



BLEA TARN ROAD PIPELINE REPLACEMENT, LANCASTER, LANCASHIRE

Archaeological Watching Brief Report



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SUMMARY

National Grid PLC are to replace a 1.1km stretch of existing gas pipeline between Blea Tarn Road, Scotsforth, Lancaster to the north (NGR SD 47778 59057) and Lancaster University to the south (NGR SD 48816 57880). An initial feasibility study regarding the environmental constraints was carried out on behalf of the National Grid Plc by RSK ENSR Environmental Ltd (2006), within which no known archaeological resource was identified. However, the area of impact lies in close proximity to a number of late Iron Age/Romano-British sites. Therefore, there was the potential to disturb unknown archaeological remains. In consultation with Lancashire County Archaeological Services (LCAS) RSK ENSR Environmental Ltd recommended an archaeological watching brief during groundworks for the pipeline. This included topsoil stripping of the pipeline easement and the excavation of the pipe trench. Oxford Archaeology North were commissioned by RSK ENSR Environmental Ltd, on behalf of the National Grid Plc, to undertake the work, which was carried out between March 2006 to May 2006.

The watching brief produced a variety of post-medieval domestic finds, of mainly nineteenth and twentieth century origin, that are likely to have derived from midden material. The base of a stone field boundary wall of possible early nineteenth century origin, underlying a current layered hedge. No deposits of archaeological significance were recorded within the development area, and there are, consequently, no recommendations for any further work.

ACKNOWLEDGEMENTS

Oxford Archaeology North would like to thank Kathryn Blyth of RSK ENSR Environmental Ltd for commissioning the work. Thanks are also due to Paul Cotteril and other construction staff on site of Willows Construction for their co-operation during the course of the fieldwork.

The field work was carried out by Fraser Brown, Vix Hughes, Andy Bates, Steve Clarke and Sean McPhillips. The drawings were compiled by Marie Rowland, and the report written by Andy Bates. The finds were assessed by Chris Howard-Davis. Emily Mercer managed the project and edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 National Grid PLC proposed to replace a 1.1km stretch of existing gas pipeline between Blea Tarn Road, Scotsforth, Lancaster to the north (NGR SD 47778 59057) and Lancaster University to the south (NGR SD 48816 57880). An initial feasibility study regarding the environmental constraints was carried out on behalf of the National Grid Plc by RSK ENSR Environmental Ltd (2006). This entailed a desk-based assessment and walkover survey. The results showed that there was no known archaeological resource within the landtake for the scheme that would be affected. However, within a 500m radius of the site there are numerous late Iron Age and Roman-British sites. Therefore, there was a possibility that an unknown archaeological resource may be disturbed during groundworks.
- 1.1.2 Acting on behalf of their client, RSK ENSR Environmental Ltd (hereafter RSK ENSR) consulted Lancashire County Archaeological Services (LCAS) regarding mitigation of the proposed scheme and recommended an archaeological watching brief during associated groundworks for the pipeline. This included the initial topsoil stripping of the pipeline easement followed by the excavation of the pipe trench. Oxford Archaeology North (OA North) was commissioned by RSK ENSR, on behalf of the National Grid Plc, to undertake the work, which was carried out between March 2006 to May 2006.
- 1.1.3 This report details the results of the watching brief, followed by a statement of the archaeological potential of the area and subsequent recommendations for further archaeological works where necessary.

1.2 LOCATION, GEOLOGY AND TOPOGRAPHY

- 1.2.1 The pipeline easement is located parallel, and in fields adjacent to, the M6 motorway north of Lancaster University. The site is positioned to the east of the city of Lancaster, centred on NGR SD 487582, in an area currently used as pasture (Fig 1).
- 1.2.2 The gently undulating nature of the topography of the area is a direct result of glacial and post-glacial activity, which has produced drumlin-like formations. The underlying solid geology of the area consists of mudstones, probably of the Crossdale Mudstone Formation, of the Upper Carboniferous Millstone Grit series, dating to the Namurian geological era, 250 million years ago (Crofts 1992). Overlying the solid geology, the drift geology is, for the most part, glacial till (boulder clay) laid down approximately 10,000 years ago. The soils of the area belong to the Brickfield Association, which are cambic stagnogley soils (Jarvis *et al* 1984).

