

FLTG18



LAND OFF DOWNFIELD LANE, TWYNING, GLOUCESTERSHIRE

ARCHAEOLOGICAL EVALUATION

commissioned by Novus Sustainable Developments

March 2018

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PROJECT TEAM:

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A handwritten signature in black ink, appearing to be 'KB', is written over a horizontal dotted line.

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PROJECT SUMMARY

Headland Archaeology (UK) Ltd undertook a targeted trial trench evaluation at Lane off Downfield Lane, Twyning, Gloucestershire, in order to inform a planning application relating to the residential development of part of the site. Two undated linear archaeological features were recorded, alongside sparse evidence of ridge and furrow cultivation. A deep plough soil was identified across the majority of the site, with dredged river clays and gravels identified to the east, adjacent to the River Avon.

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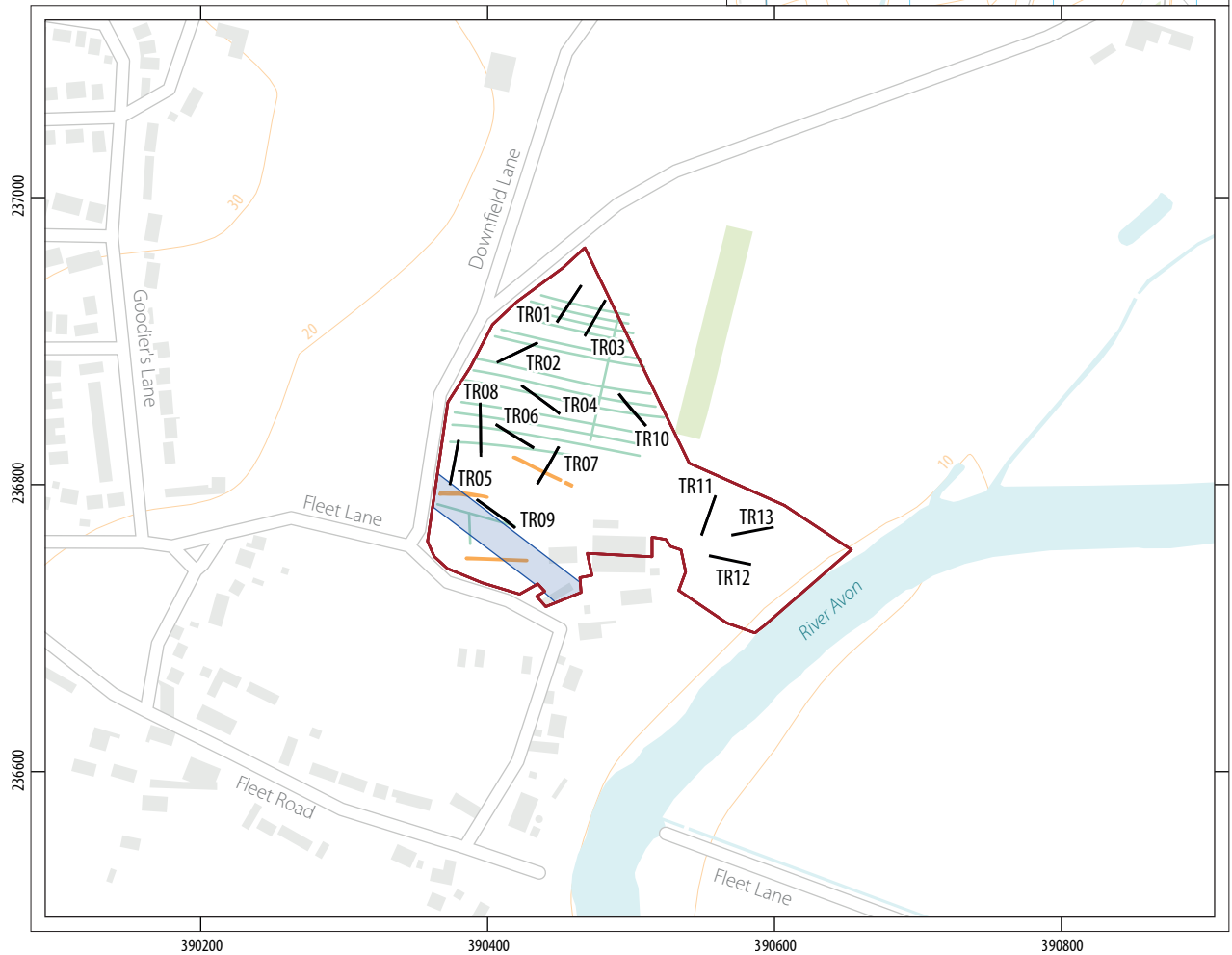
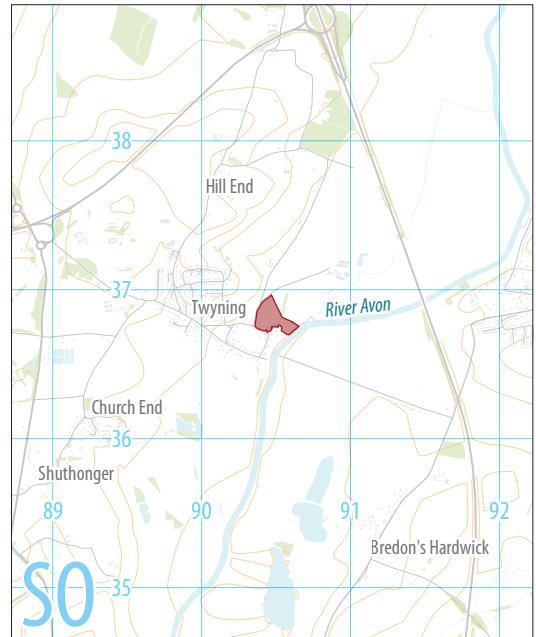
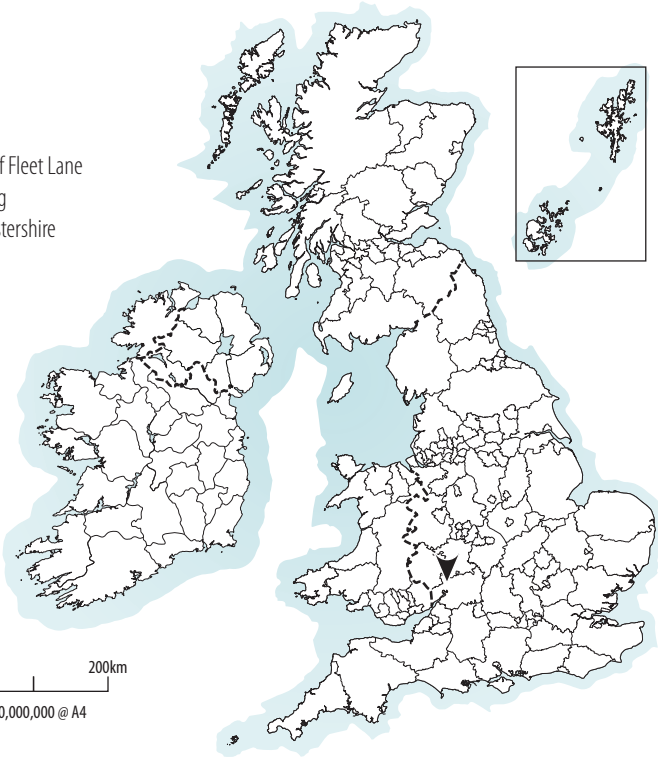
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Land off Fleet Lane
Twyning
Gloucestershire

