



BLACKBURN CONCESSIONARY SUPPLIES, BRIERCLIFFE, LANCASHIRE

Watching Brief and Topographic Survey



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Prepared by: John Zant
Position: Post-excavation Project Officer
Date: March 2013

Checked/Approved by: Alan Lupton
Position: Operations Manager
Date: March 2013

Signed.....

Oxford Archaeology North

Mill 3, Moor Lane Mills
Moor Lane
Lancaster
LA1 1QD
t: (0044) 01524 541000
f: (0044) 01524 848606

w: www.oxfordarch.co.uk
e: info@oxfordarch.co.uk

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Janus House
Osney Mead
Oxford
OX2 0EA
t: (0044) 01865 263800
f: (0044) 01865 793496

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SUMMARY

United Utilities proposed the installation of a concessionary supplies water pipeline on agricultural land to the west of Extwistle Moor, in Briercliffe, Lancashire (SJ 89000 34330, central point). The area contains many sites of archaeological interest, including numerous prehistoric monuments and settlements of prehistoric and/or Romano-British date. Four such sites, all of which are legally protected as Scheduled Monuments, lay within 100m of the proposed pipeline route. Consequently, the Planning Archaeologist at Lancashire County Archaeological Service (LCAS) advised that a programme of archaeological work should be undertaken. United Utilities commissioned Oxford Archaeology North (OA North) to undertake historical and archaeological research and a walkover survey of the immediate environs of the pipeline. This resulted in the compilation of a gazetteer of 22 sites of archaeological interest, of which five were threatened with potential damage by the pipeline works. LCAS therefore recommended that a topographic survey should be undertaken at these sites, and that an archaeological watching brief should be maintained during ground works associated with the construction of a new switchgear house at the western end of the pipeline, adjacent to the junction of Shay Lane and Monk Hall Lane. OA North was commissioned by United Utilities to carry out these works, which were completed in October 2012.

As the watching brief found nothing of archaeological interest, LCAS did not request that any other part of the pipeline route be subject to a watching brief condition. The topographic survey resulted in the addition of further descriptive details to the original gazetteer entries for the five threatened sites. However, the survey did not result in any major advances in understanding or dating of the archaeological features at these sites.

ACKNOWLEDGEMENTS

OA North would like to thank United Utilities for commissioning the project. Thanks are also due to the staff of the Lancashire Record Office (LRO) in Preston. For OA North, the watching brief was conducted by Phil Cooke and the topographic survey was undertaken by Pete Schofield. The report was compiled by John Zant and edited by Alan Lupton, who also managed the project. The drawings were prepared by Mark Tidmarsh.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 In 2012, United Utilities proposed the installation of a concessionary supplies water pipeline on agricultural land to the west of Extwistle Moor, in Briercliffe, Lancashire (centred on SJ 89000 34330 (Fig 1). The wider landscape around the pipeline route is extremely rich in terms of the density of significant sites of archaeological interest, with numerous prehistoric monuments and settlements of prehistoric or Romano-British date having been identified. Four such sites, all of which are legally protected as Scheduled Monuments, lie within 100m of the pipeline. Consequently, the Planning Archaeologist at the Lancashire County Archaeological Service (LCAS) advised that a programme of archaeological work should be undertaken, and United Utilities therefore commissioned Oxford Archaeology North (OA North) to undertake a programme of historical and archaeological research, together with a walkover survey of the immediate environs of the proposed pipeline. This work (OA North 2011) resulted in the compilation of a gazetteer of 22 sites of potential archaeological significance within the study area, of which ten lay either within, or close to, the proposed pipeline. Subsequently, LCAS recommended that a topographic survey should be carried out at five of these sites (Sites **16, 18, 19, 20, 21**), in order to record surviving landscape features of archaeological interest that might be affected by construction of the pipeline. Additionally, it was recommended that an archaeological watching brief should be undertaken at the western end of the pipeline, during ground works associated with the construction of a new switchgear house, adjacent to the junction of Shay Lane and Monk Hall Lane. Following the negative results of this watching brief, LCAS did not request that any other part of the pipeline route be subject to a watching brief condition. OA North were commissioned by United Utilities to undertake the necessary works, which were completed in October 2012.

1.2 TOPOGRAPHY AND GEOLOGY

- 1.2.1 The pipeline route runs through an agricultural landscape, comprising modern roads and tracks, farms and fields, in an area lying to the west of Extwistle Moor, between Thursden Brook and the Swinden Water reservoirs (Fig 1). The route traverses the slope of Bonfire Hill, the northern side of which forms part of the Thursden Brook valley, whilst the southern slope descends to Holden Clough. Undulating moorland extends to the east of the study area. Pike Lowe, the summit of Bonfire Hill, lies at 331m above Ordnance Datum (aOD). The altitude of the pipeline route varied between c 255-325m aOD.
- 1.2.2 The local solid geology comprises Pennine and South Wales lower coal measures, which consist of Bashkirian undifferentiated mudstone, siltstone, sandstone, coal, ironstone and ferricrete (British Geological Society 2011). These are overlain by drift deposits of diamicton glacial till, in the northern part of the study area, although no drift deposits having been recorded in the southern portion (*ibid*).

