Power Line Pole Refurbishment Trowbridge to Hawkeridge Wiltshire



Archaeological Watching Brief Report



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Summary

In November 2011 and February 2012 Oxford Archaeology undertook an archaeological watching brief during refurbishment of the overhead power line between Trowbridge and Hawkeridge.

The route covered three sites of archaeological interest at Arnold's Hill Deserted Medieval Village, Southwick Country Park and Court Farm Deer Park. The watching brief observed the excavations for seven replacement poles and for the plumbing of twelve leaning poles within these areas. No archaeological stratigraphy or artefacts were encountered. The watching brief also monitored and advised plant and vehicle access which successfully avoided or minimised impacts to the upstanding earthworks.

1 Introduction

1.1 Scope of work

- 1.1.1 Scottish and Southern Energy (SSE) undertook a programme of overhead power line refurbishment between Trowbridge and Westbury in Wiltshire in November 2011 and February 2012. This required the replacement and straightening (plumbing) of selected poles along this route.
- 1.1.2 During the project planning stage, discussions between SSE and Wiltshire Council County Archaeology Service (WCCAS) identified areas of archaeological potential along the route. These areas comprised upstanding earthwork remains and locations with buried archaeological potential. As part of the archaeological mitigation for the work SSE commissioned Oxford Archaeology South (OAS) to undertake a watching brief on all of the intrusive excavations and to monitor and advise the SSE field team with regard to movements over and around the earthwork remains. Prior to the fieldwork commencing, OAS discussed and agreed the proposed fieldwork methods and scope of work with WCCAS. Subsequently, a Written Scheme of Investigation (WSI) was produced by OAS and agreed with WCCAS prior to the commencement of the fieldwork outlining how it would fulfil the archaeological conditions (OAS 2011).

1.2 Location, geology and topography

1.2.1 The route of the overhead line refurbishment runs between Arnold's Hill and Westbury Cement Works crossing a varied rural landscape (Fig. 1). Arnold's Hill is located between Wingfield and Trowbridge. Westbury Cement Works are located to the northeast of Westbury and 2 km south of Trowbridge, Wiltshire. The start and end National Grid References (NGR) for the route are ST 8322 5841 to ST 8811 5256. The poles (P) and areas identified for observation were located in three distinct groups centred upon NGRs ST 8327 5762, ST 8376 5627 and ST 8558 5399 (P48) (Figs 2-4).

Single Poles

1.2.2 Poles 6-14 are situated within grazed pasture farmland to the north-west (P6-12) and south-east (P13-14) of Wingfield Road (A366) (Fig. 2). Poles 21-29 are located to the west of Upper Studley and Firs Hill / Frome Road (A361) within pasture meadows and the boundary hedges of Southwick Country Park (Fig. 3). For the area covering poles 6-24 the underlying solid geology is recorded as Kellaways Formation – sandy



mudstone. The solid geology for P28-29 is recorded as Peterborough member – mudstone (http://mapapps.bgs.ac.uk/geologyofbritain/).

H poles

1.2.3 Pole 48 is situated to the north-west of Hawkeridge within the corner of a grazed pasture field adjacent to a wooded area. The underlying solid geology is Oxford Clay.

1.3 Archaeological and historical background

- 1.3.1 Wiltshire and Swindon Historic Environment Record (HER) records that the Arnold's Hill deserted medieval village (DMV) is situated to the east of the route in the vicinity of poles 10, 11 and 12. The HER records a series of well defined earthworks, probably representing medieval settlement, with features surviving up to a height of 2ft (HER record MWI1390 ST85NW452).
- 1.3.2 Further earthworks survive to the west of P14 at Arnold's Hill Farm probably representing field boundaries of post-medieval date. Banks here are also recorded up to 2ft high (HER record MWI1426 ST85NW607).
- 1.3.3 Poles 21-24 and 28 and 29 are situated within 500m of features recorded during an evaluation in 1995 at Southwick Country Park. Medieval pits, ditches and stakeholes were discovered and 13th-century pottery was recovered. It is possible that one of the linear features was a beamslot for a building and the stakeholes suggest that the area was probably fenced (HER record MWI1406 ST85NW468).
- 1.3.4 Concentrations of Romano-British pottery including greywares and a Samian sherd were recovered approximately 100m south-west of P21 during a fieldwalking exercise in 1998 (HER record MWI1382 ST85NW307). A short distance to the south and immediately west of P28 several substantial fragments of Roman Tegula and Imbrex tile were also recovered from the ploughsoil of an arable field (HER record MWI1380 ST85NW305).
- 1.3.5 South-east of P48, a late medieval deer park is recorded. This was mentioned in a document from 1323, but the park status was removed by 1582 with the land being sub-divided (HER record MWI1538 ST85SE474). The field boundary adjacent to the pole is probably the remains of the deer park perimeter.

