

EKTE16/001

11KV POWER LINE REPLACEMENT, TRANENT, EAST
LOTHIAN

Watching Brief

For SPIE-ENS

February 2017

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Illus1

Site location plan

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WATCHING BRIEF

Abstract/Summary – Headland Archaeology Ltd was commissioned by SPIE-ENS to undertake a programme of archaeological monitoring in connection with the replacement of powerlines in and around Ormiston and Cousland, near Tranent, East Lothian. The replacement of 22 poles across 5 separate areas were monitored during this programme of archaeological works. One of the poles was located within the limits of a scheduled ancient monument. The remaining poles were situated close to known historical assets. In all cases no features or artefacts of archaeological significance were identified.

1 INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned by SPIE-ENS to undertake a programme of archaeological works in connection with the replacement of powerlines in and around Ormiston and Cousland, near Tranent, East Lothian.

The client had commissioned Headland Archaeology (UK) Ltd to agree a programme of archaeological work with East Lothian Council Archaeological Service (ECLAS) and to encapsulate the work within a Written Scheme of Investigation (WSI).

This included a watching brief on the excavation of trenches for the insertion of targeted replacement electricity poles. The WSI was submitted to and agreed with ECLAS who advise the Local Planning Authority on archaeological matters. This report details the results of the work.

2 SITE LOCATION AND DESCRIPTION

The replacement poles to be monitored were located across seven areas (Area 1 to 7) within the Ormiston and Cousland area near Tranent, East Lothian (Illus 1). A specific number of targeted poles were subject of archaeological monitoring in each area. The locations of the specified pole replacements was based upon their proximity to known heritage assets

as identified in the Historical Environment Records held by ECLAS.

Area 1 (see Illus 1) is located immediately south of Cousland. Four poles (poles 1, 5, 6 & 7) were identified for monitoring in this area and these were all situated within enclosed fields. Pole 1 was an isolated pole positioned at NGR: NT 378 681. Poles 5 – 7 were on an east/west alignment between points NT 377 680 (Pole 5) and NT 376 680 (Pole 7).

Area 2 (see Illus 1) was located west of Pardivan Farm within a ploughed field enclosed by Hadfast Road. Seven monitored pole replacements (Poles 1 & 31 to 36) were situated in this area, with six of these forming a linear east/west alignment between Pole 31 (NT 389 685) and Pole 36 (NT 386 684) adjacent to a field boundary. The final pole (Pole 1; NT 388 686) was located to the north of Pole 31 along the eastern edge of the field.

Area 3 (see Illus 1) was located to the east of Fordel Parks, north of the A6093. Three monitored pole replacements (Poles 7 – 9) were situated along the edge of a cropped field to the north-east of a farmstead. The poles were aligned north-west/south-east with Pole 7 positioned at NT 386 678 and Pole 9 at NT 388 677.

Area 4 (see Illus 1) was located north-west of Oxenfoord Mains Farm and the A6093. The five monitored pole replacements (Poles 22 – 26) were set in a line from north-west to south-east following a field boundary across the farmland. Pole 22 was positioned at NT 389 672 and Pole 26 was at NT 393 671.

Area 5 was located south of Ormiston immediately south of the A6093 and east of West Byres farm. A further three monitored pole replacements (Poles 1 – 3) were located in this area, situated along the edge of a ploughed field. The line was set on a north-west/south-east alignment with Pole 1 positioned at NT 409 679 and Pole 3 at NT 410 679.

Area 6 (see **Illus 1**) was located east of Fordel Mains farm across farmland covered in stubble. Three monitored pole replacements (Poles 1, 2 & 67) were situated east/west across the field. Pole 4 was positioned at NT 375 666 with Pole 7 at NT 373 666.

Area 7 (see **Illus 1**) was located further to south within farmland close to Longfaugh farm south of Pathhead. A total of seven pole replacements (Poles 3 – 6 & 10 – 11) required monitoring in this area. Four of these (Poles 3 to 6) were aligned north/south across a ploughed field on the north side of a minor road. Pole 3 was positioned at NT 406 625 and Pole 6 at NT 408 623. The remaining three poles were located east of Longfaugh farm continuing on the same north/south alignment. Pole 10 was positioned at NT 406 618 with Pole 12 at NT 409 618.