0 200km
1:10,000,000 @ A4



0 100m
1:5,000 @ A4

- ▭ site boundary
- ▭ overhead buffer
- trench location
- geophysics: possible archaeology
- geophysics: agricultural

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ILLUS 1 Site location

LAND OFF DOWNFIELD LANE, TWYNING, GLOUCESTERSHIRE

ARCHAEOLOGICAL EVALUATION

1 INTRODUCTION

1.1 PLANNING BACKGROUND AND OBJECTIVES

This report presents the results of an archaeological field evaluation on land off Downfield Lane, Twynning, Gloucestershire. The archaeological works were commissioned by Novus Sustainable Developments and were undertaken in accordance with a Written Scheme of Investigation (Bain 2018) agreed in advance with the local authority archaeological advisor. The purpose of the work was to provide sufficient information to determine the archaeological potential of the site.

1.2 SITE LOCATION, DESCRIPTION AND SETTING (ILLUS 1)

The site (Illus 1) comprised a 3.5ha parcel of pasture land to the south-east of Downfield Lane, Twynning (NGR SO 904 368) and included an area, to the south-east, that was not included in the current application area. The land is currently used as pasture land for grazing sheep but has previously been subject to arable farming. The site is bounded by Downfield Lane to the north and west, Fleet Lane and farm buildings to the south, the River Avon to the east and a static caravan park to the north-east.

The bedrock geology of the site consists of Charmouth Mudstone formed in the Jurassic period in shallow seas. Superficial deposits are recorded as part of the Wasperton Sand and Gravel, comprising quaternary sand and gravels of fluvial origin (NERC 2017). The overlying soils are described as loamy (Cranfield University 2018).

1.3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

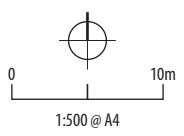
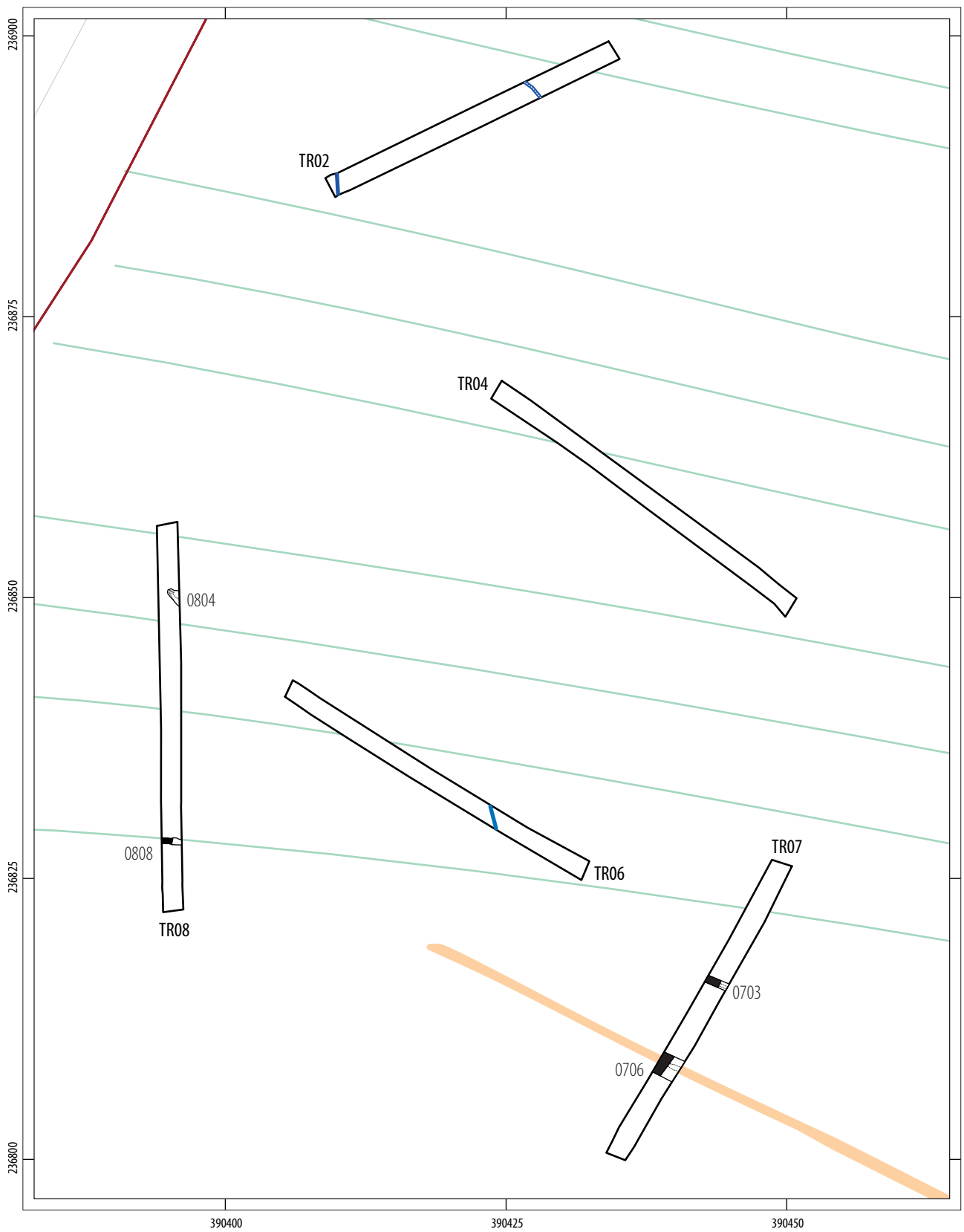
Twynning has origins as a medieval settlement and there are also records of prehistoric and Roman activity in the area (Richards 2018). The village contains a number of listed buildings and there have been some previous archaeological investigations in the area. However, no previous investigation of the application site is known to have taken place.