1.3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 1.3.1 **Prehistoric Period:** there is relatively little information about prehistoric activity in North Lancashire, which in part reflects the minimal amount of work carried out and partially the paucity of known remains from this period (Middleton *et al* 1995). Bronze Age cemeteries might be expected to be found in the area, since place names such as Barrow Greave and Burrow Heights are found nearby. However, the latter, located c 1.0km to the west of the development area, has produced only finds of Romano-British date (Neil 1995a) and has been found to be associated with cropmarks thought to be early field systems. More substantial evidence comes from a flint scatter revealed at Galgate Allotments in 1978, to the south of the development, which is thought to represent Bronze Age occupation (LSMR 2759) and a Bronze Age log boat found during construction of Blea Tarn Reservoir to the east of the study area (RSK ENSR 2006). Prehistoric activity has also been recorded in Lancaster, the earliest being a Neolithic Mortlake-type bowl at 65 Church Street (Jones and Shotter 1988 207). A Bronze Age palstave was found on Castle Hill and a group of Bronze Age urns were recovered from Lancaster Moor in the mid to late nineteenth century development of the area (Shotter and White 1990, 5). In the Iron Age, the area seems to have come under the aegis of the Brigantes (Cunliffe 1991). During development to extend Lancaster University and provide student accommodation at Barker House Farm, the site of a late Iron/Age/Romano-British farmstead was excavated (Bagwell forthcoming).
- 1.3.2 **Roman Period:** in the vicinity of Galgate, south-west of the site, the various Roman roads from sites at Walton-le-Dale and the fort at Ribchester, identified by Margary (1973) as 70d and 704 respectively, are believed to have met and continued north towards the Roman fort and extramural settlement at Lancaster. The fort at Lancaster was founded on Castle Hill in the AD 70s and was followed by a sequence of forts on the site through to the fourth century (Shotter 1997). The road between Galgate and Lancaster has been recorded in two places. The first recorded site is at the former Royal Albert Hospital, where an earthwork appears to have survived, although excavations in the area produced ambiguous results (LUAU 2000; 2001). The second is at Highland Brow, west of the A6, where aerial photographs appear to show a linear mark consistent with a Roman road (Neil 1995b, 16). Situated on this road is an area known as Burrow Heights where several sites have produced Romano-British stone heads, milestones, and a third century AD coin of Claudius II (Shotter 1997).
- 1.3.3 Of particular importance to the proposed route of the pipeline is the site of Barker House Farm within the grounds of Lancaster University, in close proximity to the southern end of the route. Recent excavations revealed a late Iron Age to early Romano-British roundhouse and double entranced circular enclosure within a larger agricultural enclosure, c 1.5km to the south-south-west of the current development area (Bagwell forthcoming). The intense level of Roman military occupation of the North West and the position of the study area in close proximity to the southern arterial route into Lancaster highlights the potential for occupation and settlement in the vicinity during the Roman period.

- 1.3.4 **Medieval Period:** the development area lies within the historical township of Scotforth. Before the Norman Conquest of 1066, Scotsforth manor was held by Cliber Machern and Gillemichael and was assessed for the purpose of the Domesday Survey in 1086 as two plough lands (Farrer and Brownbill 1914, 56-58). After the conquest the manor was given to Count Roger de Poitou, and eventually came into the hands of the Duchy of Lancaster (*ibid*). The land holdings within the township became complex and varied over time, land being sub-divided among a number of small residences and neighbouring lords, with both Cockersands Abbey and Lancaster Priory at one time holding lands within Scotsforth (*ibid*). Bailrigg, a hamlet within the township which lies immediately to the east of the development, was sometimes called a manor. Fields surrounding Bailrigg and Scotforth appear to be strip fields possibly dating to the medieval period, with evidence of ridge and furrow at the north end of the study area supporting this theory (RSK ENSR 2006, 21). The site of Cockshades Chapel, dating to the thirteenth century, is alleged to lie some distance to the south-south-east of the development area (Neil 1995b).
- 1.3.5 **Post-Medieval and Modern Periods:** an Act of Parliament for the enclosure of Scotsforth was passed in 1809 (*op cit*). The majority of the field boundaries seen today probably relate to land organisation of this period. The two principal modern-day communication routes through the area are the A6 road and the M6 motorway. The A6 was originally part of the Garstang and Heron Syke Trust and was operated as a turnpike, dating from after 1786 (Yates 1786). The turnpike superseded a medieval road slightly to the east, the 'road to Scotland', shown on Yates' map. This road gave Galgate its name, with 'Gal' deriving from 'Galloway' and 'Gate' from 'gata' meaning 'road', hence 'the road to Scotland'.