2 PROJECT AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 The watching brief aims were to:
 - (i) seek to restrict or minimise the movements and impact of any necessary vehicle access across identifiable earthworks;
 - (ii) preserve by record any archaeological deposits encountered during the course of ground intrusions;
 - (iii) seek to establish the extent, nature and date of any archaeological deposits encountered within the scope of the ground intrusion;
 - (iv) secure the analysis, conservation and long-term storage of any artefactual/ecofactual material recovered from the site.:
 - (v) disseminate results through the production of a grey literature report.



2.2 Methodology

2.2.1 The watching brief accompanied all works that had the potential to disturb or destroy archaeological remains at the notified locations. This included all machine excavation for the replacement and plumbing of poles and vehicle movements in sensitive areas with earthwork remains where wheel rutting had the potential to damage upstanding features.

Pole replacement and plumbing method

- 2.2.2 All new poles were erected in machine excavated trenches, typically 2m long, 0.5m wide and up to 1.8m deep, near to the existing associated pole location. Each trench was excavated under archaeological supervision with the topsoil and underlying plough soil deposits carefully removed to reveal the surface of the underlying geology or potential archaeological deposits. Where no archaeological deposits were present, machine excavation continued to the required depth. The exposed soil sequence within each trench was recorded following excavation and prior to the installation of the new pole and backfilling. All old poles were removed using a mechanical excavator operating with archaeological supervision.
- 2.2.3 Where the poles required plumbing (moving back to the vertical), a small trench, usually 1.8m long, 0.5m wide and 1m deep, was excavated to either side of the existing pole to facilitate this. Once the pole was upright, the associated trench was backfilled with the excavated material. All machine excavation associated with these poles was undertaken with archaeological supervision.
- 2.2.4 All spoil generated by the machine excavations was examined for the presence of archaeological artefacts.
- 2.2.5 All features and deposits were issued with unique context numbers, and context recording was in accordance with established OAS practices. Black-and-white negative photographs and a digital photographic record were taken of all excavations, general settings and any recorded sections.
- 2.2.6 Site plans were maintained showing the location of the excavations and the proposed access routes at an appropriate scale. Sections were drawn at a scale of 1:20.
- 2.2.7 Full details of the recorded contexts may be found in the Archaeological Context Inventory, Appendix A.

Vehicle Access - Arnold's Hill DMV and Court Farm Deer Park

- 2.2.8 Prior to any vehicle movement across the areas with upstanding earthworks, the attending archaeologist assessed the ground conditions and advised on the best access routes to each pole. The proposed routes were chosen utilising existing farm vehicle tracks and access where possible and to minimise the travelling distance over the areas of archaeological interest taking into consideration the ground conditions.
- 2.2.9 A photographic record of vehicle movement across the areas containing earthworks was maintained illustrating the before and after conditions and appearance. Written records were complied detailing the extent or absence of any wheel ruts or compaction that occurred during access across these areas.