A geophysical survey was carried out prior to the archaeological evaluation, revealing several anomalies predominantly relating to agricultural land use, including ridge and furrow cultivation. Several possible ditches were identified to the west of the site which were targeted by the evaluation trenches.

A Desk-Based Assessment of the site was conducted shortly before the trial trench evaluation (Richards 2018). This included a map regression and a detailed search of local historic environment records. The maps demonstrated the agricultural history of the site, with the land divided into arable fields. The desk-based assessment also noted that very faint ridge and furrow was visible on a lidar survey of the site, though it appeared much more defined on the opposite side of Downfield Lane.

2 AIMS AND OBJECTIVES

In general, the purpose of the programme of archaeological work was to provide sufficient evidence for a confident prediction of the impact of the proposal by establishing the extent, nature and significance of any heritage assets within the affected area (following the National Planning Policy Framework).



- site boundary
- trench location
- feature

- geophysics: possible archaeology
- geophysics: agricultural
- waterpipe
- water main

ILLUS 2 Site plan showing Trenches 2, 4, 6, 7 and 8



ILLUS 3 Linear feature [0703], looking south-east **ILLUS 4** Linear feature [0706], looking south-east **ILLUS 5** Probable natural feature [0804], looking east

The local and regional research contexts are provided by the Archaeological Research Framework for the South West.

The results of the evaluation will be used to describe the significance of heritage assets potentially affected by the development, allowing the planning authority to make an informed assessment of any potential impacts on the historic environment in line with Paragraph 128 of the NPPF.

The resulting archive (finds and records) will be organised and deposited with the local museum to facilitate access for future research and interpretation for public benefit.

3 METHOD

The fieldwork was conducted in accordance with the WSI and Method Statement and with the following documents:

- › Chartered Institute for Archaeologists Code of Conduct (Cifa 2014a)
- › Standard and Guidance for Archaeological Field Evaluations (Cifa 2014b)

The original evaluation trench plan was adjusted due to avoid live services noted by the landowner and identified during the evaluation. Trenches 04 and 10 were rotated to avoid a water main identified as running east-west across the site in Trench 02. Trench 03 was moved to avoid a sewer pipe that was identified as a non-archaeological

linear anomaly on geophysics and from information provided by the landowner as running north-south. The final evaluation comprised the excavation of thirteen trenches, each measuring 30m long x 1.8m wide.

The evaluation trenches were excavated under archaeological supervision, with the topsoil and subsoil being removed by machine and excavation terminating at the uppermost significant archaeological horizon or when geological deposits were encountered.

The stratigraphic sequence was recorded in full in each of the trenches, even where no archaeological deposits were identified.

All recording followed standard archaeological guidelines as set out by the Chartered Institute for Archaeologists (Cifa). The recorded contexts were assigned unique numbers and recording was undertaken on Headland Archaeology pro forma trench and context record sheets. Digital photographic images and black and white 35mm film photographs were taken of all trenches with a graduated metric scale clearly visible. Digital surveying was undertaken using a Trimble dGPS system.

Fieldwork was undertaken between the 30th January and 2nd February 2018.

4 RESULTS

A full trench and context register is included in Appendix 1. A plan of the excavated trenches can be found on Illus 1.



ILLUS 6 Trench 12 showing trench conditions to the east of the site

4.1 GENERAL SITE STRATIGRAPHY

Geological deposits varied across the site. Dark brownish red sands and gravels were generally present at a depth of around 0.90m below ground level (BGL) on the western half of the site.

To the east, alluvial gravels and clays continued to approximately 1.40m BGL, above Charmouth mudstone formation blue-grey clays.

