University of Leicester

Archaeological Services

An archaeological field evaluation at Holmleigh Way, Chellaston, Derby, (SK 374 296)

Leon Hunt

ULAS Report No 2013-160

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for

Bellway Homes Ltd

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An archaeological field evaluation at Holmleigh Way, Chellaston, Derby, (SK 374 296)

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Summary

An archaeological field evaluation was carried out by University of Leicester Archaeological Services (ULAS) for Bellway Homes Ltd at Holmleigh Way, Chellaston, Derby (NGR: SK 374 296).

The work was in advance of the proposed development of the area for new housing. The site consists of two arable fields to the west of Holmleigh Way.

The site lies close to the Bronze Age barrow cemetery of Swarkestone Lows, a Scheduled Monument (SM 41) and is also close to known archaeological remains from the Neolithic period through to the Anglo-Saxon period. A recent archaeological evaluation carried out by ULAS on land to the east of the site uncovered evidence of Roman and prehistoric artefacts and features.

A total of 18 trenches were excavated across the site, mainly in the western field (Field 1) as it is known that much of Field 2, to the south-east consists of made-up ground from the construction of the nearby A50. A geophysical survey carried out prior to the evaluation confirmed that the field is mostly disturbed. The survey was largely inconclusive with few anomalies suggesting archaeological features.

The evaluation was negative for archaeological finds and features. However, the trenches excavated at the northern ends of both fields revealed deep deposits of peat and alluvial clay and other trenches at the edge of the peat revealed tree boles and root disturbance suggesting that part of the area once consisted of a very marshy environment, most likely lying on the edge of an ancient lake. Similar geological data was retrieved during recent archaeological work at Sin Fin Moor, around 1 mile to the north-west of the current site.

Therefore, they maybe potential for good palaeobotanical or environmental evidence to be retrieved during any further work within the proposed development area.

Introduction

University of Leicester Archaeological Services (ULAS) were commissioned by Bellway Homes Ltd to carry out an archaeological field evaluation at Holmleigh Way, Chellaston, Derby (SK 374 296) in advance of the proposed development of the site for new housing.

This archaeological work is in accordance with NPPF Section 12: Enhancing and Conserving the Historic Environment.

The site lies within an area rich in prehistoric archaeology, lying around 500m north-east of the Bronze Age barrow cemetery of Swarkestone Lows, a Scheduled Monument (SM 41).

Close by lies an Iron Age/ Roman settlement and recent excavation work in fields to the east of the site have produced Roman and prehistoric artefacts and features. Earlier Neolithic remains and also later Anglo-Saxon remains are known from the area around the barrow cemetery.

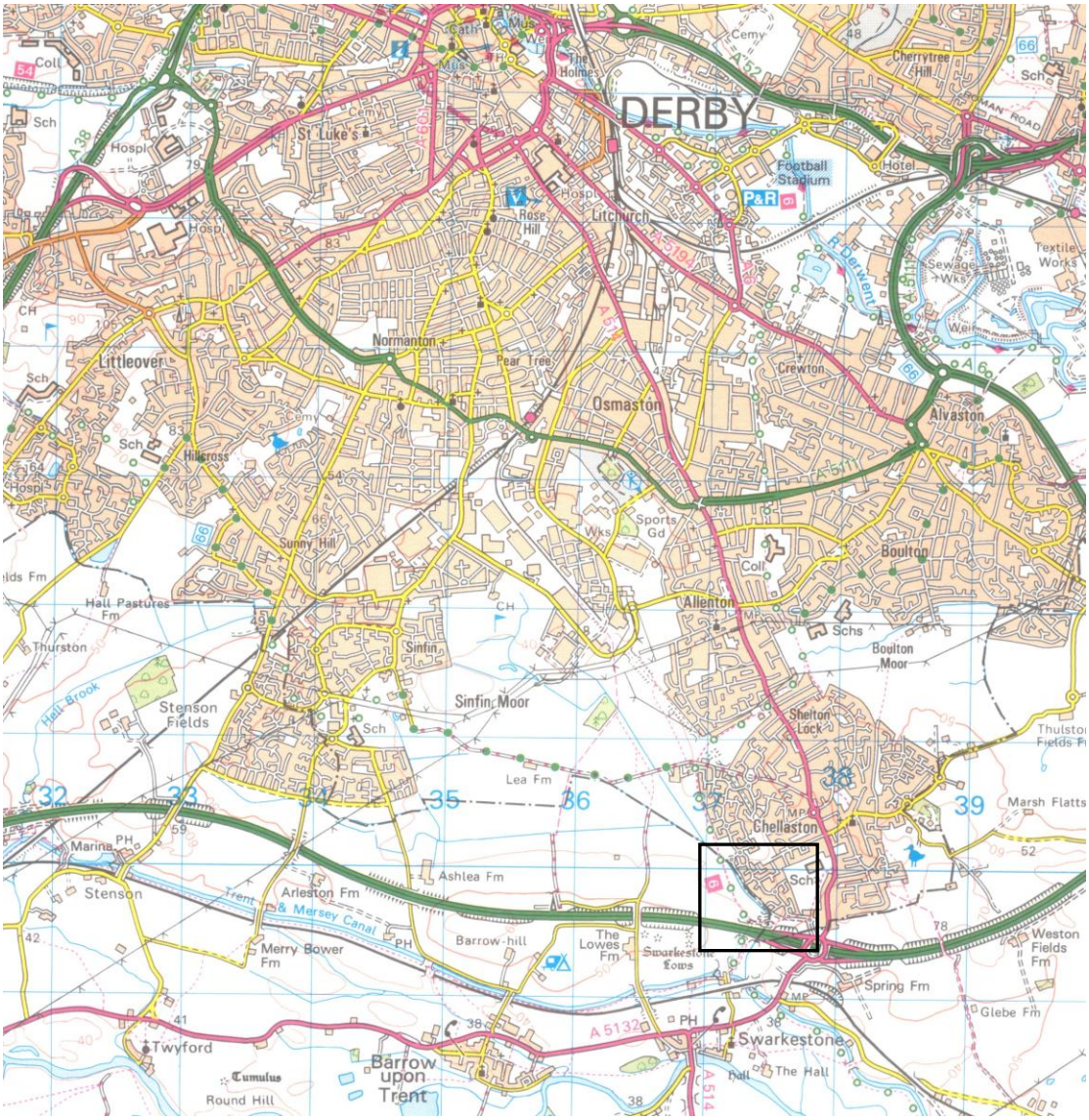

Figure 1: Site Location

Location and Geology

The site lies at the western edge of Chellaston along the western side of Holmleigh Way. The site covers 11.3 ha and consists of two fields; a long 'tadpole' shaped field, aligned broadly north to south with the narrow part of the field to the north (Field 1) and a sub-rectangular field to the south-east of the first field (Field 2). Most of the trenches were to be excavated within the western field (the tadpole field, or 'Land's End' as it is known locally).

The land in the Field 1 is flat, with a slight fall to the north. The land in Field 2 falls quite steeply from the south-west to the north-east, and the north-eastern part of the field is almost flat. A track, which curves over a bridge over the Cuttle Brook, which runs alongside the eastern edge of 'Land's End', connects the two fields. The site falls from a high point at the eastern edge of the site at around 56m aOD to around 39m aOD at the bridge that lies between the two fields.

The steep part of the eastern field is known to consist of made up ground, mainly from the material from the adjacent A50, the construction compound of which was situated in this field.

To the western edge of the site is the disused Derby Canal (now part of the Cloud Trial Cycle Track) and the area to the north and east of Holmleigh Way is covered in modern housing. The land is currently used as farmland and at the time of the archaeological work was covered in crop stubble (Field 1) and a young rapeseed crop (Field 2).

The British Geological Survey website indicates that the underlying geology of the area is likely to be Branscombe Mudstone Formation mudstone, overlain by Thrussington Member or Oadby Member Diamicton on the eastern part of the site, with Arden Sandstone Formation, overlain by Alluvium at the edge of the Cuttle Brook and by Head or Lacustrine Deposits of sand, silt or clay at the northern end of the site.