The majority of the sites lay between around 100m to 180m OD and were underlain by Sedimentary Rock of the Clackmannan Group formed approximately 312 to 331 million years ago in the Carboniferous Period with the environment previously dominated by rivers.

The superficial geology mainly comprised Till – Diamicton in a local environment previously dominated by ice age conditions depositing moraines of till with outwash sand and gravel deposits from seasonal and post glacial meltwaters.

Secondary superficial geologies in the area comprise of alluvium forming bands of clay, silt and sand along with glacial sand and gravel deposits (British Geological Survey – Online source <http://www.bgs.ac.uk>).

3 ARCHAEOLOGICAL BACKGROUND

The pole replacements within each area were specifically targeted due to their proximity to known archaeological assets. The sites were identified from the ELCAS Historic Environment Records (online resource: - www.johngraycentre.org).

In Area 1 Poles 5, 6 & 7 are in close proximity to the location of a long cist burial (HER: MEL 8269) and the remains of a 17th /18th century windmill. Pole 1 was also a short distance from a series of medieval ditches and drains (HER: MEL 10248).

The pole replacements in Area 2 included one (Pole 1) located within the boundary of a Scheduled Ancient Monument (SMR 6269). This was the cropmark of an enclosure (HER: MEL 8279), potentially of prehistoric date. A potential pit alignment (HER: MEL 8321) of prehistoric date was also located close to this area. A second cropmark

enclosure (HER: MEL 8280) was also located 100m to the south of the line of poles (Poles 1 to 6).

The three pole replacements in Area 3 are adjacent to a linear cropmark (HER: MEL8305). Pole 9 is also close to a listed 19th century steading (HER: MEL10161; listed building record: 51734).

West of Oxenfoord Mains (Area 4) the five replacement poles are situated north-east of three sites. The largest of these is a cropmark enclosure (HER: MEL 10174) that may be associated with a smaller double ditched enclosure (HER: MEL 8723). This site was potentially a Roman fortlet. A small linear cropmark feature (HER: MEL 8304) was located a short distance to the south-east of the former sites.

The three poles located in Area 5 to the south of the A6093 were flanked by two sites. To the north was a cropmark of a D-shaped enclosure (HER: MEL 364). This was potentially a prehistoric feature and been assigned as a Scheduled Ancient Monument (SMR: 5748). A slightly smaller cropmark site (HER: MEL 391) was recorded to the south-east.

To the south-west of Fordel Mains (Area 6) a large circular cropmark site (HER: MEL 8279) was located immediately south of Pole 67. This site has been interpreted as a fort site and has been assigned as a Scheduled Ancient Monument (SMR: 6268). The poles were also close to Fordel Mains, a 19th century farmhouse (HER: MEL 5620).

In Area 7 the four poles to the north of the farm road (Poles 3 – 6) were situated immediately east of a sub-rectangular cropmark site (HER: MEL 8592). This site was also scheduled (SMR: 6273). The three poles (Pole 10 – 12) were east of Longfaugh farm and north-west of a further circular cropmark enclosure (HER: MEL 8623). This site had also been scheduled as the site of a settlement (SMR 6274).

4 AIMS & OBJECTIVES

In line with the WSI the main objectives of archaeological works were:

- To monitor all ground breaking associated with the development within the seven areas listed above and to mitigate against any adverse impacts on sub-surface remains of archaeological interest.
- Organise and deposit the resulting archive in the Scottish National Record of the Historic Environment (SNRHE); to facilitate access for future research and interpretation for public benefit.
- In addition to the above areas of archaeological sensitivity all works associated with Pole 31 in the Pardivan area (Area 2) were subject to

Scheduled Monument Consent (SMC). All works conducted in this area were to be carried out in line with the SMC (along with the overarching approach outlined in this WSI) and were not to commence until Scheduled Monument Consent has been granted by Historic Environment Scotland.