Trench 09 to the southwest of the site contained poorly draining dark grey clays to a depth of 1.10m BGL at its western end, with dark red sands and gravels appearing approximately 1.00m BGL to the east. This differing geology is possibly the cause of geophysical anomalies reported in the survey.

Trench 06 was targeted on probable geological noise to the centre of the site. This trench contained gravel deposits that were more dense than surrounding trenches, which was likely reflected in the geophysical survey.

Trenches 01– 08 and 10, demonstrated a deep plough soil between 0.20 and 0.60m BGL with a dark reddish-brown subsoil overlain by mid-greyish-brown, silt-sand topsoil. There was a diffuse border between the strata, likely due to agricultural ploughing. Occasional small-medium sub-rounded stones were present within the deposits.

4.2 TRENCHES CONTAINING POSSIBLE ARCHAEOLOGICAL FEATURES (ILLUS 2)

Three probable linear features were recorded across the site; ditch [0703], ditch [0706] and ditch [0808].

Ditches [0703] in Trench 07 (0.70m wide x 0.30m deep) and [0808] in Trench 08 (appx.1.00m wide x 0.50m deep) both had a similar, roughly north-west to south-east alignment and form and were most likely the same feature (Illus 3). The alignment of the feature, leading to the adjacent pond, to the south-east, strongly suggested that it represented a field drainage ditch.

The larger ditch, [0706] in Trench 7 (2.20m wide x 1.33m deep), was in the approximate location of a possible archaeological anomaly identified on the geophysical survey. This ditch was roughly coincident with the position of a field division noted on the Twyning Tithe map (Richards 2018), and thus likely represented a ditch defining this field boundary (Illus 4). The continuation of this ditch was not, however, visible in Trench 08 to the west

A fourth feature, [0804] (0.74m wide x 0.55+ deep), was recorded as a possible ditch, terminating at the centre of Trench 08, with very high levels of bioturbation and surrounding disturbance (Illus 5). Though its form was roughly linear, the feature was highly irregular, with an undulating base and sides. It is likely that this feature is of natural

origin, due to its ill-defined shape and the similarity of associated deposits to patches of natural geology elsewhere across the site.

Trenches 02, 03, 05 and 08 contained slight evidence of ridge and furrow cultivation. The furrows that were identified were very shallow; ranging from 0.05m to 0.15m in depth, with fairly irregular concave bases.

The remaining trenches were void of archaeological features, but the large amount of redeposited alluvial material in Trenches 12 and 13, to the east of the site, is worth noting and is likely the result of dredging practices in the adjacent River Avon. The waterlogging of these deposits caused instability during the excavation of these trenches, with groundwater flooding and trench edge collapse (Illus 6). It was deemed unsafe to enter these trenches, but a sondage to the north-eastern end of Trench 12 was attempted and revealed underlying Charmouth Mudstone at approximately 1.40m BGL.

5 DISCUSSION

A small linear feature, aligned east-west, was identified across two trenches, continuing towards a pond near the centre of site. The feature is likely a modern field drainage ditch. A larger ditch on a similar alignment appeared to relate to a former field boundary, visible on the Twyning Tithe map (Richards 2018). A further linear feature was tested but was interpreted as being of probable natural origin. A linear feature aligned roughly northeast-southwest, identified through geophysics as of probable agricultural origin was confirmed as the line of a sewer. The remainder of the linear anomalies identified by the geophysical survey were confirmed as faint traces of the remains of ridge and furrow cultivation, concentrated toward the western side of the site. The portion of the site outwith the current application area was characterised by relatively deep deposits of material, thought to derive from the dredging of the River Avon. No other archaeological deposits, finds or features were identified during the field evaluation.

