

HBTS19



HINKLEY POINT C CONNECTION PROJECT – ‘BRIDGWATER T’

ARCHAEOLOGICAL WATCHING BRIEF DURING GROUND
INVESTIGATION WORKS

commissioned by LSTC

September 2019

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PROJECT INFO:

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PROJECT SUMMARY

Headland Archaeology (UK) Ltd was commissioned by LSTC, to monitor the excavation of seven trial pits and a bore hole, undertaken as part of the Hinkley Point C Connection Project within the 'Bridgewater T' route (Illus 1).

The site resides between two Deserted Medieval Villages, Crook located to the north and Horsey to the immediate south.

No archaeological materials or features were recorded during monitoring works. Extant earthworks were noted during the excavation of TP06 and TP07, indicative of land drainage and agricultural practices potentially related to the adjacent Deserted Medieval Village.

Alluvial deposits were identified within the borehole, with an undated black peat deposit identified at a depth of 11.85m bgl.

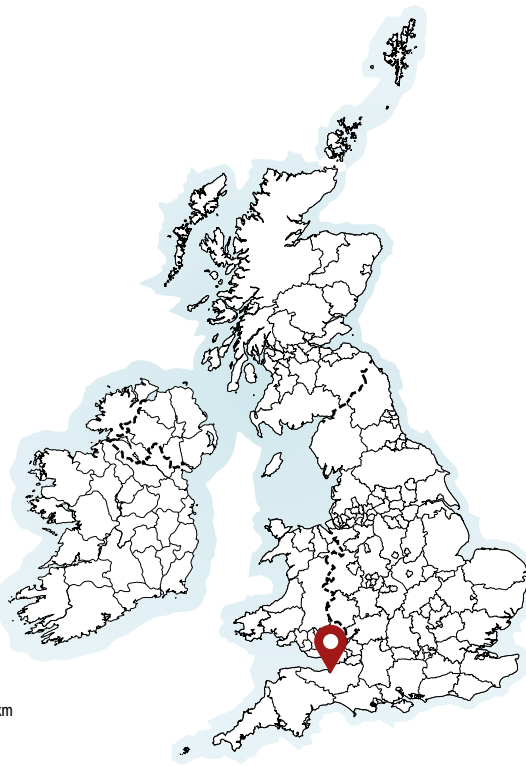
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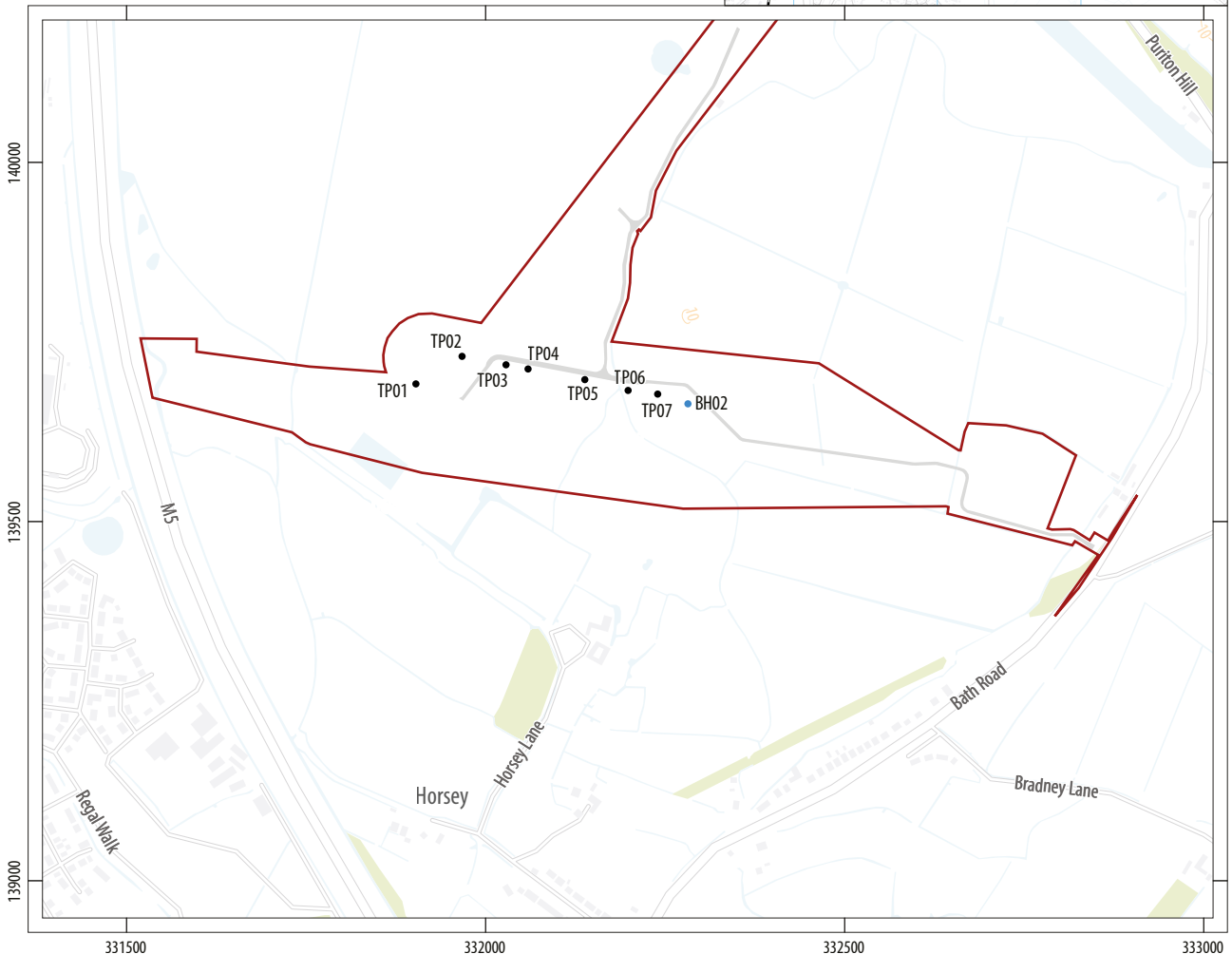
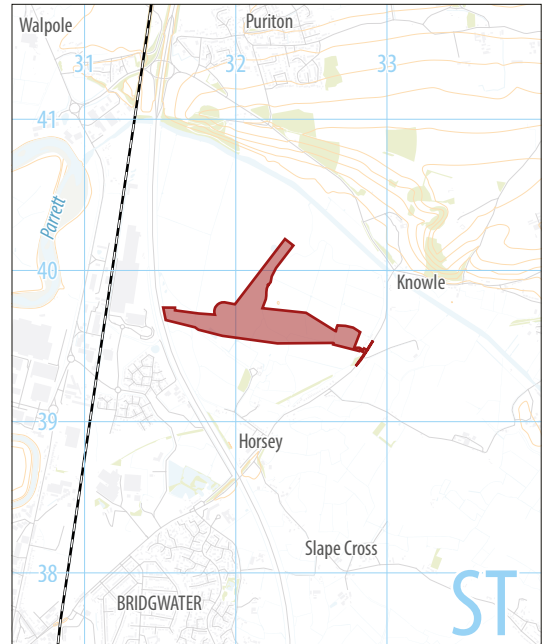
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Hinkley Bridgwater T
 Bridgwater
 Somerset



0 200km
 1:12,500,000 @ A4



0 200m
 1:10,000 @ A4

- development boundary
- proposed haul road
- trial pit
- borehole



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1 INTRODUCTION

Headland archaeology (UK) Ltd was commissioned by LSTC to monitor the excavation of seven trial pits and a single borehole spaced at approximately 100m intervals along the course of the underground cable route which forms Stage 4 of the Hinkley Point C Connection Project, within the ‘Bridgewater T route’. The work was undertaken in order to determine the geotechnical properties of the ground in key locations.

