Archaeological Services
University of Durham

Refurbishment of Overhead Electricity Line situated at Piercebridge, County Durham

archaeological monitoring

on behalf of
CE Electric UK

Report 2142
January 2009

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Cargo Fleet Lane, Middlesbrough, TS3 8DG

Contents

1. Summary

The project

1.1 This report presents the results of archaeological monitoring conducted during the refurbishment of overhead powerlines at Piercebridge and Manfield, County Durham. The works comprised the excavation of five trenches at Piercebridge.

1.2 The works were commissioned by CE Electric UK, and conducted by Archaeological Services in accordance with a Written Scheme of Investigation provided by English Heritage.

Results

1.3 Five electricity poles were replaced at Piercebridge; two within the scheduled area of the Roman Fort one within the scheduled area for the Roman Bridge and two others outside of the scheduled area north of the River Tees. Three pole stays were also replaced. The trenches were excavated to a depth of 1.5m-2.5m. No archaeological deposits were identified, and no artefacts recovered from any of the trenches.

2. Project background

Location (Figure 1)

2.1 The sites are located at Piercebridge, County Durham (NGR: NZ 2130 1570). The site is located approximately 200m east of Piercebridge Village. The northern part of the site is bounded by the River Tees to the south, Piercebridge Village to the west, Carlbury to the north and open fields to the east. The southern part of the site is bounded by the River Tees to the north, Cliffe to the west and open fields to the south and east.

Development proposal

2.2 Refurbishment of the overhead power lines required the replacement of several electricity poles.

Objective

2.3 The objective of the monitoring programme was to identify and record any archaeological features uncovered during groundworks.

Methods statement

2.4 The works have been undertaken in accordance with a Written Scheme of Investigation provided by English Heritage (Appendix 3) and a Method Statement provided by Archaeological Services (DS08.21revised).

Dates

2.5 Fieldwork was undertaken between 19th November 2008 and 21st November 2008. This report was prepared between 15th December 2008 and 2nd February 2009.

Personnel

2.6 Fieldwork was conducted by Matt Claydon. This report was prepared by Matt Claydon and Daniel Still, with illustrations by Edward Davies. The Project Manager was Daniel Still.

Archive/OASIS

2.7 The site code is **PME08**, for **P**iercebridge to **M**anfield **E**lectricity Line 20**08**. The archive is currently held by Archaeological Services and will be transferred to the Bowes Museum, Barnard Castle in due course. Archaeological Services is registered with the **O**nline **A**cces**S** to the **I**ndex of archaeological investigation**S** project (OASIS). The OASIS ID number for this project is **archaeol3-52822**.

3. Landuse, topography and geology

3.1 At the time of the survey the development area comprised open fields to the north of the River Tees at the location of the *vicus* and an enclosed area of grass to the south, close to the remains of a Roman Bridge.

3.2 The site is at a mean elevation of *c*.60m OD. The underlying solid geology of the area consists of Magnesian Limestone overlain by river terrace deposits of sand and gravel.

4. Historical and archaeological background

3.1 The village of Piercebridge was constructed within the walls of the Roman Cavalry Fort of Magis (SAM DA29; SMR 1536). The fort was constructed in the 270s AD, probably as a replacement for an earlier earth and timber structure. Substantial areas of the fort were excavated in the 1970s, the consolidated remains of which are on public display. To the east of the fort in the Tofts field are the remains of the civilian settlement or vicus (SMR 1537). This has a clearly visible street plan which can be seen in aerial photographs of the area. The vicus would have supplied goods and services to the fort and was abandoned in the 5th Century AD. Studies of the coins found in the vicus (SMR 6584) suggests its establishment in the early 2nd Century AD, thus pre-dating the stone fort and linking the establishment of the vicus with the earlier fort. No evidence of this earlier fort has yet been discovered.

