



# **RIBBLE LINK MAIN, BOWLAND FRINGE AND PENDLE HILL LANCASHIRE**

## **Archaeological Evaluation and Watching Brief**



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## SUMMARY

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Following the findings of a desk-based assessment and walkover survey (OA North 2004) along the proposed pipeline route between Lowcocks Service Reservoir (SD 7457 4596) and Laundwood Pumping Station (SD 6536 4563), a programme of archaeological investigation was initiated on behalf of United Utilities Ltd during June, July and September 2004 by Oxford Archaeology North. The programme comprised the evaluation of three sites identified by the desk-based assessment and walkover survey as being under threat from the pipeline route. In addition, a targeted watching brief was maintained during topsoil stripping activities in specific areas thought to have archaeological potential, concentrated along the central area of the pipeline west of Waddington to Bashall Eaves.

The evaluation sites varied from possible Bronze Age hut circles (Site **19**), and the course of a Roman road which ran from Ribchester to Burrow in Lonsdale (Site **09**), to a linear earthwork of unknown date (Site **04**). None produced significant dating evidence to allow the specific period of occupation to be determined, however an interesting deviation in the projected course of the Roman road was identified close to the north bank of the River Hodder.

The results of the watching brief produced little in terms of archaeological significance, other than the presence of a quarry spoil heap near Site **04**, and post-medieval field boundaries in Fields **1** and **3**, that may have medieval origins. The possible re-use of material from the Roman road was observed at Site **09**.

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The evaluation was undertaken by Sean McPhillips assisted by Philipa Kok and Jason Clarke. The watching brief was undertaken by Kathryn Blythe, Sean McPhillips, Jason Clarke and David McNichol.

The report was compiled by Sean McPhillips, who also assessed the finds. The drawings were completed by Mark Tidmarsh. The project was managed by Alison Plummer, who also edited this report.

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## 1. INTRODUCTION

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### 1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 In 2004, at the request of Lancashire County Council's Archaeological Service (LCAS), OA North compiled a desk-based assessment and undertook a walkover survey of the route of the Lowcocks Service Reservoir (SD 7457 4596) to Laundwood Pumping Station (SD 6536 4563) water transfer pipeline proposed by United Utilities Ltd (OA North 2004).
- 1.1.2 Following the results of the 2004 report, LCAS issued a verbal brief in response to which OA North produced a project design (*Appendix 1*). The brief specified the evaluation of three sites (Sites **04**, **09** and **19**) and a targeted watching brief during topsoil stripping activities. The work was subsequently undertaken from June to September 2004. This report sets out the results of each phase of archaeological work.

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## 2. METHODOLOGY

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### 2.1 EVALUATION

- 2.1.1 The locations of the trenches were agreed by OA North and LCAS for sites lying within the pipeline easement. The programme of trenching intended to examine 5% of potential archaeology within the agreed areas. Two trenches totalling 20m were placed east/west across a linear earthwork bank (Site **04**), which was located south of Lees Wood (SD 652 445). A series of four trenches 8m<sup>2</sup> and four 2m<sup>2</sup> test pits were excavated along the line of the Roman road (Site **09**), in the vicinity of the north bank of the river Hodder and in close proximity to New Plantation (SD 658 469). Two trenches totalling 48.76m<sup>2</sup> were excavated across the putative Bronze Age site (Site **19**) in the south-west corner of a field adjacent to Horse Hey farm (SD 693 426).
- 2.1.2 A mechanical excavator was used to remove the topsoil down to the surface of the natural subsoil, or to the top of significant archaeological deposits. The trenches were then cleaned by hand, and manual excavation was carried out where appropriate. A complete record of all features and horizons was made, comprising a full description and preliminary classification of features or structures revealed, on OA North *pro-forma* sheets, and their accurate location in plan. Plans of each site was produced, showing the excavated areas (Figs 2A-2C). A photographic record in colour slide and monochrome format was also compiled.

### 2.2 WATCHING BRIEF

- 2.2.1 The topsoil strip was carried out using a mechanical excavator fitted with a 1.6m wide toothless bucket. Permanent observation of the work was undertaken along specific targeted areas, as well as examination of any soil horizons exposed, and the accurate recording of all archaeological features, horizons and any artefacts found during the excavations.

### 2.3 ARCHIVE

- 2.3.1 A full professional archive has been compiled in accordance with the project design (*Appendix I*), and in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited in the Lancashire County Record Office (Preston) on completion of the project.

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## 3. BACKGROUND

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### 3.1 GEOLOGY AND TOPOGRAPHY

- 3.1.1 The underlying carboniferous geology is mainly of the Worsthorne Shale Group, although there are areas of both Clitheroe and Chatburn Limestones. This is overlain by a drift geology of cambric stagnogley soils of the Brickfield 3 association (Ordnance Survey 1983).
- 3.1.2 The route of the pipeline falls within the area known as the 'Bowland Fringe and Pendle Hill' (Countryside Commission 1998). This is a transitional region between the upland core of the Bowland Fells and the flat landscape of the Lancaster and Amounderness coastal plain. It is mainly between 50m and 150m above sea-level, and consists of an undulating rolling landscape which is predominantly used for permanent pasture, mostly improved, with some woodland and arable land.

### 3.2 HISTORY AND ARCHAEOLOGY

- 3.2.1 **Introduction:** the historical and archaeological background derives from the desk-based assessment report compiled in 2004 (OA North 2004). Specific references are made to the immediate area where relevant.
- 3.2.2 **Prehistory:** evidence for prehistoric activity in the region is currently sparse. This may be due to a lack of research or the fact that encroaching peat in the moorlands may have obscured early prehistoric sites. Elsewhere in the Pennines the investigation of erosion scars in the peat has uncovered sites previously covered in similar environmental circumstances (Newman and Hodgkinson 1997). However, it is likely that the Bowland Landscape and its fringes were populated by nomadic hunters from as early as 10,000 BC (Countryside Commission 1992), when much of the area was covered in broadleaved forests. Woodland clearance began in the Neolithic period and this process continued throughout the Bronze Age. Evidence for late Neolithic/early Bronze Age activity in the area has been found in the form of sites at Bleasdale Circle and Oak Farm near Chipping, along with remains found in a cave above Whitewell and a possible assembly of tumuli on Waddington Fell (*ibid*). Along the route itself there are possible Bronze Age hut circles at Horse Hey Farm (Site 19). The evidence for Iron Age activity in the region is sparse, although this is attributed to a lack of research rather than an abandonment of the landscape, as pollen evidence has indicated an increase in activity represented by woodland clearance at this time (MacKay and Tallis 1994, 578).
- 3.2.3 **Roman:** by the end of the Iron Age the Bowland area was in the control of the Brigantes, whose principal centre on the west of the Pennines was thought to be at Ingleborough (Newman and Hodgkinson 1997, 20) to the north-west of the study area. The Romans occupied the central Pennines area, including Bowland, in AD 70-72, and a fort was established at Ribchester in the early 70s (*ibid*). The Roman road from Ribchester to Burrow in Lonsdale (Margary

1973) passes through the study area (Site **09**) but there is little direct evidence of Roman activity elsewhere along the route.

- 3.2.4 **Early Medieval:** there is little evidence for early Medieval activity in the region, with the nearest known remains being found at Ribblehead near Ingleborough, and the parish site of Whalley. Documentary evidence suggests that the Bowland area passed out of British control and was integrated into the Kingdom of Northumbria in the seventh century AD (Newman and Hodgkinson 1997, 21). The majority of place-names in the region, such as Chipping and Waddington in the study area are of Anglo-Saxon origin, and these towns are likely to have been established before the arrival of Viking settlers in the tenth century (*ibid*). Traces of the Viking occupation can be seen in the place-names of the Bowland Region, for example Battersby (*ibid*), and in the origin of upland features such as ‘fell’, ‘moss’, ‘thwaite’ and ‘beck’ (Countryside Commission 1992, 13). The name Bowland itself has Anglo-Saxon origins, as ‘Boelanda’ or ‘the land by the bow’, in the sense of the bend of the River Ribble (Ekwall 1960, 56). The lands at Waddow and Bashall both have early origins, although the houses themselves are later. Waddow and nearby Waddington are thought to derive from the Anglo-Saxon ‘Wada’ with Waddington being ‘The Tūn of Wada’s People’ (Ekwall 1960, 490), although the town is recorded in the Domesday Book as ‘Widitun’ (*ibid*). Similarly, Bashall Eaves is recorded as ‘Baschelf’ (*ibid*, 29). The town of West Bradford is also recorded in the Domesday Book as ‘Bradeforde’ (*ibid*, 58) and there is known to have been a settlement at Lees (Sites **03-06**) since the eleventh century (Newman and Hodgkinson 1997, Fig 2). Environmentally, there is evidence for further depletion of the woodland cover throughout the Anglo-Saxon period, and cultivation of the heavy clay soils in the lower lying areas took place for the first time (*ibid*). This clearance continued throughout the tenth century.
- 3.2.5 **Medieval:** at the time of the Norman Conquest the Bowland area was divided between the Earldoms of Northumbria and Mercia, with the River Ribble as its boundary. After the Conquest the lands were granted to Count Roger de Poitou and formed part of the original county of Lancashire. In these lands, a wide hunting territory was established that continued until the twelfth century, after which the land was primarily used for cattle and horse rearing. After Roger de Poitou, the ownership of the land passed to Robert de Lacy in the reign of Henry I (1100-1133). It was then decreed that no further hunting should take place on the land without the permission of the de Lacies (Newman and Hodgkinson 1997, 22). As a result, Bowland and Pendle, along with Trawden and Rossendale became a chase rather than a forest; a forest at that time being a specific legal term referring to land reserved for hunting and held by the King (Countryside Commission 1992, 14). In the later medieval period there was a decline in the importance of hunting in the area, and a rise in cattle rearing. It is thought that many of the medieval vaccary, or cattle ranching, sites may be obscured or indeed still occupied by post-medieval farms (Newman and Hodgkinson, 1997, 24). Towns such as Clitheroe were granted charters in the mid-thirteenth century (White 1996, 127).