A Detailed Archaeological Method Statement (Craddock-Bennett 2019), was produced to define the scope and operation of this monitoring to operate in conjunction with the site wide archaeological Written Scheme of Investigation (National Grid 2015).

The Detailed Archaeological Method Statement was submitted as an addendum to the Hinkley Point C Connection Project Archaeological Written Scheme of Investigation (National Grid 2015). It specified the methodology for the monitoring and recording of the ground investigation trial pits and boreholes; to be excavated prior to commencement of the development permitted by a Development Consent Order. The method statement was submitted to National Grid for approval prior to the commencement of works.

1.1 SITE DESCRIPTION

The site was located within the ‘Bridgewater T’ route in the Horsey Levels north of the village of Horsey (centred on NGR ST 3211 3968).

The investigation area is broadly bounded by the M5 motorway to the west, A39 (Bath road) to the south and east and the A39 (Puriton Hill) to the north.

The site was on level ground at 6–7m AOD – a flood plain of the River Parrett. It comprised two agricultural fields, sub-divided by a mature hedge line and drainage ditch orientated north to south. The easterly field was under pasture and the westerly field contained crop.

The bedrock geology comprises Mudstone and Halite-stone of the Mercian Mudstone group with superficial deposits listed as Tidal Flat Deposits - Clay, Silt and Sand (NERC), classified as Soilscape 21; a loamy and clayey soil of coastal flats with naturally high groundwater (Cranfield University 2017).

1.2 ARCHAEOLOGICAL BACKGROUND

The archaeological background is defined by Environmental Statement; Historic Environment Historic Environment Appendix 11A Part 1 (Desk-based assessment) and Historic Environment Appendix 11E (Geoarchaeological Desk-Based Assessment Report and Field Survey). The following section is a summary based upon those accounts.

The site lies between two Deserted Medieval Villages, on an area (AR20), containing earthworks and cropmarks that may be associated with cultivation between the settlements. Previously excavated archaeological evaluation trenches at the west of this area did not reveal any buried archaeological remains. Horsey Deserted Medieval Village, a scheduled monument (SM45), containing the remains of a chapel (AR21), lies c 120m to the south, and Crook Deserted Medieval Village (AR23), lies c 80m to the north on a natural east to west ridge of higher ground.

Previous geophysical survey did not identify any anomalies that appear to be of an archaeological nature within the site.



ILLUS 2 Shot of BH02; Stratified peat deposit (0912)

2 METHOD

Archaeological monitoring was undertaken between 15th–17th July and 6th–7th August 2019.

The trial pits and the bore hole location were set out by the client (LSTC) and marked out on site prior to any intrusive groundworks taking place.

All recording followed the ClFA standard and guidance for an archaeological watching brief (ClFA 2014b) and was carried out on pre-printed Headland Archaeology pro-forma recording sheets. All deposits encountered were given a unique number and were recorded along with their depth below ground level (BGL). Sections and general views of each trial pit were photographed on 35mm black and white film with a graduated metric scale and supplemented by digital photographs.

2.1 TRIAL PITS

The trial pits were excavated by a JCB mechanical excavator fitted with a toothless grading bucket. Six of the trial pits were excavated to a depth of 1m bgl with the remaining trial pit to a depth of 2m bgl.

The topsoil was removed and cast to the side of the excavation, stored separately from the underlying subsoils. All excavation was monitored by the attending archaeologist, in order to identify any potential archaeological materials or features.

2.2 BORE HOLE

A trial hole measuring 0.30m in diameter and 1.20m deep was hand dug prior to the mechanical auger being moved into position, after which cores were retrieved and placed into boxes. The cores were exposed on site with clear measurements marked to support recording of different deposits. Several samples were retained by the Ground Investigation contractors. These samples were within sealed sleeves and as a result the interface between some deposits could not be accurately recorded (Illus 2).