2. HISTORICAL BACKGROUND

2.1 INTRODUCTION

- 2.1.1 The following section presents a summary of the historical and archaeological background of the general area. This is presented by historical period, and has been compiled in order to place the study area into a wider archaeological context.

Period	Date Range
Palaeolithic	30,000-10,000 BC
Mesolithic	10,000-3,800 BC
Neolithic	4000 -2,500 BC
Bronze Age	2,500 -700 BC
Iron Age	700 BC-AD 43
Romano-British	AD 43-AD 410
Early Medieval	AD 410-AD 1066
Late Medieval	AD 1066-AD 1540
Post-medieval	AD 1540-1750
Industrial Period	AD 1750-1901
Modern	Post-1901

Table 1: Summary of British archaeological periods and date ranges

2.2 THE PREHISTORIC PERIODS

- 2.2.1 **Mesolithic:** the mesolithic was the latest cultural epoch in Britain during which people employed a subsistence strategy based wholly upon hunting, gathering, and fishing. There is substantial evidence for mMesolithic activity across Lancashire, consisting primarily of flint scatters and pollen studies, with the central Pennine uplands of Lancashire and Yorkshire providing one of the greatest concentrations of identified sites in the country (Barrowclough 2008, 48; 56-7). Upland sites have been identified on the moors to the east of Burnley (*op cit*, 57), within which the study area is located. The site of a mesolithic camp at Boulsworth, near Trawden, to the north-east of the proposed pipeline, was represented by worked flints and hazelnuts (Harrison 1988, 4). Dense scatters of mesolithic flints have also been found at Briercliffe (Kenyon 1991, 35), although no such sites are known within the study area.
- 2.2.2 **Neolithic:** following the introduction of farming to the British Isles, from around 4000 BC, the neolithic period saw the beginning of the widespread construction of monumental architecture, although few such sites have been identified in Lancashire (Middleton 1996, 41). Much settlement during this period appears to have been concentrated in the lowlands, although scattered neolithic material has been found within upland areas, including Worstorne Moor (*op cit*, 40), to the south of the study area, and at Castercliffe near Nelson (Barrowclough 2008, 92). The latter lies *c* 4km north of the study area, but no neolithic sites have been identified within the study area itself.
- 2.2.3 **Bronze Age:** the beginning of the Bronze Age in Britain, defined mainly by the introduction of the use of copper, developed gradually out of the preceding neolithic during the mid-third millennium BC (Parker Pearson 2000, 13). An increase in the quantity of stone axes discovered to the west of the Pennines

suggests a marked increase in activity in the Bronze Age, and numerous artefacts of this period have been found in the Burnley, Rossendale, Briercliffe and Worsthorne areas (Barrowclough 2008, 100-1; 131).

- 2.2.4 The tradition of monumental architecture continued into the Bronze Age, with new ritual and religious traditions developing that were associated with new monument types (Hodgson and Brennand 2006, 41-5). Such monuments are conspicuous in the vicinity of the study area, with an area of *c* 25km² of the Extwistle and Worsthorne Moors containing a dense concentration of sites, including no less than 14 stone circles, together with ring banks and barrows (Barrowclough 2008, 114-5). This demonstrates a considerable degree of ritual and burial activity within these areas during the Bronze Age, although the associated sites of domestic occupation have not yet been identified.
- 2.2.5 **Iron Age:** evidence for the Iron Age in the Pennine fringes of eastern Lancashire is most conspicuously represented by the presence of enclosed hill-top sites known as hillforts (Barrowclough 2008, 182-7). This includes Castercliffe, near Nelson (*op cit*, 186). In addition to these site-types, it is likely that other settlement sites that were not associated with such easily identifiable earthworks also existed. Environmental evidence demonstrates that a reduction of woodland, which might have resulted from deliberate clearance for agriculture, occurred during the later part of the Iron Age, including in the Rossendale area (*op cit*, 199) and, indeed, on Extwistle Moor itself (Bartley and Chambers 1992).
- 2.2.6 Although sites of demonstrable Iron Age date have not been identified within the study area, several enclosed sites, probably settlements, have been recognised that could date to this period. These include Ringstones, Twist Castle, and Beadle Hill Camp, although they may, alternatively represent the remains of Romano-British settlements (Bennet 1946, 29) (*Section 2.3.2*).