3.2 The Roman bridge at Piercebridge (SAM NY1150; SMR 1539) carried Dere Street across the River Tees. This important Roman road connected York with Hadrian's Wall. Pevsner describes the bridge as consisting of "*two abutments and ten piers, of which the southern abutment and four piers are still visible*" (Pevsner, 1985, 379). This bridge continued in use till the 13th Century when it was replaced. This replacement bridge (SAM DA55; SMR 1540) was in turn rebuilt in the 16th Century.

3.3 In the 3rd Century a bath house was constructed in the south-east corner of the fort. Parts of this structure still remained in the 13th century and were incorporated into the building of a chapel thought to have been that of St. Mary, the ruins of which are now a Grade II* listed structure (Listed Building 17\152; SMR 1550).

Previous archaeological works

3.4 Major excavations took place in the 1970s directed by the late P. Scott. These took place on the eastern side of the fort. The consolidated remains of these excavations are on public display. Scott also directed excavations of the vicus within the Tofts field in the 1980s (Scott 1978 and 1981; Scott and Large 1979, 1980).

3.5 In April 1996 Archaeological Services Durham University undertook a programme of archaeological monitoring during works on a water main in the central part of the fort (SMR 4865; Archaeological Services 1996 a, b).

3.6 In September 1996 a programme of archaeological monitoring (SMR 4899) took place for the installation of an electricity supply to a house 100m south of the ramparts of the Roman fort. No deposits or artefacts of any archaeological significance were identified.

3.7 In November 2006 Archaeological Services undertook archaeological monitoring during the excavation of foundation bases for an agricultural structure at Piercebridge Farm (Archaeological Services 2006). A stone wall was identified of unknown function. No other finds or features were identified.

5. The monitoring programme

Introduction (Figure 2)

5.1 Five electricity poles were replaced at Piercebridge; two within the scheduled area of the Roman Fort (P49 and P50), one within the scheduled area for the Roman Bridge (P53) and two others outside of the scheduled area north of the River Tees (P51 and P52). Three pole stays were also replaced.

Trench 1 [1m by 2m]

5.2 Trench 1 was excavated to install a replacement electricity pole for P49 and was located immediately southeast of the present pole (Figure 3). The trench was excavated to a depth of 2.5m below ground level bgl. Natural subsoil [2] was identified at 0.5m bgl and comprised well rounded river cobbles in an orange sandy matrix overlying bedrock. This was directly overlain by topsoil consisting of brown sandy silt [1]. No archaeological deposits were identified, and no artefacts recovered.

Trench 2 [0.5m by 4.5m]

5.3 Trench 2 was excavated to replace stays securing pole P49 to the ground. The trench was located 6m northwest of the pole on a northeast-southwest alignment. The trench was excavated to a depth of 1.5m bgl through 0.5m of topsoil [1] and 1m of natural subsoil of the same composition as trench 1 [2]. Bedrock was not reached. No archaeological deposits were identified, and no artefacts recovered.

Trench 3 [1m by 1.5m]

5.4 Trench 3 was excavated to install a replacement electricity pole for P50 and was located on the site of the present pole. The trench was excavated to a depth of 2.2m bgl. Natural subsoil was identified 1m bgl and consisted of orange-brown sand [2]. This was overlain by a layer of loose sandstone [5: 0.3m deep]. Above this was a dark brown sandy silt soil layer [3: 0.8m deep]. This was directly overlain by topsoil [1: 0.2m deep]. No archaeological deposits were identified, and no artefacts recovered.

Trench 4 [1m by 2m]

5.5 Trench 4 was excavated to install a replacement electricity pole for P52 and was located immediately southeast of the present pole (Figure 4). This pole is situated outside the extent of the designated Scheduled Monument. The trench was excavated to a depth of 2m bgl. Natural subsoil was identified 1.8m bgl; this was of the same composition as trench 2 [2]. This was overlain by a layer of dark brown sandy silt [3: 1.6m deep]. Above this was topsoil [1: 0.2m deep]. No archaeological deposits were identified, and no artefacts recovered.