3 RESULTS

A total of seven trial pits and one bore hole were monitored in order to record any archaeological remains that could potentially be disturbed and the depth, nature and stratigraphy of all exposed deposits. Descriptions of individual deposits within each trial pit are presented in Appendix 1a, and those of the bore hole in Appendix 1b.

3.1 EAST FIELD (ILLUS 3)

Two trial pits (TP06, TP07) and a borehole (BH02) were situated in the eastern field.

TP06 was excavated to a depth of 2.00m bgl, measuring approximately 5.00m in length and 3.80m wide. The geological substrate (0603) comprised medium grey/brown alluvial clays with frequent flecks and striations of iron panning. This was reached at a depth of 0.52m bgl, sealed by agricultural soils comprised of medium yellow/brown silty clay subsoil (0602) and medium grey/brown silty clay plough-soil (0601) (Illus 4).

TP07 was located on a ridge, defining the edge of a plateau/platform (Illus 3). This was excavated to a depth of 1m bgl, measuring 3.00m long and 1.80m wide. The geological substrate (0703) was reached at a depth of 0.50m bgl and comprised grey/brown compact alluvial clays. This was sealed by a yellow/brown subsoil (0702) and in turn grey/brown compacted silty clay plough-soil with occasional flecks of chalk (0701).

BH02 was located centrally within the eastern field, reaching a maximum depth of 18.80m bgl. A sequence of alluvial deposits (0914, 0915, 0916, 0917, 0918, 0919 and 0920) was sealed by a compact black peat deposit (0912) measuring approximately 0.30m in depth (Illus 2). This was in turn sealed by 11.50m of alluvial deposits (0902, 0903, 0904, 0905, 0906, 0907, 0908, 0910, 0911) and agricultural soils consisting of a light grey/brown loam plough-soil (0901) measuring a depth of 0.35m. No subsoil was identified at this location.

3.2 WEST FIELD

Five test pits (TP01, TP02, TP03, TP04, and TP05) were situated in this field. All trial pits were excavated to a depth of 1m bgl and measured between 2.80–3.00m long and 1.60m wide.

The geological substrate was exposed between 0.46–0.64m bgl, comprising of light grey/brown silty clay mudstone. This was sealed by agricultural soils comprising a medium grey/brown clay subsoil and dark grey/brown clayey loam plough-soil (Illus 5).

No archaeological features or materials were identified during excavation of the trial pits.

3



ILLUS 3 General shot of east field, looking north **ILLUS 4** Representative shot of TP06, looking west **ILLUS 5** Representative shot of TP04, looking east

4 CONCLUSION

Extant earthworks forming sub-rectangular field patterns, demarcating a network of drainage channels, were visible within the eastern field. They are likely to be associated with the broader agricultural landscape of either/or both Deserted Medieval Villages of Crook and Horsey. TP07 was situated on a ridge bounding a plateau/platform of land rising from the flood plain.

BH02 had identified deep alluvial sediments and compressed black peat deposit (0912) and potentially related to buried reed bed or wetland.

In the western field, no evidence of archaeological remains was encountered, and it is likely any potential earthworks that had once been present had subsequently been levelled through ploughing.

5 REFERENCES

- Chartered Institute for Archaeologists (CIfA) 2014a *Code of Conduct* (Reading) <http://http.www.archaeologists.net/sites/default/files/CodesofConduct.pdf> accessed 19 July 2019
- Chartered Institute for Archaeologists (CIfA) 2014b *Standard and guidance for an archaeological watching brief* (Reading) http://www.archaeologists.net/sites/default/files/CifAS&GWatchingbrief_2.pdf accessed 19 July 2019
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National Grid 2014c *Historic Environment Gazetteer: Hinkley Point C Connection Project*. Application Reference EN020001

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6 APPENDICES

APPENDIX 1 CONTEXT REGISTER

Appendix 1.1 Trial pit context register

*DBGL = Depth Below Ground Level

TP01	ORIENTATION	L (M)	W (M)	AV. D (M)
	E-W	3.00	1.60	1.00
CONTEXT	DESCRIPTION	D BGL (M)		
0101	Topsoil- Dark grey brown clayey loam with few sub-angular shale and quartz (0-0.05m). Good plough-soil.	0-0.32		
0102	Subsoil- Medium grey brown silty clay mudstone.	0.32-0.56		
0103	Natural- Light grey brown silty clay mudstone.	N/A		

Summary: Located central to arable field containing root vegetables (sugar beet). Test pit exposed agricultural plough-soil and subsoil above natural mudstone. No archaeological materials or features encountered.