5 METHODOLOGY

5.1 Site works

The work was undertaken as specified in the WSI. The archaeological watching brief comprised monitoring of all ground works associated with the installation of new and replacement overhead poles and any excavations in relation to installation of new or replacement underground cables and stabilisers.

The main contractor undertook all ground breaking works under direct archaeological supervision. A toothed bucket was used to remove any hard surfaces/demolition deposits and all soft deposits were removed in spits using a flat bladed ditching bucket.

The monitoring strategy was in place to provide information on any previously unrecorded features of archaeological interest at risk from ground works associated with the pole replacement programme. Archaeological features or artefacts exposed during the monitoring were to be recorded according to normal excavation methodology.

Any archaeologically significant sub-surface remains encountered were to be subject to a programme of excavation and recording. The duration and effort of recording were to be appropriate to the significance of the remains identified.

5.2 Recording

All aspects of the work were undertaken in accordance with the current relevant Standards and Guidance for watching briefs of the Institute for Archaeologists (CIfA 2014).

All recording was undertaken on pro forma record cards. A digital photographic record of all excavations was also undertaken. A full photographic record can be found in Appendix 1.

The site plan including areas of excavation and any other pertinent information has been accurately linked to the National Grid and heights to OD.

5.3 Reporting and Archives

The results of the works are presented below. A summary report has been prepared for submission

to *Discovery & Excavation in Scotland* (Appendix 2) and the OASIS database (headland1-280213).

The complete project archive will be deposited with the SNRHE within six months of the completion of the project. The records (paper and digital) will be archived according to best practice guidelines set out by the Archaeological Archiving Forum.

6 RESULTS

The primary aim of the work undertaken by SPIE-ENS was the replacement of the powerline in and around Ormiston and Cousland, near Tranent. This included both the replacement of the existing timber electricity poles and in some cases the realignment of the powerline requiring the re-positioning of the replacement poles.

In a number of cases the replacement poles did not require any additional excavation. In these instances the new poles were placed within the same post-holes as the ones removed. In these cases no monitoring was required. This was the case for all the poles in Area 1 and 4 plus Pole 12 in Area 7.

In total the excavation and replacement of 22 poles were monitored across 5 separate areas. In all cases the excavated trenches for the replacement poles were generally 1.5m x 0.6m in size and excavated to a maximum depth of 2m. In a small number of instances additional stabiliser trenches were required. These were generally to the same dimensions as the pole trenches.

In Area 2 one of the poles (Pole 31) was located within the limits of a scheduled ancient monument (SMR 6269). A notification of urgent works was submitted to HES and a confirmation notice was received (Case No. 201604794).

Of the seven trenches in Area 2 only Pole 31 required additional stabilisers. The pole was located close to the north-east corner of the field with all three stay trenches close to or within the hedge line. The excavation of Pole 31 (*Illus 2*) and the stay trenches generally revealed 0.45m of dark-brown sandy loam overlying geological subsoil comprising mid-brown sandy clay loam to a depth of 1.8m. No archaeology or artefacts were identified within these trenches. Similar results were recorded for the remaining six poles in this area with the topsoil varying in depth between 0.35m and 0.45m.

All three poles in Area 3 recorded similar negative results. Of these only Pole 9 required additional stabiliser trenches. In all cases the trenches recorded 0.5m of dark grey-brown sandy loam topsoil overlying the geological subsoil, in this case a mid-brown/grey sandy clay.

In Area 5 three poles were due to be replaced. Poles 1 and 3 also each required an additional single

stabiliser trench. Poles 2 and 3 were located within the hedge line of the field boundary making visibility of the stratigraphy difficult (Illus 3). Both recorded heavy root bioturbation in the topsoil comprising dark brown stone rich loam 0.4m deep overlying a geological subsoil comprising light brown stone rich sand. Pole 1 at the north-west corner of the field produced similar results.

