

WBGH/01



GEOTECHNICAL SITE INVESTIGATIONS TO THE WEST OF HEREFORD

ARCHAEOLOGICAL WATCHING BRIEF
HER REF. EHE 80306

commissioned by WSP

September 2017

GEOTECHNICAL SITE INVESTIGATIONS TO THE WEST OF HEREFORD

ARCHAEOLOGICAL WATCHING BRIEF

commissioned by WSP

September 2017

© 2017 by Headland Archaeology (UK) Ltd

This report contains OS data © Crown copyright and database right 2017.

This report adheres to the quality standard of ISO 9001:2008

PROJECT INFO:

HA Job No. **WBGH/01** / HAS No. **1251** / NGR **SO 49200 39400** / Parish **Breinton** / Local Authority **Herefordshire Council** / OASIS Ref. **headland3-293519** / Archive Repository **Hereford Museum**

PROJECT TEAM:

Project Manager **Luke Craddock-Bennett** / Author **Robert Blackburn** / Fieldwork **Chris Sear, Robert Blackburn** / Graphics **Rafael Maya Torcelly**

Approved by **Luke Craddock-Bennett**



Headland Archaeology Midlands & West
Unit 1 | Clearview Court | Twyford Rd | Hereford HR2 6JR
t 01432 364 901
e midlandsandwest@headlandarchaeology.com
w www.headlandarchaeology.com



PROJECT SUMMARY

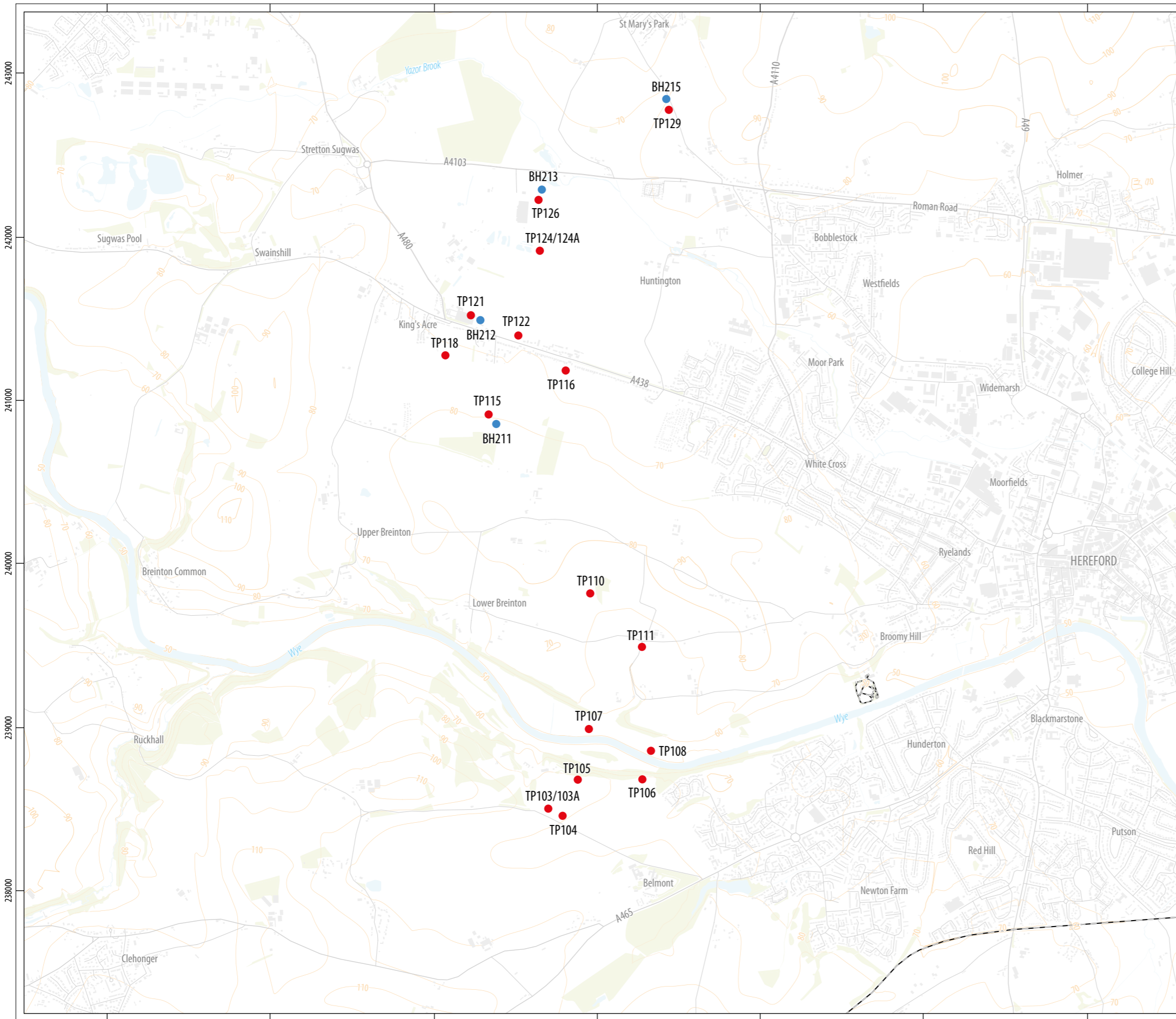
Headland Archaeology (UK) Ltd undertook archaeological monitoring during the excavation of a series of geotechnical test pits and bore-holes on agricultural land to the west of Hereford. The geotechnical survey was undertaken along the potential route of the proposed Hereford bypass. No archaeological finds, features or deposits were identified during the work.