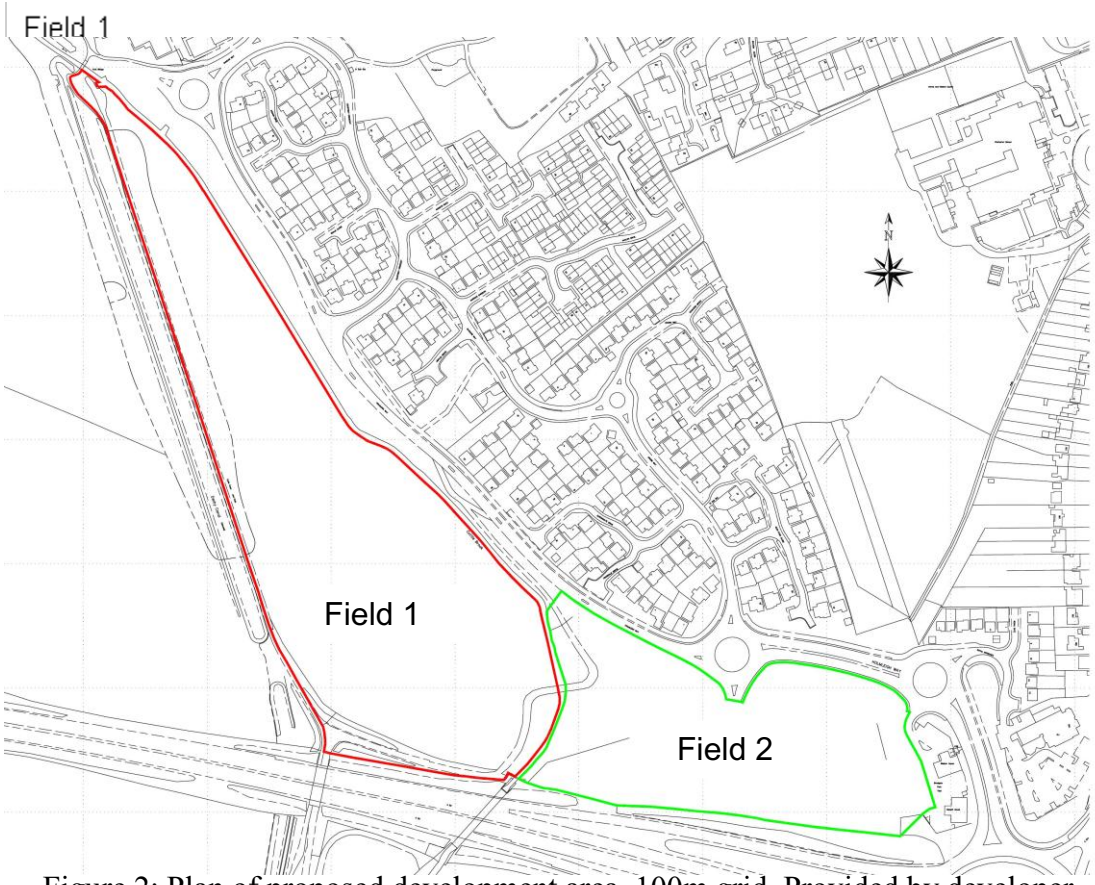

Figure 2: Plan of proposed development area. 100m grid. Provided by developer

Historical and Archaeological Background

According to the Historic Environment Record for Derbyshire, no archaeological sites are recorded within the development area itself. However, the site lies within an area

rich in prehistoric archaeology, lying around 500m north-east of the Bronze Age barrow cemetery of Swarkestone Lows, a Scheduled Monument (SM 41). Close by lies an Iron Age/ Roman settlement and recent excavation work in fields to the east of the site have produced Roman and prehistoric artefacts and features (Harvey 2012). Earlier Neolithic remains and also later Anglo-Saxon remains are known from the area around the barrow cemetery.

A geophysical survey was carried out on the present site prior to the evaluation. This was largely inconclusive, showing few anomalies that could be construed as being archaeological in origin (Smalley 2012). A few anomalies of possible archaeological origin are present in the northern section while the southern section shows evidence of considerable disturbance and the presence of a medium pressure gas pipeline.

Figure 3: Interpretive Plan of Geophysical Survey results. Provided by Stratascan

Archaeological Objectives

The main objectives of the evaluation were:

- To identify the presence/absence of any archaeological deposits.
- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed ground works.
- To produce an archive and report of any results.

Within the stated project objectives, the principal aim of the evaluation is to establish the nature, extent, date, depth, significance and state of preservation of archaeological

deposits on the site in order to determine the potential impact upon them from the proposed development.

Trial trenching is an intrusive form of evaluation that will demonstrate the existence of earth-fast archaeological features that may exist within the area.

Methodology

All work followed the Institute for Archaeologists (IfA) *Code of Conduct* (2010) in accordance with their *Standard and Guidance for Archaeological Field Evaluation* (2010). The archaeological work followed the *Written Scheme of Investigation (WSI) for archaeological work* (WSI) prepared by ULAS (Appendix).

A *c*.1.44% sample by trial trenching of the area was proposed of Field 1, covering *c*.6 ha, which will comprise *c*. 865 sq metres, the equivalent of 16 30m by 1.8m trenches, serving to target the probable archaeological anomalies highlighted in the geophysical survey and to also test blank areas. Due to the largely disturbed nature of the land in Field 2, only two 30m x 1.8m trenches (108 sq. m.) were proposed along the north-western edge of the site, outside the disturbed areas identified by the geophysical survey (Figure 4).