3.2.6 **Post-medieval:** the current landscape in the region, of small-to-medium-scale irregular fields around small villages and hamlets, is largely due to the development of the medieval vaccaries into multi-tenanted nucleated settlements (Newman and Hodgkinson 1997, 26). Post-medieval vernacular stone buildings with stone-flagged or slate roofs make up the core of the settlements and farms. In many cases these are surrounded by fields marked with ridge and furrow. The development of small-scale quarrying and mining in this period has left behind disused quarries and lime kilns (see Sites **03**, **05** and **10**, for example (OA North 2004)), but the main evidence for industry in this area is seen to the east at Waddington and West Bradford. At Waddington, a fulling mill, dye house and tenter field are known to have existed before the 18th century (Rothwell 1990, 29-30) and towards the end of the 18th century, a tannery and tile works were established (*ibid*). At West Bradford a medieval corn mill was rebuilt a number of times, and once corn milling had ceased by c1840 it was used for bone crushing, bobbin turning and chairmaking (*ibid*).

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## 4. EVALUATION RESULTS

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### 4.1 INTRODUCTION

4.1.1 The results of the evaluation trenching of Sites **04**, **09**, and **19** are presented below. The trench locations are shown graphically as Figures 2A-2C.

### 4.2 SITE 04

4.2.1 Two trenches were excavated through an earthfast linear bank, **52**, and its associated ditches to the east and west (**53** and **51** respectively), with the aim of ascertaining the character and extent of the earthwork. The feature had been recorded as a possible field boundary bordered to the east and west by ditches, and lined along the summit by hawthorn trees, as illustrated on the 1908 Ordnance Survey Map (OA North 2004). It transected a gently sloping field adjacent to the River Hodder (Fig 2A) along a north-east/south-west alignment. The field bordered a small wooded area, which contained several stone quarries and a lime kiln (gazetteer Site **05**, OA North 2004). The trenches, totalling 20m in length and measuring 1.6m in width, were excavated on an north-west/south-east alignment across the bank and associated ditches.

4.2.2 **Trench 1:** this trench measured 9.80m in length, was positioned north-west/south-east across the highest extant edge of the bank (Fig 4), and was excavated to a maximum depth of 1.2m.

4.2.3 The earliest deposit encountered in the trench comprised a horizon of yellow natural sand (**54**) which contained inclusions of manganese streaks and fragments of tree bark. The sand was observed beneath the bank (**52**), and at the base of the two ditches (**51** and **53**) at a depth of 1.20m below the turf. Contained within the sand were several randomly spread circular patches (**108**) resembling post-holes, which measured on average 0.15m by 0.10m and with a depth of 0.12m. The patches had no distinct edges and irregular bases, and were filled with calcified mud, manganese, and roots. Other than a loose lump of water-worn limestone recovered within the sand, no stone-packing typical of post-hole deposits was observed, which suggests the features probably represented the remains of small trees.

4.2.4 The sand (**54**) was sealed by 0.20m thick deposit of grey humic clay subsoil, **50**, spread throughout the trench. The subsoil contained infrequent flat and angular stone inclusions, which formed an interface with sand **54** and the bank (**52**).

4.2.5 The fabric of the bank (**52**) comprised reddish-brown clay-silt with frequent stone inclusions (Plate 3) that had mostly been excavated from ditches **51** and **53**, and also possibly imported from quarried features in the vicinity, giving the bank an overall width of 4m. The western area of the bank contained lenses of sandy-clay ranging in colour from grey to yellow, with frequent decayed organic matter. It is possible, therefore, that this area of the bank was at some time lined with trees. The material around the summit of the bank had

a heavier concentration of stones, containing flat and angular rocks of varying size creating a level surface. The stones may have been placed in order to stabilise the bank following the removal of the trees.

- 4.2.6 The ditches (**51** and **53**) located on either side of the bank had an average width of 1m and were exposed at 0.60m below the turf. Following excavation to a depth of 0.50m these were seen to have wide U-shaped profiles. Both features were filled at the base with a redeposition of layer **50**, which was in turn overlaid by a residue of layer **52**, and sealed with topsoil (**55**). Topsoil **55** comprised grey silty-clay, which varied in thickness, averaging 0.40m across the slope of the bank and gradually thinning to 0.15m over the ditches. No artefacts were recovered from the earthwork.
- 4.2.7 **Trench 2:** this measured 12m in length (Plate 4) and was positioned north-west/south-east across the southern end of the bank (referred to as **57** in this trench), at a distance of 15m south-east of Trench 1 (Fig 2A). The trench was excavated to a maximum depth of 1.10m into natural clay. The width of the bank had been reduced to 2.10m, with the remains of a single ditch (**60**) along its western edge (Fig 5). The alignment of the ditch corresponded to the western ditch (**51**) in Trench 1. A 1m<sup>2</sup> sondage was manually excavated below the bank to determine the depth of the natural subsoils (**56** and **62**). No artefacts were recovered from the trench.
- 4.2.8 The earliest deposit exposed within the sondage was represented by a layer of waterlogged silty-sand (**62**) exposed at a depth of 1m below the base of the bank. The sand was sealed by a horizon of natural yellow sandy-clay, **56**, observed running beneath the base of the bank for a distance of 1.3m x 0.30m, and at a depth of 0.65m below the turf (**61**). Within the sand-clay layer **56**, were traces of tree bark and mud stone.
- 4.2.9 Clay layer **56** was sealed by the make-up of bank **57**, being a reddish-brown clay-silt spread unevenly throughout the trench and measuring 0.6m in thickness (Fig 5). The clay-silt deposit formed a shallow, and much less well-defined bank, than observed in Trench 1, and at some stage had spread across the top of the ditch (**60**). This suggests changes or modifications to the earthwork possibly a result of changes in the landscape during the 18th and 19th centuries, such as a reconfiguration of the field caused by quarrying activity.
- 4.2.10 The eastern edge of ditch **60** was observed cutting natural clay (**56**). At the base of the ditch was a layer of unsorted angular and flat stones ranging from 0.02m up to 0.12m in size, that were probably deposited to aid drainage. Above the redeposited bank material (**57**), the ditch was sealed by a deposit of topsoil (**59**) that would appear to have accumulated over a period of time. This signalled the end of the ditch as a probable drainage feature.
- 4.2.11 The topsoil (**59**) comprised a 0.10m thick deposit of grey silty-clay which sealed bank **57**, and gradually thickened to 0.15m over ditch **60**. This was in turn sealed by turf layer **61**.

### 4.3 SITE 09

4.3.1 A series of four trenches (T1, T2, T3 and T5) and four test pits (TPs 4, 6-8) were excavated along, and close to, the projected line of the Roman road (Fig 2B). The evaluation trenching and test pits were undertaken prior to reinforcement of the existing access track leading into the field north of New Plantation and a watching brief (*Section 4.3.12*) was undertaken during the development works.

4.3.2 The trenches were excavated south-east/north-west along the access track and the test pits were mainly excavated west of the course of the Roman road. The results are summarised in the table below. Traces of a cobbled surface in a poor state of preservation were encountered throughout the trenches at an average shallow depth of 0.10m below the turf.

| Trench/Test Pit | Dimensions      | Topsoil | Roman Road preservation   | Other features               |
|-----------------|-----------------|---------|---------------------------|------------------------------|
| T1              | 9m by 2m        | 0.04m   | Degraded                  | None observed                |
| T2              | 9m by 2m        | 0.10m   | None                      | Two field drains             |
| T3              | 3.4m by 1.4m    | 0.10m   | Poor                      | None observed                |
| TP4             | 2m <sup>2</sup> | 0.20m   | None                      | None observed                |
| T5              | 8m <sup>2</sup> | 0.20m   | Poor                      | Traces of <i>agger</i> ditch |
| TP6             | 4m by 2m        | 0.20m   | Poor                      | None observed                |
| TP7             | 4m by 2m        | 0.15m   | Hill-washed stone Surface | None observed                |
| TP8             | 4m by 2m        | 0.20m   | Poor                      | Drainage ditch               |

Table 1: Summary results from the trenches along the access track

4.3.3 **Trench 1:** the trench was excavated to a depth of 0.15m and was characterised by a spread of poorly-sorted sub-rounded cobbles and small pebbles (**200**) measuring between 0.05m and 0.2m (Fig 7). The stones were exposed in the central area of the trench for a distance of 3.6m within the topsoil, and partially compacted into the underlying yellowish-brown silty-clay subsoil (**202**). The spread was bordered in the east and west by deposits of grey silty-clay (**203**), which lined the base of two 0.10m deep drainage ditches that ran parallel with the possible road (**63** and **208** respectively).

4.3.4 **Trench 2:** no evidence of the Roman road was encountered in this trench except for a patch of saturated silty-clay (**205**) that bordered the eastern edge of the trench, and possibly represented the edge of a ditch. Two 20th century

ceramic field drains (**206** and **207**) cut through a similar clay deposit, along the western edge of the trench, at a depth of 0.10m below the topsoil (**204**).

- 4.3.5 **Trench 3:** traces of a stone surface (**209**) were encountered within the topsoil (**210**) and underlying deposits, in the form of a poorly-sorted flat and angular spread (Plate 6). The surface comprised a variety of quartz and granite pebbles concentrated in dense patches, particularly along the eastern edge of the trench. The stones in this area of the trench appeared to be slightly cambered for a distance of 0.5m, and sloped towards clean clay (**222**) which was visible along the western limit of the trench.
- 4.3.6 **Test Pit 4:** the test pit was located 15m west of the projected course of the Roman road. No evidence of the Roman road or any other archaeological features were encountered.
- 4.3.7 **Trench 5:** the trench was located at the point where the pipeline crossed the projected line of the Roman road, along the western edge of New Plantation, and was excavated to a maximum depth of 0.3m to natural sandy-silt. The trench was characterised by a broad spread of medium-sized (50-100mm) rounded cobbles and flat stones concentrated over a distance of 5m by 4m, and observed on a north-east to south-west alignment along the eastern edge and central part of the trench (Fig 8). The cobbles (**12/212**) were exposed immediately below the topsoil (**211**), and within a light brown silty-clay matrix. A slight trace of a camber in the mid area of the spread (Fig 9) suggests that the surface may have Roman origins, although no material evidence from this period was recovered by the excavation.
- 4.3.8 Traces of a 1.2m wide ditch (**223**) backfilled with pale red silty-sand (**224**), were observed along the western edge of cobbles **12/212** (Fig 9; Plate 7). The ditch followed a similar alignment to that of the cobbles and survived to an overall depth of 0.40m. The possible remains of a second drainage ditch (**225**) represented by a thin band of red/brown silty-sand were detected along the southern edge of the stones, and appeared to run along a north-east to south-west alignment. Little evidence of its dimensions survived as its eastern edge was truncated by a later drainage ditch (**214**), although it appeared to run south beyond the limit of excavation. Drainage ditch **214** was placed along a north-south alignment, following the topography of the field.
- 4.3.9 **Test Pit 6:** no evidence of the road survived within this test pit, which was located to the immediate south of Trench 5. No other archaeological features were observed.
- 4.3.10 **Test Pit 7:** this pit was excavated in order to trace the south-western extent of the cobble surface (**12/212**) observed in Trench 5. Traces of a cobbled surface (**217**) were observed at the north-western end of the pit following the slope of the field. The cobbles were randomly spread down the slope, suggesting the road surface had slipped owing to hill-wash (Plate 8). The cobbles sealed saturated natural clay deposits.