3 RESULTS

3.1 Description of deposits

Arnold's Hill DMV

- 3.1.1 The works undertaken within this area comprised the replacement of four poles (7, 8, 12 and 14) and the plumbing of three further poles (9, 10 and 11) (Fig. 2). Within the main area of the DMV (poles 9, 10 and 11) raised banks and associated ditches were visible defining two parallel lines of roughly square enclosures running east to west across the field (Plate 1). None of the poles were located on or near these features. Within the vicinity of poles 7 and 8, in the field north of the main area, and pole 12 in the field south of the main area, no earthworks were evident. No archaeological features, deposits or artefacts were encountered during the excavations associated with any of these poles.
- 3.1.2 South of the A366 a number of lynchets and building platforms could be seen on the north and south banks of a brook running to the north of pole 14. None of the visible surface features coincided with the location of pole 14.
- 3.1.3 By utilising the existing farm tracks vehicle movement over areas of archaeological interest was limited to a minimum (Plate 2). The ground conditions during the work were firm which, combined with the use of low pressure within the tyres and restricting the number of vehicles that needed to access the site, resulted in minimal rutting and compression of the soil (Plate 3). Where noted this was generally confined to the upper 25 mm of the turf and topsoil caused by the tyre tread of the excavator (Plate 4).
- 3.1.4 The deposit sequence encountered at each pole location across this area was consistent, with only minor variations in colour, depth and thickness of the recorded soil layers. A full list of individual context descriptions is tabulated in Appendix A.
- 3.1.5 At the location of the replacement poles (7, 8, 12 and 14) undisturbed soil sequences were recorded. At these locations the surface of the underlying Kellaways Formation geological horizon was encountered between 0.35-0.45m below the current ground level. This appeared as a yellowish orange-brown silt clay deposit. A buried ploughsoil or subsoil horizon comprising a yellow brown silty clay soil layer up to 0.2m thick overlay the surface of the Kellaways Formation deposits. The current 0.15m thick topsoil and turf horizon completed the sequence. Sections 5 and 7 recorded at pole locations 7 and 12 illustrate this sequence (Fig. 5).
- 3.1.6 The stratigraphy exposed during the plumbing of poles 9, 10 and 11 had been heavily disturbed during the original installation of the poles. Where undisturbed stratigraphy was observed it was similar to that recorded in elsewhere within this field.

Southwick Country Park

- 3.1.7 The works undertaken within this area comprised the plumbing of single poles 21, 22, 24, 28 and 29 and the replacement of poles 23 and 25 (Fig. 3). Poles 28 and 29 are located close to the area of medieval features identified during an evaluation in 1995 on land at Southwick County Park. In addition a scatter of Romano-British pottery was recovered approximately 100m south-west of pole 21 during field walking in 1998.
- 3.1.8 A simple soil sequence similar to that encountered around Arnold's Hill was recorded for the pole replacements within Southwick Country Park. This comprised natural orange-yellow clay encountered 0.45m below the current ground level overlain by a 0.2m thick light brown silty clay buried soil horizon. The current 0.15m thick dark



yellowish-brown clayey silt topsoil and turf completed the sequence. The same general soil sequence was recorded around the plumbed pole locations although this was disturbed by the original installation. No archaeological deposits or finds were encountered at these pole locations.

Court Farm Deer Park

3.1.9 The works undertaken within this area included the replacement of a "H" pole (48) and the plumbing of three single poles (53, 54 and 55). Pole 48 was located to the immediate south-west of the ditch and bank defining the boundary of the Deer Park (Fig. 4). Poles 53, 54 and 55 were located in fields south of Court Farm.

Pole 48

- 3.1.10 Prior to the replacement of pole 48 two temporary poles (jockey poles) were installed to support the overhead wires before pole 48 could be removed. One of these poles was installed 25m south of pole 48 and the second 25m to the north-west, inside the deer park boundary. The installation of the temporary poles required the excavation of trenches to similar proportions for those of the single pole replacements. The new double pole location (P48) required the excavation of a trench measuring approximately 3m long, 1m wide and 1.75m deep (Plate 5).
- 3.1.11 A sequence of undisturbed deposits exhibiting minor variations was encountered at each location (Fig. 6). Section 1 was recorded within the trench of the southern jockey pole, section 2 within the northern jockey pole trench and section 3 within the replacement pole trench. The sequence comprised Oxford Clay overlain by a subsoil and the current topsoil and turf. Within the base of each trench the Oxford Clay was light grey with calcareous inclusions (13, 23 and 33). The surface of this horizon was encountered between 1-1.3m below the ground level and was overlain by weathered yellowish brown Oxford Clay (12, 21, 22 and 32). A silt clay subsoil (11, 31) was present within the southern field (sections 1 and 3) overlain by a topsoil and turf horizon with a combined thickness of 0.25-0.3m, whereas only an undifferentiated topsoil and turf horizon to a depth of 0.22m was present to the north.
- 3.1.12 A profile of the extant ditch and bank boundary to the immediately east of pole 48 was also recorded as part of the field investigation (Fig. 6, section 4 and Plate 6). The remaining bank measured approximately 0.4m high and 2.4m wide and the ditch was approximately 0.5m deep and 1.5m wide. Both the ditch and the bank had been subject to erosion and animal disturbance leading to silting up of the ditch and a spread of the bank. The surface of the field on the north side of the bank was roughly 0.15m lower than that of the field on the southern side.