2.3 THE HISTORIC PERIODS

- 2.3.1 **Romano-British:** although Roman roads have been recognised running to the north, south and west of the study area, no sites indicative of a Roman military presence have been identified within the near vicinity. During the nineteenth century, Burnley was considered to have been a site of Roman occupation (Whitaker 1876, 156-7), a view which appears to have been based on the discovery of Roman coins in the vicinity. Colne was also regarded as having a Roman origin (Whitaker 1818, 385), but there is very little archaeological evidence from either town to corroborate this.
- 2.3.2 In the vicinity of the study area, enclosed settlements at Ringstones, Twist Castle and Beadle Hill Camp are referred to in nineteenth-century sources, and on late nineteenth-early twentieth-century mapping, as 'Roman camps' (*eg* Bennet 1946, 29). Although this term is suggestive of a military installation, it is more likely that these sites represent 'native' settlements, of Iron Age or Romano-British date (or both). Woodland clearance at Extwistle Moor during the Romano-British period has been demonstrated by pollen analyses (Bartley

and Chambers 1992), and it is possible this was associated with nearby settlement/agricultural activity.

- 2.3.3 **Early medieval:** evidence for early-medieval activity within the immediate vicinity of the study area is largely confined to place-names with roots that pre-date modern English. It should, however, be considered that place-names are a linguistic trait and, alone, do not conclusively demonstrate the ethnic origins of those responsible for establishing any given settlement. The place-name of Saxifield, which refers to an area on the eastern side of Burnley, is suggestive of an Anglo-Saxon presence in the area, and early histories suggested that a battle was fought in this area in AD 597 (Slaters Directory 1848, 315).
- 2.3.4 An Anglo-Saxon influence in the local area is certainly suggested by the preponderance of place-names of Old English origin. Briercliffe, which was *Brereclife* in 1242 (Farrer and Brownbill 1911, 468), appears to be derived from the Old English *Brer*, meaning briar, or the personal name *Brether*, with the Old English post-fix *cleof*, meaning cliff (Sephton 1913, 28). Indeed, many ancient place-names in this area are related to topography, rather than man-made features or land usage. For example, Extwistle appears to be a combination of the personal name *Eche* with the Old English *twistle*, which means a fork in a river (*op cit*, 197), and Holden derives from *hohl* and *denv*, meaning hollow valley (Wyld and Oakes Hirst 1911, 155). Thursden combines topography and mythology, with *Thirsedeneheved* being an Old English word meaning the head of the giant's valley (*op cit*, 249). Similarly, the field names within the study area that are not modern English are almost exclusively of Old English origin, such as Parrock, from *pearroc*, meaning paddock (Field 1972, 272), and Pike Lowe, which derives from *pic* and *hlaw*, and might translate as pointed hill, or the funeral mound at the pointed hill (Field 1972, 166; Sephton 1913, 120). Indeed the only place-name within the study area that is not of recognisably modern or Old-English origin is the field name Wham, from the Old Norse *hvammr*, meaning small valley or marshy hollow (Field 1972, 251).
- 2.3.5 Although there is no direct evidence for specific sites of activity within the vicinity of the study area during the early-medieval period, it should be considered that the enclosed settlements of possible Iron Age/Romano-British date discussed above (Section 2.2.6; 2.3.2) are not closely dated. It is, therefore, possible that such sites, if in use during the Romano-British period, may have continued to be occupied later.
- 2.3.6 **Medieval period:** Briercliffe did not constitute an individual manor during the medieval period, but was part of the manor of Ightenhill (Farrer and Brownbill 1911, 648-73) and lay within the Hundred of Blackburn (Lewis 1848, 369-75). The estate that became the township of Briercliffe is first recorded in 1242, although most of the information recorded between the thirteenth and sixteenth centuries relates to tenancy agreements and genealogy, rather than providing details of specific land uses. It is recorded that one of the De Lacy family received a grant for free warren in Briercliffe during the thirteenth century (*ibid*), which might relate to hunting or the rearing of rabbits. Within the broader area of Briercliffe with Extwistle, the general character of the

medieval landscape appears to have been agricultural, with at least one mill at Extwistle. Unenclosed moor and waste would also have formed a prominent feature of the landscape, and it has been estimated that out of 4,227 acres of land forming the Briercliffe estate in 1300, only 8% was cultivated (Bennet 1946, 74). Some of the 'wastes' would have constituted common land with tenant's rights to pasture, cutting of wood, and extraction of lime and slate (*op cit*, 88-9). Indeed, some of the field names recorded on the tithe schedule of 1850 (LRO DRB 1/26) are suggestive of common apportionment, such as Dole, which is likely to derive from the Old English *dal*, meaning common land divided into shares, and Town Fields, which is suggestive of a similar functionality.