CONTENTS

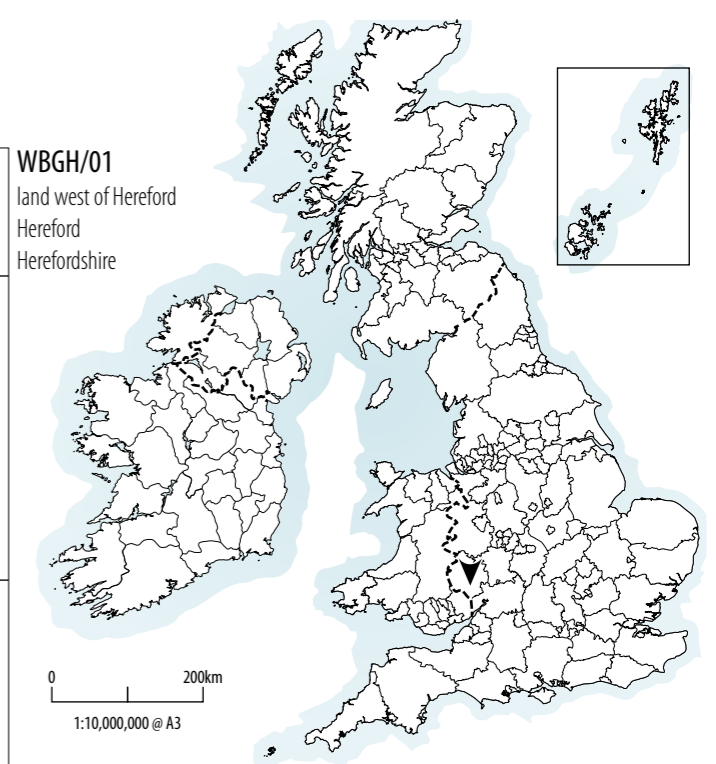
1	INTRODUCTION	1
	1.1 SITE DESCRIPTION	1
	1.2 ARCHAEOLOGICAL BACKGROUND	1
2	METHOD	1
3	RESULTS	2
	3.1 TEST PITS	2
	3.2 BORE-HOLES	2
4	CONCLUSION	3
5	REFERENCES	3
6	APPENDICES	4
	APPENDIX 1 TEST PIT AND BORE-HOLE REGISTER	4

LIST OF ILLUSTRATIONS

ILLUS 1 SITE LOCATION	IX
ILLUS 2 WORKING SHOT SHOWING TOPOGRAPHY	2
ILLUS 3 EAST FACING SECTION OF TP116, SHOWING BELOW GROUND DEPOSITS	3
ILLUS 4 SECTION OF TP106 ON GRASSLAND	3
ILLUS 5 PLAN VIEW OF EXCAVATED BH212	3



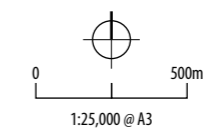
WBGH/01
land west of Hereford
Hereford
Herefordshire



Contains OS data © Crown copyright and database right 2017



**HEADLAND
ARCHAEOLOGY**
MIDLANDS & WEST Unit 1, Clearview Court, Twyford Road
Hereford HR2 6JR
01432 364 901
www.headlandarchaeology.com



● borehole
● trial pit

GEOTECHNICAL SITE INVESTIGATIONS TO THE WEST OF HEREFORD

ARCHAEOLOGICAL WATCHING BRIEF

1 INTRODUCTION

This document reports on the findings of an archaeological Watching Brief during the excavation of geotechnical test pits and bore-holes on farmland to the west of Hereford, conducted by Headland Archaeology from Monday 10th to Friday 21st of July, 2017.