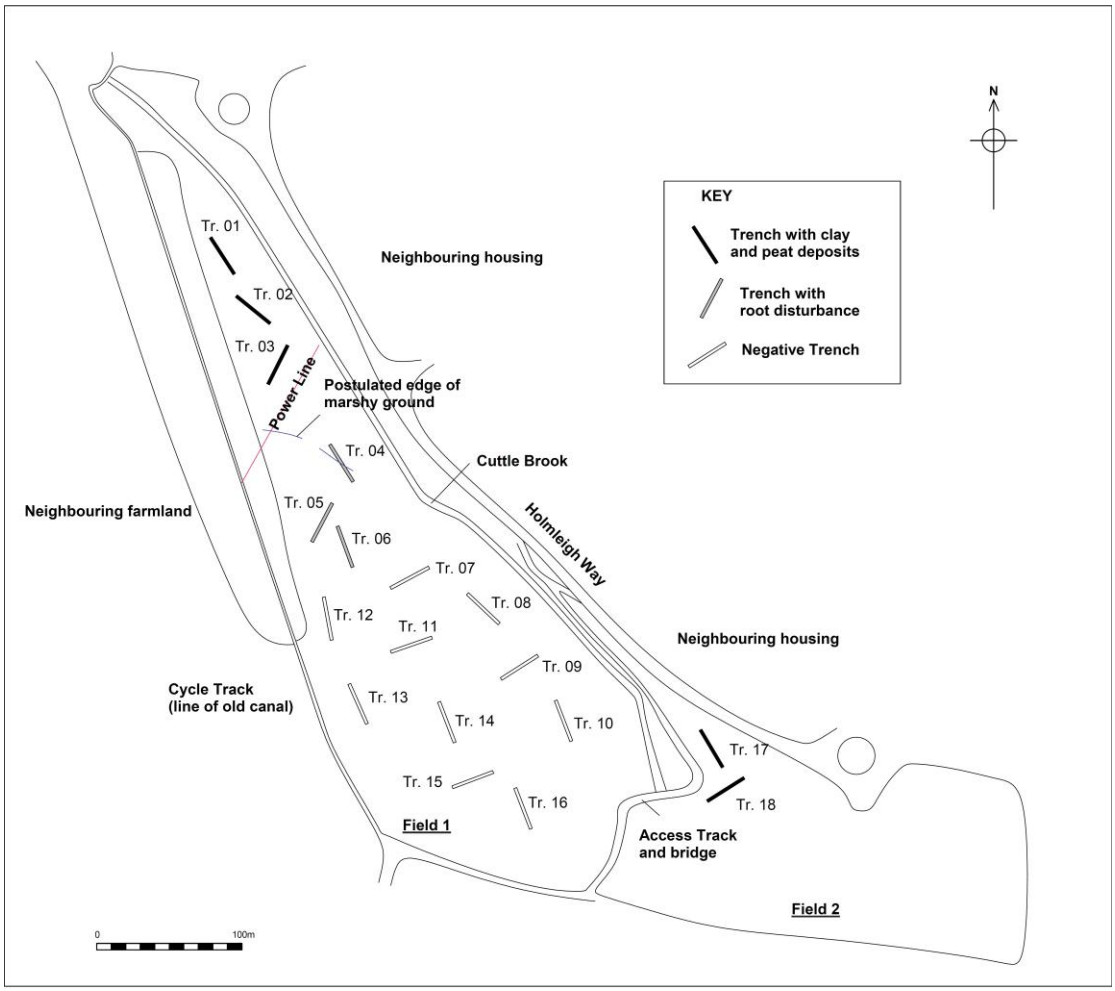

Figure 4: Plan of trench locations and other features

All the trenches were excavated with by a large tracked excavator using a 2m wide ditching bucket, down to the natural sub-stratum or archaeological deposits, whichever the higher in the sequence. All trenches were back-filled after recording.

Results

Trench 01

Length: 30.5m

Width: 2m

Orientation: NW-SE

The soil sequence within Trench 01, at the very northern end of Field 1, consisted of 0.28m-0.34m of grey clayey silt with occasional small angular stones and rounded pebbles, under this lay a thin layer of re-deposited red clay, possibly from the dredging or widening of the nearby brook, over 0.20m thick layer of buried topsoil, which was largely the same as the upper topsoil but with more charcoal within the matrix.

Under this lay a 0.20m layer of very dark greyish brown peat, which overlay 0.14m of soft greyish orange clay, which was only visible for the first 13.3m of Trench 01 at the south-east end. Under this lay the natural substratum, which consisted of bluish grey sandy clay with brownish orange mottled and abundant poorly sorted sub-rounded stones and pebbles and rare large pebbles.

Interval	**0m (SE)**	**5m**	**10m**	**15m**	**20m**	**25m**	**30m (NW)**
Topsoil depth (incl. lens of red clay)	0.28m	0.33m	0.28m	0.30m	0.34m	0.28m	0.28m
Buried topsoil depth	0.20m	0.24m	0.26m	0.18m	0.18m	0.16m	0.12m
Peat	0.20m	0.18m	0.26m	0.20m	0.14m	0.10m	0.09m
Clay	0.14m	0.11m	0.12m	0.10m	0.10m*	0.06m*	0.09m*
Base of trench	0.82m	0.86m	0.92m	0.78m	0.76m	0.60m	0.58m

*Top of natural substratum: no clay visible here

No archaeological features were discovered in this trench

Plate 1: Peat layer in Trench 02, looking north

Trench 02

Length: 29.5m

Width: 2m

Orientation: NW-SE

The soil sequence in Trench 02 was very similar to Trench 01, except the thin lens of clay was not visible and the clay layer below the peat was a soft greyish brown clayey silt with a high peat content. The natural substratum at each end of the trench was the same as Trench 01, but within the centre of the trench the substratum was an orangey pink clayey sand and gravel (Plate 1).

Interval	0m (SE)	5m	10m	15m	20m	25m	29m (NW)
Topsoil depth	0.33m	0.30m	0.36m	0.34m	0.26m	0.34m	0.24m
Buried topsoil depth	0.26m	0.28m	0.18m	0.30m	0.28m	0.40m	0.39m
Peat	0.23m	0.15m	0.20m	0.20m	0.27m	0.20m	0.10m
Silt	0.26m	0.29m	0.36m	0.30m	0.22m	0.18m	0.12m
Top of natural	0.12m	0.16m	0.20m	0.18m	0.32m	0.08m	0.05m
Base of trench	1.20m	1.18m	1.30m	1.32m	1.35m	1.20m	0.90m

No archaeological features were present in this trench

Plate 2: Peat and clay layers in Trench 03, looking north

Trench 03

Length: 29m

Width: 2m

Orientation: NE-SW

The soil sequence within trench 03 was more complex. Broadly, there were two sections of peat, separated from each other by a thick deposit of clay (Plate 2). At the south-western end of the trench the topsoil lay over a thin layer of peat, which lay over the aforementioned clay, which lay over a thicker lens of clay, which lay over the substratum of mottled reddish pink and greyish blue clay and sandy clay, which formed swirling patterns in the base of the trench. Further down the trench the topsoil overlay a thinner layer of buried topsoil, which lay over a thick band of peat, which lay over the clay layer and then the natural substratum.

Interval	**0m (SW)**	**5m**	**10m**	**15m**	**20m**	**25m**	**29m (NE)**
Topsoil depth	0.30m	0.43m	0.28m	0.28m	0.33m	0.28m	0.31m
Buried topsoil depth	-	-	-	0.22m	0.28m	0.24m	0.25m
Peat	0.10m	-	-	0.30m	0.34m	0.26m	0.30m
Clay	0.10m	0.16m	0.69m	0.10m	0.09m	0.12m	0.10m
Peat (2)	0.06m	0.38m	-	-	-	-	-
Top of	0.56m	0.97m	-	0.18m	-	-	-

natural							
Base of trench	0.88m	1.12m	0.97m	1.14m	1.04m	0.90m	0.94m

No archaeological features were present in this trench.

Trench 04

Length: 30m

Width: 2m

Orientation: NW-SE

The topsoil in this trench consisted of dark grey clayey silt with occasional small rounded stones and charcoal flecks under this was a layer of dark brown silty-clay subsoil at the north-western end of the trench. At the south-eastern end of the trench this lay over the natural substratum of mottled greyish yellow and greyish orange clayey sand and gravel. At the north-western end of the trench the topsoil lay over a fine orangey grey clay with very rare rounded pebbles, just under this a thin layer of peat was visible. This trench was not fully excavated at this end in order to illustrate what appeared to be the edge of the peaty area of the field.

Plate 3: Edge of peat area within Trench 04, looking north

Interval	**0m (NW)**	**5m**	**10m**	**15m**	**20m**	**25m**	**29m (SE)**
Topsoil depth	0.15m	0.14m	0.16m	0.10m	0.38m	0.35m	0.31m
Subsoil	0.20m	0.25m	0.15m	0.17m	-	-	-

Clay	0.35m	0.17m	0.16m	0.19m	-	-	-
Top of natural	-	-	-	-	0.38m	0.35m	0.35m
Base of trench	0.70m	0.56m	0.47m	0.46m	0.58m	0.48m	0.60m

No archaeological features were present in this trench

Plate 4: Tree boles and roots in Trench 05, looking south-west

Trench 05

Length: 30.5m

Width: 2m

Orientation: NE-SW

The topsoil consisted of a yellowish grey clayey silt with rare small angular grit, small to medium rounded pebbles and charcoal flecks. No subsoil was visible in the trench.

The natural substratum consisted of mottled pale brownish orange and greyish yellow clayey sand with lenses of grey silty sand (possibly due to root action), pinkish brown and greyish blue clay. At the north-eastern end of the trench the natural substratum was mottled pinkish brown and greyish blue clay with lenses of grey silty sand.

Interval	**0m (SW)**	**5m**	**10m**	**15m**	**20m**	**25m**	**30m (NE)**
Topsoil depth	0.30m	0.30m	0.30m	0.30m	0.31m	0.33m	0.34m
Subsoil	-	-	-	-	-	-	-

Top of natural	0.18m	0.22m	0.26m	0.29m	0.19m	0.27m	0.33m
Base of trench	0.48m	0.52m	0.56m	0.59m	0.50m	0.60m	0.67m

No archaeological features were present in this trench.