6 REFERENCES

- Chartered Institute for Archaeologists (CIfA) 2014a *Code of Conduct* [online document] available from www.archaeologist.net/site/default/files/CodesofConduct.pdf accessed 29 January 2018
- Chartered Institute for Archaeologists (CIfA) 2014b *Standard and guidance for archaeological field evaluation* [online document] available from www.archaeologists.net/sites/default/files/CifAS&GFieldevaluation_1.pdf accessed 29 January 2018
- Bain K 2018 *Land off Fleet Lane, Twyning, Gloucestershire. Written Scheme of Investigation for Archaeological Evaluation* [unpublished client report] Headland Archaeology (Ref: FLTG18)
- Richards J 2018 *Land off Downfield Lane, Twyning, Gloucestershire: Archaeological desk based assessment* [unpublished client report] Headland Archaeology (Ref: FLTG18)
- Natural Environment Research Council (NERC) 2018 *British Geological Survey* [online] from www.bgs.ac.uk/ accessed 30 January 2018

7 APPENDICES

APPENDIX 1 TRENCH REGISTER

TR01	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	1.00	1.20
Context	Description			DBGL (m)
0101	Plough/topsoil – mid greyish brown silty-sand			0 – 0.60
0102	Subsoil – dark reddish brown silty-sand			0.60–1.20
0103	Natural- Dark red sandy-clay			1.20+
Summary	NW of site, aligned N-S. Signs of burning/ charcoal in small patch of rooting channels in upper subsoil – likely relating to modern activity. No archaeological features.			

TR02	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	0.90	1.00
Context	Description			DBGL (m)
0201	Plough/topsoil – mid greyish brown silty-sand			0 – 0.22
0202	Subsoil – dark reddish brown silty-sand			0.22–0.90
0203	Natural- Dark red sands and gravels			0.90+
Summary	NW of site, aligned NE-SW. Very minor signs of possible ridge & furrow visible in section, with frequent bioturbation. High pressure water pipe identified to western end of trench. No other archaeology.			

TR03	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	0.90	0.95
Context	Description			DBGL (m)
0301	Plough/topsoil – mid greyish brown silty-sand			0 – 0.50
0302	Subsoil – dark reddish brown silty-sand			0.50–0.90
0303	Natural- Dark red silty-sand			0.90+
Summary	NW of site, aligned N-S. Very slight signs of possible ridge and furrow visible in section. No other archaeology. Several natural features tested – likely tree throws.			

TR04	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	1.00	1.20
Context	Description			DBGL (m)
0401	Plough/topsoil – mid greyish brown silty-sand			0 – 0.60
0402	Subsoil – dark reddish brown silty-sand			0.60–0.90
0403	Natural- Dark red sands and gravels with light brownish-red silty-sand patches			0.90+
Summary	Centre west of site, aligned NW-SE. No archaeology.			

TR05	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	0.75	0.97
Context	Description			DBGL (m)
0501	Plough/topsoil – mid greyish brown silty-sand			0 – 0.50
0502	Subsoil – dark reddish brown silty-sand			0.50–0.70
0503	Natural- Dark red Sandy-Clay			0.70+
Summary	SW of site, aligned N-S. Possible signs of ridge & furrow in section. No other archaeological features.			

TR06	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	0.85	0.90
Context	Description			DBGL (m)
0601	Plough/topsoil – mid greyish brown silty-sand			0 – 0.50
0602	Subsoil – dark reddish brown silty-sand			0.50–0.80
0603	Natural- Dark red sands and gravels			0.80+
Summary	Towards the centre west of site, aligned NW-SE. No archaeology. Dense gravel patches present across the trench are likely the cause of noise visible on geophysics report. A disused water feeder pipe was located towards the centre of the trench.			

TR07	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	0.65	0.75
Context	Description			DBGL (m)
0700	Plough/topsoil – mid greyish brown silty sand			0 – 0.30
0701	Subsoil – dark reddish brown silty sand			0.30–0.60
0702	Natural- Dark red Sandy-Clay			0.60+
0703	Small ditch running NE-SW across trench 07			0.60–0.90
0704	Secondary fill of 0703 – mid greyish brown silty-clay			0.60–0.90
0705	Primary fill of 0703 – Dark reddish-brown clay-silt			0.60–0.85

0706 Large ditch running NE-SW across trench 07 0.60–1.33

0707 Fill of ditch 0706 0.60–1.33

Summary Centre west of site, next to triangular shaped pond. Aligned NE-SW. This trench contained two ditches, the larger of which was targeted on a geophysical anomaly. The smaller ditch is likely a drainage ditch going towards the pond, and is possible the same as ditch 0808. Larger ditch is possibly the field boundary represented in the Tithe map noted in the Desk Based Assessment (Richards 2018).