Three further poles were being replaced in Area 6. Of these Pole 67 required the excavation of two additional stabiliser trenches. This pole was located on the line of an old wall boundary the resulting trenches all encountering rubble stone wall debris. Two service pipes were also encountered indicating the area had been heavily disturbed. Poles 1 and 2 were located within the ploughed field with 0.25m of topsoil and 0.05m of subsoil recorded overlying the geological subsoil, a mid-brown sand and gravel layer.

The four poles to the north side of Area 7 were excavated within a ploughed field (Illus 4). Pole 6 was the only one of these that required an additional stabiliser trench. This was located in the verge at the side of the road. The resulting two trenches recorded 0.5m of dark reddish brown loam topsoil overlying a boulder rich orange sand geological subsoil. The trenches for Poles 3 to 5 recorded 0.3m of topsoil overlying the subsoil.

The excavation of two further pole trenches (Poles 10 and 11) were monitored close to Longfaugh Farm. Pole 10 was located to the south end of a paddock that had possibly once been a walled garden. Two additional stabiliser trenches were required for this pole, one in the paddock and one just south of the paddock. In all three cases 0.5m of dark brown loam topsoil overlay an orange-brown stone rich sand geological subsoil. Similar results were recorded for Pole 11. No Archaeology was encountered in any of the trenches.

6.1 Conclusion

No features or artefacts of archaeological significance were recorded during the monitoring of the pole replacement excavations and no further work is recommended. In all case the small size of the excavated trenches limited the probability of identifying any potential archaeology.

7 REFERENCES

7.1 Bibliographic sources

ClfA Standards and Guidance for an archaeological watching brief (December 2014).

Headland Archaeology 2016 Written Scheme of Investigation for Archaeological Monitoring: 11kv Power Line Replacement, Tranent, East Lothian. Unpublished client report EKTE16-001

7.2 Other sources

Internet

<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

www.johngraycentre.org/collections/getrecord/

8 APPENDICES

8.1 Appendix 1 – Site registers

Photographic register

Photo No	Site No	Facing	Description
EKTE-001	6	NW	Location shot of Fordel Mains Pole 2
EKTE-002	6	SE	NE facing section of Pole 2 trench
EKTE-003	6	SE	NE facing section of Pole 2 trench
EKTE-004	6	SE	NE facing section of Pole 2 trench
EKTE-005	6	SE	Trench for Pole 2 stay
EKTE-006	6	SW	NE facing section of Pole 2 stay trench showing the field drain
EKTE-007			void
EKTE-008	6	NE	Working shot of installation of pole 2
EKTE-009	6	SE	NW facing section of Pole 2 trench
EKTE-010			void
EKTE-011			void
EKTE-012	6	SW	View of Pole 1 stay trench
EKTE-013			
EKTE-014	6	SW	NE Facing section of Pole 1 stay trench
EKTE-015	6	SE	View of area of Pole 67
EKTE-016	6	S	Working shot of pole 67 trench excavation
EKTE-017	6	S	Pole 67 trench being backfilled
EKTE-018	6	SW	Location shot of Pole 67 on the field boundary
EKTE-019	6	NE	Location of Pole 67 stay trench
EKTE-020	6	SE	Excavated trench for the stay of Pole 67
EKTE-021	6	NE	Excavated trench for the stay of Pole 68
EKTE-022	5	NW	General view of the area of Back braes Map 5
EKTE-023	5	NE	Pole 3 stay trench
EKTE-024	5	NE	S facing section of Pole 3 stay trench
EKTE-025	5	N	Location shot of Pole 2
EKTE-026	5	N	Working shot of Pole 2 excavations
EKTE-027	5	N	S facing section of Pole 2 trench
EKTE-028	5	NW	Location shot of Pole 1