There were a number of discrete grey silty-sand features, which in places looked like they may be of archaeological origin. A few of these were excavated (Plate 4), but they appeared to be natural, most likely caused by roots action and small tree boles, possibly denoted an area once covered in vegetation.

Trench 06

Length: 31m

Width: 2m

Orientation: N-S

The soil sequence and substratum were similar to Trench 05, with similar silty root/ tree boles at northern end.

Interval	**0m (N)**	**5m**	**10m**	**15m**	**20m**	**25m**	**30m (S)**
Topsoil depth	0.26m	0.28m	0.30m	0.31m	0.29m	0.29m	0.28m
Subsoil	-	-	-	-	-	-	-
Top of natural	0.26m	0.28m	0.30m	0.31m	0.29m	0.29m	0.28m
Base of trench	0.40m	0.50m	0.48m	0.50m	0.45m	0.46m	0.43m

No archaeological features were present in this trench.

Trench 07

Length: 31.5m

Width: 2m

Orientation: NE-SW

The topsoil consisted of brownish grey clayey silt with occasional small rounded pebbles and rare charcoal flecks. No subsoil was visible.

The underlying substratum at the southern end of Field 1 was fairly uniform, consisting of mottled yellowish orange, brownish orange and yellowish grey clayey sand and gravel with lenses of red clay. Variations of this substratum were found within all trenches excavated on this end of the field (Trenches 7-16). Overlying the substratum within these trenches was 0.24m-0.38m of brownish grey clayey silt topsoil, containing occasional small angular stones and rounded pebbles.

Interval	**0m (SW)**	**5m**	**10m**	**15m**	**20m**	**25m**	**30m (NE)**
Topsoil depth	0.38m	0.36m	0.24m	0.29m	0.29m	0.33m	0.33m

Subsoil	-	-	-	-	-	-	-
Top of natural	0.38m	0.36m	0.24m	0.29m	0.29m	0.33m	0.33m
Base of trench	0.40m	0.48m	0.34m	0.35m	0.37m	0.34m	0.34m

No archaeological features were present in this trench.

Plate 5: Post excavation view of Trench 08, showing substratum of sand and gravel, looking north-west

Trench 08

Length: 31m

Width: 2m

Orientation: NW-SE

Interval	**0m (NW)**	**5m**	**10m**	**15m**	**20m**	**25m**	**30m (SE)**
Topsoil depth	0.29m	0.29m	0.31m	0.30m	0.31m	0.29m	0.29m
Subsoil	-	-	-	-	-	-	-
Top of natural	0.29m	0.29m	0.31m	0.30m	0.31m	0.29m	0.29m
Base of trench	0.41m	0.39m	0.51m	0.38m	0.40m	0.40m	0.39m

No archaeological features were present in this trench (Plate 5).

Trench 09

Length: 30.5m

Width: 2m

Orientation: NE-SW

Interval	0m (SW)	5m	10m	15m	20m	25m	30m (NE)
Topsoil depth	0.24m	0.31m	0.32m	0.31m	0.24m	0.31m	0.34m
Subsoil	-	-	-	-	-	-	-
Top of natural	0.24m	0.31m	0.32m	0.31m	0.24m	0.31m	0.34m
Base of trench	0.41m	0.42m	0.42m	0.45m	0.32m	0.40m	0.50m

No archaeological features were present in this trench.

Trench 10

Length: 30.5m

Width: 2m

Orientation: N-S

Interval	0m (N)	5m	10m	15m	20m	25m	30m (S)
Topsoil depth	0.27m	0.33m	0.29m	0.27m	0.29m	0.31m	0.24m
Subsoil	-	-	-	-	-	-	-
Top of natural	0.27m	0.33m	0.29m	0.27m	0.29m	0.31m	0.24m
Base of trench	0.46m	0.40m	0.38m	0.38m	0.38m	0.40m	0.29m

No archaeological features were present in this trench.

Trench 11

Length: 30.5m

Width: 2m

Orientation: E-W

Interval	0m (W)	5m	10m	15m	20m	25m	30m (E)
Topsoil depth	0.28m	0.23m	0.25m	0.28m	0.36m	0.26m	0.26m
Subsoil	-	-	-	-	-	-	-
Top of natural	0.28m	0.23m	0.25m	0.28m	0.36m	0.26m	0.26m
Base of	0.44m	0.42m	0.38m	0.42m	0.49m	0.40m	0.38m

trench							

No archaeological features were present in this trench.

Trench 12

Length: 30m

Width: 2m

Orientation: N-S

Interval	**0m (N)**	**5m**	**10m**	**15m**	**20m**	**25m**	**30m (S)**
Topsoil depth	0.24m	0.25m	0.24m	0.30m	0.28m	0.26m	0.28m
Subsoil	-	-	-	-	-	-	-
Top of natural	0.24m	0.25m	0.24m	0.30m	0.28m	0.26m	0.28m
Base of trench	0.36m	0.40m	0.46m	0.39m	0.44m	0.40m	0.50m

No archaeological features were present in this trench.

Trench 13

Length: 30.5m

Width: 2m

Orientation: N-S

Interval	**0m (N)**	**5m**	**10m**	**15m**	**20m**	**25m**	**30m (S)**
Topsoil depth	0.23m	0.31m	0.23m	0.24m	0.28m	0.31m	0.32m
Subsoil	-	-	-	-	-	-	-
Top of natural	0.23m	0.31m	0.23m	0.24m	0.28m	0.31m	0.32m
Base of trench	0.38m	0.40m	0.34m	0.41m	0.53m	0.48m	0.46m

No archaeological features were present in this trench.

Trench 14

Length: 30.5m

Width: 2m

Orientation: N-S

Interval	**0m (N)**	**5m**	**10m**	**15m**	**20m**	**25m**	**30m (S)**
Topsoil depth	0.33m	0.29m	0.26m	0.26m	0.28m	0.23m	0.28m

Subsoil	-	-	-	-	-	-	-
Top of natural	0.33m	0.29m	0.26m	0.26m	0.28m	0.23m	0.28m
Base of trench	0.39m	0.38m	0.42m	0.44m	0.36m	0.38m	0.38m

No archaeological features were present in this trench. A number of plough scars could be discerned crossing the trench.

Trench 15

Length: 30.5m

Width: 2m

Orientation: E-W

Interval	**0m (W)**	**5m**	**10m**	**15m**	**20m**	**25m**	**30m (E)**
Topsoil depth	0.28m	0.26m	0.25m	0.31m	0.26m	0.25m	0.30m
Subsoil	-	-	-	-	-	-	-
Top of natural	0.28m	0.26m	0.25m	0.31m	0.26m	0.25m	0.30m
Base of trench	0.48m	0.40m	0.40m	0.48m	0.39m	0.40m	0.30m

No archaeological features were present in this trench.

Trench 16

Length: 30m

Width: 2m

Orientation: N-S

Interval	**0m (N)**	**5m**	**10m**	**15m**	**20m**	**25m**	**30m (S)**
Topsoil depth	0.33m	0.26m	0.24m	0.26m	0.29m	0.28m	0.34m
Subsoil	-	-	-	-	-	-	-
Top of natural	0.33m	0.26m	0.24m	0.26m	0.29m	0.28m	0.34m
Base of trench	0.33m	0.42m	0.37m	0.39m	0.42m	0.46m	0.52m

No archaeological features were present in this trench. Plough scars were visible crossing the trench from north-west to south-east.

Plate 6: Working in progress in Field 2, Trench 18, looking north

Trench 17

Length: 27m

Width: 2m

Orientation: NW-SE

The soil sequence within the eastern field was quite different to that of Field 1. A 0.14m-0.31m layer of greyish orange clayey silt topsoil overlay a 0.23m-0.31m layer of orangey grey clay mixed with occasional small rounded pebbles and grit, which changed in colour to bluish grey at the base of the layer.