- 4.3.11 **Test Pit 8:** the pit was located along a gradual slope, and was excavated north/south in order to trace the western extent of the cobble surface (**I2/212**) encountered in Trench 5. A degraded, loosely-sorted gravel surface (**219**) was observed in the southern end of the pit, surviving for a distance of 2.3m. The surface was bordered by a drainage ditch (**215**) along its southern edge (Plate 9). The ditch sloped to a depth of 0.30m below the gravel.
- 4.3.12 **Watching Brief of Site 09:** during the topsoil strip of the field containing Site **09**, further evidence of the projected Roman road was encountered. A patch of cobbles spread over a distance of two metres was encountered 16m south of the field entrance. The cobbles contained faint traces of a camber sloping to the west. A similar cobble concentration was observed 33m south of the gate sloping into a ditch along a similar alignment. The best-preserved stretch (**220**; Plate 10) measured 3.5m in length adjacent to a possible road-side ditch (**221**) located 66m south of the gate. The cobbles along this stretch differed in that the size of the stones was slightly larger, measuring on average 0.25m. The cobbles sealed a 0.10m deep deposit of compacted yellow/red clay that appeared to function as a bedding layer (**218**). The deposit measured at least 1.2m wide continuing east into the ditch (**221**).
- 4.3.13 The field boundary ditch (**I4**) running through Site **09** was observed to be have edges and a lining of cobbles for an area of approximately 5.2m by 3.4m. The cobbles were tightly-packed and flattened, well-sorted large stones (Plate 11), which at the base of the ditch contained fragments of ceramic drainpipe of possible post-medieval date. At this point the ditch crossed the projected alignment of the Roman road and therefore it is assumed that the cobbles are re-used road material, particularly as they are similar to those seen elsewhere along the line of the road (*Section 4.3.12*).
- 4.3.14 **Road Deviation:** the line of the Roman road, at the point of Trench 5, appeared to deviate from the projected course, on an alignment through the trees of New Plantation. The deviation was clearly defined by an 11m wide raised bank (**216**) that traversed the field along a north-east/south-west alignment (Plate 12) heading towards the river. The alignment suggests an attempt was made to avoid the marshy areas at the bottom of the field. Two 15m wide hollows (**I3**) observed at the west end of the bank may possibly be the remnants of the quarries used to construct the earthwork.
- 4.3.15 Further evidence for the deviation of the road was encountered during the topsoil strip within the south-western part of the same field. A 15m by 8m spread of randomly-sorted stones was encountered along the top of bank **216**, clearly representing a metalled road surface. The surface was bordered along the southern edge by a strip composed of a silty-clay matrix that sloped sharply to the south.
- 4.3.16 During the stripping of material from across the width of New Plantation, a 0.10m thick deposit of turf, topsoil, and tree debris was removed. The topsoil sealed a very mixed, thick clay loam overburden, that was probably formed by landscaping in preparation for tree planting. The overburden followed the incline of the tree slope gradually increasing in depth to 0.40m, and then

thinning out at the base of the slope. Very few stones were observed in the topsoil and sub-soils in this area, suggesting that the Roman road did not exist on its projected alignment.

### 4.3 SITE 19

4.3.1 Two trenches totalling 34m (Fig 10) were excavated to determine the presence or absence of previously undiscovered Bronze Age remains. The field containing the site sloped gently to the south from Horse Hey Farm toward the River Hodder, being bordered in the east by a deep ditched-field boundary and to the west by a farm track. The trenches were excavated within the pipeline easement and were located 15m due south from the farm on an east/west alignment. Both trenches were excavated to a maximum depth of 0.40m into natural clay (Fig 2C).

4.3.2 **Trench 1:** the first trench excavated produced no archaeological evidence. Natural orange/yellow clay (**106**) was encountered at a relatively shallow depth of 0.30m at the western end of the trench, extending 0.40m to the east. The clay was interspersed with veins of manganese, which formed large patches across the trench. These patches became more apparent further east, with a gradual change to sand and gravel, which eventually diffused to a sandstone outcrop at the eastern limit of the trench. The clay was sealed by grey/brown subsoil (**107**) observed across the centre of the trench, which was cut by three 20th century land drains (**03**, **05**, and **07**).

4.3.3 **Trench 2:** no archaeological features were observed within this trench. Natural yellow clay (**105**) was encountered at a depth of 0.40m below the turf along a flat horizon. Cutting the clay at the east end of the trench was a north-east/south-west aligned linear feature (**01**). Upon investigation, the feature proved to have irregular sides with a shallow depth of <0.05m, and was filled with grey clay (**02**), resembling the appearance of an animal burrow. The natural was sealed by 0.25m thick layer of topsoil (**102**) that yielded 19th century pottery.

## 5. WATCHING BRIEF RESULTS

### 5.1 INTRODUCTION

- 5.1.1 A targeted watching brief was maintained at specific locations along the length of the pipeline easement. Of the total pipeline length, 12 of the 22 fields in the corridor were directly observed by OA North representatives. The results of the observations are described in the table below. The following fields were not observed under supervision by OA North: Fields **7** to **9** (east of Annas Clough), Fields **11** and **12** (north-east of Bashall Town), Field **18** (north of Coplow Hill), Field **19** (south of Lane Side Farm), and Fields **21** to **23** (Westfield End).
- 5.1.2 Whilst few fields had recognisable archaeological features, assemblages of pottery and other materials were collected from a number, a general description of which is included in *Section 7*. These are described in detail in *Appendix 3*.
- 5.1.3 Archaeological evidence was observed in Fields **1** (quarry spoil heap, bank), **3** and **6** (field boundaries and track), the details of which are described and discussed below (*Section 5.3*).

### 5.2 RESULTS

| Field    | Topsoil   | Subsoil                              | Archaeological Features  |
|----------|---|--------------------------------------|--|
| <b>1</b> | 0.20m in depth of turf and light brown sandy-clay         | Dark grey sandy-clay.                | Possible remnants of a spoil heap associated with limestone quarry (gazetteer Site <b>03</b> ) along the west edge of the easement an earthwork bank (gazetteer Site <b>04</b> ). Stone post pad and 19th/20th century pottery collected from across the easement. |
| <b>2</b> | 0.20m in depth of turf and light brown sandy-clay         | Dark grey sandy-clay.                | No archaeological features were observed.  |
| <b>3</b> | Maximum 0.3m in depth of turf and mixed grey plastic clay | Yellow/red sticky clay, waterlogged. | Small tree-boles, field boundary <b>7</b> and field drain <b>8</b> . No dating evidence was recovered from these features.   |

| Field     | Topsoil   | Subsoil  | Archaeological Features   |
|-----------|---|--|---|
| <b>4</b>  | Very thin near to New Plantation (<0.1m) sticky red plastic clay  | Orange/yellow clay with occasional (10%) limestone lumps.        | Seventeen field drains ( <b>9</b> ) spaced 2m apart, aligned north/south down the slope towards the River Hodder.   |
| <b>5</b>  | Maximum 0.1m in depth of mid brown silty-clay with traces of decayed stone inclusions. The topsoil varied in thickness reflecting the undulating topography | Yellow/red sticky clay with frequent small stone inclusions.     | In the vicinity of crop mark (gazetteer Site <b>08</b> ). Two field drains ( <b>10</b> and <b>11</b> ). Field boundary <b>103</b> . No archaeological finds recovered.  |
| <b>6</b>  | Light red/brown silty-clay with medium size (0.03m-0.05m) stone and gravel inclusions (<8%)   | Pale brown/grey mottled silty-clay. Marsh grass.                 | Along the line of Roman Road (gazetteer Site <b>09</b> ). Road deviation/track ( <b>12</b> ), hollows ( <b>13</b> ) located at the south edge of <b>12</b> , boundary ditch <b>14</b> , cobbles ( <b>15</b> ) within <b>14</b> , that may have Roman origin. 19th century clay tobacco pipe collected from topsoil. |
| <b>7</b>  | Not observed  | Not observed.  | None.   |
| <b>8</b>  | Not observed  | Not observed.  | None.   |
| <b>9</b>  | Not observed  | Not observed.  | None.   |
| <b>10</b> | 0.35m in depth of yellow/brown compact clay with occasional small stones inclusions   | Grey/white compact clay with occasional small stones inclusions. | No archaeological features were observed. 19th century pottery and clay pipe collected from the spoil heap.   |
| <b>11</b> | Not observed  | Not observed.  | None.   |
| <b>12</b> | Not observed  | Not observed.  | None.   |
| <b>13</b> | Not observed  | Dark brown water-borne silt.                                     | No archaeological features were observed.   |
| <b>14</b> | Not observed  | Dark brown water-borne silt.                                     | No archaeological features were observed.   |
| <b>15</b> | Not observed  | Dark brown water-borne silt.                                     | No archaeological features were observed.   |
| <b>16</b> | Not observed  | Waterlogged sand.  | 19th century pottery collected from topsoil   |
| <b>17</b> | Not observed  | Waterlogged sand.  | No archaeological features were observed.   |
| <b>18</b> | Not observed  | Not observed.  | None.   |

| Field | Topsoil                               | Subsoil            | Archaeological Features   |
|-------|---------------------------------------|--------------------|---|
| 19    | Not observed                          | Not observed.      | None.   |
| 20    | Unknown, stripped prior to inspection | Boggy yellow clay. | 18th and 19th century pottery and drain pipe fragments collected from spoil heap. |
| 21    | Not observed                          | Not observed.      | None.   |
| 22    | Not observed                          | Not observed.      | None.   |
| 23    | Not observed                          | Not observed.      | None.   |