Poles 53, 54 and 55

3.1.13 These poles were located in open pasture to the south of Court Farm. As with the other plumbed poles, the stratigraphy exposed here had been heavily disturbed during the original installation. Where undisturbed stratigraphy could be recorded it was similar in all three trenches. The underlying clay geology, a light yellow-brown silty clay, was exposed in the base of the trench and was overlain by a 0.2m thick layer of orange-yellow sandy silty clay containing lenses of gravel and a layer of dark grey-brown clay loam topsoil 0.15m in depth.

3.2 Finds

3.2.1 No dating evidence or artefacts were recovered from any of the excavations.



3.3 Environmental remains

3.3.1 No deposits suitable for palaeo-environmental sampling were encountered during the course of the watching brief.

4 DISCUSSION AND CONCLUSIONS

4.1 Arnold's Hill DMV

- 4.1.1 Within this area relatively undisturbed soil sequences were recorded overlying the silty clays of the Kellaways Formation. The recorded subsoil may represent a buried ploughsoil, although the lack of artefactual inclusions in such close proximity to a DMV suggests that this may not be the case; this may represent a largely undisturbed soil horizon or one that has not derived from significant ploughing and manuring. The relatively shallow topsoil and turf horizon strongly indicates that this field has remained as pasture, possibly since settlement ceased within the DMV, or that it has only ever been subjected to shallow and occasional ploughing in the past.
- 4.1.2 The impact of the plant upon the upstanding earthworks was very limited with no permanent affect to these. Restrictions to plant movements and careful consideration of access routes following advice from the OA staff proved very effective.

4.2 Southwick Country Park

4.2.1 A simple soil sequence similar to that encountered around Arnold's Hill was recorded for the pole replacements within Southwick Country Park suggesting a similar situation.

4.3 Court Farm Deer Park

4.3.1 The eroded bank and infilled ditch associated with the deer park were clearly visible adjacent to the existing pole and formed part of the current field boundaries. Pole 48 was sited within 3m of the feature although this was sufficient for it not to encounter any part of the boundary within the replacement pole trench excavation. Vehicle movement within this area was confined to existing farm tracks including where it was necessary to cross the ditch and bank.



APPENDIX A. ARCHAEOLOGICAL CONTEXT INVENTORY

Context	Туре	Depth	Width	Length	Comments	Finds	Date
Pole 48	1	1					•
10	Layer	0.12m	-	-	Present day topsoil and turf	-	-
11	Layer	0.18m	-	-	Subsoil, possibly earlier ploughsoil horizon	-	-
12	Layer	0.8m	-	-	Natural clay	-	-
13	Layer	> 0.5m	-	-	Oxford Clay with calcareous flecking	-	-
20	Layer	0.22m	-	-	Present day topsoil and turf	-	-
21	Layer	0.5m	-	-	Weathered Oxford Clay	-	-
22	Layer	0.8m	-	-	Weathered Oxford Clay	-	-
23	Layer	> 0.4m	-	-	Oxford Clay with calcareous flecking	-	-
30	Layer	0.12m	-	-	Present day topsoil and turf	-	-
31	Layer	0.12m	-	-	Subsoil, possibly earlier ploughsoil horizon	-	-
32	Layer	0.8m	-	-	Weathered Oxford Clay	-	-
33	Layer	> 0.6m	-	-	Weathered Oxford Clay	-	-
Pole 7	1		1				1
50	Layer	0.12m	-	-	Present day topsoil and turf	-	-
51	Layer	0.2m	-	-	Subsoil, possibly earlier ploughsoil horizon	-	-
52	Layer	> 1.5m	-	-	Natural clay Kellaways Formation	-	-
Pole 8	•	•	•	•		·	'
60	Layer	0.12m	-	-	Present day topsoil and turf	-	-
61	Layer	0.25m	-	-	Subsoil, possibly earlier ploughsoil horizon	-	-