TP02	ORIENTATION	L (M)	W (M)	AV. D (M)
	NW-SE	2.80	1.60	1.00
CONTEXT	DESCRIPTION	D BGL (M)		
0201	Topsoil- Dark grey brown clayey loam. Good plough-soil.	0-0.34		
0202	Subsoil- Medium grey brown silty clay mudstone.	0.34-0.64		
0203	Natural- Light grey brown silty clay, mudstone.	0.64-1.00		

Summary: Located central to arable field containing root vegetables (sugar beet). Test pit exposed agricultural plough-soil and subsoil above natural mudstone. No archaeological materials or features encountered.

TP03	ORIENTATION	L (M)	W (M)	AV. D (M)
	N-S	2.80	1.60	1.00
CONTEXT	DESCRIPTION	D BGL (M)		
0301	Topsoil- Dark grey brown clayey loam with sub-angular shale and quartz (0-0.03m). Good plough-soil.	0-0.34		
0302	Subsoil- Medium grey brown silty clay 'mudstone'. Diffused interface.	0.34-0.52		
0303	Natural- Light grey brown silty clay mudstone with flecks of shale and quartz (0-0.02m).	0.52-1.00		

Summary: Located central to arable field containing root vegetables (sugar beet). Test pit exposed agricultural plough-soil and subsoil above natural mudstone. No archaeological materials or features encountered.

TP04	ORIENTATION	L (M)	W (M)	AV. D (M)
	N-S	3m	1.60	1.00
CONTEXT	DESCRIPTION	D BGL (M)		
0401	Topsoil- Dark grey brown clayey loam with sub-rounded and sub-angular shale and quartz (0-0.04m). Good plough-soil.	0-0.32		
0402	Subsoil- Medium grey brown silty clay. Diffused interface.	0.30-0.46		
0403	Natural- Light grey brown silty clay, mudstone with sub-angular shale and quartz (0-0.03m)	0.46-1.00		

Summary: Located central to arable field containing root vegetable (sugar beet). Test pit exposed agricultural plough-soil and subsoil above natural mudstone. No archaeological materials or features encountered.

TP05	ORIENTATION	L (M)	W (M)	AV. D (M)
	NE-SW	3.00	1.60	1.00
CONTEXT	DESCRIPTION	D BGL (M)		
0501	Topsoil- Dark grey brown clayey loam. Good plough-soil.	0-0.30		
0502	Subsoil- Medium grey brown compacted silty clay mudstone with flecks of chalk.	0.30-0.55		
0503	Natural- Light grey brown silty clay mudstone with flecks of chalk.	0.55-1.00		

Summary: Located to eastern extent of arable field containing root vegetables (sugar beet), adjacent to mature hedge line. Test pit exposed agricultural plough-soil and subsoil above natural mudstone. No archaeological materials or features encountered.

TP06	ORIENTATION	L (M)	W (M)	AV. D (M)
	N-S	5.00	3.80	2.00
CONTEXT	DESCRIPTION	D BGL (M)		
0601	Topsoil- Medium grey brown compacted silty clay mudstone with few occasional flecks of chalk and iron stone (0-0.03m).	0-0.30		
0602	Subsoil- Medium yellow brown compact friable silty clay mudstone.	0.30-0.52		
0603	Alluvium- Medium grey brown compact alluvial clays with frequent iron panning.	0.52-2.00		

Summary: Located to the western extent of pasture field, adjacent to mature hedge-line. Test pit excavated through plateau/platform, exposed agricultural plough-soil and subsoil above alluvial clays. No archaeological materials or features encountered.