2. METHODOLOGY

2.1 FIELDWORK

- 2.1.1 The programme of work undertaken complied with current legislation and accepted best practice, including the Code of Conduct and the relevant professional standards of the Institute of Field Archaeologists (IFA).
- 2.1.2 The route of the pipeline passed through five fields that were numbered 1-5 from north to south (Fig 1). The topsoil strip was carried out using a 360° mechanical excavator, fitted with a 1.9m wide toothless bucket. Permanent observation of the work was undertaken by an OA North archaeologist for the easement of the topsoil strip. In agreement with LCAS, the excavation of the pipe trench was undertaken intermittently, with stretches of the previously excavated trench recorded during three site visits. However, due to problems encountered with the inwash of excavated material under wet weather conditions by the contractors, some stretches were immediately backfilled prior to archaeological recording. Any soil horizons exposed were examined, and all archaeological features, horizons and any artefacts found during the groundworks were accurately recorded.
- 2.1.3 **Recording:** the recording comprised a full description record and preliminary classification of all features and horizons revealed on OA North *pro-forma* sheets, as recommended by English Heritage Centre for Archaeology. A photographic record, using colour slide and monochrome formats, was compiled.

2.2 ARCHIVE

- 2.2.1 A full professional archive has been compiled in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The archive will be deposited in the Lancashire Records Office with a copy of the report to the Lancashire Historic Environment Record (HER).

3. FIELDWORK RESULTS

3.1 INTRODUCTION

- 3.1.1 An archaeological watching brief was conducted during removal of the topsoil for the pipeline easement and intermittent observations were undertaken during the excavation of the pipe trench, following verbal approval from LCAS. The easement was approximately 10m in width and was stripped of its topsoil to approximately 0.1m-0.2m. The pipe trench was excavated to an approximate overall depth of 1.2m and was between 0.5m-1.0m wide. The results of the watching brief are presented below by field number (Fig 2). Context descriptions are provided in *Appendix 1*.

3.2 RESULTS

- 3.2.1 **Field 1:** the easement was stripped of its soil horizon under permanent presence, and benched for future machine access. The area was seen to be almost entirely within made ground associated with the construction of the M6 motorway located immediately to the east of the easement, and no evidence was observed of the underlying natural geology. No archaeologically significant deposits or finds were present.
- 3.2.2 **Field 2:** the topsoil comprised a very dark mid grey-brown sandy-clay, 0.2m thick, with 1% to 10% small sub-rounded stone inclusions. The underlying subsoil comprised a mid grey-brown fine sand-silty-clay with similar stone inclusions, 0.1m thick. The natural geology comprised a light grey-brown clay till, visible over less than 1% of the easement area. Pottery finds were recovered from the topsoil (see *Section 3.3* below).
- 3.2.3 At the boundary between Field 2 and 3, below the current hedge, the base of a dry stone wall, **1**, was present. The tumble, **2**, from this wall was revealed in Field 2 (Fig 2; Plate 1).
- 3.2.4 **Field 3:** the topsoil and subsoil was the same as that observed in Field 2; a very dark grey-brown fine sandy-silty-clay topsoil, c 0.2m thick, and a mid grey-brown fine sand-silty-clay. The natural till deposit was observed over less than 1% of the area of the easement (Plate 2) but was seen within the excavated pipe trench. It comprised a medium sandy-clay with occasional sub-rounded stone of a maximum of 0.33m by 0.22m by 0.18m.
- 3.2.5 Finds of pottery and glass were recovered from the topsoil (see *Section 3.3* below). No features of archaeological significance were recorded beyond the location of a nineteenth century field drain (Fig 2) approximately 0.3m below the interface between topsoil and subsoil.
- 3.2.6 **Field 4:** the topsoil was the same as that observed in Fields 2 and 3; a very dark grey-brown fine sandy-silty-clay topsoil, c 0.2m thick (Plate 3). This overlay the natural till deposit, which was an orange-brown medium sandy-

clay banded with blue clay-silt. The till contained inclusions of sub-rounded boulders of various parent material and generally less than 0.3m in diameter.

3.2.7 Finds of pottery and glass were recovered from the topsoil (see *Section 3.3* below), but no features of archaeological significance were recorded.

3.2.8 **Field 5:** the topsoil was a mid brown fine silty-clay with occasional mid-to large boulders. The natural till was observed in the excavated pipe trench as an orange-brown medium sandy-clay banded with blue clay-silt; the same as that observed in Field 4. Five nineteenth century ceramic field drains, c 0.15m in diameter, were observed approximately 0.3m below the base of the topsoil in varying alignments in Fields 4 and 5 (Fig 2). Their presence is evidence that this area was not disturbed during the construction of the motorway in the 1960s.

