

ARCHAEOLOGICAL
SERVICES
DURHAM UNIVERSITY

on behalf of
Partner Construction Limited

Dunelm Road
Thornley
Easington
County Durham

archaeological evaluation

report 3362
February 2014

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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 on land off Dunelm Road, Thornley, County Durham. The works comprised the excavation of four archaeological trial trenches.
- 1.2 The works were commissioned by Partner Construction Limited and conducted by Archaeological Services Durham University.

Results

- 1.3 No archaeological resource was identified in Trenches 3 and 4. Three plough furrows were identified in Trench 2. Two linear ditches were exposed in Trench 1, the date of which is uncertain.

Recommendations

- 1.4 Mitigation work, in the form of archaeological recording, may be required by the planning authority in the vicinity of Trench 1.

2. Project background

Location (Figure 1)

- 2.1 The site is located on land off Dunelm Road, Thornley, Easington, County Durham (NGR centre: NZ 35400 39175). It is irregular in shape, and covers an area of approximately 1ha. The site lies on the north side of the A181, and is bounded by the course of Dunelm Road (the B1279) to the east. The housing estate of Crossways Court lies directly to the southeast, with further housing and the centre of Thornley village to the northeast. A reservoir forms most of the northwestern boundary of the site, with open fields beyond to the north, west, and south.

Development proposal

- 2.2 A residential development is proposed for the site.

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.

Specification

- 2.4 The works have been undertaken in accordance with a Written Scheme of Investigation provided by Archaeological Services Durham University (reference DS14.64) and approved by the planning authority.

Dates

- 2.5 Fieldwork was undertaken on the 12th of February 2014. This report was prepared for February 2014.

Personnel

- 2.6 Fieldwork was conducted by Mark Randerson and Nathan Thomas (supervisor). This report was prepared by Mark Randerson, with illustrations by Janine Watson. Palaeoenvironmental assessment was by Dr Charlotte O'Brien. Sample processing was by Lorne Elliott. Artefact assessment was by Jennifer Jones. The Project Manager was Daniel Still.

Archive/OASIS

- 2.7 The site code is **DTE14**, for **Dunelm Road, Thornley, Easington 2014**. The archive is currently held by Archaeological Services Durham University and will be transferred to Bowes Museum in due course. The sample residues were discarded following examination. The flots and charred plant remains will be retained at Archaeological Services Durham University. 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 **archaeol3-171515**.

3. Landuse, topography and geology

- 3.1 At the time of this assessment, the proposed development area comprised the southern part of a field of crop stubble.

- 3.2 The level of the survey area falls steadily and gradually downward to the south, from a mean elevation of approximately 181.5m OD in the north to one of roughly 177.5m OD to the south.
- 3.3 The underlying solid geology of the area comprises sedimentary Dolostone of the Ford Formation, which is overlain by deposits of Devensian Till.

4. Historical and archaeological background

Previous archaeological works

- 4.1 No previous archaeological works are known of in the immediate locality.

The prehistoric period (up to AD 70)

- 4.2 A rectilinear enclosure has been identified in the near vicinity of the site. This may be of prehistoric date.

The medieval period (5th century to 1540)

- 4.3 The name of Thornley means 'Thorney Hill' in Old English. The village is first recorded in 1383.

The post-medieval period (1541 to 1899)

- 4.4 A survey of the lands of the Bishop of Westmorland, conducted in 1569, records a coal mine operating at Thornley. The exact location of this mine is unknown. A small quarry, used for gravel extraction, was in use on the southern part of the study site during the 19th century. This is shown on the first and second edition Ordnance Survey maps.

The modern period (1900 to present)

- 4.5 Recent geotechnical work on the site has located the position of the former gravel quarry.

5. The evaluation trenches

Introduction

- 5.1 Four trenches were excavated across the study site (Figure 2).

Trench 1 (Figure 3)

- 5.2 Trench 1 measured 30m by 1.8m. It was located in the northern part of the study area, and aligned north-south. Natural glacial subsoil [101] was exposed across the base of the trench at a depth of between 0.3m and 0.4m. This was a mixed deposit with some local variation, but was generally observed to be a heavily compact, friable mid yellow-brown silty clay. It was mottled with flecks of brown, and contained occasional sub-rounded cobbles and irregular lenses of clay and sandy clay. Toward the north end of the trench a large, irregular lens of subsoil overlay the glacial deposits. This lens [102: 3.4m wide, 0.14m thick] was a light grey-brown clayey silt.
- 5.3 Further to the south, a pair of linear ditches crossed the trench on a roughly north-west / south-east orientation, cutting through glacial subsoil [101]. The northernmost of these ditches [F103: 1.34m wide, 0.43m deep] had moderate to

steeply-sloping sides which met at a smooth, pointed base (Figure 4). It was filled with a light yellow-brown firm clayey silt [104]. To the south, ditch [F105: 1.9m wide, 0.35m deep] lay on a slightly different alignment and displayed a very different profile. This ditch had moderate to gently-sloping sides, gradually rounding onto a rounded, smooth base (Figure 5). It was filled with a mid orange-brown stiff silty clay [106] containing occasional medium rounded stone toward the base of the cut.