Balfour Beatty are assessing options for the route of a bypass to relieve traffic congestion in Hereford. In order to assess ground conditions, a series of bore-holes and test pits were excavated along a broadly north-south corridor of land immediately to the west of the City of Hereford (Illus 1). Approximately 15 boreholes and 16 test pits were proposed along the route.

Archaeological monitoring was undertaken in accordance with a Written Scheme of Investigation (WSI) prepared by Headland Archaeology (Craddock-Bennett 2017) and agreed with the archaeological advisor to Herefordshire Council, Mr Julian Cotton.

1.1 SITE DESCRIPTION

The proposed road corridor runs west from the A49, just north of Hereford (NGR SO 50564 42971), turning south at the village of Burghill and the area around the Hereford livestock centre on the Roman Road (NGR SO 47666 42253). The course of the road then heads in the direction of Breinton village, crossing Kings Acre road before traversing the major topographic feature of the route, the River Wye (NGR SO 48153 38885). On the south side of the river it runs through the former site of Belmont golf course, and south west around Belmont Abbey, before joining the Abergavenny Road, south of Hereford (NGR SO 47753 37487). North and south of the river the topography is gently undulating agricultural land (Illus 2), apart from the river channel of the Wye.

The solid geology is recorded as Mudstones and siltstones, with superficial geology comprising glacial deposits of sands and gravels (NERC 2017).

1.2 ARCHAEOLOGICAL BACKGROUND

The proposed road corridor passes through a landscape containing heritage assets from multiple periods. An east-west orientated Roman road (A4103) passes through the northern part of the proposed road corridor, with the Roman settlement of Magnis located 3.5km to the west, and Credenhill Iron Age hill fort located 1.5km to the north-west.

The proposed road corridor passes close to Warham house on the north side of the river, and Belmont House located directly across the river. Historically both houses were owned by the same family, with a house existing on the Warham site from at least the 17th century and Belmont House dating to the 18th century. Some degree of landscaping is still visible around the houses which were originally constructed so as to be inter-visible within the landscape. There is a possible Deserted Medieval Village around the area of Breinton and Warham.

2 METHOD

The bore-hole and test pit locations were set out by the client at designated points along the proposed route.

A total of 16 test pits and 12 bore-holes were excavated during the course of the ground investigation works. The excavation of all 16 test pits and four bore-holes was monitored by an archaeologist of ACIFA equivalent experience or higher. Test pits were excavated by



ILLUS 2 Working shot showing topography

a JCB excavator to a maximum depth of 3.5m, or shallower where the natural substrate or bedrock prevented excavation to this depth. Bore-holes were excavated using a percussion rig. Material recovered to the surface during the test pit and bore-hole excavation was visually scanned by the monitoring archaeologist for archaeological remains, and a record maintained of the sequence of deposits. Excavation was stopped in order to check the presence of potential deposits during the excavation of the test pits.

All recording followed *Cifa Standards and guidance* (Cifa 2014a and 2014b). All deposits identified during the test pit excavation were given a unique number, and recorded on pro forma trench record sheets, recording the level at which deposits were encountered below ground level (BGL). Where appropriate, digital photographs were taken of the test pit sections using a 1 metre scale.

3 RESULTS

A full description of the sequence of deposits at each location is provided in Appendix 1. The location of test pits and bore-holes is recorded on Illus 1.

3.1 TEST PITS

The test pits were machine excavated to a depth of between 2.6m (TP115), to 3.7m (TP104, TP118), with the aim of determining the nature of the superficial natural deposits.

The soil profiles showed a marked similarity across the whole of the route. On low lying grass and pasture fields, there was generally a shallow topsoil measuring 0.10m thick composed of a friable silty loam, overlying a friable silty clay subsoil, measuring on average 0.3–0.6m thick, overlying a firm reddish clay substrate (eg TP116 – Illus 4).