EKTE-029	5	N	S facing section of Pole 1 trench
EKTE-030	5	W	E facing section of Pole 1 trench
EKTE-031	5	N	Working shot of Pole 1 excavations
EKTE-032	5	N	S facing section of the stay trench for Pole 1
EKTE-033	5	W	E facing section of the stay trench for Pole 2
EKTE-034	3	SE	View of Pole 9 trench
EKTE-035	3	NE	SW facing section of Pole 9 trench
EKTE-036	3	E	Location shot of Pole 9
EKTE-037	3	SE	Working shot of South stay of Pole 9
EKTE-038	3	SE	View of eastern stay for Pole 9
EKTE-039	3	SE	Location shot for Pole 8
EKTE-040	3	NE	SW facing section of Pole 8 trench
EKTE-041	3	SE	View of Pole 8 trench
EKTE-042	3	NE	SW facing section of Pole 7 trench
EKTE-043	3	SE	Working shot of Pole 7 excavations
EKTE-044	3	NE	SW facing section of Pole 7 trench
EKTE-045	3	SE	Working shot of erection of Pole 7
EKTE-046	2	NE	SW facing section of Pole 32 trench
EKTE-047	2	N	View of Pole 32 trench
EKTE-048	2	NE	Working shot of Pole 33 excavation
EKTE-049	2	N	S facing section of Pole 33 trench
EKTE-050	2	NE	Working shot of Pole 33 excavation
EKTE-051	2	N	S facing section of Pole 33 trench
EKTE-052	2	E	View of Pole 33 trench
EKTE-053	2	E	General location shot of poles 32 to 34
EKTE-054	2	N	S facing section of Pole 35 trench
EKTE-055	2	E	View of Pole 35 trench
EKTE-056	2	NE	Working shot of Pole 35 excavations
EKTE-057	2	N	S facing section of Pole 36 trench
EKTE-058	2	W	View of Pole 36 trench
EKTE-059	2	NE	Working shot of Pole 36 excavation
EKTE-060	2	NE	Working shot of pole 36 erection
EKTE-061	2	SE	NW facing section of Pole 36 stay trench
EKTE-062	2	NE	View of stay trench for Pole 36

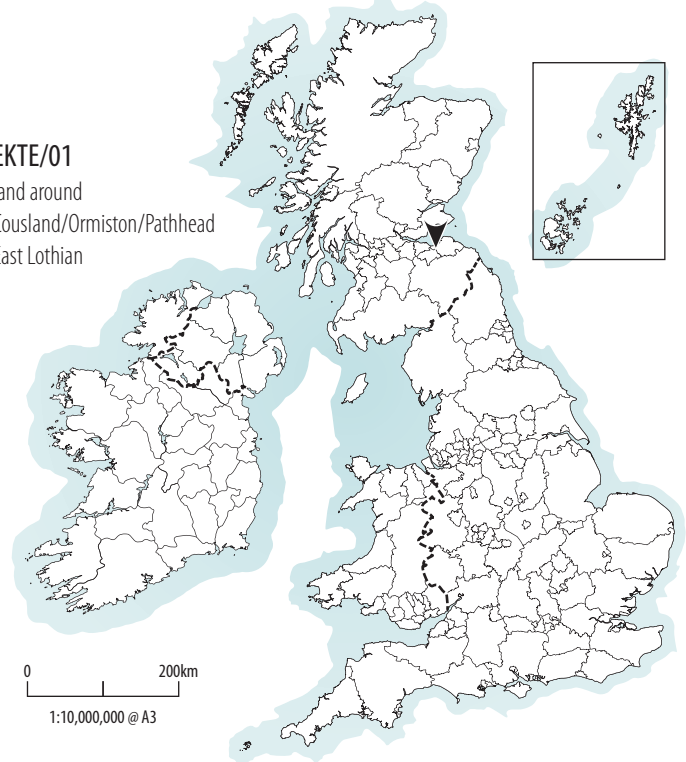