- 2.3.7 The field name Chipping Meadow might provide an indication of activity other than agriculture in the local area during the medieval period, since it is likely to derive from the Old English *ceping*, meaning a market (Field 1972, 44). Although a market charter was not granted to Briercliffe, this name might record the former presence of an unofficial local market.
- 2.3.8 A house in the vicinity of the present Monk Hall appears to have existed since at least as early as the fourteenth century. There is a reference to deeds dating to the reign of Richard II (1376-99), and a suggestion that a precursor to the hall might have been occupied during the reign of Edward III (1327-76). A medieval wayside cross appears to be represented by a cross base, known as Nogworth Cross (LHER 796), located to the west of the study area. This features in local tradition as the place where a mischievous boggart was trapped (Farrer and Brownbill 1911, 648-73).
- 2.3.9 ***Post-medieval and Industrial periods:*** the township of Briercliffe with Extwistle lay within the parochial chapelry and poor law union of Burnley, and within the parish of Whalley and the higher division of the hundred of Blackburn (Lewis 1848, 369-75). The character of the area continued to be dominated by agriculture and unenclosed moorland, with common access into the post-medieval period. The Byre Law, or bye law, of Extwistle, which set out conditions relating to common rights on the wastes, was established in 1561 (Farrer and Brownbill 1911, 648-73; Bennet 1946, 88-9). However, by 1594 an agreement had been made relating to the enclosure of commons and moors in Extwistle (Farrer and Brownbill 1911, 648-73), which is likely to have increased the gradual rate of encroachment of enclosed lands into the marginal areas at the western edge of Extwistle Moor.
- 2.3.10 In 1624, part of the common land of Briercliffe, comprising the limestone scar in Thursden, was divided among the freeholders and copyholders of that township in order to apportion land for limestone extraction (*ibid*). The limestone was apparently extracted from the glacial drift by water action, rather than by quarrying, and an agreement was made that the river would be dammed and the water diverted to two different parts of the newly apportioned land holdings on alternate weeks (*ibid*). Conflict occurred in the local area in 1644, during the English Civil War, when a skirmish took place in Haggate, to the north of the study area, between the Parliamentary forces and those of Prince Rupert (*ibid*).

- 2.3.11 The study area remained a primarily agricultural landscape throughout the post-medieval period, although it is likely that cottage industries, such as hand-loom weaving (Lewis 1848, 369-75), were undertaken, the products of which would have been able to be sold in Burnley. Burnley itself was a small market town by 1650 (*op cit*, 442) and developed into a manufacturing area throughout the post-medieval and industrial periods (Bennet 1948). Nelson gradually became established as a town after 1835, following the establishment of a series of local cotton mills within a previously agricultural area, and would have become a source of employment and a potential destination for the sale of goods during the nineteenth century (Crosby 1998).
- 2.3.12 The study area lies within the Burnley coalfield, well-known for its Mountain Mine seams and Gannister coal, which was much sought after during the nineteenth century as a furnace coal (Hull 1875). There were coal mines in the wider area, including three recorded at Altham, Cligiver and Hapton (Baines 1824, 572), although there is little evidence for coal extraction within the immediate vicinity of the study area. To the east, on Extwistle Moor, there is an area called Coal Pit Pasture, and an old coal pit is recorded on the Ordnance Survey First Edition map (Ordnance Survey 1848). There is also a field called Coal Hill, recorded on the tithe schedule of 1850 (LRO DRB 1/26), on the western side of the study area, although the field was under pasture when the schedule was compiled. It is unclear when coal extraction might have occurred here, and its scale, but it is likely that any workings were shallow and short-lived.
- 2.3.13 Stone quarrying was also undertaken throughout Briercliffe (Lewis 1848, 369-75), and in the immediate vicinity of the study area. The Ordnance Survey First Edition map (Ordnance Survey 1848) shows Monk Hall Quarry to the north-east of the study area, where sandstone flags were extracted. Many other, much smaller, quarries, are depicted on the map, some of which were clearly already disused by 1848.
- 2.3.14 The part of Extwistle Moor immediately to the east of the study area features large and conspicuous geometric enclosures and boundaries, which are shown on the Ordnance Survey First Edition map (Ordnance Survey 1848). These are typical of planned enclosure associated with the Parliamentary enclosure Acts of the late eighteenth/early nineteenth century, contrasting with the irregular boundaries formed by earlier, piecemeal enclosure (Muir 2004, 203).
- 2.3.15 The current farmhouses located the study area were all established during this period. These include Monk Hall, which is likely to have been built during the later seventeenth century, Elders i' th' Row and Sweet Well House, both of which pre-date production of the Ordnance Survey First Edition map in 1848. A reservoir had been established at the site of the current Swinden Reservoirs by the time this map appeared, and the latter had been extended to their current size by the time the Second Edition map appeared in 1894 (Ordnance Survey 1894).
- 2.3.16 **Modern:** little conspicuous physical change has occurred within the study area in recent times. The Monk Hall quarries were disused by the time the Ordnance Survey Third Edition map was produced (Ordnance Survey 1912),

and no stone merchants are in the 1924 edition of Slaters Directory (Slaters Directory 1924). Although arable land was listed in the tithe schedule of 1850 (LRO DRB 1/26), all of the fields within the study area are currently under pasture.

3. METHODOLOGY

3.1 WATCHING BRIEF

- 3.1.1 An archaeological watching brief was maintained during ground works associated with the construction of a new switchgear house at the western end of the pipeline. This was located on the south side of Monk Hall Lane, almost directly opposite the junction with Shay Lane (Fig 2). The area affected by the ground works was roughly rectangular, measuring approximately 4 x 3m. Within this area, modern overburden was removed mechanically, under archaeological supervision, using a toothless ditching bucket (Pl 1), down to the surface of the natural subsoil. Excavation of a series of deeper trenches for services and other features, which penetrated below the natural surface, was also conducted under archaeological supervision.



