darlington

archaeological evaluation

report 4724
March 2018

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1. Summary

The project

- 1.1 This report presents the results of an archaeological evaluation conducted in advance of a proposed development at Beech Crescent, Heighington. The works comprised the excavation and recording of 14 archaeological evaluation trenches.
- 1.2 The works were commissioned by Trivselhus by ESH and conducted by Archaeological Services Durham University.

Results

- 1.3 A ditch of unknown date was recorded in trench 1. The palaeoenvironmental sample from the ditch comprised trace amounts of fuel waste. The absence of significant diagnostic palaeoenvironmental remains provides little information about the age or nature of the deposit.
- 1.4 Furrows, the remains of medieval or post-medieval ploughing, were recorded in trenches 3, 5, 7, 8, 9 and 11, cutting into the natural subsoil. Modern backfill of a pond was recorded in Trench 6.
- 1.5 No further archaeological deposits were recorded and no artefacts were recovered.

Recommendations

- 1.6 A programme of archaeological monitoring and recording during groundworks in the vicinity of the ditch is recommended.

2. Project background

Location (Figure 1)

- 2.1 The site is located at Beech Crescent, Heighington, Darlington (NGR centre: NZ 2515 2260). It covers an area of approximately 2 ha. To the north and east of the site is the A6072, to the west the residential Beech Crescent, and to the south Heighington Lane.

Development

- 2.2 Planning permission has been granted for a residential development at Beech Crescent, Heighington. The planning application reference number is 16/00820/FUL.

Objective

- 2.3 The objective of the scheme of works was to assess the nature, extent and potential significance of any archaeological resource within the proposed development area, so that an informed decision may be made regarding the nature and scope of any further scheme of archaeological works that may be required in relation to the development.

Research Objectives

- 2.4 The regional research framework (Petts & Gerrard 2006) contains an agenda for archaeological research in the region, which is incorporated into regional planning policy implementation with respect to archaeology. In this instance, the scheme of works was designed to address agenda items:

Late Bronze Age and Iron Age

- iii. Settlement
- liii. Landscape

Roman

- R1. The Iron Age to Roman transition
- Riv. Native and civilian life
- Rv. Material culture

Later Medieval

- MDii. Landscape

Specification

- 2.5 The works have been undertaken in accordance a Written Scheme of Investigation provided by Archaeological Services Durham University (reference DS18.61r) and approved by the planning authority.

Dates

- 2.6 Fieldwork was undertaken between 5th and 9th March 2018. This report was prepared for March 2018.

Personnel

- 2.7 Fieldwork was conducted by Hilly Andrews and Alan Rae (supervisor). This report was prepared by Hilly Andrews, and edited by Natalie Swann, with illustrations by David Graham. Specialist reporting was conducted by Dr Carrie Armstrong (palaeoenvironmental). Sample processing was undertaken by Ben Matus. The Project Manager was Daniel Still.

Archive/OASIS

- 2.8 The site code is **HBC18**, for **Heighington Beech Crescent 2018**. The archive is currently held by Archaeological Services Durham University and will be transferred to an appropriate depository in due course. The charred plant remains will be retained at Archaeological Services Durham University. The flots and residue have been scanned in their entirety with all material of palaeoenvironmental or dating value removed, and have therefore been discarded. Archaeological Services Durham University is registered with the **Online Access to the Index of archaeological investigations project (OASIS)**. The OASIS ID number for this project is **archaeol3-311337**.

3. Landuse, topography and geology

- 3.1 At the time of this assessment, the proposed development area comprised one ploughed field.
- 3.2 The survey area sloped gently from 135.9m OD in the east to 138.7m OD in the west.
- 3.3 The underlying solid geology of the area comprises Ford Formation Dolostone of the Permian period, which are overlain by Devensian glaciolacustrine and glaciofluvial deposits.