The natural geology varied slightly, with mudstone predominant over the majority of the route. Deposits of gravel were identified in the vicinity of Kings Acre Road (TP116 (Illus 3), 118, 121 and 124), and alluvial silts were identified adjacent to the River Wye (TP105 and 108).

In the case of Test pits 103 and 124, additional soakaway Test pits (103a and 124a) were excavated adjacent to the originals in order to ascertain the water holding properties of the deposits (Illus 6).

No archaeological finds, features or deposits suggestive of archaeological activity were identified during the excavation of the test pits.

3.2 BORE-HOLES

All monitored bore-holes were hand dug to a depth of 1.2m. The percussion rig was then put in place and excavation continued down to the bedrock.

Every test pit had a corresponding bore-hole which was excavated down to the solid bedrock/substrate. Twelve were excavated along



ILLUS 3 East facing section of TP116, showing below ground deposits



ILLUS 4 Section of TP106 on grassland **ILLUS 5** Plan view of excavated BH212

the route, four were observed (BH211, BH212 (Illus 5), BH213 and BH215).

The soil profile of the bore-holes corresponded to the adjacent test pits. In the four bore-holes observed, the natural comprised mudstone.

No archaeological finds, features or deposits suggestive of archaeological activity were identified during the excavation of the test pits.

4 CONCLUSION

No archaeological finds, features or deposits have been identified during the monitoring of the ground investigation works on the route of the potential western bypass route. Due to the limited scale of observations made during GI works, it is not possible to entirely rule out the possibility of archaeological deposits at the locations observed, however, it would be expected that dense archaeological activity would be identified if present.

The archaeological monitoring has succeeded in providing a record of the sequence of deposits which will aid the development of future strategies for the assessment of archaeological potential along the course of the proposed bypass route.

5 REFERENCES

- Chartered Institute for Archaeologists (CIfA) 2014a *Code of Conduct* [online document] available from www.archaeologists.net/sites/default/files/CodesofConduct.pdf
- Chartered Institute for Archaeologists (CIfA) 2014b *Standard and guidance for an archaeological watching brief* [online document] available from http://www.archaeologists.net/sites/default/files/CifAS&GWatchingbrief_2.pdf
- Craddock-Bennett L 2017 *Geotechnical site investigations to the west of Hereford: Written Scheme of Investigation for Archaeological Watching Brief* [unpublished client document] Headland Archaeology, Ref. WBGH17/01
- Natural Environment Research Council (NERC) 2017 *British Geological Survey* [online] from www.bgs.ac.uk/

6 APPENDICES

APPENDIX 1 TEST PIT AND BORE-HOLE REGISTER

DBGL = Depth below ground level

TP103		
DIMENSIONS L X W X D (M)		
2.00 X 0.50 X 3.50		
CONTEXT	DESCRIPTION	DBGL (M)
0103-01	Topsoil: brown, soft, loamy sand	0–0.15
0102-02	Subsoil: brown, friable, silty clay	0.15–0.70
0103-03	Firm, reddish brown, sandy clay	0.70–3.50
Summary: Slightly undulating ground surface of former golf course. No archaeology.		

TP104		
DIMENSIONS L X W X D (M)		
2.00 X 0.50 X 3.70		
CONTEXT	DESCRIPTION	DBGL (M)
0104-01	Topsoil: brown, soft, loamy sand	0–0.15
0104-02	Subsoil: brown, friable, silty clay	0.15–0.60
0104-03	Gravel/sand	0.60–1.30
0104-04	Firm, reddish brown sandy clay, occasional large cobbles	1.30–3.70
Summary: Slightly undulating ground of former golf course. No archaeology.		

TP105		
DIMENSIONS L X W X D (M)		
1.20 X 0.50 X 3.40		
CONTEXT	DESCRIPTION	DBGL (M)
0105-01	Topsoil: brown, friable, loamy sand with occasional small stone inclusions	0–0.10
0105-02	Subsoil: brown, friable, silty clay	0.10–0.40
0105-03	Greyish brown, friable, silty clay	0.40–1.20
0105-04	Greyish brown, friable clayey silt	1.20–3.40
Summary: Evidence of alluvial silts at base of trench.		