Plate 1: mechanical removal of topsoil under archaeological supervision during construction of the switchgear house at the western end of the pipeline

3.2 TOPOGRAPHIC SURVEY

- 3.2.1 The five sites identified by LCAS as requiring topographic survey in advance of the pipeline construction (Sites **16, 18, 19, 20, 21**) were surveyed by means of survey grade GPS using a Leica 1200 differential system, to a standard compatible with English Heritage Level 3 (English Heritage 2007). The system employs Ordnance Survey base stations in conjunction with a roving station to correct the raw data with corrections transmitted by mobile phone. This system is capable of accuracy to +/- 30mm, and provides an effective means of recording the detail of earthwork features of archaeological interest.

3.3 ARCHIVE

- 3.3.1 The results of all the archaeological works undertaken have been ordered in an archive compiled to professional standards, in accordance with current guidelines (English Heritage 2006). The archive has been deposited with the

Lancashire Record Office in Preston. As part of the archiving phase, an entry providing details of the project has been made on the Arts and Humanities Data Service (AHDS) online database, *Online Access to index of Archaeological Investigations* (OASIS).

4. RESULTS

4.1 WATCHING BRIEF

- 4.1.1 At the western end of the pipeline, the roughly rectangular area affected by construction of the switchgear house (Fig 2), measuring *c* 4m, north-east to south-west, by *c* 3m wide, was subject to an archaeological watching brief during all ground works. Mechanical removal of approximately 0.25m of dark grey-brown topsoil and brick rubble (Pl 2) revealed a deposit of clean, dark brown silty clay, probably a fairly recent buried soil. This was 0.15m thick, and directly overlay the natural subsoil, a pale buff-brown clay. It was thought likely that the upper layer of soil and rubble had been deliberately dumped in order to provide a firm surface at an access point from the road into an adjacent field. No features or deposits of archaeological interest were recorded, though several complete bricks were recovered from the uppermost layer. One of these bore the stamp 'Towneley Colliery' (Pl 3), suggesting it may have come from the colliery of that name located on the east side of Burnley, which was operative from the 1870s to 1948. The stamp 'Burnley' on the reverse frog indicates that the brick was a product of the Burnley Brick and Lime Company.



Plate 2: modern topsoil and a buried soil overlying natural clay, observed during ground works for the construction of the switchgear house



Plate 3: brick with 'Towneley Colliery' stamp, recovered from modern topsoil during the watching brief on the site of the switchgear house

4.2 TOPOGRAPHIC SURVEY

- 4.2.1 The topographic survey targeted five sites identified in the walkover survey (OA North 2011, Sites **16, 18, 19, 20, 21**) (Fig 2), all of which were thought likely to be affected by the pipeline works. The results of the survey are presented as figures (Figs 3-5). Additional information collected during the course of the survey has been added to the site descriptions, which are presented in *Sections 4.2.2-6 (below)*. The unamended site descriptions are available in the original gazetteer of sites that was compiled following the historical research and walkover survey (OA North 2011, 24-30).
- 4.2.2 **Site 16:** a probable post-medieval or industrial-period metalled track, 4.5m wide, located east of Elders i' th' Row (SD 89043 34220) (Fig 2). This feature is depicted on the Ordnance Survey First Edition map (Ordnance Survey 1848), and was therefore in existence by 1848, though its precise date is unknown. Within the study area, the track is orientated north-west/south-east, and is traceable for over 70m (Fig 3: Pl 4). It follows the contours between Beadle Hill, to the south-west, and Bonfire Hill, on the east, and was constructed of rubble in order to raise it above a boggy area. Parts of the track are currently surfaced with brick rubble and tarmac.



Plate 4: south-east-facing view of the trackway at Site 16

- 4.2.3 **Site 18:** a probable industrial period track (Fig 4: Pl 5), terraced into the north-facing lower slope of Pike Lowe (SD 89423 34301). This feature is not shown on the Ordnance Survey First Edition map (Ordnance Survey 1848), and was therefore probably not in existence in 1848. It runs, on a roughly east-south-east/west-north-west alignment, from the vicinity of one of the former entrances to Monk Hall Quarry, on the east, towards the higher ground of Bonfire Hill (Fig 2). The track is 2-2.5m wide and extends for at least 125m.



Plate 5: south-west-facing view of the terraced trackway at Site 18

- 4.2.4 **Site 19:** a sub-circular gravel pit (Fig 4: Pl 6), 10m in diameter and up to 3m deep, situated adjacent to the modern road (SD 89423 34301), opposite the former entrance to Monk Hall Quarry and at the eastern end of the trackway at Site 18 (Section 4.2.3). Although undated, it is likely to have been used for gravel extraction in association with the surfacing of the road, and is therefore probably relatively modern.