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62	Layer	> 1.5m	-	-	Natural clay Kellaways Formation	-	-
Pole 12		1	1			1	1
70	Layer	0.15m	-	-	Present day topsoil and turf	-	-
71	Layer	0.2m	-	-	Subsoil, possibly earlier ploughsoil horizon	-	-
72	Layer	> 1.5m	-	-	Natural clay Kellaways Formation	-	-
Pole 14			1			1	
80	Layer	0.32m	-	-	Present day topsoil and turf	-	-
81	Layer	0.3m	-	-	Subsoil, possibly earlier ploughsoil horizon	-	-
82	Layer	> 1.1m	-	-	Natural clay	-	-
Pole 28		1	1	1		1	1
90	Layer	0.14m	-	-	Present day topsoil and turf	-	-
91	Layer	0.22m	-	-	Subsoil, possibly earlier ploughsoil horizon	-	-
92	Layer	> 0.5m	-	-	Natural clay	-	-
Pole 21	_1	1		1	1	1	1
100	Layer	0.12m	-	-	Present day topsoil and turf	-	-
101	Layer	0.2m	-	-	Subsoil	-	-
102	Layer	> 0.5m	-	-	Natural clay	-	-



APPENDIX B. BIBLIOGRAPHY AND REFERENCES

OAS, 2011 Power Line Pole Refurbishment, Trowbridge to Haweridge, Wiltshire: Written Scheme of Investigation for an Archaeological Evaluation



APPENDIX C. SUMMARY OF SITE DETAILS

Site name: Power Line Pole Refurbishment, Trowbridge to Hawkeridge, Wiltshire

Site code: TRHAWK 11

Grid reference: ST 8322 5841 to ST 8811 5256

Type of work:

Watching brief on power line pole replacements, plumbing of tilted poles and monitoring of vehicle access across upstanding earthworks.

Date and duration of project:

Two phases of archaeological monitoring in November 2011 and February 2012

Area of site:

n/a. Works limited to small trenches approximately 2m long by 0.5m wide at individual pole locations along the power line route.

Summary of results:

In November 2011 and February 2012 Oxford Archaeology undertook an archaeological watching brief during refurbishment of the overhead power line between Trowbridge and Hawkeridge.

The route covered three sites of archaeological interest at Arnold's Hill Deserted Medieval Village, Southwick Country Park and Court Farm Deer Park. The watching brief observed the excavations for seven replacement poles and for the plumbing of twelve leaning poles within these areas. No archaeological stratigraphy or artefacts were encountered. The watching brief also monitored and advised plant and vehicle access which successfully avoided or minimised impacts to the upstanding earthworks.

Location of archive:

The archive is currently located at Oxford Archaeology's Janus House office and will be deposited with Trowbridge Museum in due course. The accession number will be confirmed by the museum prior to the creation and deposition of the archive.