4. Historical and archaeological background

Previous archaeological works

- 4.1 A heritage assessment of the proposed development area (Stephenson 2015) has been completed and its conclusions are summarised below.
- 4.2 There is evidence of human activity in the area from at least the Bronze Age, and a major Roman road ran two miles west of the site. However the site has no special archaeological potential and is likely to have been agricultural land from the medieval period. Cultivation is likely to have had a detrimental effect on any earlier sub-surface remains, as evidenced by the removal of earthwork ridges by more recent ploughing.
- 4.3 The entire site lies within the Heighington Conservation Area since its extension in 1999. There seems no special architectural or visual reason for the area's inclusion other than providing an open buffer up to the 1980s' bypass. The bypass represents a major change to the historical landscape to the east.
- 4.4 Although a group of Grade II listed buildings, including Trafalgar House, walls and a dovecote lie south of the site, they are well screened from the site by stone walls and field boundaries and orientated away from the site.
- 4.5 A magnetic survey of the site has been completed (James 2016). The majority of the anomalies identified were thought to be a result of modern material/agricultural activity and geological/pedological origin.

5. The evaluation trenches

Introduction

- 5.1 Fourteen trenches were proposed for the site, seven of which targeted anomalies identified on the geophysical survey. Trenches 4 and 8 were 50m long and the remaining 12 were 25m long. All trenches were excavated with a machine equipped with a toothless ditching bucket under constant archaeological supervision. Selected trench plans and sections can be seen on Figure 3. Context data is summarised in Table 1.1 and trench data is recorded in Table 1.2.

Trench 1

- 5.2 This trench was located over two linear geomagnetic anomalies, which were not identified. Natural subsoil varied between a yellow-brown sandy gravelly clay and a yellow boulder clay [2] and was identified at a depth of 0.32m (136.2m OD). A small ditch [F4: over 1.5m long, 0.5m wide, 0.31m deep] was cut into the natural subsoil at the south end of the trench, on an approximate north-east / south-west alignment, filled with a grey-brown silty clay [3]. This was parallel with and approximately 8m south of a modern field boundary location recorded on 1980s Ordnance Survey mapping. A field drain cut the natural subsoil on an east/west alignment towards the centre of the trench. Sealing the ditch was the topsoil, a dark brown loamy clay [1].

Trench 2

- 5.3 Trench 2 was aligned north-west/south-east and targeted a linear geomagnetic anomaly. Natural subsoil, a dark yellow sandy gravelly clay, was identified between 0.3m and 0.4m below ground level (bgl, 135.5m OD). Covering the trench was a dark brown loamy clay topsoil [1: 0.3m to 0.4m deep]. No archaeological features were identified and no artefacts were recovered. The geomagnetic anomaly was identified as geological variation in the natural subsoil.

Trench 3

- 5.4 Trench 3 was located near the north-west edge of the site, aligned north-east/south-west and targeted a semi-circular geomagnetic anomaly. The natural subsoil, a dark yellow-brown sandy stony clay, was identified between 0.3m and 0.4m bgl (136.7m OD). Directly overlying this was a dark brown loamy clay topsoil [1]. Cutting the natural subsoil were four furrows [F7] aligned north-west/south-east. These were spaced 3m apart and averaged 2.6m wide. No other archaeological features were identified and no artefacts were recovered. The geomagnetic anomaly aligned with one of the plough furrows.

Trench 4

- 5.5 Trench 4 was 50m long and located to the north-west of site, aligned north-west/south-east. It targeted the same semi-circular geomagnetic anomaly as Trench 3. The natural subsoil, a dark yellow-brown sandy stony clay was identified between 0.3m and 0.4m bgl (136.3m OD to 136.7m OD). Overlying this was a dark brown loamy clay topsoil [1]. The geomagnetic anomaly was identified as a shallow depression in the natural subsoil, filled with modern brick fragments and redeposited natural subsoil, and thought to be associated with modern farming on the site. No archaeological features were identified and no artefacts were recovered.

Trench 5

- 5.6 Trench 5 was located towards the centre of the site aligned east/west. The natural subsoil, a mixed yellow-brown, grey-brown sandy stony clay, was identified between 0.2m and 0.47m bgl (135.6m OD to 136.2m OD). Three furrows [F7] were recorded cutting the natural subsoil, aligned north-east/south west and spaced 3m to 4.5m apart and up to 2.7m wide. Covering the trench was a dark brown loamy clay topsoil [1: 0.2m to 0.44m deep]. No other archaeological features were identified and no artefacts were recovered.