- 5.4 Both ditches and subsoil deposit [102] were sealed by a layer of ploughsoil [100: 0.3m – 0.4m thick]. This was a layer of moderately compact friable to plastic mid greyish-brown clayey silt which extended across the whole of the trench.

Trench 2

- 5.5 Trench 2 was located to the south of Trench 1, on the east side of the centre of the study site. It measured 30m by 1.8m, and was orientated roughly north-west / south-east. Natural glacial subsoil [101] was exposed across the base of the trench at a depth of between 0.3m and 0.4m. The bases of three plough furrows, aligned east to west, were observed crossing the trench and cutting through deposit [101]. The two northernmost furrows were roughly 0.4m wide and 0.04m deep, with indistinct, eroded edges. The southernmost furrow was rather clearer, extending to a depth of 0.08m (Figure 6). All three furrows were filled with ploughsoil [100], which sealed the whole of the trench. No other archaeological features were identified.

Trench 3

- 5.6 This trench was positioned west of Trench 2, on the west side of the centre of the study area. It measured 30m by 1.8m, and was orientated east-west. Natural glacial subsoil [101] was exposed across the whole of the base of the trench at a depth of 0.3m. This was overlain by ploughsoil [100]. No features were observed, and no finds recovered.

Trench 4

- 5.7 Trench 4 was located in the south-western corner of the study area. It measured 10m by 1.8m and was orientated roughly north-west / south-east. Glacial subsoil [101] was exposed a depth of 0.3m across the whole of the base of the trench. This was again directly overlain by ploughsoil [100], with no features observed and no finds recovered.

6. The palaeoenvironmental evidence

- 6.1 A palaeoenvironmental assessment was carried out on two ditch fills of unknown origin [contexts 104 and 106]. The samples were manually floated and sieved through a 500µm mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification using a Leica MZ7.5 stereomicroscope for waterlogged and charred botanical remains. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classifications follow Preston *et al.* (2002).
- 6.2 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 Environmental Laboratory at Archaeological Services Durham University.

- 6.3 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

- 6.4 The samples comprised small amounts of charcoal, clinker/cinder and coal/coal shale, with a few tiny fragments of fired clay noted in context [104]. The few identifiable charcoal fragments were oak in context [104] and oak and hazel in context [106]. Pre-Quaternary trilete megasporangia, which derive from the coal deposits, were noted in the flots of [104]. The charred plant remains recorded in context [104] were a hazel nutshell, an indeterminate cereal grain, a heather twig and a tuber/rhizome. Plant macrofossils were absent from context [106]. Although a few uncharred fat-hen seeds were noted in [104], the non-waterlogged nature of the site, and the presence of modern roots suggest that these are recent intrusions. The results are presented in Appendix 1 Table A1.2. Material suitable for radiocarbon dating is available for both samples, although the charcoal in context [106] may be too small to return a date.

Discussion

- 6.5 The assessment can provide little information about the age or nature of the features due to the small and undiagnostic nature of the palaeoenvironmental assemblage. The combined presence of a hazel nutshell, heather twig and rhizome/tuber possibly reflects a prehistoric date for ditch [103], although all of these remains can occur on sites of both prehistoric and historic date.

Recommendations

- 6.6 No further analysis is required for the palaeoenvironmental remains due to their low numbers and poor preservation. Radiocarbon dating could establish the date of the features. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.

7. Artefactual evidence

Fired Clay/pottery assessment

Results

- 7.1 The only finds from the site were recovered from environmental sample <1> from context [104]. These comprise 6 very small pieces of fired clay and one small stone (<10mm length) with traces adhering clay, total weight less than 5g. The stone fragment may have been used for tempering (most likely prehistoric) pottery. One of the clay fragments is hard-fired and is therefore likely to be post-medieval or modern. The other five are softer fired. Two are very dark coloured, showing they were produced in a reducing environment. These five pieces may be pottery, probably medieval or earlier, or possibly fired daub. However, no original surfaces survive and the fragments are too small for anything but a tentative identification.

Recommendation

- 7.2 No further work is recommended.

8. The archaeological resource

- 8.1 Two linear ditches were identified in Trench 1. The palaeoenvironmental material and finds from this feature are inconclusive as to their date. Three plough furrows, which may be medieval or post-medieval in date, were identified in Trench 2. No resource was identified in trenches 3 and 4.

9. Impact assessment

- 9.1 The proposed development has the potential to remove the archaeological resource that is on the site.