Trench 5 [0.5m by 5m]

5.6 Trench 5 was excavated to replace stays securing pole P52 to the ground. The trench was located 5m southwest of the pole on a north-south alignment. The trench was excavated to a depth of 1.5m. Natural subsoil was not reached. The trench was excavated through a layer of dark brown sandy silt [3: 1.3m deep]. This was overlain by topsoil [1: 0.2m deep]. No archaeological deposits were identified, and no artefacts recovered.

Trench 6 [1m by 2m]

5.7 Trench 6 was excavated to install a replacement electricity pole for P53 and was located immediately southeast of the present pole (Figure 5). This pole lies outside the extent of the designated Scheduled Monument. This trench was excavated to a depth of 2m bgl. Natural subsoil was identified 0.5m bgl [2]; this was of the same composition as in trench 2. This was directly overlain by topsoil [1]. No archaeological deposits were identified, and no artefacts recovered.

Trench 7 [0.5m by 4m]

5.8 Trench 7 was excavated to replace stays securing pole P53 to the ground. The trench was located within the scheduled area, 5m southwest of the pole on a northeast-southwest alignment. The trench was excavated to a depth of 1.5m bgl through 1.3m of dark brown sand silt with frequent sub-rounded stones [4]. This was directly overlain by topsoil [1: 0.2m deep]. Disturbance from the previous stays was apparent within the trench. No archaeological deposits were identified, and no artefacts recovered.

Trench 8 [1m by 2m]

5.9 Trench 8 was excavated to install a replacement electricity pole for P51 and was located immediately to the southeast of the existing pole. The trench was excavated to a depth of 2m bgl. Natural subsoil was not reached. The trench was excavated through a layer of brown sandy silt [3]. This was overlain by topsoil [1: 0.2m deep].

6. Conclusions

6.1 As no significant archaeological features have been uncovered, no further scheme of archaeological works is recommended in relation to this development.

7. Sources

Archaeological Services 1996a *Archaeological Evaluation of a water main relay at Piercebridge Roman Fort: archaeological monitoring,* unpublished report **403**, for Northumbria Water, Archaeological Services Durham University

Archaeological Services 1996b *Archaeological Monitoring for a water main renewal at Piercebridge Roman Fort:* unpublished report **410**, for Northumbria Water, Archaeological Services Durham University

Archaeological Services 2006 *Piercebridge Farm, Piercebridge. Co. Durham: archaeological monitoring,* unpublished report **1559**, for Heritage North, Archaeological Services Durham University

Pevsner, N, 1985 *The Buildings of England: County Durham*, Yale University Press

Scott P 1978 Excavations at Piercebridge Co. Durham 1976-7: Summary Report, in *Universities of Durham and Newcastle-upon-Tyne archaeological reports for 1977*, 16-21

Scott P and Large S 1979 Excavations at Piercebridge, in *Universities of Durham and Newcastle-upon-Tyne archaeological reports for 1978*, 9-10

Scott P and Large S 1980 Excavations at Piercebridge, in *Universities of Durham and Newcastle-upon-Tyne archaeological reports for 1979*, 11-12

Scott P 1981 Excavations at Piercebridge Co. Durham, in *Universities of Durham and Newcastle-upon-Tyne archaeological reports for 1980*, 28-29

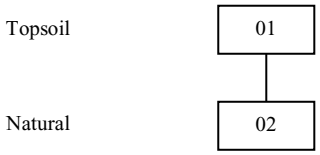
Appendix 1: Context data

Summary list of contexts.