Plate 6: south-facing view of the gravel pit at Site 19

- 4.2.5 **Site 20:** a stone kerb forming the western edge of the former entrance to Monk Hall Quarry (SD 89438 34325) (Fig 2; Fig 4). The remaining stretch of kerbstones is approximately 20m in length and comprises a single, slightly curvilinear row of dressed sandstone blocks (Pl 7), each measuring *c* 0.9 x 0.25 x 0.2m. The blocks at the southern end of the row have been displaced downslope. A track leading to the quarry is depicted in this area on the Ordnance Survey First Edition map of 1848, so the track is probably attributable to the post-medieval or industrial periods, but the precise date of the kerb itself is not known.



Plate 7: sandstone kerbing at Site 20, marking the former entrance to Monk Hall Quarry

- 4.2.6 **Site 21:** a roughly rectangular area of turf-covered quarry pits (SD 89583 34195), situated amongst outcropping sandstone between Pike Lowe, on the west, and a larger, disused quarry (Fig 2). The quarry, but not the smaller pits,

is depicted on the Ordnance Survey First Edition map of 1848 (Ordnance Survey 1848). Numerous hollows are visible, within an area measuring approximately 65 x 55m, adjacent to the junction of two trackways (on the west and south) and an enclosure wall (on the east). At the eastern end of this area the hillslope has been irregularly excavated, with several small spoil heaps apparent (Fig 5; Pl 8). Towards the north-west corner of the site there are also two shallow, sub-circular quarry pits, one of which cuts an alignment of parallel ditched/embanked features, the largest of which, located at the northern end of the site, is c 45m long, 5m wide and 0.3m deep (Fig 5; Pl 8). These are likely to be hollow-ways leading up to the quarries, but they might possibly be the remains of relict ridge and furrow. In addition, there is a large, relatively modern clearance cairn located at the south-west corner of the site. This measures c 15 x 8m, and contains large stones/boulders that have clearly been moved and dumped mechanically.



Plate 8: East-facing view of one a possible hollow-way at Site 21, leading to a series of quarry pits and spoil tips

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6. ILLUSTRATIONS

6.1 LIST OF FIGURES

Figure 1: site location

Figure 2: location of watching brief (switchgear house) and topographic survey (Sites **16, 18, 19, 20, 21**)

Figure 3: topographic detail of Site **16**

Figure 4: topographic detail of Sites **18, 19** and **20**

Figure 5: topographic detail of Site **21**

6.2 LIST OF PLATES

Plate 1: mechanical removal of topsoil under archaeological supervision during construction of the switchgear house at the western end of the pipeline

Plate 2: modern topsoil and a buried soil overlying natural clay, observed during ground works for the construction of the switchgear house

Plate 3: brick with ‘Towneley Colliery’ stamp, recovered from modern topsoil during the watching brief on the site of the switchgear house

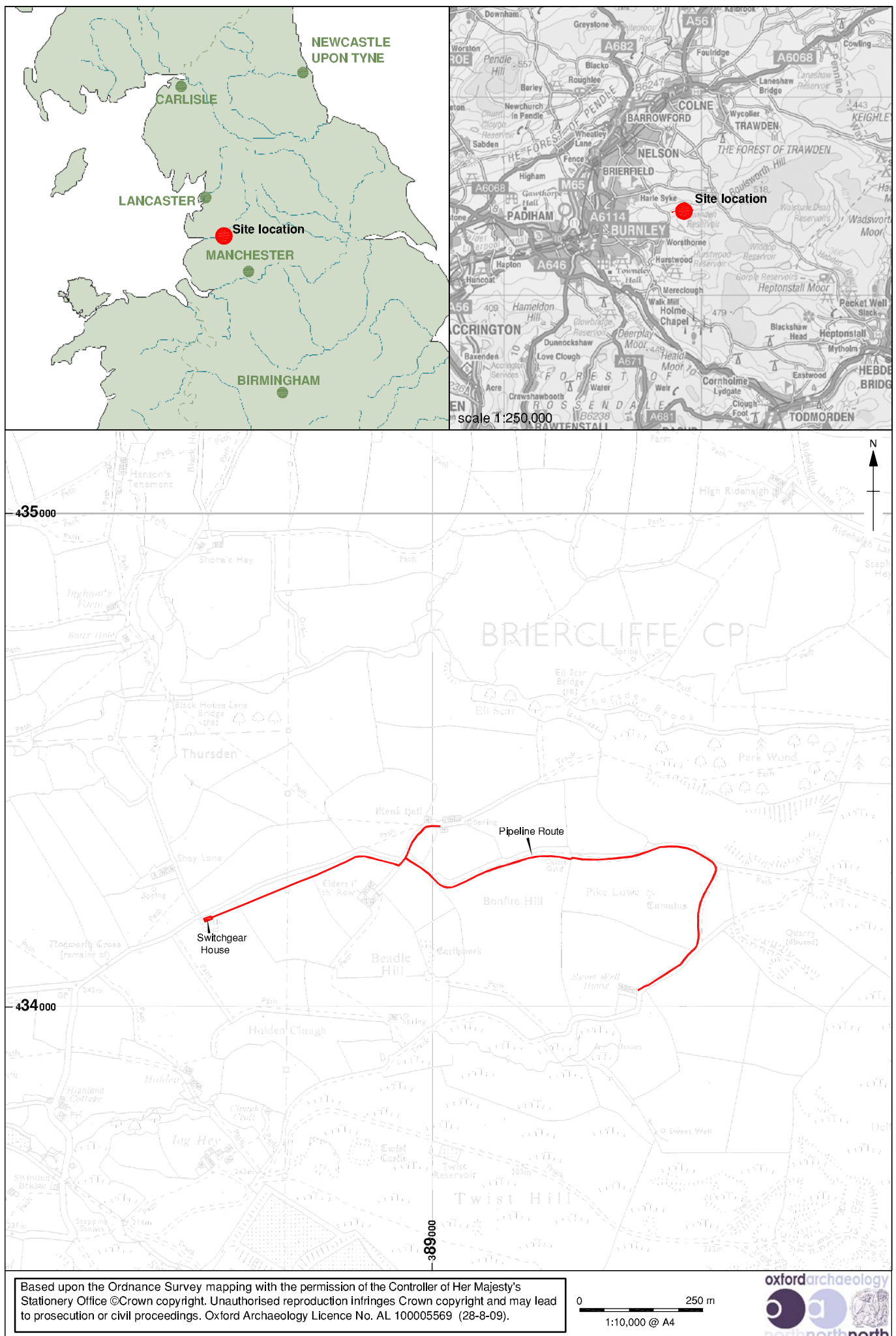
Plate 4: south-east-facing view of the trackway at Site **16**