Table 2: Summary results from the Watching Brief

### 5.3 SIGNIFICANT ARCHAEOLOGY

- 5.3.1 **Field 1:** the easement transected the eastern area of the field along a north/south alignment. Evidence to suggest the field was the site of a quarry was represented by the small remnant of a spoil heap located along the western edge of the easement. Although the earthwork was almost unrecognisable, its presence indicates the extent of limestone extraction in the immediate vicinity, with several sites noted in close proximity (gazetteer Sites **03** and **05**).
- 5.3.2 The only other notable feature in the field was the extant remains of an earthen bank (Site **04**) that possibly represented an old field boundary (see *Section 4.2*). A profile through the bank was drawn (Fig 6), which comprised bank material (**100**), and topsoil (**101**).
- 5.3.3 **Field 3:** the easement transected the southern edge of the field along an east/west alignment. A single ditched-and-hedged field boundary (**7**) was observed on a north/south alignment at the western end of the field (Plate 13). The boundary comprised a slight earthen bank and ditch lined along the summit with young oak trees. The bank survived to a height of 0.5m and 2.5m in width. The ditch extended to a width of 1.2m and survived to a maximum depth of 0.37m. A maximum 0.10m in depth of topsoil was removed from the top of the bank exposing the bank material, which comprised heaped, large round pebbles, probably intended to stabilise the earthwork.
- 5.3.4 **Field 5:** a single ditched field boundary (**103**) was observed within the southern edge of the field placed along an east/west alignment. The boundary was lined with trees, which may represent a remnant of Lees Wood, and bordered the eastern edge of the field. Evidence of tree-boles were observed within the subsoil across the easement, suggesting an episode of tree clearance.
- 5.3.5 **Field 6:** the easement cut through New Plantation and transected archaeological evaluation Trench 5 and Test Pits 6, 7 and 8. It continued beyond Trench 5 through the central area of the field along an east/west alignment. Features of note within the field were the remains of a stone-surfaced track (**12**), which possibly had Roman origins (see *Section 4.3.1-4.3.10*), and the remains of a field boundary ditch (**14**), which is presently used for drainage.

- 5.3.6 The ditched field boundary (**14**) was positioned in the northern end of the field outside of the pipeline route; however, it was affected by the installation of the new access track. The ditch ran from the northern boundary, curving across the field and returning to the east near the access track, and ultimately feeding the ditch within New Plantation. A 20m length and 2.3m width and overall depth of 1.6m were exposed across the easement (Plate 14).

## 6. FINDS

### 6.1 RESULTS

6.1.1 In total, 51 fragments of artefacts were retrieved during the archaeological evaluations and the targeted watching brief. The material largely comprised ceramic drain fragments (38), with smaller numbers of pottery (8), tobacco pipe (2), and industrial residue, wood and stone. Of the 51 fragments, two were recovered from stratified contexts (**02**, **108**), such as posthole and drain backfills, whilst the rest were collected from topsoil or spoil heap deposits across the pipeline easement. The material was, on the whole, poorly preserved having been rolled from the effects of ploughing. The types of finds and their approximate date range are summarised in Table 3 below, and grouped according to the field in which they were found.

| Field | Number of fragments | Types of finds     | Approximate date range |
|-------|---------------------|--------------------|------------------------|
| 1     | 1                   | Stone              | Not closely datable    |
| 1     | 1                   | Pottery            | 19th/20th century      |
| 2     | 1                   | Industrial residue | 19th/20th century      |
| 4     | 21                  | Ceramic drain pipe | 20th century           |
| 6     | 1                   | Clay tobacco pipe  | 18th/19th century      |
| 10    | 1                   | Clay tobacco pipe  | 19th/20th century      |
| 10    | 4                   | Pottery            | 19th century           |
| 17    | 1                   | Wood               | 20th century           |
| 20    | 17                  | Ceramic drain pipe | 20th century           |
| 20    | 3                   | Pottery            | 18th/19th century      |

Table 3: Types and quantities of finds from different fields

6.1.2 All artefacts appeared to fall into a date range between the 18th to 20th centuries, with the pottery fragments providing the most reliable dating evidence. Details of the pottery are set out below, followed by a brief record of the other categories of finds. Whilst these finds, where they are datable, corroborate the pottery evidence, they have little other relevance for the results.

6.1.3 **Pottery:** it could be seen that only one fragment of tableware from Field 20 dates to the 18th century, with larger quantities dating to the 19th and 20th centuries. The 18th century fragment comprised a brown-glazed red earthenware cup. The later types include a thick-walled dark-glazed red earthenware jar, industrial slipware plate fragment and glazed white

earthenware plates. One of the white earthenware dinner plate sherds bore a blue transfer with a Mayfield pattern.

- 6.1.4 **Building material:** the ceramic building material comprised drain pipe fragments from land drains dating to the 20th century.
- 6.1.5 **Clay tobacco pipe:** two plain stem fragments recovered from Fields 6 and 10, probably derive from 19th and 20th century pipes.
- 6.1.6 **Industrial residue:** a single lump of vitrified clay collected from a furrow in Field 1, resembled kiln furniture possibly dating to the 19th century. It is possible the debris derives from the waste product of a lime kiln or tile production in the vicinity.
- 6.1.7 **Wood:** a single piece of a burnished tool handle that dates to the 20th century was collected from a spoil heap in Field 17.

## 6.2 CONCLUSION

- 6.2.1 The finds are of interest as a small post-medieval assemblage from rural Lancashire. However, since the majority of the finds were from unstratified deposits, their value is limited.

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## 7. DISCUSSION

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### 7.1 SYNTHESIS

- 7.1.1 The programme of work across the study area demonstrated at least two phases of activity comprising the Roman and post-medieval periods. The phases are based on the evidence recorded during the evaluations and watching brief.
- 7.1.2 **Prehistoric:** no evidence of prehistoric remains were encountered during the evaluation of Site **19**. The site lay within the field that was thought to have contained Bronze Age hut circles: however, the evaluation trenches excavated within the east area of the field yielded no archaeological features.
- 7.1.3 **Roman:** a deviation in the projected course of the Roman road that ran from Ribchester to Low Borrow Bridge (Site **09**) was encountered south of the River Hodder. It is known that the course of the road ‘twisted somewhat in its descent to the river, which was forded there’ (Ross in Margary 1973). Ross went on to say that the straight alignment of the road that ran across the fields suggested that a bridge was needed to cross the river (*ibid*). Investigations of Ross’s theory of the river crossings was made during the evaluation and watching brief. No evidence of a bridge was observed from the edge of the bank; however, a natural flat outcrop of limestone was clearly visible forming a shallow riverbed, at the point where the deviation in the road terminated. This suggests that the ford route anticipated by Mr Ross in 1914 was the most logical and practical crossing.
- 7.1.4 **Post-Medieval:** other than the putative remains of field boundaries (Site **04**, **7** in Field 3, **103** in Field 5, and **14** in Field 6) and the remains of a spoil heap probably associated with lime quarrying in Field **1**, there was little significant archaeology from this period surviving.

### 7.2 CONCLUSION

- 7.2.1 With the exception of the Roman road, the results of the three stages of work would suggest that the investigated sites had limited archaeological potential. Generally, the preservation of the targeted sites was poor. Aside from the Roman road, the archaeological resource identified by the study is only of local interest.

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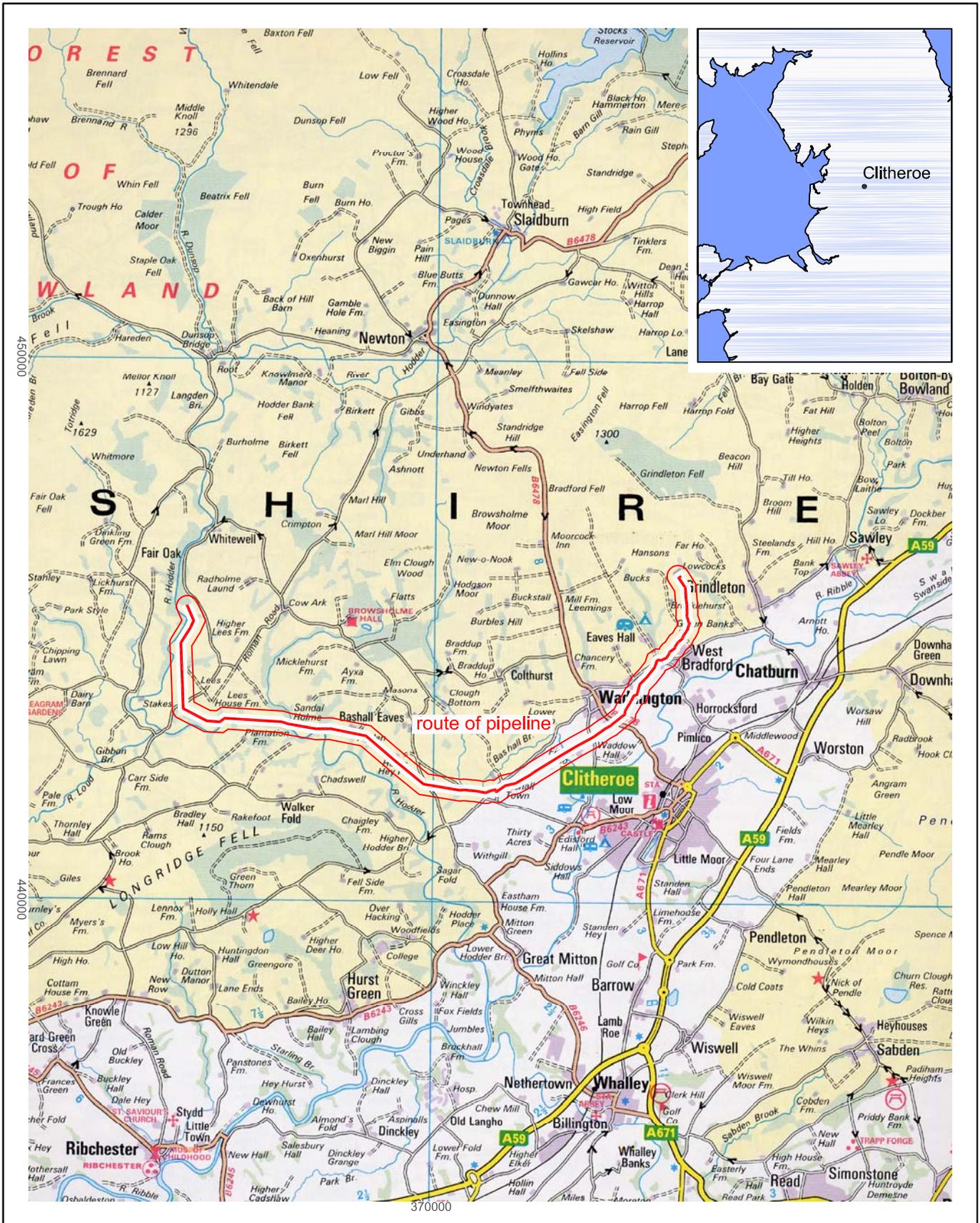
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Plate 13: Field boundary **7** in Field 3