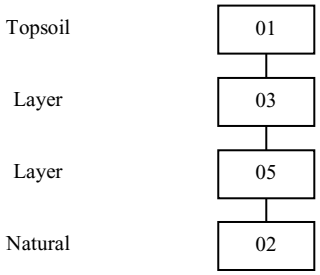
No	Description
1	Topsoil
2	Natural subsoil
3	Layer – Sand silt
4	Layer – Stoney sandy silt
5	Layer – Loose sandstone

Appendix 2: Stratigraphic matrices

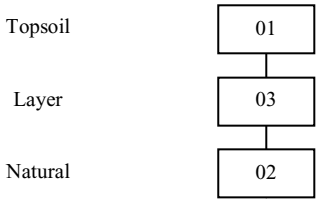
Trenches 1, 2 and 6



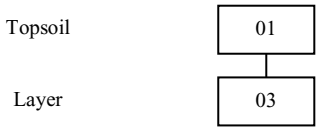
Trench 3



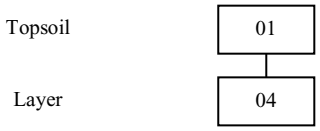
Trench 4



Trench 5 and 8



Trench 7



Appendix 3: Written Scheme of Investigation

STANDARD WRITTEN SCHEME OF INVESTIGATION (WSI)
FOR LIMITED ARCHAEOLOGICAL RECORDING ("WATCHING BRIEF")

Sites: **1)** Manfield Shrunken Medieval village, Scheduled Ancient Monument, National Monument Number 29502, Manfield North Yorkshire.
2) Piercebridge Roman Bridge, Piercebridge, North Yorkshire. Scheduled Ancient Monunment and English Heritage Guardianship site, National Monument Number NY1150.
3) Piercebridge Roman Fort, Scheduled Ancient Monument, National Monument Number DA29, Piercebridge, County Durham.

Initiator of work: NEDL

To be Undertaken by: Alfred McAlpine Infrastructure Services, New Road, Kirkbymoorside, York, YO62 6DT. Contact is: Mr J. Thorne, Wayleaves Officer (07801 021474).

Description of the Proposed Works:

Note: Full clarification of the number of poles to be removed/replaced and the areas of undergrounding of cable *must* be confirmed with Mr Jim Thorne, McAlpine Infrastructure Services in order to prepare an accurate cost for the proposed works. In general the works are:

1. the removal of selected timber electricity poles carrying an overhead electricity supply
2. the replacement of selected poles in new locations, and
3. the undergrounding of selected lengths of electricity cable

It is proposed by McAlpines to:

4. move the electricity pole at Pirecebridge Roman Bridge so that it is further away from the guardianship site, but the stays for that pole will remain within the guardianship area but will be 'rearranged', and this will necessitate some excavation (although most will take place in soil previously disturbed).
5. replace 2 of the poles located in the Scheduled Area of Piercebridge Roman Fort, north of the Tees. In this case the 2 new poles will be located in the existing holes. One of the poles has 3 stays and these will be reduced in number to 2 stays in more or less the same place. The second pole does not have stays.
6. A number of poles will be moved or removed at Manfield Shrunken Medieval village and selected lengths of cable will be buried, both inside and outside the Scheduled Area.

McAlpines will submit Scheduled Monument Consent applications for the proposed works.

Archaeological Impact:
The electricity poles which are to be replaced on a like for like basis will be located within the areas of previous disturbance – although it might be possible to examine sections.
The new stays will be anchored in railway sleepers dug into the ground in trenches 5m long by 450mm wide by 1.8m deep.
For the stays in item 5 above most of the disturbance will take place in previously disturbed ground, although there is likely to be an overlap into undisturbed ground at either end of the trench.
For the stays in item 4, the proposal is to place them at right angles to the existing configuration, across the existing mound in the corner of the guardianship site. It is also likely that the mound will be reduced in height. In this example the majority of the excavation will take place in previously disturbed ground, but as above there will be an overlap at either end of the trench into undisturbed ground.
Item 6 will include the removal and relocation of a selected number of poles and their stays in addition to the undergrounding of cable, although the majority of the latter will take place immediately outwith the boundary of the Scheduled Ancient Monument.

1 The purpose of the work is to record and recover archaeological remains which are:
a) affected by proposed development only to a limited and clearly defined extent,
b) not available or susceptible to standard area excavation techniques, or
c) of limited importance or potential.
The work should not require the construction programme or development to suffer substantial delay while archaeological investigation takes place.