Under this lay a thick 0.30m-0.70m layer of very dark greyish brown dry peat (Plates 7 & 8). This overlay soft yellowish grey clay with greyish orange mottling, which contained occasional roots and pieces of wood. Under this was a thin layer of greyish brown silt with organic, peat inclusions and roots. This overlay the natural substratum of mottled bluish grey and greyish orange sandy gravel.

Interval	**0m (NW)**	**5m**	**10m**	**15m**	**20m**	**25m (SE)**
Topsoil depth	0.14m	0.16m	0.18m	0.17m	0.27m	0.17m
Clay (1)	0.29m	0.24m	0.33m	0.26m	0.26m	0.35m
Peat	0.30m	0.42m	0.32m	0.40m	0.54m	0.55m
Clay (2)	0.21m	0.18m	0.26m	0.22m	-	0.16m
Silt	0.20m	0.26m	0.24m	0.29m	0.40m	0.19m
Base of	1.14m	1.26m	1.33m	1.34m	1.57m	1.52m*

trench/ natural						

*Natural substratum not reached. No archaeological features were present in this trench

Plate 7: Post excavation view of Trench 17, looking north-west

Plate 8: Oblique view of section of Trench 18, showing peat and clay layers, looking north

Trench 18

Length: 31m

Width: 2m

Orientation: NE-SW

Interval	0m (SW)	5m	10m	15m	20m	25m	30m (NE)
Topsoil depth	0.31m	0.27m	0.24m	0.24m	0.30m	0.24m	0.27m
Clay (1)	0.26m	0.23m	0.28m	0.25m	0.35m	0.31m	0.28m
Peat	0.50m	0.59m	0.70m	0.66m	0.54m	0.66m	0.57m
Clay (2)	0.34m	0.53m	0.07m	0.12m	0.06m	-	-
Silt	0.29m	-	0.36m	0.21m	0.19m	0.25m	0.38m
Base of trench/ natural	1.70m	1.62m	1.65m	1.48m	1.49m	1.46m	1.50m

No archaeological features were present in this trench.

Conclusion

The archaeological field evaluation by trial trenching carried out on land at Holmleigh Way, Chellaston, Derby was negative for archaeological evidence. The geophysical survey carried out on the land prior to the evaluation being undertaken was largely inconclusive with regard to possible archaeological features and showed only a possible 'L-shaped' feature in field 1, which was not identified within the archaeological trenches and other amorphous anomalies, which may have been natural in origin, possibly related to the peat and other deposits located in these areas.

The evaluation revealed two distinct types of geology within the study area. The geology in the southern end of the western field (Field 1) largely showed sand and gravel, overlying red clay, most likely Head, a superficial deposit caused by the sloping of the land.

Elsewhere on the site the geology was dominated by deposits of peat and clay, suggesting that the land here was once very marshy. The main areas for the peat were in the northern end of Field 2 and in the northern end of Field 1. The presence of the peat here may reflect the land's proximity to the Cuttle Brook, although it may also be indicative of Lacustrine deposits, accumulated along the edge of an ancient lake, with the northern part of Trench 04 representing the edge of the peat deposits and the root and tree bole features seen in Trenches 04, 05 and 06 representing the vegetation growing along the edge of the lake.

These deposits are consistent with the geological survey of the area, which show Lacustrine deposits along the north-western edge of Field 1 and with the geological evidence for similar deposits identified during archaeological work at Sin Fin Moor, around a mile to the north-west of the present site (Hunt 2011; Jarvis 2013), where Palaeolithic and Mesolithic artefacts were discovered within the ploughsoil.

Therefore, although no archaeological features were identified there is some potential for environmental or palaeobotanical evidence of upper palaeolithic/Mesolithic date within the proposed development area.

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Acknowledgements

ULAS would like to thank Bellway Homes Ltd for the their help and co-operation with this project. The machine was provided by Planters Ltd and was driven by Paul Harris. The project was managed by Patrick Clay and the work was carried out by the author assisted by Mathew Morris.

Publication

Since 2004 ULAS has reported the results of all archaeological work through the *Online Access to the Index of Archaeological Investigations* (OASIS) database held by the Archaeological Data Service at the University of York.

A summary of the work will also be submitted for publication in a suitable regional archaeological journal in due course.

OASIS data entry

Project Name	Holmleigh Way, Chellaston, Derby
Project Type	Evaluation
Project Manager	Patrick Clay
Project Supervisor	Leon Hunt
Previous/Future work	None/ not known
Current Land Use	Arable
Development Type	Housing
Reason for Investigation	NPPF
Position in the Planning Process	Pre-determination
Site Co ordinates	SK 374 296
Start/end dates of field work	23-09-2013 to 26-09-2013
Archive Recipient	Derby Museums
Study Area	11.3 ha

Archive

The archive for this project will be deposited with Derby Museum. The accession number is DBYMU 2013-93 and the archive consists of the following:

1 Unbound copy of this report (2013-160)

1 Unbound copy of desk-based assessment report (2012-175)

18 Trench recording sheets

2 Contact sheets of digital photographs

1 CD digital photographs

1 Set B&W contact sheets

1 Set B&W negatives

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01-10-2013

APPENDIX I: The environmental samples: Assessment of potential for C14 dating and palaeo-environmental information

Anita Radini

During the excavation at Chellaston, two samples were taken from peat deposits: sample **1** from Trench 3 and sample **2** from Trench 17. They were taken to assess the potential for retrieving organic material suitable for C14 and palaeo-environmental data. Both samples consisted of lumps of highly deteriorated organic matter mixed with pale brown clay indicative of post-depositional disturbance. They were also rich in tree root fragments which also indicated extensive post-depositional disturbance. Such disturbance dictates that the deposits would not produce reliable C14 dates. For example, the tree roots could be dated, but they would be only suggest the age in which the disturbance occurred and not the real date of the deposit. In addition, no charcoal fragments from possible human or natural fires were observed. No further work is therefore recommended for these samples.

APPENDIX II: Written scheme of investigation for archaeological work

UNIVERSITY OF LEICESTER ARCHAEOLOGICAL SERVICES

Written scheme of investigation for archaeological work

Job title: Chellaston, Holmleigh Way, Derbyshire

NGR: SK 374 296

Client: Bellway Homes Ltd

Planning Authority: Derby City Council

1 Introduction

1.1 ***Definition and scope of the specification***

This document is a Written Scheme of Investigation for a phase of pre-determination archaeological evaluative work and as appropriate recording at the above site, in accordance with National Planning Policy Framework (NPPF) Section 12 Conserving and Enhancing the Historic Environment. The fieldwork specified below is intended to provide preliminary indications of the character and extent of any buried archaeological remains in order that the potential impact of the development on such remains may be assessed by the Planning Authority and further mitigation measures, if necessary, be put in place.

1.2 The definition of an archaeological evaluation, taken from the Institute for Archaeologists Standards and Guidance: Institute for Archaeologists Standards and Guidance: for Archaeological Field Evaluation (2010) is a limited programme of non-intrusive and/ or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate. The definition of an Archaeological excavation taken from the Institute for Archaeologists Standards and Guidance: for archaeological excavations (2008) is controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves artefacts, ecofacts and other remains within a specified area or site on land, inter-tidal zone or underwater. The records made and objects gathered during fieldwork are studied and the results of that study published in detail appropriate to the project design.

2. Background

Context of the Project

2.1 This document sets out a Written Scheme of Investigation (WSI) to record potential archaeological deposits at Holmleigh Way, Chellaston, Derby (Grid. Ref. SK 374 296; figs.1 and 2) in advance of proposed residential development. A desk-based assessment (Hunt 2012) and geophysical survey report (Smalley 2012) have been prepared.