EKTE-063	2	E	Working shot of Pole 36 stay excavation
EKTE-064	2	NW	Location shot of Pole 31 in SAM area
EKTE-065	2	NE	SW facing section of Pole 31 trench
EKTE-066	2	NE	SW facing section of Pole 31 trench
EKTE-067	2	W	Working shot of Pole 31 excavations
EKTE-068	2	E	Working shot of Pole 31 erection
EKTE-069	2	SE	NW facing section of Stay trench 1 for Pole 31
EKTE-070	2	SW	View of Stay trench 1 for Pole 31
EKTE-071	2	NW	Working shot of excavation of stay trench 1 for Pole 31
EKTE-072	2	SW	NE facing section of stay trench 2 for Pole 31
EKTE-073	2	W	View of stay trench 2 for Pole 31
EKTE-074	2	NW	Working shot of stay trench 2 excavations
EKTE-075	2	NE	SW facing section of stay trench 3 of Pole 31
EKTE-076	2	NE	SW facing section of stay trench 3 of Pole 32
EKTE-077	2	SE	Working shot of stay 3 of Pole 31 erection
EKTE-078	2	N	Removal of Pole 1
EKTE-079	2	N	S facing section of Pole 1 trench
EKTE-080	2	N	S facing section and base of Pole 1 trench
EKTE-081	2	NW	Location shot of Pole 1 trench
EKTE-082	7	N	S facing section of Pole 4 trench
EKTE-083	7	S	General view of Pole 4 trench
EKTE-084	7	SW	View of Pole 5 trench
EKTE-085	7	SW	View of Pole 5 trench
EKTE-086	7	NE	General view of Pole 5 trench
EKTE-087	7	NE	Location shot of Poles 4 - 6 in Area 7
EKTE-088	7	NE	Excavation of Pole 6 trench
EKTE-089	7	SW	View of the section of Pole 6 trench
EKTE-090	7	SE	View of the section of Pole 6 trench
EKTE-091	7	S	View of the section of Pole 6 trench
EKTE-092	7	W	E facing section of Pole 10 trench
EKTE-093	7	S	Location shot of Pole 10 trench
EKTE-094	7	SW	Location shot of Pole 10 trench
EKTE-095	7	E	W facing section of the stay A trench for Pole 10