Trench 6

- 5.7 Trench 6 was located on the eastern edge of site aligned north/south and targeted a modern infilled pond. The natural subsoil [2] was located at the north end of the trench 0.32m bgl (135.01m OD). Across most of the trench, a red brown clay with modern brick and gravel inclusions [5: 0.4m deep] overlay the natural subsoil and was the backfill of the modern pond. Overlying this was a dark brown loamy clay topsoil [1: 0.19m to 0.32m deep]. No archaeological features were identified and no artefacts were recovered.

Trench 7

- 5.8 This trench was located in the centre of the site aligned east/west. The natural subsoil, a yellow-brown sandy stony clay, was identified between 0.18m and 0.29m bgl (136m OD to 135.5m OD). Overlying this was a dark brown loamy clay topsoil [1: 0.19m to 0.29m deep]. Four furrows [F7] cut the natural subsoil on a north-west/south-east alignment. These were between 2.6m and 3m wide and spaced c.3m apart. A field drain cut the natural subsoil towards the east end of the trench aligned north-east/south-west. No archaeological features were identified and no artefacts were recovered.

Trench 8

- 5.9 Trench 8 was 50m long and was located on the western edge of the site. It was aligned north-west/south-east and targeted two linear geomagnetic anomalies. The natural subsoil, a mixed yellow-brown, grey-brown sandy stony clay, was identified between 0.17m and 0.24m below the ground surface (136.1m OD to 136.9m OD). Across the trench was a dark brown loamy clay topsoil [1: 0.17m to 0.24m deep]. Cutting the natural subsoil were four furrows [F7] aligned north/south. These were c.4m wide and spaced c.3.6m apart. No archaeological features were identified and no artefacts were recovered; the geomagnetic anomalies were not identified in this trench.

Trench 9

- 5.10 Trench 9 was located towards the south end of the site. It was aligned north-east/south-west and targeted two linear geomagnetic anomalies. The natural subsoil, a mixed grey-brown and yellow-brown sandy stony clay, was identified at between 0.2m and 0.3m bgl (135.2m OD to 135.6m OD). Overlying this was a dark brown loamy clay topsoil [1: 0.2m to 0.3m deep]. Three furrows [F7] cut the natural subsoil on a north-east/south-west alignment. These were 2.3m wide and spaced between 6m and 3m apart. No archaeological features were identified and no artefacts were recovered; the geomagnetic anomalies were identified as geological variations.

Trench 10

- 5.11 Trench 10 was located at the south-east edge of the site aligned north/south. The natural subsoil, a yellow-brown and grey-brown sandy stony clay, was identified between 0.18m and 0.31m bgl (135.12m OD to 134.9m OD). Overlying this was a dark brown loamy clay topsoil [1: 0.18m to 0.31m deep]. No archaeological features were identified and no artefacts were recovered.

Trench 11

- 5.12 Trench 11 was located towards the south end of the site and targeted two linear geomagnetic anomalies. The natural subsoil, a mixed yellow-brown and grey-brown sandy stony clay, was identified between 0.19m and 0.34m below the ground surface (135.1m OD to 135.8m OD). Directly above this was a dark brown loamy clay topsoil [1: 0.19m to 0.34m deep]. Two furrows [F7] cut the natural subsoil on a north - south alignment. These were 5m wide and spaced 7m apart.

Trench 12

- 5.13 Trench 12 was located towards the south end of the site. It was aligned east/west and targeted a linear geomagnetic anomaly. Natural subsoil, a yellow-brown to grey-brown sandy stony clay, was identified between 0.19m and 0.22m bgl (134.4m OD to 135m OD). Across the trench, a dark brown loamy clay topsoil [1: 0.19m to 0.22m deep] sealed the natural subsoil. The geomagnetic anomaly was identified as geological variation. No archaeological deposits were identified and no artefacts were recovered.