Plate 14: Field boundary **14** in Field 6



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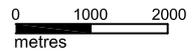
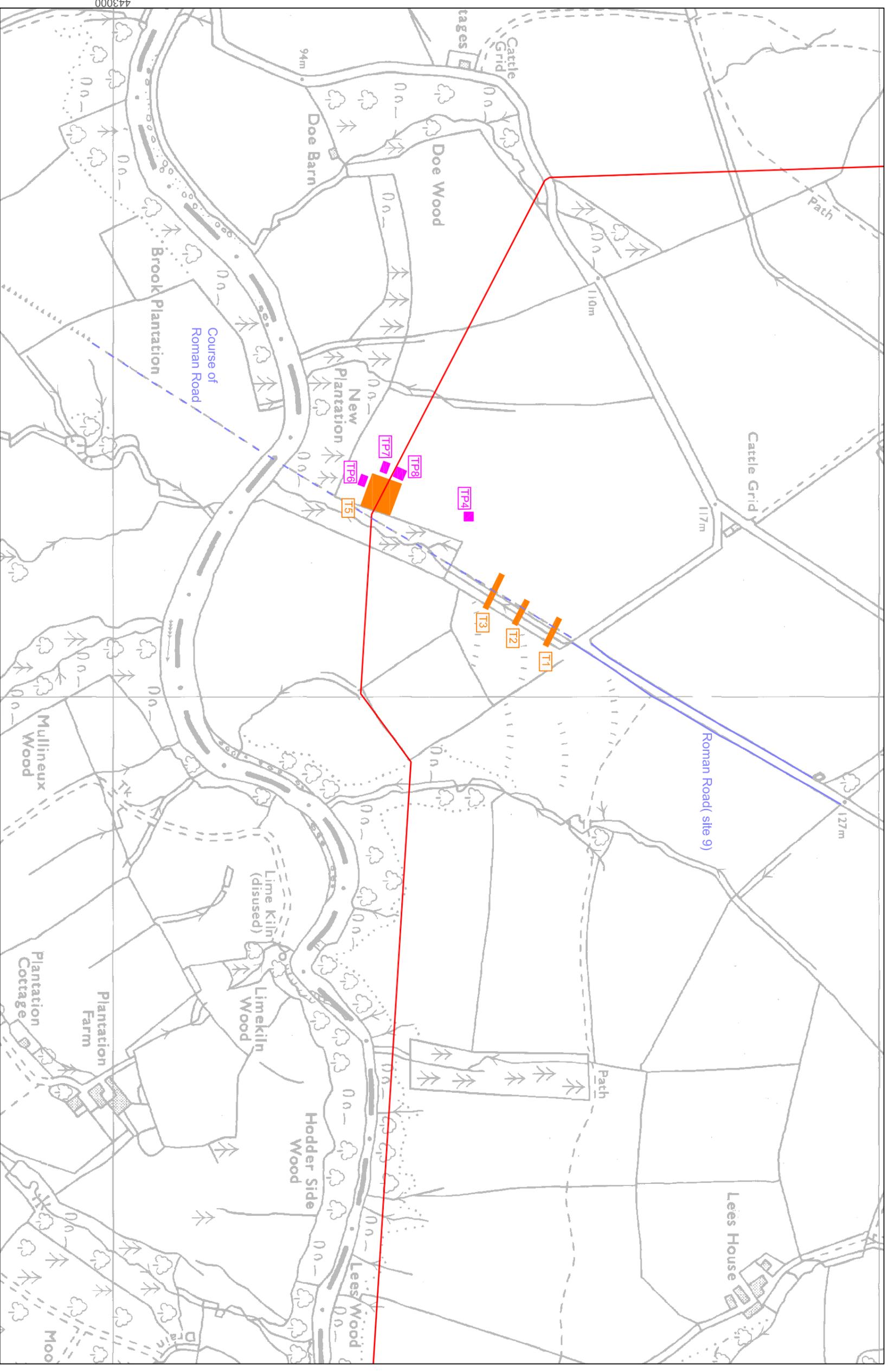


Figure 1: Location Map



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Fig 2A  
 Fig 2B  
 Fig 2C

0 100m  
 Scale 1:5,000 @ A3

Figure 2B : Evaluation trench location plan, Site 09

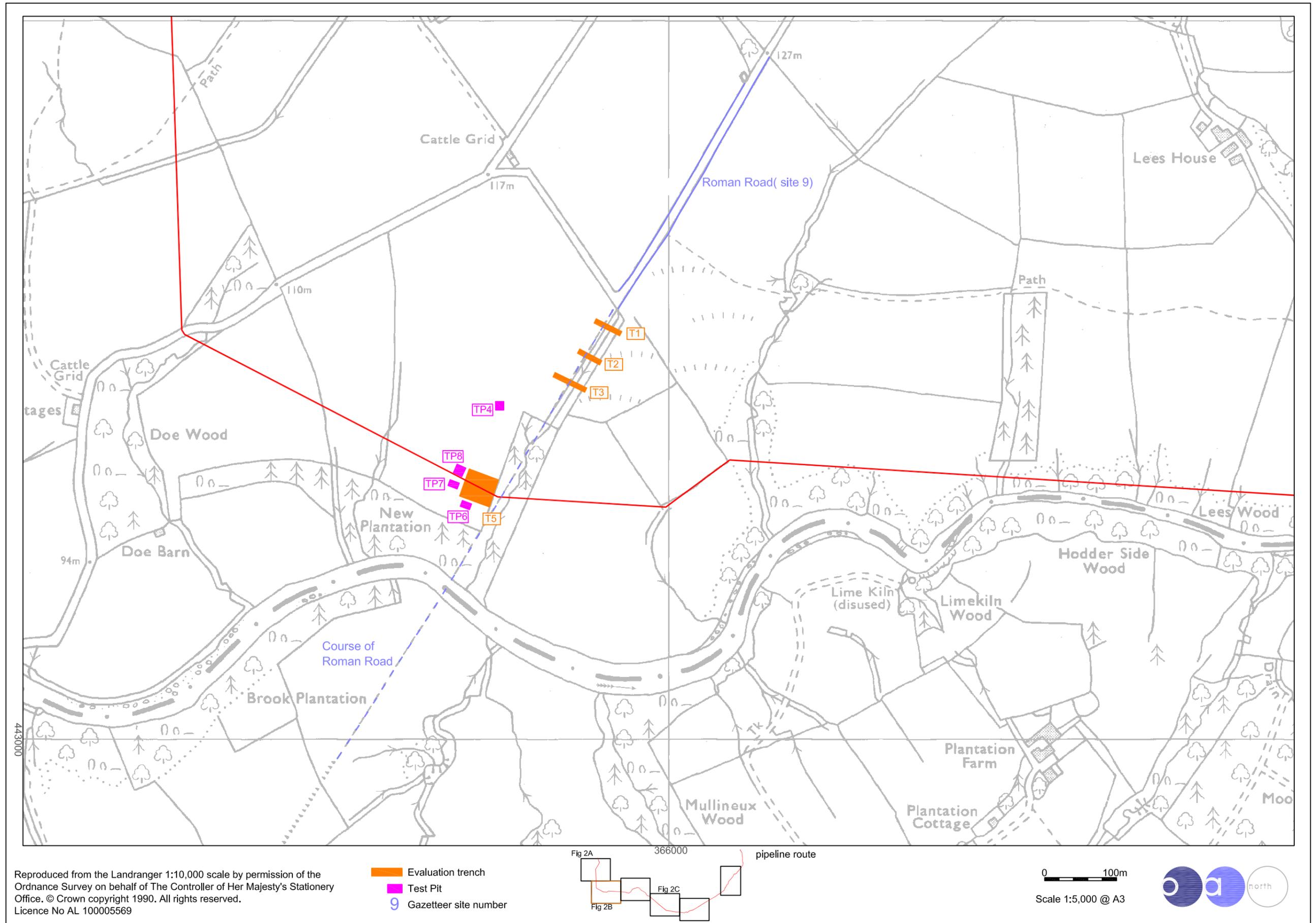
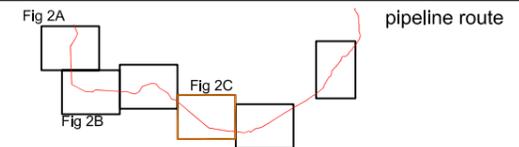


Figure 2B : Evaluation trench location plan, Site 09



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▬ Evaluation trench  
○ 19 Gazetteer site number