10. Recommendations

- 10.1 Mitigation work, in the form of archaeological recording, may be required by the planning authority in the vicinity of Trench 1.

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
- 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
- Stace, C, 1997 *New Flora of the British Isles*. Cambridge

Appendix 1: Data tables

Table A1.1: Context data

No	Area	Description
100	Tr1 – Tr4	Ploughsoil
101	Tr1 – Tr4	Natural subsoil
102	Tr1	Subsoil lens
F103	Tr1	Ditch cut
104	Tr1	Fill of [F103]
F105	Tr1	Ditch cut
106	Tr1	Fill of [F105]

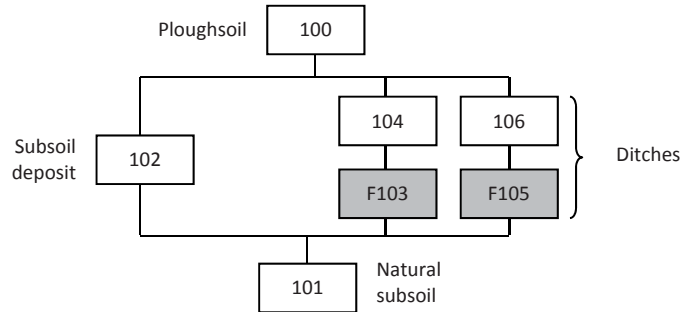
Table A1.2: Data from palaeoenvironmental assessment

Sample	1	2
Context	104	106
Feature	Ditch	Ditch
Feature number	103	105
<i>Material available for radiocarbon dating</i>	✓	(✓)
<i>Volume processed (l)</i>	20	20
<i>Volume of flot (ml)</i>	110	60
<i>Residue contents</i>		
Fired clay	(+)	-
<i>Flot matrix</i>		
Charcoal	(+)	(+)
Clinker / cinder	+	+
Coal / coal shale	++	+
Heather twigs (charred)	(+)	-
Pre-Quaternary trilete megasporangia	(+)	-
Roots (modern)	+	+
Tuber / rhizome (charred)	(+)	-
Uncharred seeds	(+)	-
Wood	(+)	-
<i>Charred remains (total count)</i>		
(c) Cerealia indeterminate grain	1	-
(t) <i>Corylus avellana</i> (Hazel) nutshell frag.	1	-

[c-cultivated; t-tree/shrub. (+): trace; +: rare; ++: occasional; +++: common; ++++: abundant (✓) may be unsuitable for dating due to size or species]

Appendix 2: Stratigraphic matrices

Trench 1



Trenches 2, 3, and 4

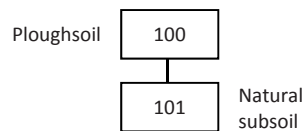


Figure 1: Site location

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 site location

0 1km
scale 1:25 000 for A4 plot





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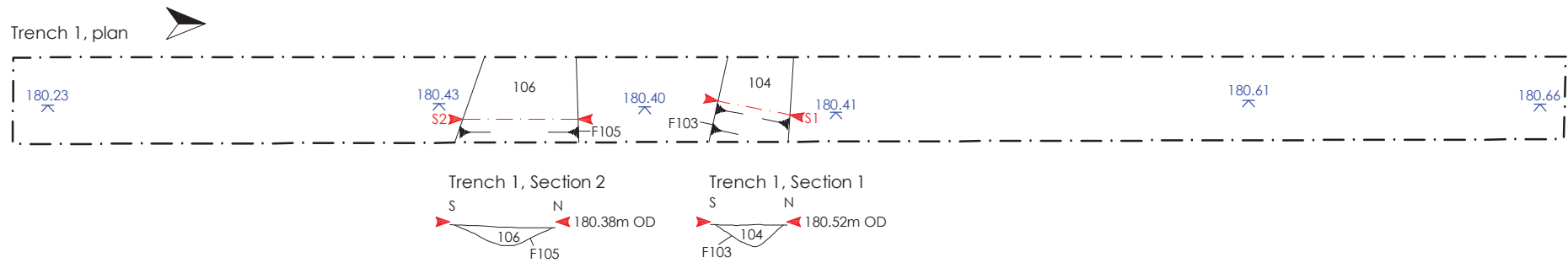
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Figure 2: Trench locations



-  extent of excavation
-  section
-  furrow
-  height m OD





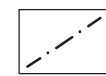
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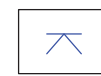
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Figure 3: Trench 1, plan and sections



extent of excavation



height m OD



section



scale 1:125 for A4 plot



Figure 4: Ditch [F103] in Trench 1, facing east



Figure 5: Ditch [F105] in Trench 1, facing east



Figure 6: Trench 2, facing north-west. The line of a plough furrow can be seen centre frame, beneath the scales