TP07	ORIENTATION	L (M)	W (M)	AV. D (M)
	N-S	3.00	1.80	1.00
CONTEXT	DESCRIPTION	D BGL (M)		
0701	Topsoil- Medium grey brown compacted silty clay mudstone with few occasional flecks of chalk (0-0.02m). Good plough-soil.	0-0.30		
0702	Subsoil- Medium yellow brown compact clay mudstone. Diffused interface.	0.30-0.50		
0703	Alluvium- Medium grey brown compact alluvial clays.	N/A		

Summary: Located to the western extent of pasture field, within network of drainage channels and earthworks.

Test pit excavated through an earthwork associated with medieval cultivational activity and land drainage. Agricultural plough-soil and subsoil exposed above alluvial clays.

No archaeological materials or features encountered.

Appendix 1.2 Bore hole context register

*DBGL = Depth Below Ground Level

BH02	ORIENTATION	D (M)	W (M)	TOTAL D (M)
	N/A	<0.30	N/A	18.80
CONTEXT	DESCRIPTION	D BGL (M)		
01	Topsoil – light greyish brown very fine sandy, silty clay. Homogenous, very dry. Moderate fine rooting throughout. No inclusions.	0-0.35		
02	Alluvium – mottled orangey brown and bluish grey fine sandy clay. Very fine grained and homogenous. No inclusions.	0.35-0.90		
03	Alluvium – mid greyish brown clayey silt – slightly mottled. Soft and plastic with occasional small soft manganese.	0.90-2.50		
04	Alluvium – dark grey silty clay. Very soft and homogenous. No inclusions	2.50-2.80		
05	Alluvium – light grey silty clay. Very soft and homogenous. No inclusions.	2.80-3.20		
06	Alluvium – mid grey, mottled with light brown and dark grey silty clay. Very soft. No inclusions.	3.20-5.40		
07	Alluvium – mid grey silty clay. Very soft - homogenous. No inclusions.	5.40-5.80		
08	Alluvium – dark grey – soft - homogenous. No inclusions.	5.80-6.40		
09	Alluvium – mottled mid grey and very dark grey silty clay – soft. No inclusions.	6.40-8.60		
10	Alluvium – mid grey silty clay with occasional bands of fine sandy clay. No inclusions	8.60-9.40		
11	Alluvium – mid grey silty clay. Soft – homogenous. Occasional very small charcoal in lower 0.50m of deposit.	9.40-11.85		
12	Alluvium – peat – compressed – damp.	11.85-12.15		

13	Organic – compressed and stratified sequence of mainly plant macro remains preserved with moist conditions.	12.15-12.25
14	Alluvium – dark grey fine sandy clay – firm and homogenous.	12.25-12.60
15	Natural geology – weathered mudstone. Mid orangey brown silty clay – firm and homogenous. No inclusions.	12.60-13.40
16	Natural geology – weathered mudstone. Mottled mid grey and dark brown gritty, sandy, silty clay. Grey element – clean clay.	13.40-14.75
17	Natural geology – weathered mudstone. Mottled dark brown fine sandy clay with light grey clay. No inclusions.	14.75-15.95
18	Natural geology – weathered mudstone. Compacted mid brown sandy clay. Homogenous with no inclusions.	15.95-16.70
19	Natural geology – weathered mudstone. Compacted dark brown clay – almost granular in appearance and texture when broken. Occasional pale grey clay – soft and clean, in patches. No inclusions.	16.70-18.10
20	Natural geology – weathered mudstone. Mixed/mottled compacted, light-mid grey clay with softer light-mid brown fine sandy clay. No inclusions.	18.10-18.80+

Summary: Located to the eastern extent of pasture field. Borehole exposed a sequence of alluvial deposits below from 0.35m to 11.85m BGL. Peat deposit overlying stratified plant macro remains from 11.85-12.25m BGL. Sequence of weathered Mercian mudstone from 12.25-18.80m+ BGL. No archaeological materials or features encountered.



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