2.2 The land covers 11.3 ha. and lies on the northern side of the A50 close to Junction 3 and is currently used as farmland. Part of the site lies within Chellaston and therefore within the City of Derby and part of the site lies within the parish of Swarkestone, Derbyshire**..**

2.3 No archaeological sites have been recorded on the Historic Environment Record within the development area. However, the site lies within an area rich in prehistoric archaeology, lying around 500m north-east of the Bronze Age barrow cemetery of Swarkestone, a Scheduled Monument (SM 41). Close by lies an Iron Age/ Roman settlement and recent excavation work in fields to the east of the site have produced Roman and prehistoric artefacts and features. Earlier Neolithic remains and also later Anglo-Saxon remains are known from the area around the barrow cemetery. The geophysical survey however was inconclusive (Smalley 2012). Anomalies of possible archaeological origin are present in the northern section while the southern section shows evidence of considerable disturbance and the presence of a medium pressure gas pipeline.

2.4 The Derbyshire County Council development Control Archaeologist has requested trial trenching to establish whether archaeological deposits are present.

3. Geology and topography

3.1 The site consists of two fields that lie to the north of the present A50, close to junction 3 at the very southern edge of Chellaston, Derby (Figure 1). Holmleigh Way lies to the north and east of the site and the Cuttle Brook lies between the road and the western field. The brook also separates the two fields and largely forms the boundary between the City of Derby and Derbyshire, with the western field falling within the parish of Swarkestone and the eastern field within Derby.

3.2 The western edge of the site is the disused Derby Canal and the area to the north of Holmleigh Way is covered in modern housing. The land is currently used as farmland and at the time of the site visit was covered in crop stubble. The site falls from a high point at the eastern edge of the site at around 56m aOD to around 39m aOD at the bridge that lies between the two fields. The western part of the site is flat. The British Geological Survey website indicates that the underlying geology of the area is likely to be Branscombe Mudstone Formation mudstone, overlain by Thrussington Member or Oadby Member Diamicton on the eastern part of the site, with Arden Sandstone Formation, overlain by Alluvium at the edge of the Cuttle Brook and by Head or Lacustrine Deposits of sand, silt or clay at the northern end of the site

4. Archaeological Aims and Objectives

4.1 All work will be considered in light of the National research context (English Heritage 1991 and 1997), the East Midlands Research Framework (Cooper ed. 2006) and strategy (Knight et al 2012), along with targeting national research aims. Potential research objectives that this scheme might contribute towards include:

Neolithic and Early Middle Bronze Age (Clay 2006; Knight et al 2012; English Heritage 2010)

The development of ceremonial monuments and their environs – the e contains several prehistoric ceremonial landscapes and the scheme may uncover archaeological assets associated with these. Palaeoenvironmental evidence may provide information on agricultural practices and land use.

Late Iron Age (Willis 2006; Knight et al 2012; English Heritage 2010)

There are Iron Age settlements in the vicinity of the scheme. Information on the sequence and chronology of settlements may be recovered and palaeoenvironmental evidence could provide information on agricultural practices and land use. Artefacts can provide evidence for evidence for craft industry and exchange across broad landscape areas.

The Roman Period (Taylor 2006; Knight et al 2012; English Heritage 2012)

There are several Roman sites within vicinity including enclosures and a Roman road. The evaluations may contribute to knowledge on Iron Age – Roman transitions in rural settlement, landscape and society. Artefacts may identify trade links and economy.

4.2 The main objectives of the exploratory works will be:
To identify the presence/absence of any archaeological deposits, in particular evidence of Palaeolithic occupation.
To establish the character, extent and date range for any archaeological deposits to be affected by the proposed ground works and record these to an appropriate level.
To produce an archive and report of any results.

5. Methodology

5.1 General Methodology and Standards

5.1.1 All work will follow the Institute for Archaeologists (IfA) Code of Conduct (2010) and adhere to their *Standard and Guidance for Archaeological Field Evaluations* and *excavations* (2008).

5.1.2 Staffing, recording systems, health and safety provisions and insurance details are included below.

5.1.3 Internal monitoring procedures will be undertaken including visits to the site by the project manager.
These will ensure that project targets are met and professional standards are maintained. Provision will be made for external monitoring meetings with the Planning Authority and the Client, if required.

5.2 Trial Trenching Methodology

5.2.1 A *c.*1.44% sample by trial trenching of the area is proposed of the western area covering *c.*6 ha which will comprise *c.* 865 sq metres, the equivalent of 16 30m by 1.8m trenches, serving to target the probable archaeological anomalies highlighted in the geophysical survey and to also test blank areas. Less trenching of the disturbed area to the south is proposed targeting the geophysical anomalies with two 30m x 1.8m trenches (108 sq. m.). The provisional trench plan (Fig. 2) shows the proposed locations of the trenches although the size and position of the trenches indicated on the provisional trench plan may vary due to unforeseen site constraints or the presence of archaeological deposits.

5.2.2 Topsoil and overburden will be removed carefully in level spits, under continuous archaeological supervision using a mechanical excavator using a toothless bucket. The areas will be excavated down to the top of archaeological deposits identified from the exploratory works. All excavation by machine and hand will be undertaken with a view to avoid any damage to archaeological deposits or features. Trenches will be left open a minimum of three days to allow weathering. Provision will be made to extend trenches where features are part-exposed

5.2.3 The area will be examined by hand cleaning and any archaeological deposits located will be planned at an appropriate scale. Archaeological deposits will be sample-excavated by hand as appropriate to establishing the stratigraphic and chronological sequence, recognising and excavating structural evidence and recovering economic, artefactual and environmental evidence.

5.2.4 Measured drawings of all archaeological features will be prepared at a scale of 1:20 and tied into an overall site plan. All plans will be tied into the Ordnance Survey National Grid. Relative spot heights will be taken as appropriate. All artefacts will be 3D located.

5.2.5 Sections of any excavated archaeological features will be drawn at an appropriate scale. At least one longitudinal face of each trench will be recorded. All sections will be levelled and tied to the Ordnance Survey Datum, or a permanent fixed benchmark.

5.2.6 Trench locations will be recorded by an appropriate method. These will then be tied in to the Ordnance Survey National Grid.

5.2.7 Any human remains encountered will initially be left in situ and will only be removed if necessary for their protection, under Ministry of Justice guidelines and in compliance with relevant environmental health regulations.

In the event that unforeseen archaeological discoveries are made during the project a contingency may be required to clarify the character or extent of additional features. The contingency will only be initiated after consultation with the Client and the Planning Archaeologist and Planning Authority. Following assessment of the archaeological remains by the Planning Archaeologist, ULAS shall, if required, implement an amended scheme of investigation on behalf of the client as appropriate.

5.2.9 The trenches will be backfilled and levelled at the end of the evaluation only after inspection by the

Derbyshire County Council Development Control Archaeologist with appropriate fencing if necessary.

5.3 Recording Systems

5.3.1 Any archaeological deposits encountered will be recorded and excavated using standard procedures as outlined in the ULAS recording manual. Sufficient of any archaeological features or deposits will be hand excavated in order to provide the information required. Any buried palaeosols located will be hand excavated and the spoil sieved for smaller lithic fragments using a 0.5mm grid.

5.3.2 Individual descriptions of all archaeological strata and features excavated or exposed will be entered onto prepared pro-forma recording sheets. All finds will be 3D recorded.

5.3.3 A record of the full extent in plan of all archaeological deposits encountered will be made on drawing film, related to the OS grid and at a scale of 1:10 or 1:20. Elevations and sections of individual layers of features should be drawn where possible. The OD height of all principal strata and features will be calculated and indicated on the appropriate plans.

5.3.4 An adequate photographic record of the investigations will be prepared illustrating in both detail and general context the principal features and finds discovered. The photographic record will also include
'working shots' to illustrate more generally the nature of the archaeological operation mounted.