2 The WSI represents a summary of the broad archaeological requirements needed to comply with any Scheduled Monument Consent or archaeological planning condition. The scheme does **not** comprise a full specification, and English Heritage makes no warranty that the works are fully or exactly described. The details of implementation must be specified in a contract between the developer and the selected archaeological contractor, the final form of which is to be agreed with English Heritage.

3 The removal of overburden (that is vegetation, turf, loose stones, rubble, made ground, Tarmac, concrete, hardcore, building debris and topsoil) should be supervised by the Archaeologist contracted to carry out the WSI. The Archaeologist should be informed of the correct timing and schedule of overburden removal.

4 Removal of overburden by machine should be undertaken using a back-acting excavator fitted with toothless or ditching bucket only.

Where materials are exceptionally difficult to lift, a toothed bucket may be used temporarily. Subsoils (B horizons) or deep, uniform fills of features may also be removed by back-acting excavator but only in areas specified by the Archaeologist on site, and only with archaeological supervision. Bulldozers or wheeled scraper buckets should not be used to remove overburden above archaeological deposits. Where reinstatement is required, topsoil should be kept separate from other soil materials.

5 Where structures, finds, soil features and layers of archaeological interest are exposed or disturbed by construction works, the Archaeologist should be provided with the opportunity to observe, clean, assess, excavate by hand where appropriate, sample and record these features and finds. If the contractors or plant operators notice archaeological remains, they should immediately tell the Archaeologist. The sampling of deposits for palaeo-environmental evidence should be a standard consideration, and arrangements should be made to ensure that specialist advice and analysis are available if appropriate.

6 Heavy plant should not be operated in the near vicinity of archaeological remains until they have been recorded, and the Archaeologist on site has allowed operations to recommence at that location. Sterile subsoils (C horizons) and parent materials below archaeological deposits may be removed without archaeological supervision. Where reinstatement is required, subsoils should be backfilled first and topsoil last.

7 Upon completion of fieldwork, samples should be processed and evaluated, and all finds cleaned, identified, assessed, spot-dated, and properly stored. A field archive should be compiled consisting of all primary written documents, plans, sections, and photographs. The Archaeologist should arrange for either the County Archaeologist or an independent post-excavation specialist to inspect the archive before making arrangements for the transfer of the archive to an appropriate museum or records office.

8 A summary report should be produced following best practice professional guidelines on reporting. The report should contain planning or administrative details of the project, a summary of works carried out, a description and interpretation of the findings, an assessment of the importance of the archaeology including its historical context where appropriate, and catalogues of finds, features, and primary records. All excavated areas should be accurately mapped with respect to nearby buildings, roads and field boundaries. All significant features should be illustrated with conventionally scaled plans, sections, or photographs. Where few or no finds are made, it may be acceptable to provide the report in the form of a letter with plans attached.

9 Copies of the summary report should be provided to the client(s), the respective County Heritage Section (HER), to the museum accepting the archive, and English Heritage (Yorkshire Region and North East Region).

10 The English Heritage IAMs (Dr Rob Young, responsible for County Durham and Dr Keith Emerick, responsible for North Yorkshire) and County Archaeologists should be informed as soon as possible of the discovery of any unexpected archaeological remains, or changes in the programme of ground works on site. Any significant changes in the archaeological work should be specified in a variation to the Scheduled Monument Consents and WSI to be approved by the planning authority and English Heritage. If human remains are encountered, they should be exhumed subject to the conditions of a Home Office licence.