3.3 FINDS

3.3.1 In total, 15 fragments were recovered during the watching brief, from Fields 2, 3, and 4. All of the finds were derived from topsoil, or were unstratified. Their distribution is shown below, in Table 1, and a detailed breakdown is provided in *Appendix 2*.

Field No.	Pottery	Glass	Tile	Totals
2	6	-	-	6
3	4	2	-	6
4	1	1	1	3
Totals	<i>11</i>	<i>3</i>	<i>1</i>	<i>15</i>

Table 1: Distribution of finds across the site

3.3.2 The majority of the material recovered was pottery with some glass. These fragments were in medium-sized fragments, unabraded and in generally good condition. None of the finds examined are likely to be earlier than the early nineteenth century, and the glass fragments are all from later twentieth century vessels. A single black-glazed tile from Field 4 is probably also of nineteenth century date. All the material would appear to have a domestic origin, and is likely to have derived from midden material distributed across the area. The finds add very little to the interpretation of the site and have no potential for any further analysis.

4. CONCLUSION

4.1 DISCUSSION

- 4.1.1 The watching brief undertaken on both the topsoil strip of the easement and the excavation of the pipe trench revealed no significant archaeological features or deposits. Examination of the existing field boundary between Fields 2 and 3 showed that the current hedge was preceded by a dry stone wall, **1**. This wall probably dates to the early nineteenth century organisation of land boundaries, following the 1809 Parliamentary Enclosure Act for the enclosure of the township of Scotsforth, and similar structures can be seen elsewhere in the area. In addition, nineteenth century field drains recorded in Fields 3-5 showed this area had not been disturbed during the construction of the M6 motorway in the 1960s. A collection of nineteenth century finds, including glass and pottery, was recovered from the topsoil. This most likely relates to the action of midden spreading during this time.

4.2 IMPACT AND RECOMMENDATIONS

- 4.2.1 The watching brief showed a lack of any significant finds or features present. Therefore, there was no impact on an archaeological resource during the development. However, Fields 2-5 showed evidence of very little modern disturbance and, given the close proximity of later prehistoric and Romano-British remains, there is potential for such remains elsewhere across the site. Therefore, should any further groundworks be undertaken in the future it is recommended that an archaeological investigation is considered.

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ILLUSTRATIONS

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Figure 1: Location Map

Figure 2: Plan showing field numbers and features revealed during the groundworks

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Plate 1: Base of dry-stone wall, **1**, in Fields 2 and 3 with tumble **2** to left looking south

Plate 2: Excavated pipeline easement, Field 3 looking north

Plate 3: Laying of gas pipe, Field 4 looking east

APPENDIX 1: CONTEXT LIST

Field No.	Context	Description
2-3	1	Dry stone wall - comprised sub-rounded stone; a maximum of 0.38m by 0.25m by 0.20m, with no bonding material, but roughly coursed.
2	2	Tumble of wall 1 - comprised 80-90% sub rounded stone a maximum of 0.35m by 0.28m by 0.22m in a very dark grey single sandy silty clay, topsoil, matrix.
2-3	3	Subsoil around wall 1 - comprised a mid-grey brown fine sand silty clay with occasional small stone inclusions.

APPENDIX 2: FINDS LIST

OR = Object Record Number; Qty = quantity

Field No.	Context	OR	Material	Category	Qty	Description	Date
2	Topsoil	2	Ceramic	Vessel	1	Body fragment thin fluted jug or teacup with sprigged decoration	Nineteenth century or later
2	Topsoil	2	Ceramic	Vessel	1	Body fragment white earthenware	Nineteenth century or later
2	Topsoil	2	Ceramic	Vessel	3	Body fragments blue and white underglaze transfer-printed earthenware, probably a dish and a chamber pot.	Nineteenth century
2	Topsoil	2	Ceramic	Vessel	1	Small body fragment. Redware with white internal slip glazed to yellow.	Nineteenth century ?
3	Topsoil	5	Ceramic	Vessel	2	Joining body fragments dish with upright beaded rim. Black-glazed redware, but where thin the glaze is greenish with a white speckle.	Nineteenth century or later
3	Topsoil	5	Ceramic	Vessel	1	Body fragment late Industrial Slipware	Nineteenth century
3	Topsoil	5	Ceramic	Vessel	1	Body fragment blue and white underglaze transfer-printed earthenware, probably a dish and a chamber pot.	Nineteenth century or later
3	Topsoil	6	Glass	Vessel	1	Body fragment. Thick colourless bottle.	Twentieth century
3	Topsoil	6	Glass	Vessel	1	Body fragment. Colourless.	Twentieth century?
4	Unstrat	1	Glass	Vessel	1	Body fragment, colourless.	Twenty-first century
4	Unstrat	3	Ceramic	Vessel	1	Rim fragment small plain white china vessel.	Nineteenth century or later
4	Topsoil	4	Ceramic	Building material	1	Worn black-glazed floor tile, no surviving original edges.	Nineteenth century ?