0 100m  
 Scale 1:5,000 @ A3



Figure 2C : Evaluation trench location plan, Site 19

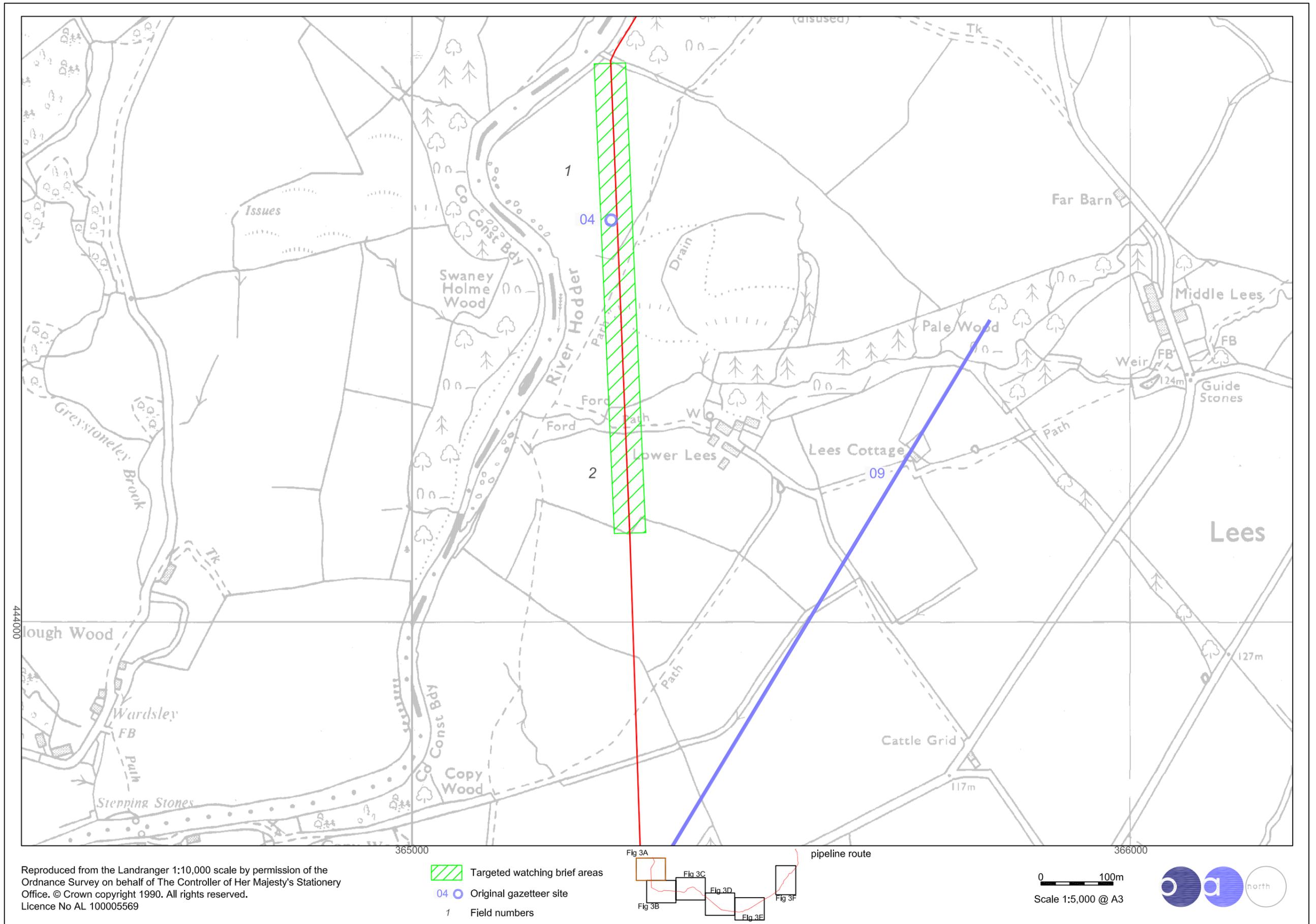
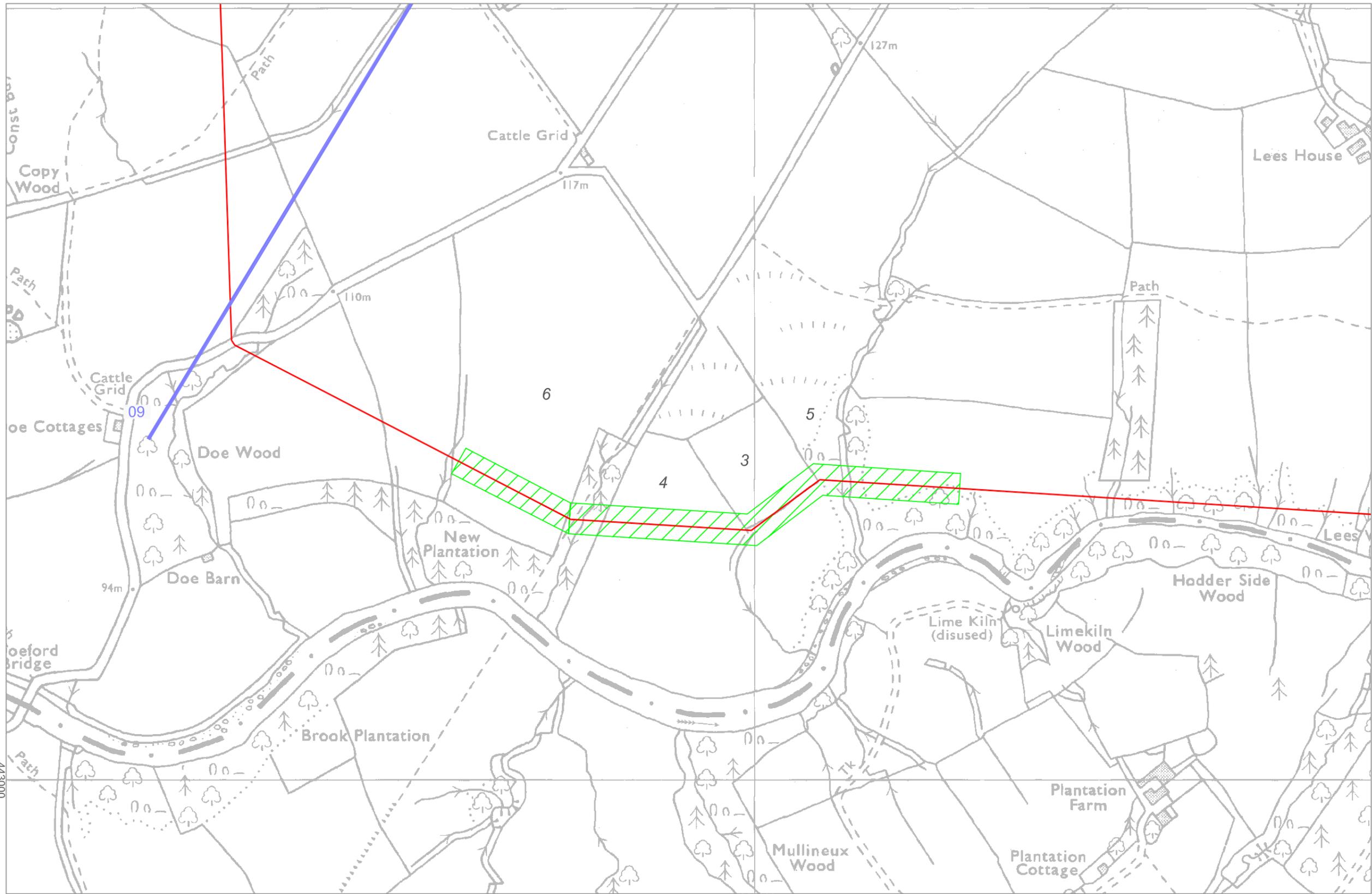
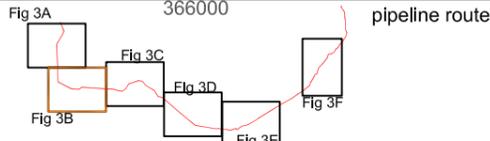


Figure 3A : Plan showing field numbers (1 and 2) and targeted watching brief areas



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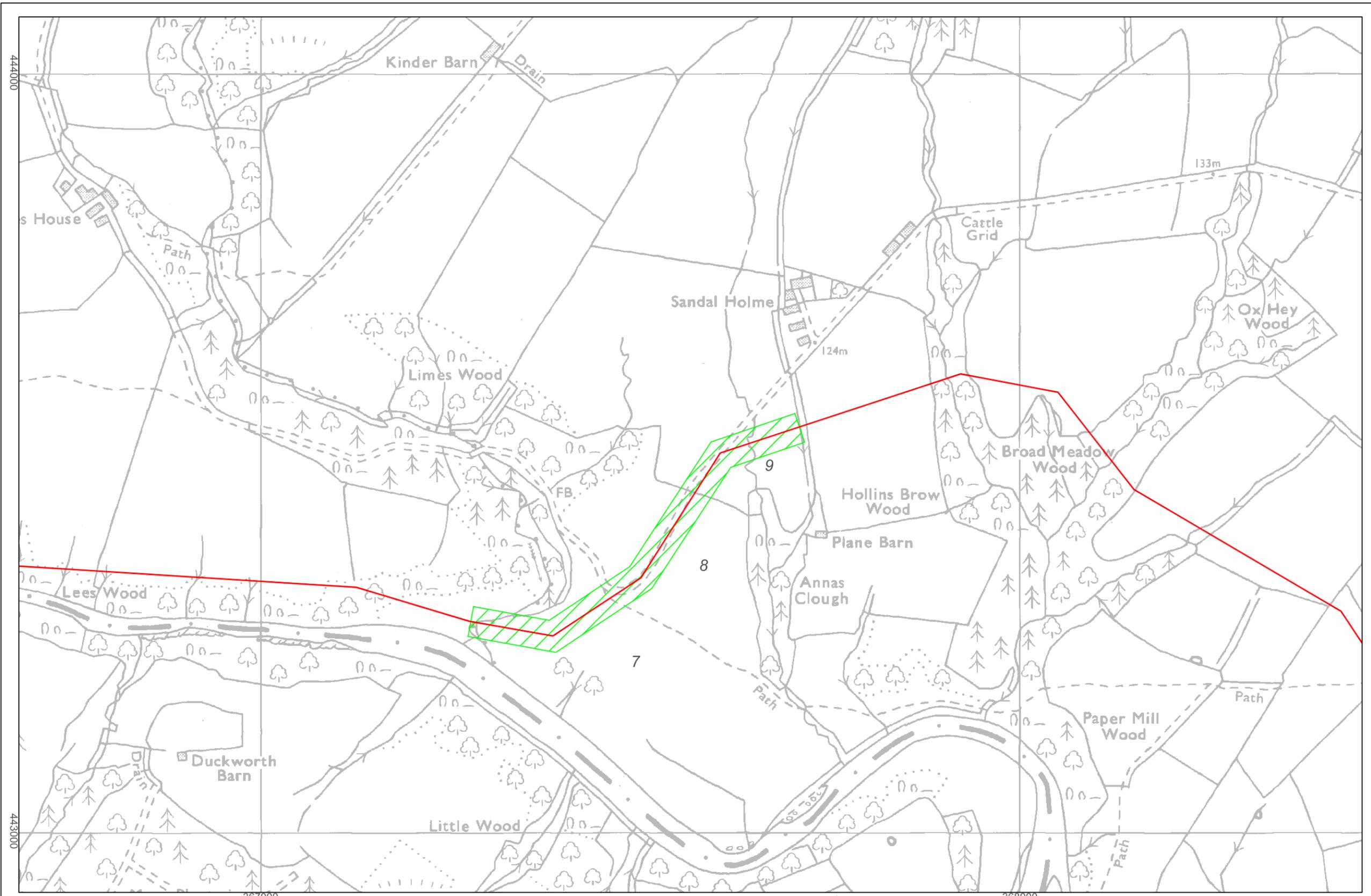
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-  04 Original gazetteer site
-  1 Field numbers