Trench 13

- 5.14 Trench 13 was located at the south-east edge of the site and aligned north-west/south-east. The natural subsoil, a yellow-brown to grey-brown sandy stony clay, was identified between 0.29m and 0.43m bgl (135.5m OD to 136.3m OD). Covering the subsoil was a dark brown loamy clay topsoil [1: 0.19m to 0.22m deep]. No archaeological features were identified and no artefacts were recovered; the geomagnetic anomalies were identified as geological variation.

Trench 14

- 5.15 Trench 14 was located at the southern limit of site and aligned east-west. The natural subsoil was identified between 0.22m and 0.32m below the ground surface (133.65m OD to 134.35m OD). Directly above this was a dark brown loamy clay topsoil [1: 0.22m to 0.32m deep]. No archaeological deposits were identified and no artefacts were recovered.

6. The artefacts

- 6.1 No artefacts were recovered.

7. The palaeoenvironmental evidence

Methods

- 7.1 A palaeoenvironmental assessment was carried out on a bulk sample [context 3], taken from a ditch fill of unknown origin. The sample was manually floated and sieved through a 500µm mesh. The residue was examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and was scanned using a magnet for ferrous fragments. The flot was examined at up to x60

magnification using a Leica MZ6 stereomicroscope for waterlogged and charred botanical remains. Identification of these was undertaken by comparison with modern reference material held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (2010). Habitat classifications follow Preston *et al.* (2002).

- 7.2 Selected charcoal fragments were identified, in order to provide material suitable for radiocarbon dating. The transverse, radial and tangential sections were examined at up to x600 magnification using a Leica DMLM microscope. Identifications were assisted by the descriptions of Schweingruber (1990) and Hather (2000), and modern reference material held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University.
- 7.3 The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in the regional archaeological research framework and resource agendas (Petts & Gerrard 2006; Hall & Huntley 2007; Huntley 2010).

Results

- 7.4 Ditch fill [3] produced a small flot comprising fragments of coal, clinker/cinder, modern roots and straw/chaff as well as a small number of uncharred seeds. A single charred indeterminate cereal grain is present and two fragments of charcoal, one of which is identifiable as willow/poplar. The willow/poplar charcoal is suitable for radiocarbon dating. The results are presented in Table 1.3.

Discussion

- 7.5 The presence of coal, clinker/cinder, charcoal fragments and a single charred cereal grain indicates the remains of some limited domestic waste. The charred remains are in poor condition, with both the cereal grain and charcoal exhibiting heavy mineralisation. The small number of charred remains provides little information about the age of the feature.
- 7.6 The small assemblage of uncharred remains includes common chickweed, violets, members of the grass family and bread wheat chaff, however the well-drained nature of the site and the presence of modern roots suggests that these are recent intrusions.

Recommendations

- 7.7 No further analysis is required for the sample due to the low number and poor preservation of palaeoenvironmental remains. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.

8. The archaeological resource

- 8.1 A ditch of unknown date was recorded in Trench 1. The palaeoenvironmental sample from the ditch comprised trace amounts of fuel waste. The absence of significant diagnostic palaeoenvironmental remains provides little information about the age or nature of the deposit. The ditch is c.8m south of and parallel with a field boundary recorded on a 1980s Ordnance Survey map.

- 8.2 Furrows, the remains of medieval or post-medieval ploughing, were recorded in trenches 3, 5, 7, 8, 9 and 11, cutting into the natural subsoil. Modern backfill of a pond was recorded in Trench 6.

9. Impact assessment

- 9.1 No impact on a significant archaeological resource is anticipated over the majority of the site. The development has the potential to impact on an undated ditch, the significance of which is unknown.

10. Recommendations

- 10.1 A programme of archaeological monitoring and recording during groundworks in the vicinity of the ditch is recommended.