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Figure 1: Site location

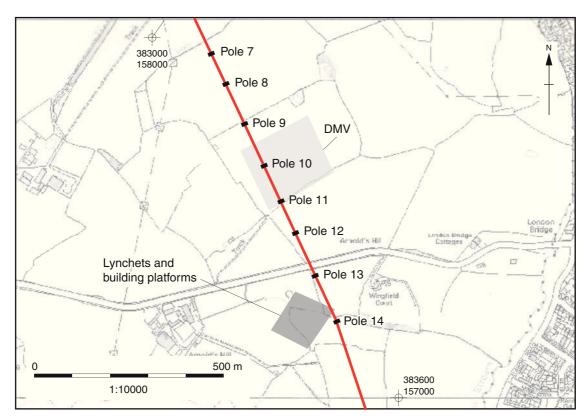


Figure 2: Location of poles 7 to 14

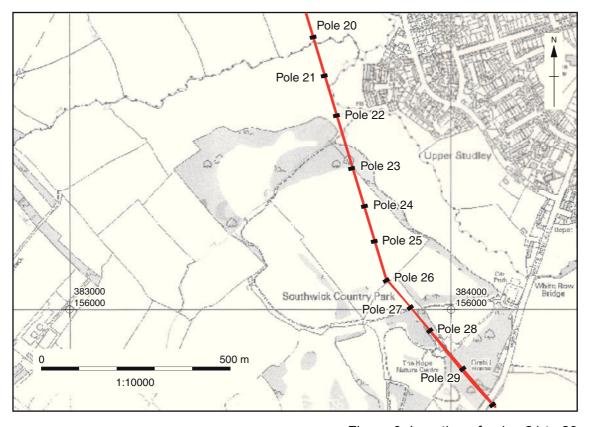


Figure 3: Location of poles 21 to 29

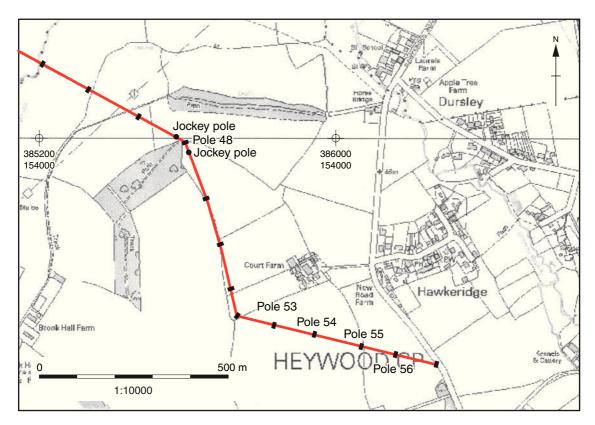
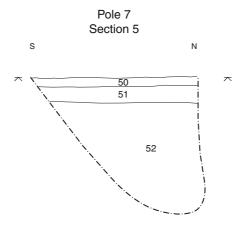


Figure 4: Location of poles 48 to 55



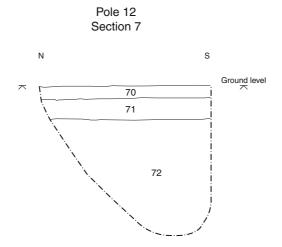
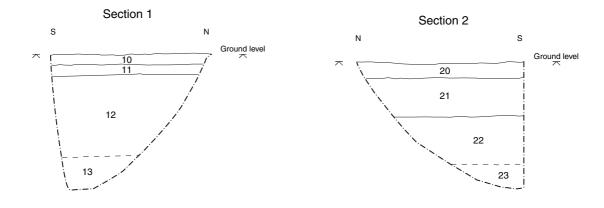
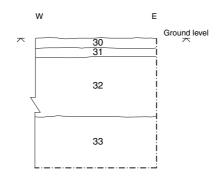




Figure 5: Poles 7 and 12, trench sections



Section 3



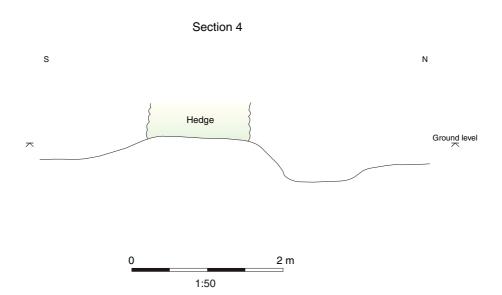


Figure 6: Pole 48 sections



Plate 1: View NE across the DMV at Arnold's Hill



Plate 2: View NW along the existing farm track west of poles 10 and 11



Plate 3: View NW illustrating the limited surface compaction caused by the works



Plate 4: View N illustrating the limited surface disturbance adjacent to pole 11



Plate 5: Replacement pole 48 excavated trench



Plate 6: View NW along the existing hedge boundary with the ditch and bank earthwork adjacent to pole 48



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