TP106		
DIMENSIONS L X W X D (M)		
2.00 X 0.50 X 3.50		
CONTEXT	DESCRIPTION	DBGL (M)
0106-01	Topsoil: brown, loamy sand	0–0.20
0106-02	Subsoil: brown, friable, silty loam	0.20–0.70

0106-03 Reddish brown silty clay, firm, occasional fragments of sandstone 0.70–3.50

Summary: Slightly undulating ground of former golf course. No archaeology.

TP107		
DIMENSIONS L X W X D (M)		
2.00 X 0.50 X 3.40		
CONTEXT	DESCRIPTION	DBGL (M)
0107-01	Topsoil: brown, sandy loam, greyish brown, friable	0–0.20
0107-02	Subsoil: brown, friable, silty loam	0.02–0.70
0107-03	Reddish brown silty clay, firm, occasional cobbles	0.00–3.40
Summary: Slightly undulating ground of former golf course. No archaeology.		

TP108		
DIMENSIONS L X W X D (M)		
2.00 X 0.50 X 3.40		
CONTEXT	DESCRIPTION	DBGL (M)
0108-01	Topsoil: brown, friable, silty clay	0–0.20
0108-02	Subsoil: brown, friable, silty loam	0.20–0.70
0108-03	Reddish brown, friable, alluvial deposit	0.70–3.00
0108-04	Reddish brown, loamy sand	3.00–3.40
Summary: Flat ground of river meadow. No archaeology.		

TP110		
DIMENSIONS L X W X D (M)		
1.50 X 0.50 X 3.20		
CONTEXT	DESCRIPTION	DBGL (M)
0110-01	Topsoil: brown, friable, silty clay	0–0.20
0110-02	Subsoil: brown, friable, silty loam	0.20–0.60
0110-03	Reddish brown silty clay, veined, occasional stone	0.60–3.20
Summary: Potato field with crop. No archaeology.		

TP111		
DIMENSIONS L X W X D (M)		
1.20 X 0.50 X 3.40		
CONTEXT	DESCRIPTION	DBGL (M)
0111-01	Topsoil: dark brown, friable, occasional small stone	0–0.10
0111-02	Subsoil: brown, friable, silty clay, common stones	0.10–0.80
0111-03	Reddish brown silty clay, veined, occasional stone	0.80–3.40
Summary: Cornfield. No archaeology.		

TP118

DIMENSIONS L X W X D (M)

2.00 X 0.50 X 3.70

CONTEXT	DESCRIPTION	DBGL (M)
0118-01	Topsoil: brown, soft, silty sand	0–0.15
0118-02	Subsoil: light brown, friable, silty clay	0.15–0.40
0118-03	Very firm, reddish brown silty clay, gravel lenses	0.40–2.50
0118-04	Sandy gravel, loose, large cobbles	2.50–3.70

Summary : Cornfield at base of low hill. No archaeology.

TP121

DIMENSIONS L X W X D (M)

1.21 X 0.50 X 3.40

CONTEXT	DESCRIPTION	DBGL (M)
0121-01	Topsoil: brown, loose, silty loam	0–0.10
0121-02	Subsoil: light brown, friable, sandy clay	0.10–0.40
0121-03	Very firm, reddish brown, silty clay, gravel lenses	0.40–3.40

Summary : Grass paddock surrounded by trees.

TP122

DIMENSIONS L X W X D (M)

3.00 X 0.50 X 3.40

CONTEXT	DESCRIPTION	DBGL (M)
0122-01	Topsoil: dark brown, soft, silty clay	0–0.10
0122-02	Subsoil: mid brown, silty clay, occasional stone, CBM fragment	0.10–0.70
0122-03	Very firm, reddish brown silty clay, common small stone fragments	0.70–3.40

Summary : Cornfield. No archaeology.

TP124

DIMENSIONS L X W X D (M)

3.00 X 0.50 X 3.40

CONTEXT	DESCRIPTION	DBGL (M)
0124-01	Topsoil: dark brown, soft, silty clay. Small roots	0–0.10
0124-02	Subsoil: mid brown, friable, silty clay, occasional stone	0.10–0.40
0124-03	Very firm, reddish brown, stoney, small cobbles	0.40–2.20
0124-04	Sandy gravel, loose gravel, reddish brown, poorly sorted	2.20–3.40

Summary : Cornfield. No archaeology.