11. Sources

- Hall, A R, & Huntley, J P, 2007 *A review of the evidence for macrofossil plant remains from archaeological deposits in northern England*. Research Department Report Series no. 87. London
- Hather, J G, 2000 *The identification of the Northern European Woods: a guide for archaeologists and conservators*. London
- Huntley, J P, 2010 *A review of wood and charcoal recovered from archaeological excavations in Northern England*. Research Department Report Series no. 68. London
- James, A, 2016 *Station Road, Heighington, Darlington: Archaeological Geophysical Survey*. Unpublished report Arc/1998/718 Phase Site Investigations
- Petts, D, & Gerrard, C, 2006 *Shared Visions: The North-East Regional Research Framework for the Historic environment*. Durham
- Preston, C D, Pearman, D A, & Dines, T D, 2002 *New Atlas of the British and Irish Flora*. Oxford
- Schweingruber, F H, 1990 *Microscopic wood anatomy*. Birmensdorf
- Stephenson, B, 2015 *Land at Station Road, Heighington, Darlington: Heritage Assessment*. Unpublished report BSA Heritage
- Stace, C, 2010 *New Flora of the British Isles*. Cambridge

Appendix 1: Data tables

Table 1.1: Context data

No	Area	Description
1	1-14	Topsoil
2	1-14	Natural
3	1	Fill of ditch/gully F4
F4	1	Cut of E-W ditch/gully
5	6	Modern pond backfill, stone/gravel/plastic
6	3,5,7, 8,9,11	Fill of furrows
F7	3,5,7, 8,9,11	Cut of furrows

Table 1.2: Trench data

Trench	Length (m)	Depth (m)	Glacial Geology	Furrows				Field Drains- number and orientation	Features
				Number	Spacing (m)	Orientation	Width (m)		
1	25	0.32-0.42	Orange yellow mixed sandy clay, sandy clay gravel, coarse boulder clay	0				1, E-W	F4, ditch, see text
2	25	0.3-0.4	Dark yellow sandy gravel clay	0				0	
3	25	0.3-0.4	Dark yellow grey sandy gravel clay	4	3	NW-SE	2.6	0	
4	50	0.3-0.4	Dark yellow mixed sandy clay and boulder clay	0				0	
5	25	0.2-0.47	Mixed yellow brown/grey yellow sandy stony clay	3	3-4.5	NW-SE	2.7	0	
6	25	0.19-0.59	Mixed yellow brown sandy stony clay	0				0	5- modern pond backfill
7	25	0.19-0.34	Yellow brown sandy stony clay	4	2.6-3	NW-SE	3	1, NE-SW	
8	50	0.25-0.31	Mixed orange brown sandy clay, grey brown sandy clay	4	3.6	NW-SE	4m	0	
9	25	0.2-0.47	Mixed grey brown yellow brown sandy stony clay	3	3-6	NE-SW	2.3	0	
10	25	0.26-0.41	Mixed yellow brown, grey brown sandy stony clay	0				0	
11	25	0.22-0.37	Mixed yellow brown, grey brown sandy stony clay	2	7	N-W	5	0	
12	25	0.32-0.39	Mixed yellow brown, grey brown sandy clay	0				0	
13	25	0.29-0.43	Dark brown sandy stony clay	0				0	
14	25	0.22-0.32	Dark yellow brown-dark brown sandy clay	0				0	

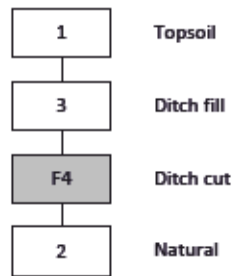
Table 1.3: Data from palaeoenvironmental assessment

Sample	1
Context	3
Feature number	4
Feature	Ditch
Material available for radiocarbon dating	✓
Volume processed (l)	15
Volume of flot (ml)	30
<i>Residue contents</i>	
Charcoal	(+)
<i>Flot matrix</i>	
Charcoal	(+)
Clinker / cinder	(+)
Coal / coal shale	(+)
Earthworm egg case	(+)
Pre-Quaternary trilete megasporangium	(+)
Roots (modern)	++
Straw / chaff (modern)	+
Uncharred seeds	+
<i>Charred remains (total count)</i>	
(c) Cerealia indeterminate	grain 1
<i>Identified charcoal (✓ presence)</i>	
Diffuse porous	✓
Salicaceae (Willow, poplar)	✓