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Figure 1
Location of the archaeological monitoring

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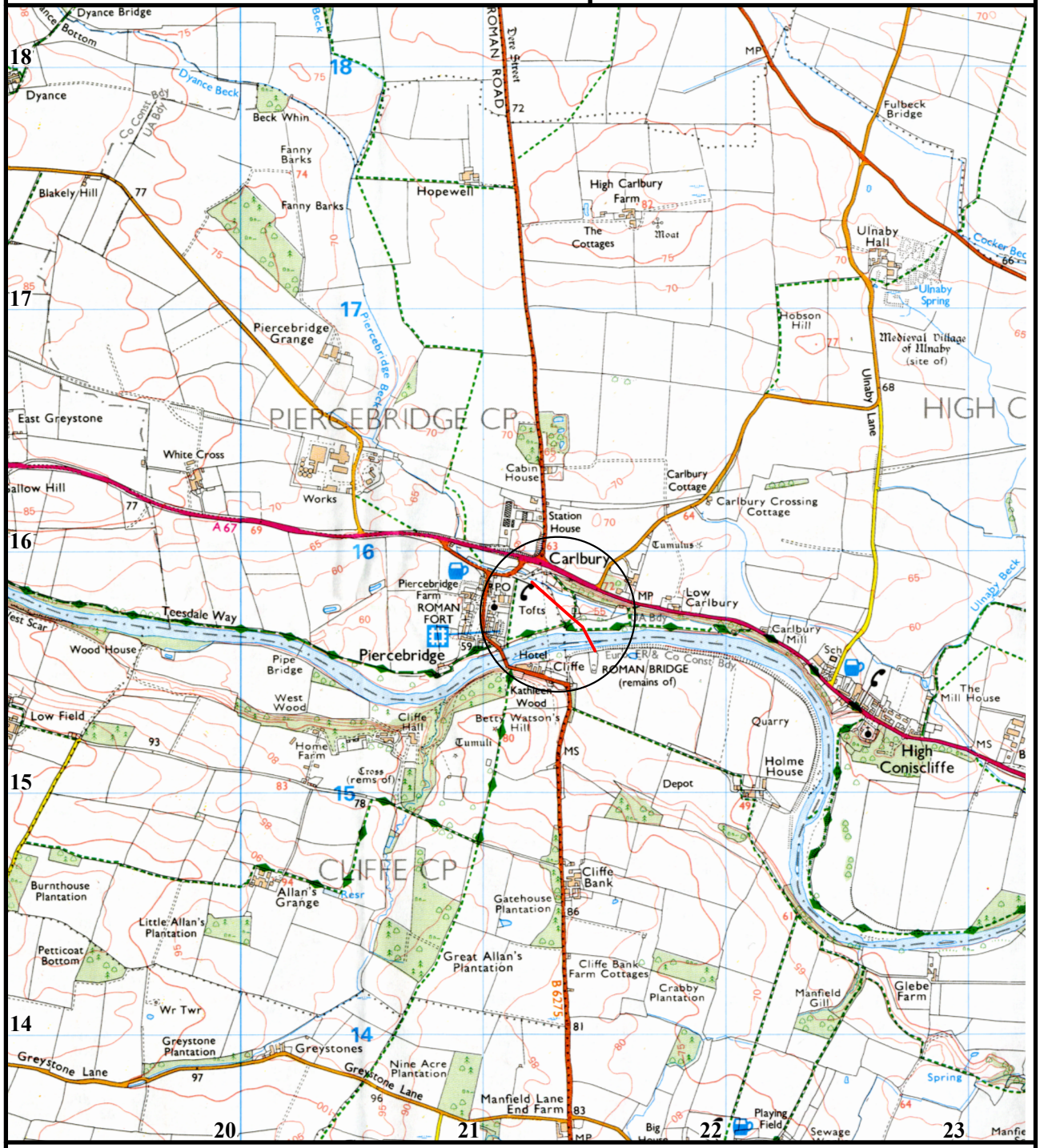

route of overhead power line

0 1km

scale 1:25 000 - for A4 plot

Archaeological Services
University of Durham

on behalf of
CE Electric UK

Refurbishment of Overhead Electricity Line situated at Piercebridge, County Durham
archaeological monitoring