TP124A

DIMENSIONS L X W X D (M)

(SOAKAWAY) 3.00 X 0.50 X 2.50

CONTEXT	DESCRIPTION	DBGL (M)
0124-01	Topsoil: dark brown, soft, silty clay. Small roots	0–0.10
0124-02	Subsoil: mid brown, friable, silty clay, occasional stone	0.10–0.40
0124-03	Very firm, reddish brown stoney clay, small cobbles	0.40–2.20
0124-04	Sandy gravel, loose gravel, reddish brown, poorly sorted	2.20–2.50

Summary : Cornfield. No archaeology.

TP126

DIMENSIONS L X W X D (M)

1.20 X 0.50 X 3.40

CONTEXT	DESCRIPTION	DBGL (M)
0126-01	Topsoil: sandy clay, reddish brown	0–0.10
0126-02	Subsoil: mid reddish brown, silty clay	0.10–0.40
0126-03	Very firm, reddish brown stoney clay, occasional cobbles	0.40–3.20

Summary : Long grass. No archaeology.

TP129

DIMENSIONS L X W X D (M)

1.20 X 0.50 X 3.50

CONTEXT	DESCRIPTION	DBGL (M)
0129-01	Topsoil: brown, friable, occasional stone, silty sand	0–0.10
0129-02	Subsoil: reddish brown, friable, silty clay	0.10–0.40
0129-03	Very firm, reddish brown sandy clay, occasional cobble	0.40–3.50

Summary : Cornfield. Undulating fields. No archaeology.

BH211

DIMENSIONS W X D (M)

0.40 X 2.50

CONTEXT	DESCRIPTION	DBGL (M)
0211-01	Topsoil: dark brown, friable, silty clay	0–0.20
0211-02	Subsoil: brown, stoney, reddish brown	0.20–1.10
0211-03	Mudstone	1.10–2.50

Summary : Cornfield. No archaeology.

BH212

DIMENSIONS W X D (M)

0.50 X 7.50

CONTEXT	DESCRIPTION	DBGL (M)
0212-01	Silty loam	0–0.10
0212-02	Sandy clay	0.10–0.40
0212-03	Silty clay	0.40–1.70
0212-04	Silty clay	1.70–2.15
0212-05	Clay gravel	2.15–5.60
0212-06	Sandy clay	5.60–6.10
0212-07	Clay/gravel	6.10–7.50
0212-08	Weathered bedrock/mudstone	7.50 +

Summary : Grass paddock surrounded by trees.

BH213

DIMENSIONS W X D (M)

0.50 X 2.50

CONTEXT	DESCRIPTION	DBGL (M)
0213-01	Topsoil: sandy clay, reddish brown	0–0.10
0213-02	Subsoil: mid reddish brown, silty clay	0.10–0.40
0213-03	Very firm, reddish brown, clay/gravel	0.40–2.50

Summary : Unable to get below 2.50m because of ground compaction.

BH215

DIMENSIONS W X D (M)

0.40 X 7.20

CONTEXT	DESCRIPTION	DBGL (M)
–	Topsoil: brown, friable, occasional stone, silty sand	0–0.10
–	Subsoil: reddish brown, friable, silty clay	0.10–0.40
–	Firm, Silty clay	0.40–1.20
–	Firm, gravelly clay	1.20–2.65
–	Firm, Gravel clay	2.65–5.00
–	Firm sandy clay	5.00–7.30
–	Mudstone	7.30 +

Summary : Cornfield. Undulating fields. No archaeology.



© 2017 by Headland Archaeology (UK) Ltd

Headland Archaeology South & East
Building 68C | Wrest Park | Silsoe | Bedfordshire MK45 4HS
t 01525 861 578
e southandeast@headlandarchaeology.com

Headland Archaeology Midlands & West
Unit 1 | Clearview Court | Ivyford Rd | Hereford HR2 6JR
t 01432 364 901
e midlandsandwest@headlandarchaeology.com

Headland Archaeology North
Unit 16 | Hillside | Beeston Rd | Leeds LS11 8ND
t 0113 387 6430
e north@headlandarchaeology.com

Headland Archaeology Scotland
13 Jane Street | Edinburgh EH6 5HE
t 0131 467 7705
e scotland@headlandarchaeology.com

www.headlandarchaeology.com