[c-cultivated. (+): trace; +: rare; ++: occasional; +++: common; ++++: abundant]

Appendix 2: Stratigraphic matrices

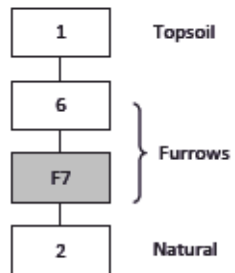
Trench 1



Trenches 2, 4, 10, 12, 13 and 14



Trenches 3, 5, 7, 8, 9 and 11



Trench 6

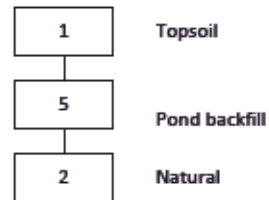


Figure 1: Site location

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 site location

0 1km
scale 1:25 000 for A4 plot

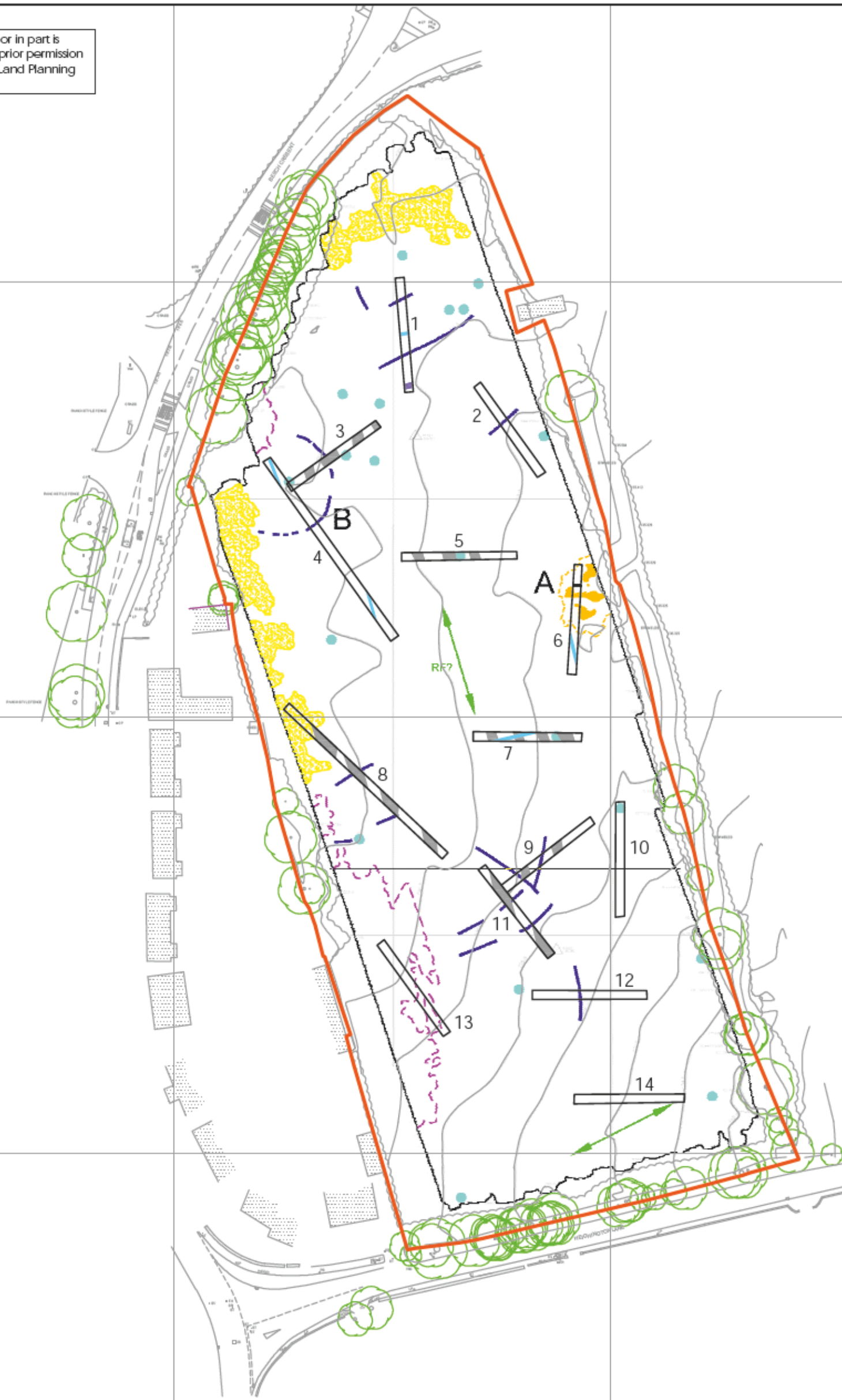


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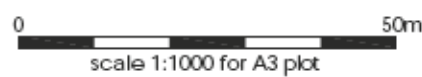


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Figure 2: Trench locations

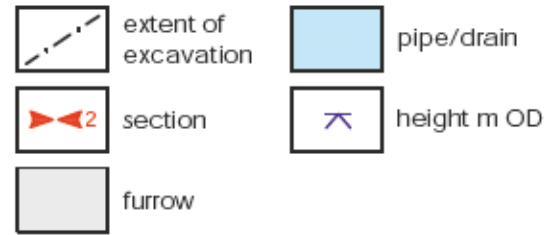
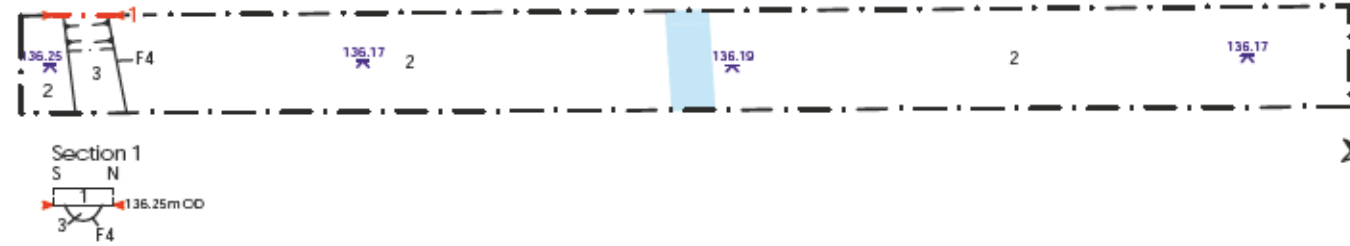