TR08	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	0.90	1.09
Context	Description			DBGL (m)

0801 Plough/topsoil – mid greyish brown silty sand 0 – 0.30

0802 Subsoil – dark reddish brown silty sand 0.30–0.75

0803 Natural- Dark Red Clayey sand 0.75+

0804 Cut of natural feature/possible disturbed terminus 1.00–1.35

0805 Fill of 0804 – mid greyish brown/reddish brown – diffuse with subsoil. 1.00–1.35

0806 Spread to southern side of [0804] – mid reddish-brown clay-sand 0.70–1.00

0807 Spread related to 0806 – mid reddish-brown silty clay sand – diffuse border 0.70–1.00

0808 Ditch in southern end of trench 0.55–1.09

0809 Fill of ditch 0808 – mid greyish brown silty-sand/ clayey-sand – reddish-brown near base. 0.55–1.09

Summary One linear feature to the south of the trench – likely relates to ditch 0703 as they are roughly the same alignment, size and shape. No finds were recovered to date the ditch. Several natural features were explored in this trench and deemed to be tree throws and periglacial channels. One feature, 0804, was recorded as a possible ditch terminus with very high levels of bioturbation/ disturbance. It is also possible that this is a natural feature, due to its irregular and ill-defined shape and the sterility of its associated deposits.

TR09	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	1.00	1.00
Context	Description			DBGL (m)

0901 Plough/topsoil – mid greyish brown silty-sand 0 – 0.45

0902 Subsoil – dark reddish brown silty-sand 0.45–0.85

0903 Mid-light grey silty-clay with dark grey patches – diffuse borders 0.45–0.90

0904 Natural- Dark reddish-brown gravel/clay 0.85+

0905 Natural mid-grey clay with mottled orange-yellow clay patches – diffuse borders 0.90+

Summary Trench south-west of the site, aligned NW-SE. Trench was targeted on geophysical anomalies to the western end. No archaeological features were identified, but a differing subsoil/ natural at the western end may have caused these survey results.

TR10	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	0.90	1.00
Context	Description			DBGL (m)

1001 Plough/topsoil – mid greyish brown silty-sand 0 – 0.45

1002 Subsoil – dark reddish brown silty sand 0.45–0.85

1003 Natural- light reddish brown silty-sand 0.85+

Summary Centre-north of site, aligned NW-SE. No archaeology and no natural features.

TR11	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	0.60	0.70
Context	Description			DBGL (m)

1101 Plough/topsoil – mid greyish brown silty sand 0 – 0.65

1102 Natural- Dark orange-brown gravel. Well sorted gravel pebbles. 0.65+

Summary Centre-east of site, aligned NE-SW. No archaeology. Several tree throws - land owner mentioned that this area used to hold an orchard, so possibly related. Natural geology here was the shallowest of all trenches.

TR12	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	1.00	1.45
Context	Description			DBGL (m)
1201	Plough/topsoil – mid-dark greyish brown clayey-silt – diffuse borders			0 – 0.30
1202	Dark grey-blue clay – diffuse borders (westernmost end of trench)			0.30–1.10
1203	Alluvial mid-orange gravel material – possibly redeposited/ levelled. Very waterlogged. Middle – eastern end of trench.			0.30–1.40
1204	Mid blue-grey clay – Charmouth mudstone formation natural geology			1.40+
Summary	East of site, aligned NW-SE. No archaeology visible, though darker grey material at western end could be a sign that pond was either dredged or used to be larger. Gravels and clays are likely redeposited alluvial material from adjacent River Avon, overlaying Charmouth mudstone formation geology. Very unstable trench edges during excavation, and immediate trench flooding – it was deemed unsafe to enter the trench for recording.			

TR13	L (m)	W (m)	Min. D (m)	Max. D (m)
	30	1.80	0.90	1.20
Context	Description			DBGL (m)
1301	Topsoil – mid greyish brown silty-clay			0 – 0.30
1302	Redeposited river gravels mottled with dark grey clays – very waterlogged.			0.30–1.20
1303	Alluvial dark blue-grey clays.			1.20+
Summary	East of site, aligned NE-SW. Gravels and clays are likely redeposited alluvial material from adjacent River Avon. Very unstable trench edges during excavation, and immediate trench flooding – it was deemed unsafe to enter the trench for recording.			



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