5.3.5 This record will be compiled and fully checked during the course of the project.

6. Finds

6.1 The IfA *Guidelines for Finds Work* will be adhered to.

6.2 A Site code/Accession number obtained from Derby City Museums that will be used to identify all records and finds from the site is **DBYMU 2012-222 .**

6.3 All antiquities, valuables, objects or remains of archaeological interest, other than articles declared by Coroner's Inquest to be subject to the Treasure Act, discovered in or under the Site during the carrying out of the project by ULAS or during works carried out on the Site by the Client shall be deemed to be the property of ULAS provided that ULAS after due examination of the said Archaeological Discoveries shall transfer ownership of all Archaeological Discoveries unconditionally to the appropriate authority for storage in perpetuity.

6.4 All identified finds and artefacts are to be retained, although certain classes of building material will, in some circumstances, be discarded after recording with the approval of the Planning Archaeologist.

6.5 All finds and samples will be treated in a proper manner. Where appropriate they will be cleaned, marked and receive remedial conservation in accordance with recognised best practice. This will include the site code number, finds number and context number. Bulk finds will be bagged in clear self sealing plastic bags, again marked with site code, finds and context.

6.6 Finds which may constitute ‘treasure’ under the Treasure Act, 1996 must be removed to a safe place and reported to the local Coroner. Where removal cannot take place on the same working day as discovery, suitable security will be taken to protect the finds from theft.

7. Environmental Sampling

7.1. If features are appropriate for environmental sampling a strategy and methodology will be developed on site following advice from ULAS's Environmental Specialist and the Derbyshire County Council Development Control Archaeologist. Preparation, taking, processing and assessment of environmental samples will be in accordance with current best practice. The sampling strategy is likely to include the following:

A range of features to represent all feature types, areas and phases will be selected on a judgmental basis. The criteria for selection will be that deposits are datable, well sealed and with little intrusive or residual material.

Any buried soils or well-sealed deposits with concentrations of carbonised material present will be intensively sampled taking a known proportion of the deposit.

Spot samples will be taken where concentrations of environmental remains are located.

Waterlogged remains, if present, will be sampled for pollen, plant macrofossils, insect remains and radiocarbon dating provided that they are uncontaminated.

7.2 All collected samples will be labelled with context and sequential sample numbers.

7.3 Appropriate contexts (i.e datable) will be bulk sampled (50 litres or the whole context depending on size) for the recovery of carbonised plant remains and insects.

7.4 Recovery of small animal bones, bird bone and large molluscs will normally be achieved through processing other bulk samples or 50 litre samples may be taken specifically to sample particularly rich deposits.

7.5 Wet sieving with flotation will be carried out using a York Archaeological Trust sieving tank with a

0.5mm mesh and a 0.3mm flotation sieve. The small size mesh will be used initially as flotation of plant remains may be incomplete and some may remain in the residue. The residue > 0.5mm from the tank will be separated into coarse fractions of over 4mm and fine fractions of > 0.5-4mm. The coarse fractions will be sorted for finds. The fine fractions and flots will be evaluated and prioritised; only those with remains apparent will be sorted. The prioritised flots will not be sorted until the analysis stage when phasing information is available. Flots will be scanned and plant remains from selected contexts will be identified and further sampling, sieving and sorting targeted towards higher potential deposits.

7.6 Where evidence of industrial processes are present (eg indicated by the presence of slag or hearth bases), samples will be taken for the analysis of industrial residues (e.g hammer scale).

7.7 Provision will be made for 1) scientific dating; 2) conservation and 3) X-radiography of metal finds where justified by the aims of the project, in line with EH guidelines and in consultation with the English Heritage Regional Scientific Advisor. Radio-carbon dating will normally be provided by Uppsala Laboratories. Conservation and x-radiography will be undertaken by Dr G C Morgan.

8 Report and Archive

8.1 A draft version of the report will normally be presented within four weeks of completion of site works.

The full report in A4 format will usually follow within eight weeks. Copies will be provided for the client and the Local Planning Authority and deposited with the Historic Environment Record. A pdf version of the report will be submitted to the HER on disk, along with five key indexed record photos

8.2 The report will include consideration of:

The aims and methods adopted in the course of the evaluation.

The nature, location and extent of any structural, artefactual and environmental material uncovered.

The anticipated degree of survival of archaeological deposits.

The anticipated archaeological impact of the current proposals.

Appropriate illustrative material including maps, plans, sections, drawings and photographs.

Summary.

a summary of artefacts, specialist reports and a consideration of the evidence within its local, regional, national context.

The location and size of the archive.

A quantitative and qualitative assessment of the potential of the archive for further analysis leading to full publication, following guidelines laid down in *Management of Archaeological Projects* (English Heritage). The report will include specialist recommendations for the retention/discard of archive material, a proposed deposition date for the archive, and a publication proposal which will include as minimum a note in *Derbyshire Archaeological Journal.*

8.3 If the assessment of the potential of the archive leads to recommendations from the Derbyshire County Council Development Control Archaeologist for further analysis leading to full publication the following procedures will be followed. 1) the material is retained pending further fieldwork on the site and further analyses will be combined with later phases for analysis, or 2) if no further fieldwork is to be undertaken further analyses are undertaken, as a self-contained project, and reported in the final report.

8.3 A full copy of the archive as defined in the IfA Standard and Guidance for archaeological archives (Brown 2008) will normally be presented to Derby City Museums and Art Gallery within six months of the completion of fieldwork. This archive will include all written, drawn and photographic records relating directly to the investigations undertaken. The Archive preparation and deposition to be in line with *Procedures for the transfer of archaeological archives* (Museums in Derbyshire 2003). Prior notification will be sent to Derby Museum who will issued an accession number. Written confirmation of completion of fieldwork will be sent to Derby Museum and the Derbyshire County Council Development Control Archaeologist. Written confirmation of the final deposition of archive will be sent to the Derbyshire County Council Development Control Archaeologist.

8.4 The copyright of all original finished documents shall remain vested in ULAS and ULAS will be entitled as of right to publish any material in any form produced as a result of its investigations.

9 Publication and Dissemination of Results

9.1 A summary report will be submitted to *Derbyshire Archaeological Journal* following completion of the fieldwork. A full report will be submitted to a national or period journal if the results are of significance.

9.2 University of Leicester Archaeological Services supports the Online Access to the Index of Archaeological Investigations (OASIS) project. The online OASIS form at http://www.oasis.ac.uk will be completed detailing the results of the project. ULAS will contact the HER prior to completion of the form. Once a report has become a public document following its incorporation into the HER it may be placed on the web-site.

10 Acknowledgement and Publicity

10.1 ULAS shall acknowledge the contribution of the Client in any displays, broadcasts or publications relating to the site or in which the report may be included.

10.2 ULAS and the Client shall each ensure that a senior employee shall be responsible for dealing with any enquiries received from press, television and any other broadcasting media and members of the public. All enquiries made to ULAS shall be directed to the Client for comment.

11 Copyright

11.1 The copyright of all original finished documents shall remain vested in ULAS and ULAS will be entitled as of right to publish any material in any form produced as a result of its investigations.

12 Monitoring arrangements

12.1 Unlimited access to monitor the project will be available to both the Client and his representatives and the Derbyshire County Council Development Control Archaeologist subject to the health and safety requirements of the site. Any amendment to the approved WSI will be discussed and agreed in advance with the Derbyshire County Council Development Control Archaeologist Provision will be made for a site meeting once all trenches are open, to review findings.

12.3 All monitoring shall be carried out in accordance with the IfA *Standard and Guidance for Archaeological Field Evaluations* (2008)

12.4 Internal monitoring will be carried out by the ULAS project manager.

13 Timetable and Staffing

13.1 A start date for the trial trenching is w/c 23.09.2013.

14 Health and Safety

14.1 ULAS is covered by and adheres to the University of Leicester Statement of Safety Policy and uses the ULAS Health and Safety Manual (revised 2010) with appropriate risks assessments for all archaeological work. A draft Health and Safety statement for this project is in the Appendix. The relevant Health and Safety Executive guidelines will be adhered to as appropriate.

15 Insurance

15.1 All ULAS work is covered by the University of Leicester's Public Liability and Professional Indemnity Insurance. The Public Liability Insurance is with St Pauls Travellers Policy No. UCPOP3651237 while the Professional Indemnity Insurance is with Lloyds Underwriters (50%) and Brit Insurances (50%) Policy No. FUNK3605.