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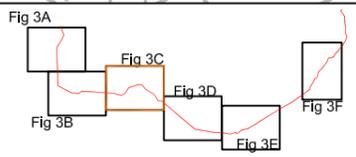


Figure 3B : Plan showing field numbers (3 to 6) and targeted watching brief areas



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-  Targeted watching brief areas
-  04 Original gazetteer site
-  1 Field numbers



pipeline route

0 100m  
Scale 1:5,000 @ A3



Figure 3C : Plan showing field numbers (7 to 9) and targeted watching brief areas

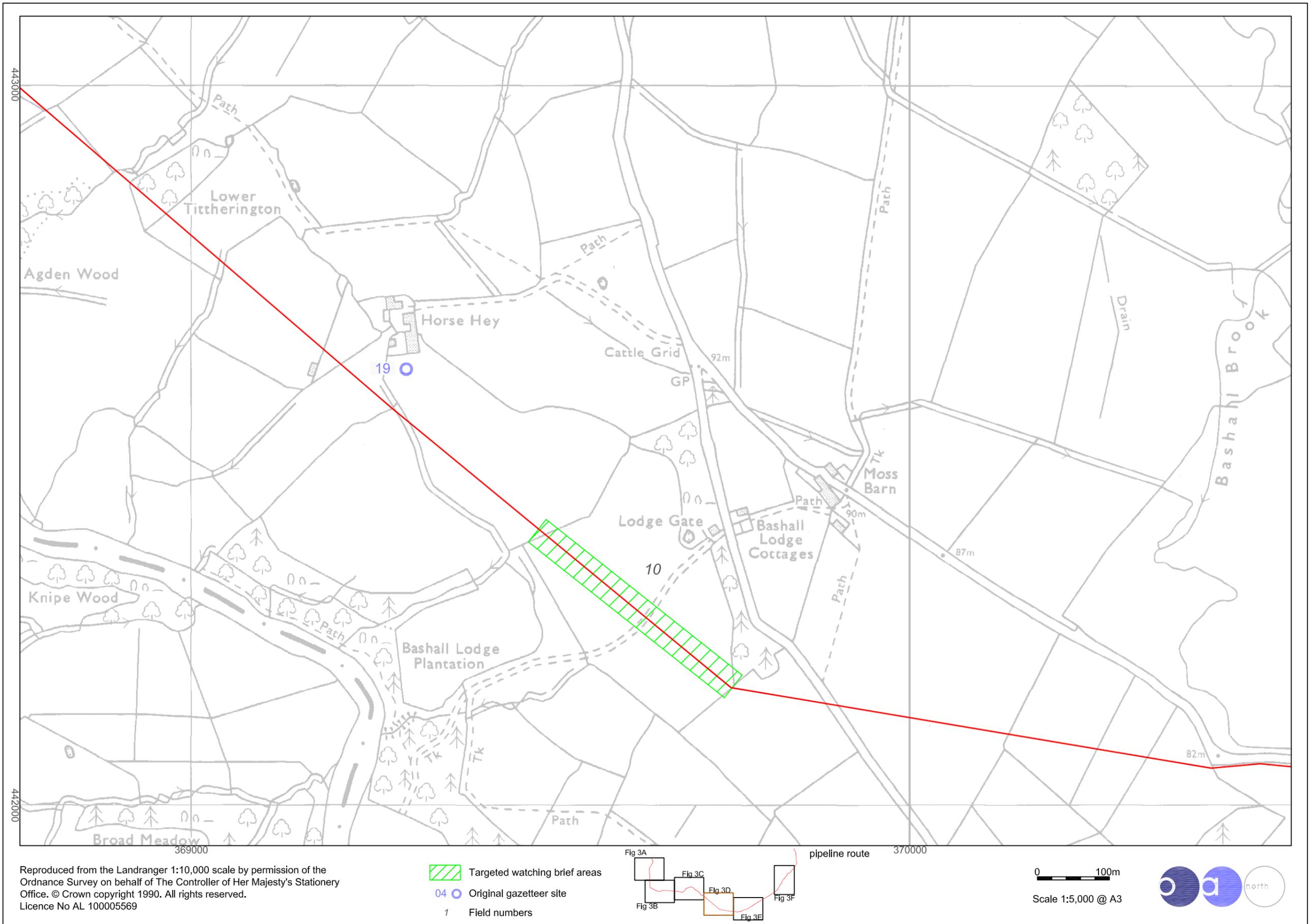


Figure 3D : Plan showing field number 10 and targeted watching brief areas

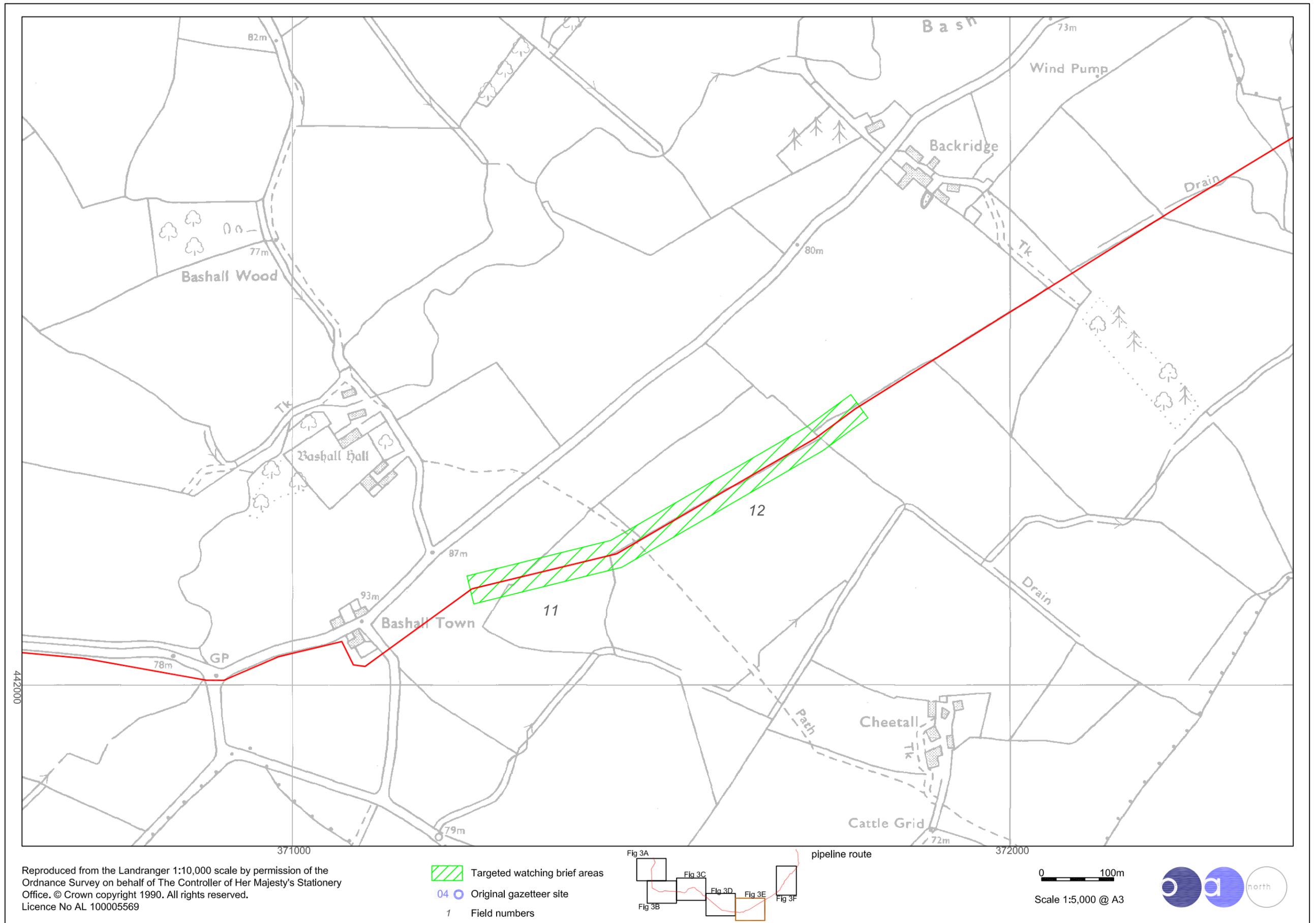


Figure 3E : Plan showing field numbers (11 and 12) and targeted watching brief areas