Plate 5: south-west-facing view of the terraced trackway at Site **18**

Plate 6: south-facing view of the gravel pit at Site **19**

Plate 7: sandstone kerbing at Site **20**, marking the former entrance to Monk Hall Quarry

Plate 8: east-facing view of one a possible hollow-way at Site **21**, leading to a series of quarry pits and spoil tips



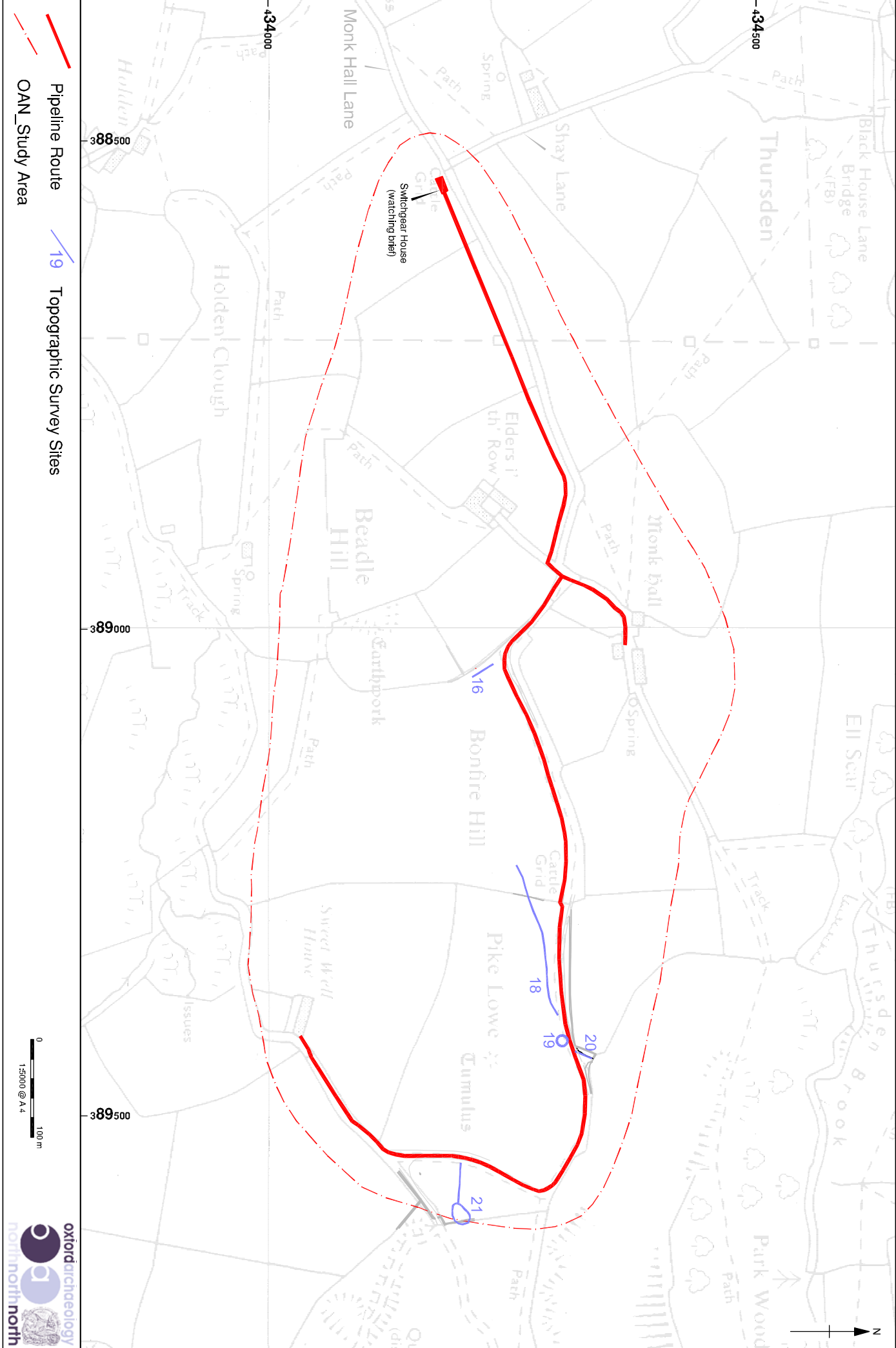


Figure 2: Plan of gazetteer sites subject to topographic survey

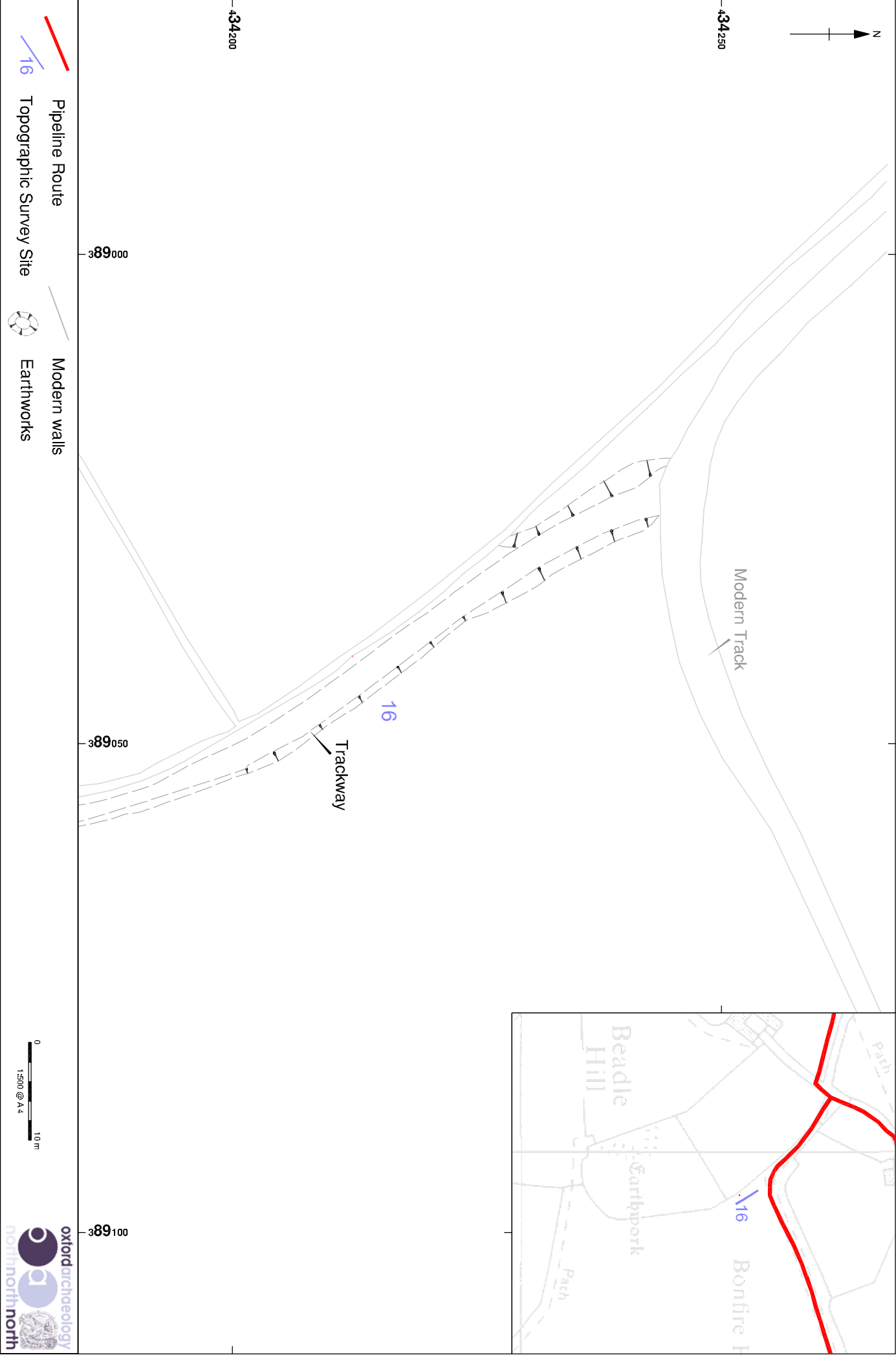


Figure 3: Topographical detail of Site 16



Figure 4: Topographical detail of Sites 18-20



Figure 5: Topographical detail of Site 21