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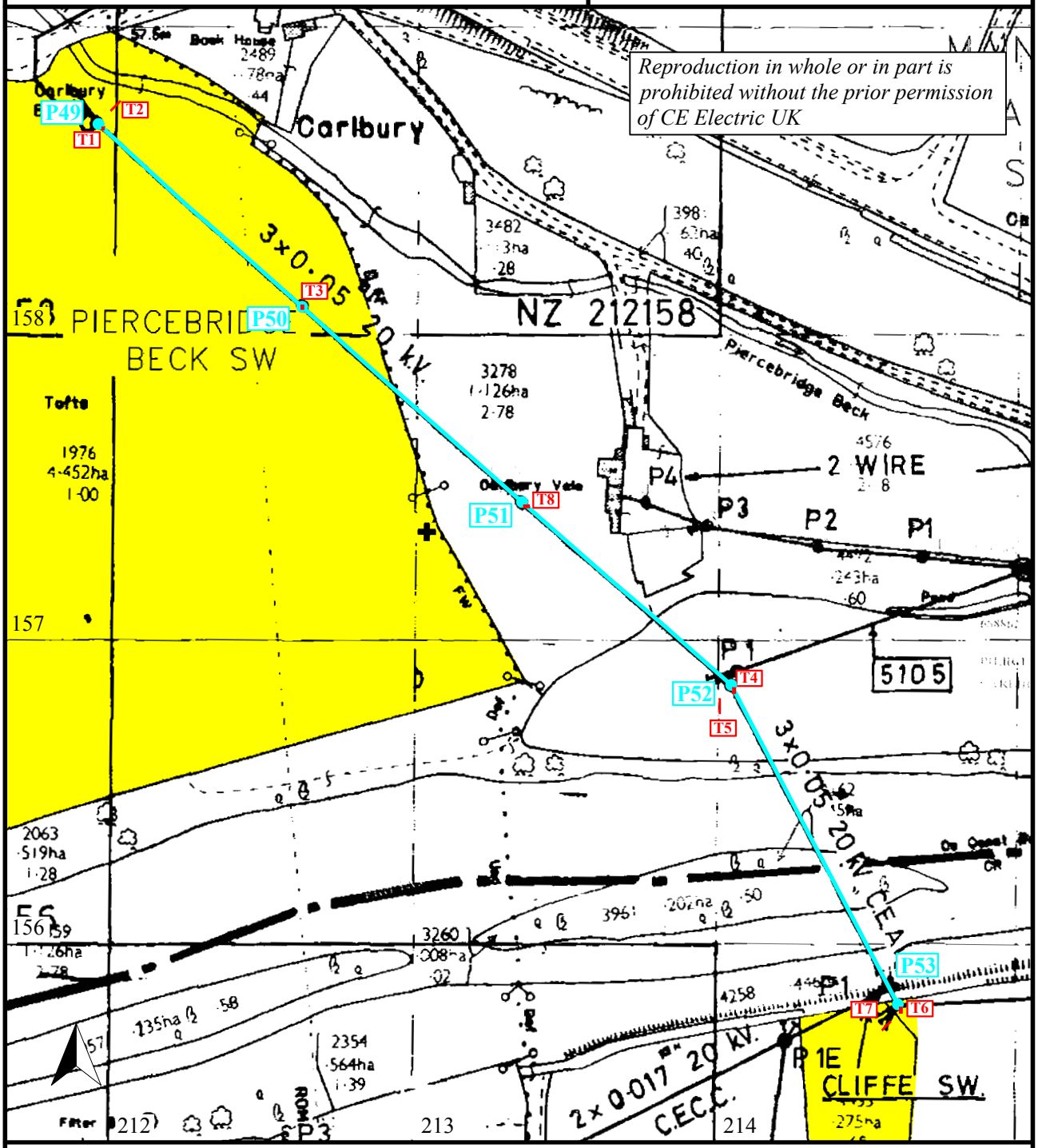
Figure 2
Location of monitored areas

0 100m
scale 1:2000 - for A4 plot



route of overhead power line | P52 poles | T4 trench locations | Scheduled ancient monument

Figure 3
Trench 1, looking northwest

Figure 4
Trench 4, looking northwest

Figure 5
Trench 6 looking north