EKTE-096	7	E	Location shot of the stay trench for Pole 10
EKTE-097	7	w	E facing section of Pole 11 trench
EKTE-098	7	N	Location shot of Pole 11
EKTE-099	7	N	S facing section of the stay B for Pole 10
EKTE-100	7	NE	Location shot of stay B for Pole 10

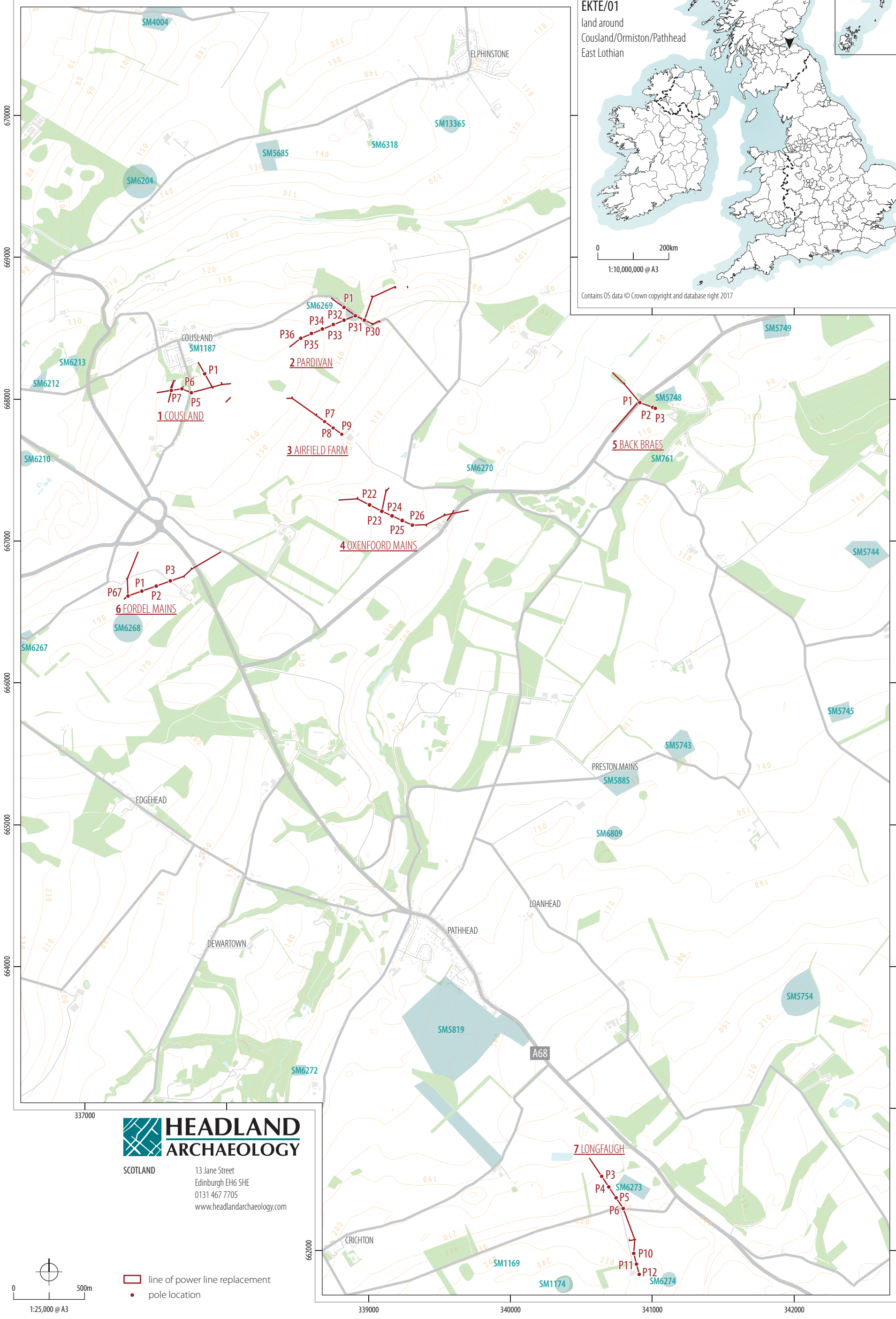
8.2 Appendix 2 – Discovery and Excavation in Scotland entry

LOCAL AUTHORITY:	East Lothian
PROJECT TITLE/SITE NAME:	Archaeological monitoring of the 11kv Power Line Replacement, Tranent, East Lothian
PROJECT CODE:	EKTE16
PARISH:	Ormiston and Cousland
NAME OF CONTRIBUTOR:	Don Wilson
NAME OF ORGANISATION:	Headland Archaeology
TYPE(S) OF PROJECT:	Watching brief
NMRS NO(S):	None
SITE/MONUMENT TYPE(S):	None
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	Various
START DATE (this season)	17/10/2016
END DATE (this season)	11/01/2017
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	Headland Archaeology Ltd undertook a programme of archaeological monitoring in connection with the replacement of powerlines in and around Ormiston and Cousland, near Tranent, East Lothian. The replacement of 22 poles across 5 separate areas were monitored during this programme of archaeological works. One of the poles was located within the limits of a scheduled ancient monument. The remaining poles were situated close to known historical assets. In all cases no features or artefacts of archaeological significance were identified.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	
SPONSOR OR FUNDING BODY:	Spie-ENS
ADDRESS OF MAIN CONTRIBUTOR:	13 Jane Steet, Edinburgh EH6 5HE
EMAIL ADDRESS:	Don.wilson@headlandarchaeology.com
ARCHIVE LOCATION (intended/deposited)	HES

EKTE/01
land around
Cousland/Ormiston/Pathhead
East Lothian

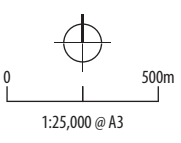


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— line of power line replacement
• pole location



ILLUS 2 Detail of Area 2, Pole 1 trench section **ILLUS 3** Working shot of the excavation of Area 5, Pole 2 **ILLUS 4** View of the north side of Area 7