Figure 3: Trenches 1, 3, 5-9 and 11, plans and sections

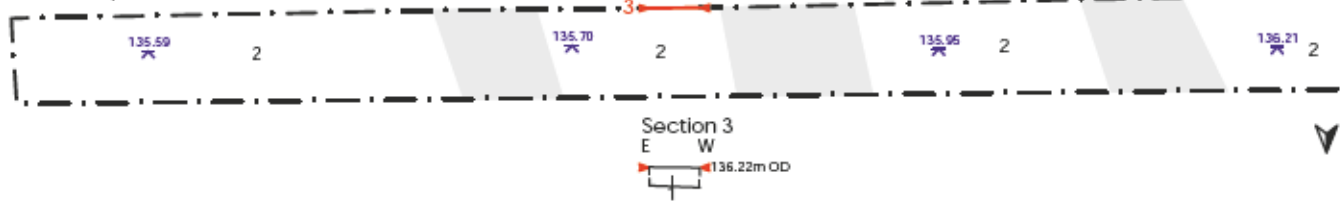
Trench 1, plan



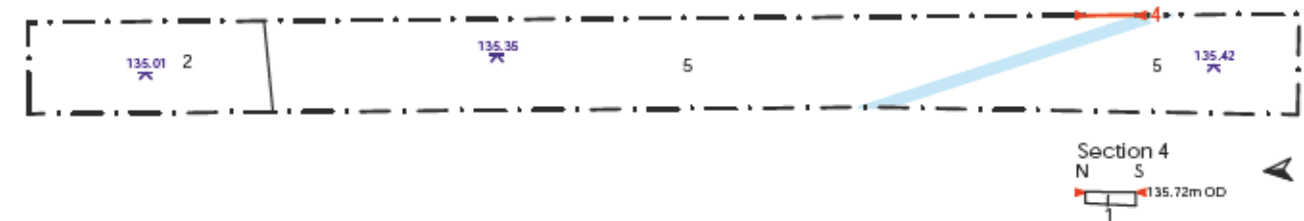
Trench 3, plan



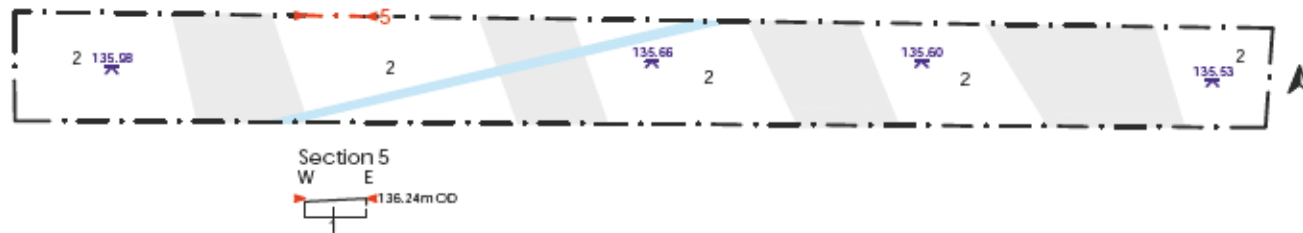
Trench 5, plan



Trench 6, plan



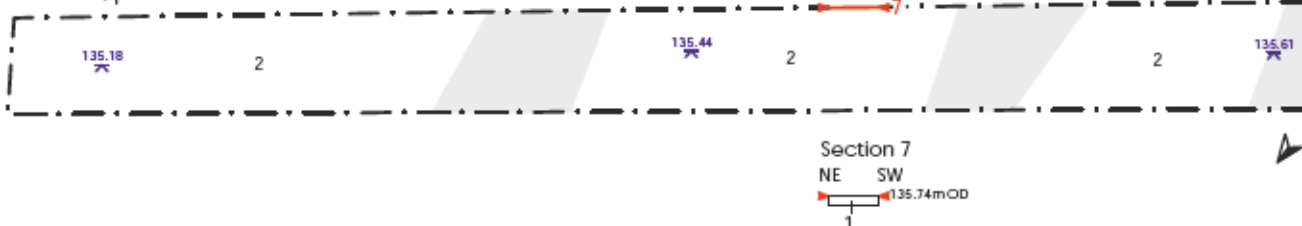
Trench 7, plan



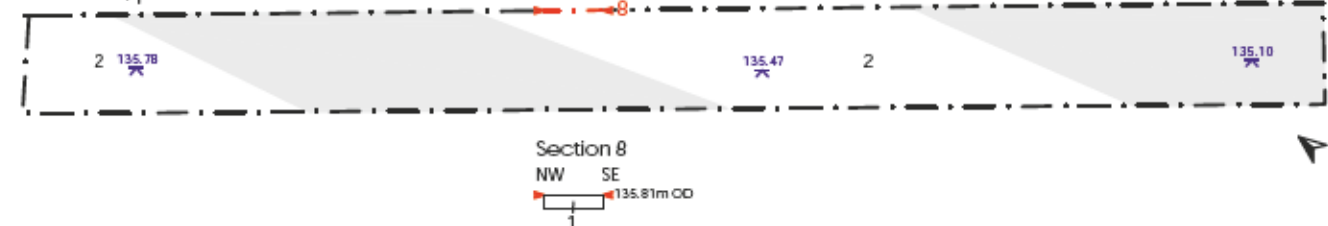
Trench 8, plan



Trench 9, plan



Trench 11, plan





Photograph 1: Trench 1, ditch F4, looking west



Photograph 2: Trench 9, looking east