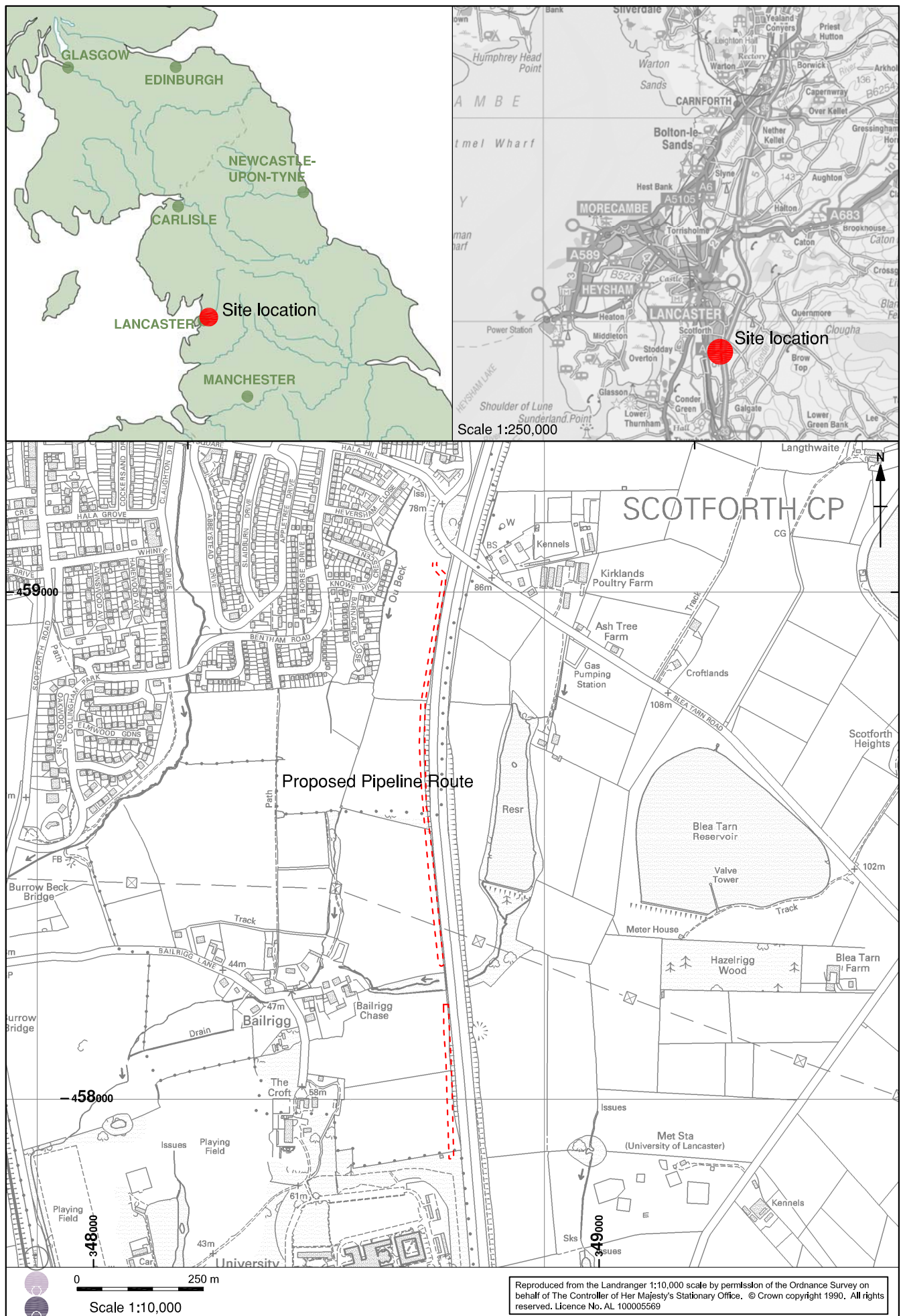


Figure 1: Site Location

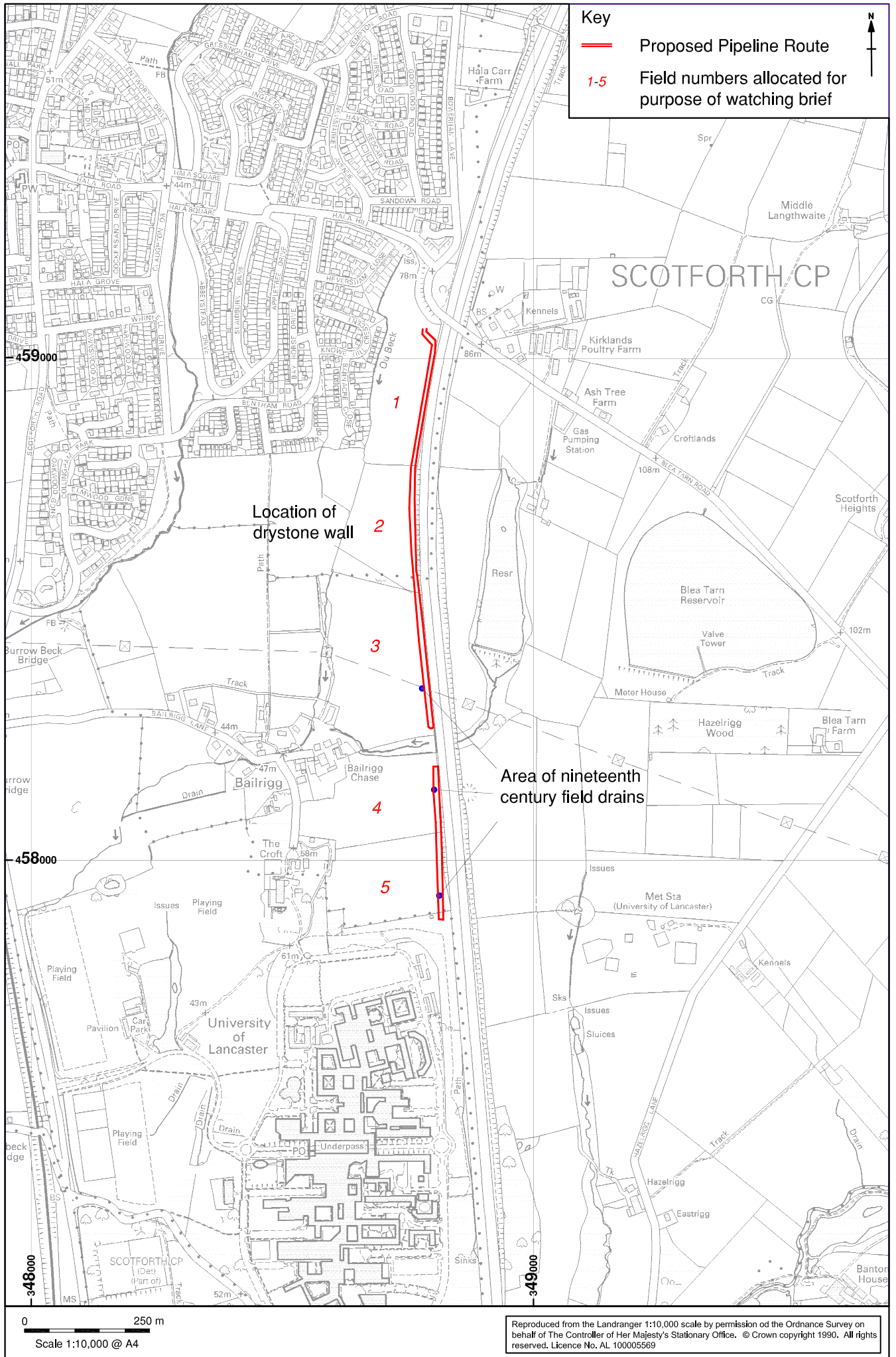


Figure 2: Plan showing field numbers and location of features



Plate 1: Base of dry stone wall, **1**, in Fields 2 and 3 with tumble **2** to left looking south



Plate 2: Excavated pipeline easement, Field 3 looking north



Plate 3: Laying of gas pipe, Field 4 looking east