16. Contingencies and unforeseen circumstances

16.1 In the event that unforeseen archaeological discoveries are made during the project, ULAS shall inform the site agent/project manager, Client and the Planning Archaeologist and Planning Authority and prepare a short written statement with plan detailing the archaeological evidence. Following assessment of the archaeological remains by the Planning Archaeologist, ULAS shall, if required, implement an amended scheme of investigation on behalf of the client as appropriate.

17. Bibliography

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05.09.2013

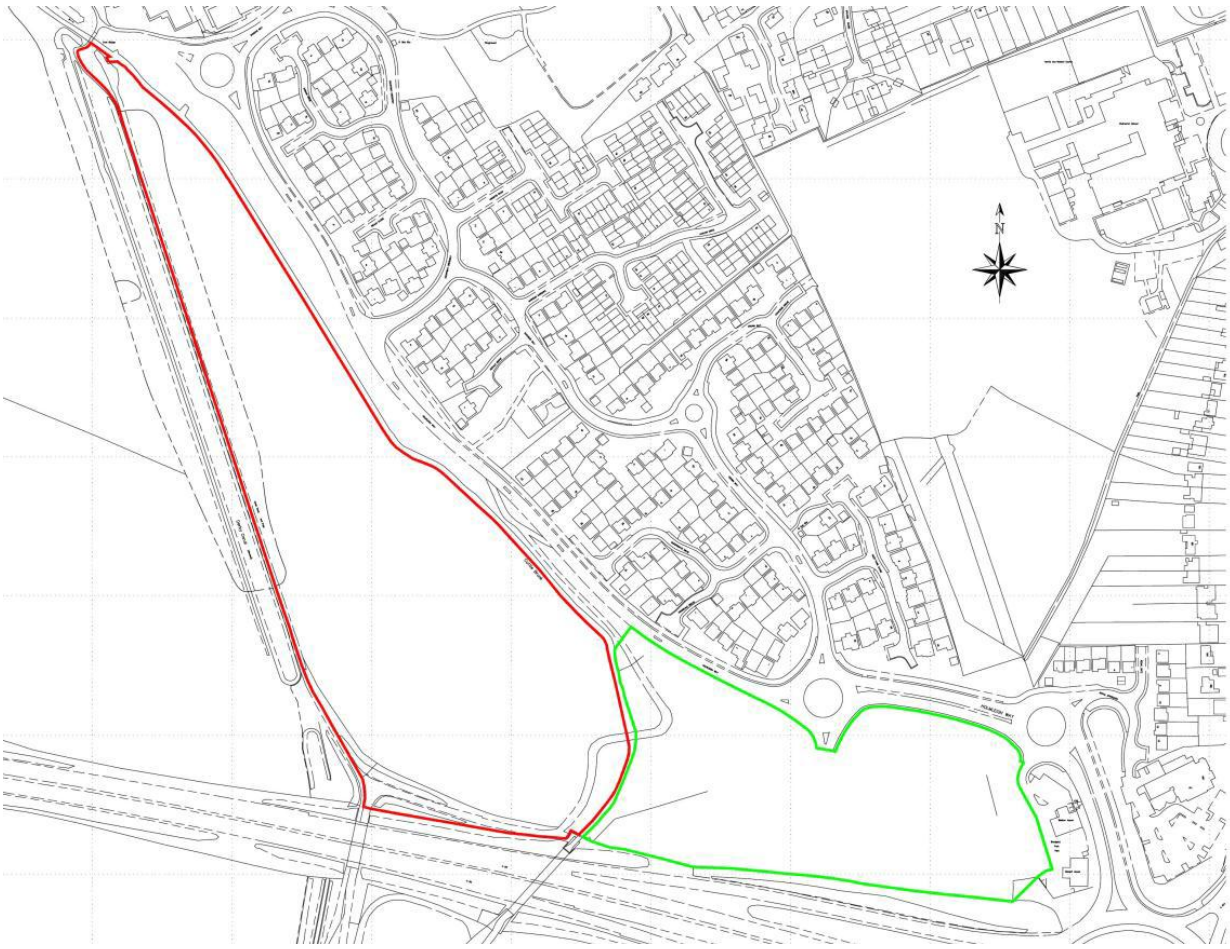

Figure 1. Site location

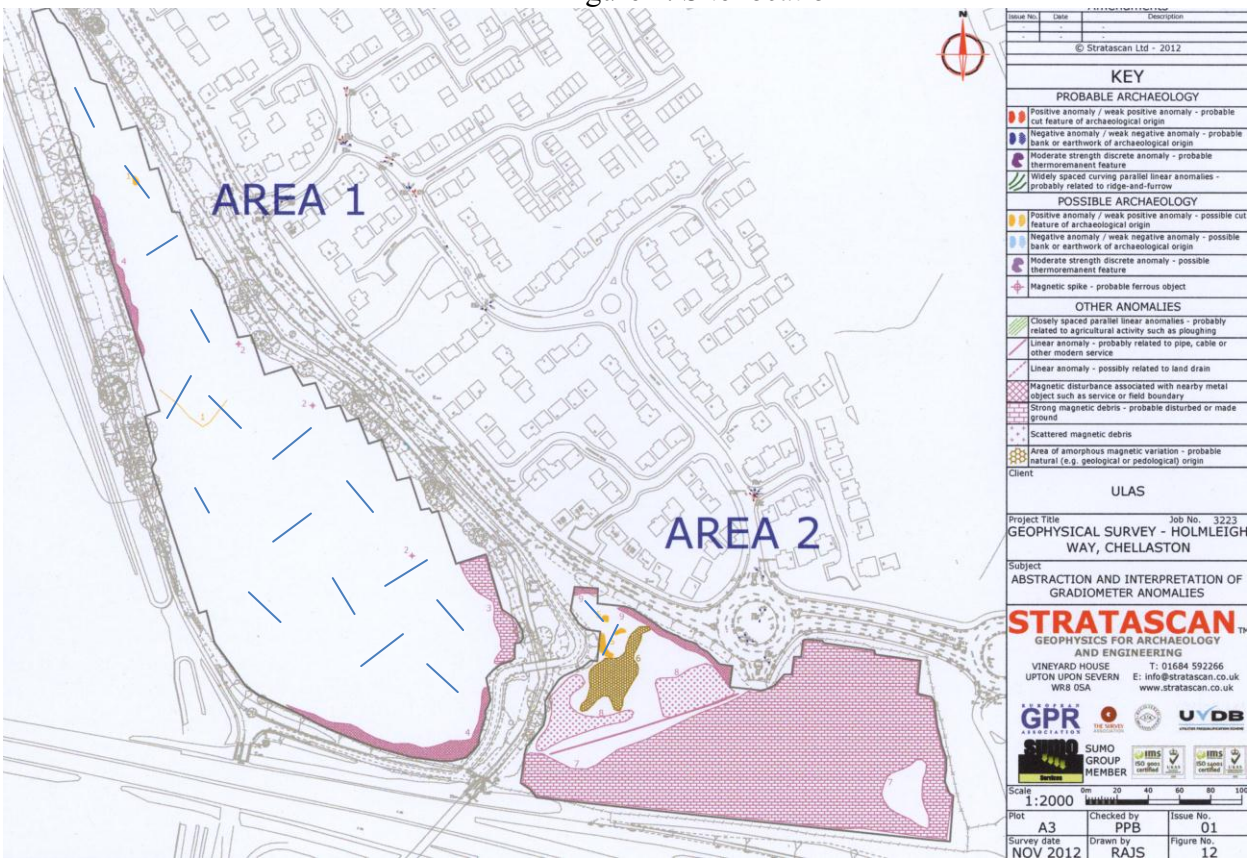

Figure 2 Proposed trial trenches in relation to Geophysical anomalies.

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Archaeological Services

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