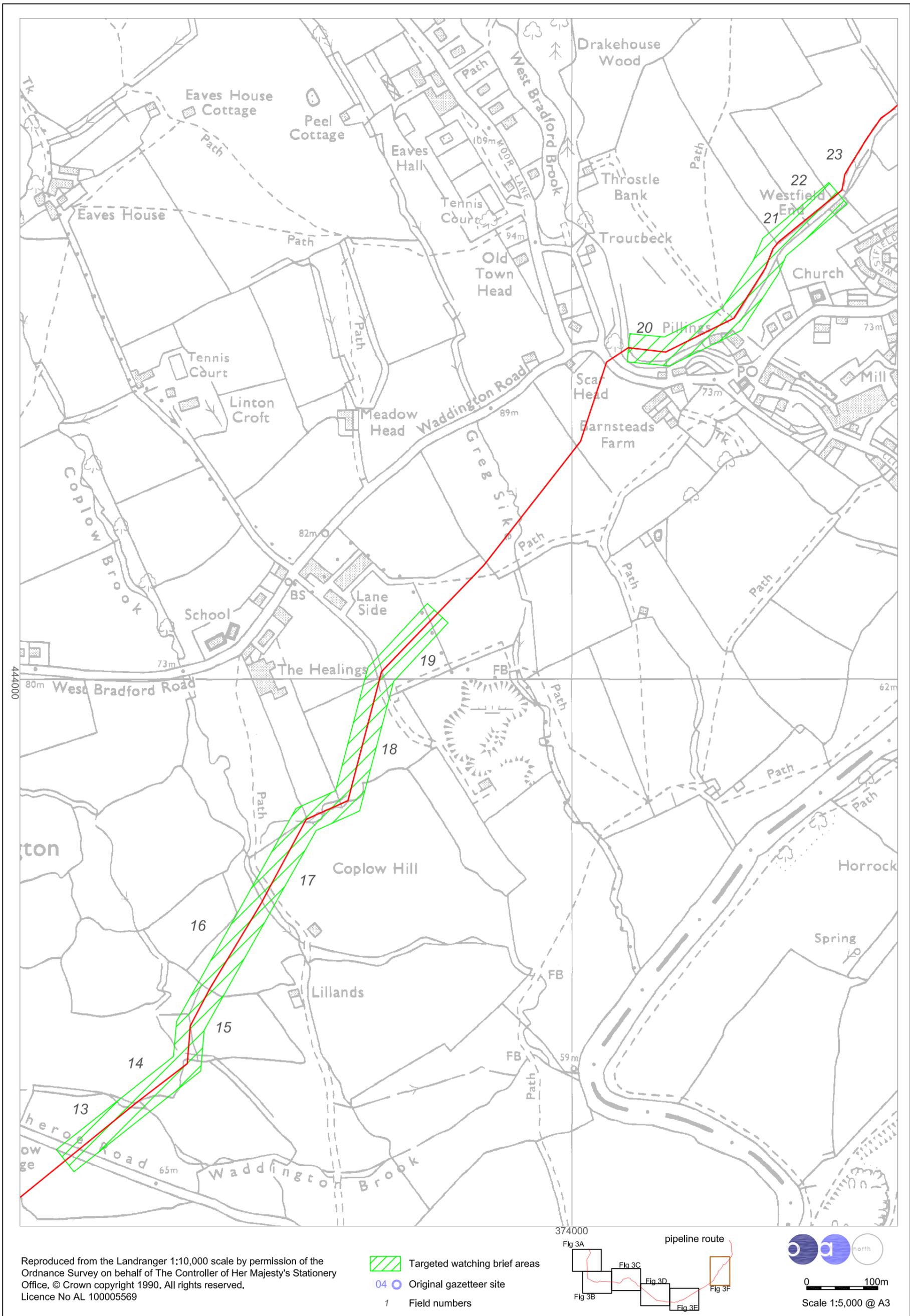


Figure 3F : Plan showing field numbers (13 to 23) and targeted watching brief areas

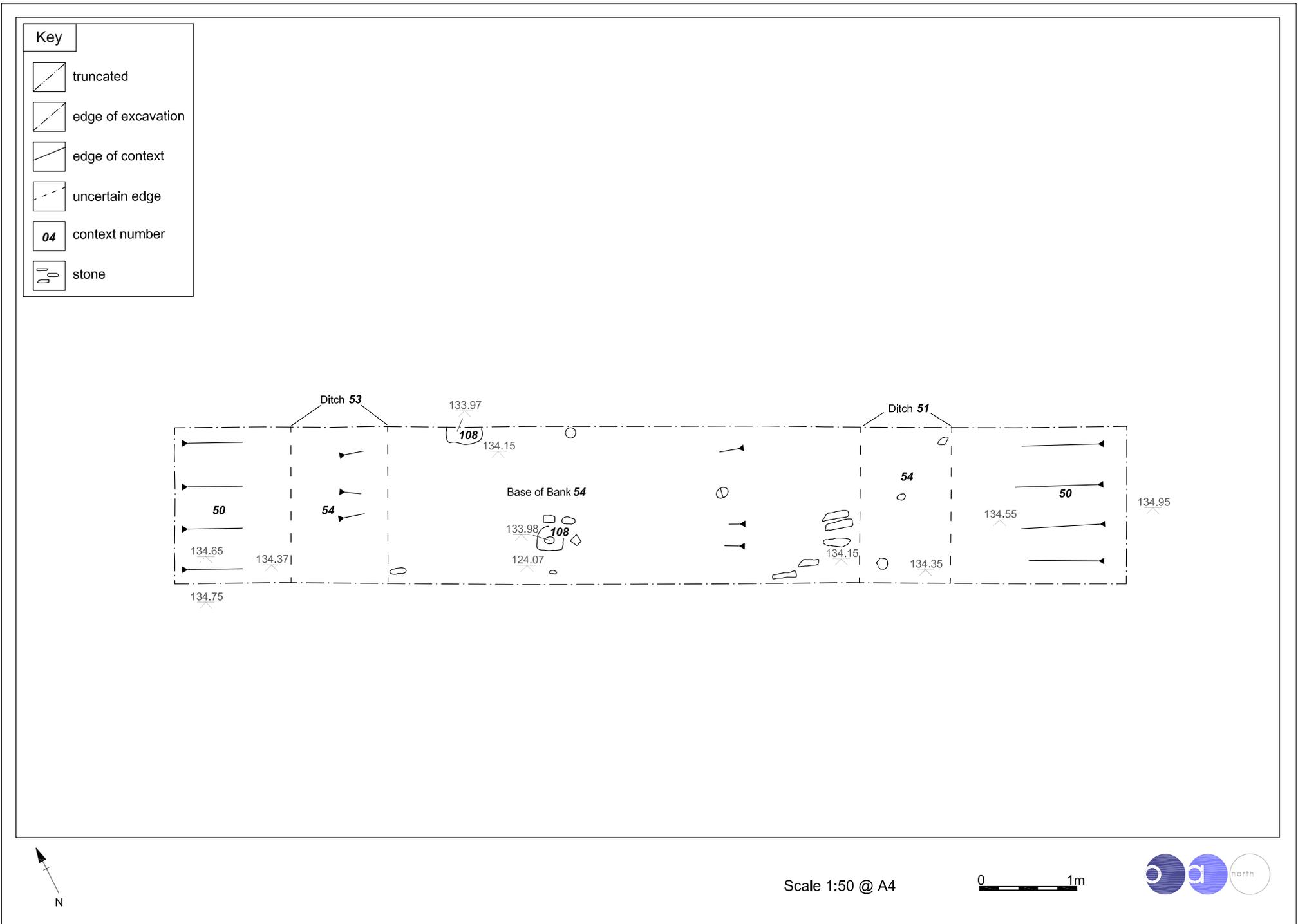
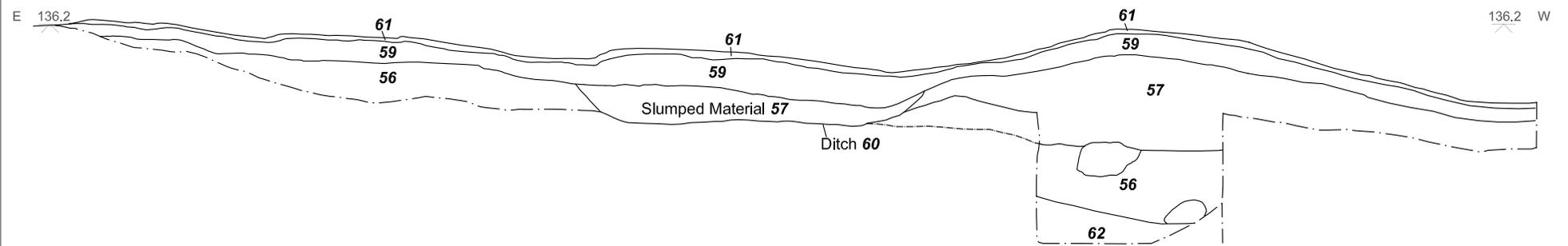


Figure 4: Plan of Trench 1, Site 04

**Key**

-  truncated
-  edge of excavation
-  edge of context
-  uncertain edge
- 04** context number
-  stone



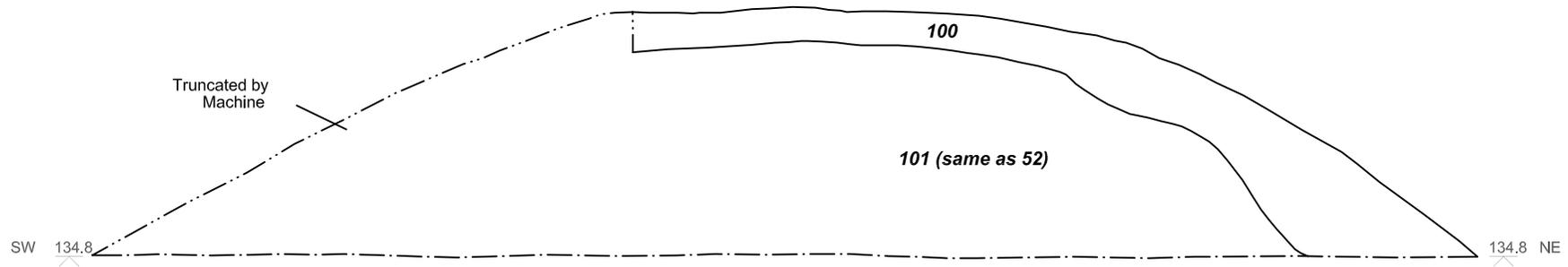
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Figure 5: South-facing section through bank in Trench 2, Site 04

**Key**

-  truncated
-  edge of excavation
-  edge of context
-  uncertain edge
-  context number
-  stone



Scale 1:20 @ A4



Figure 6: Bank profile observed north of Trench 1, Site **04**, during the watching brief

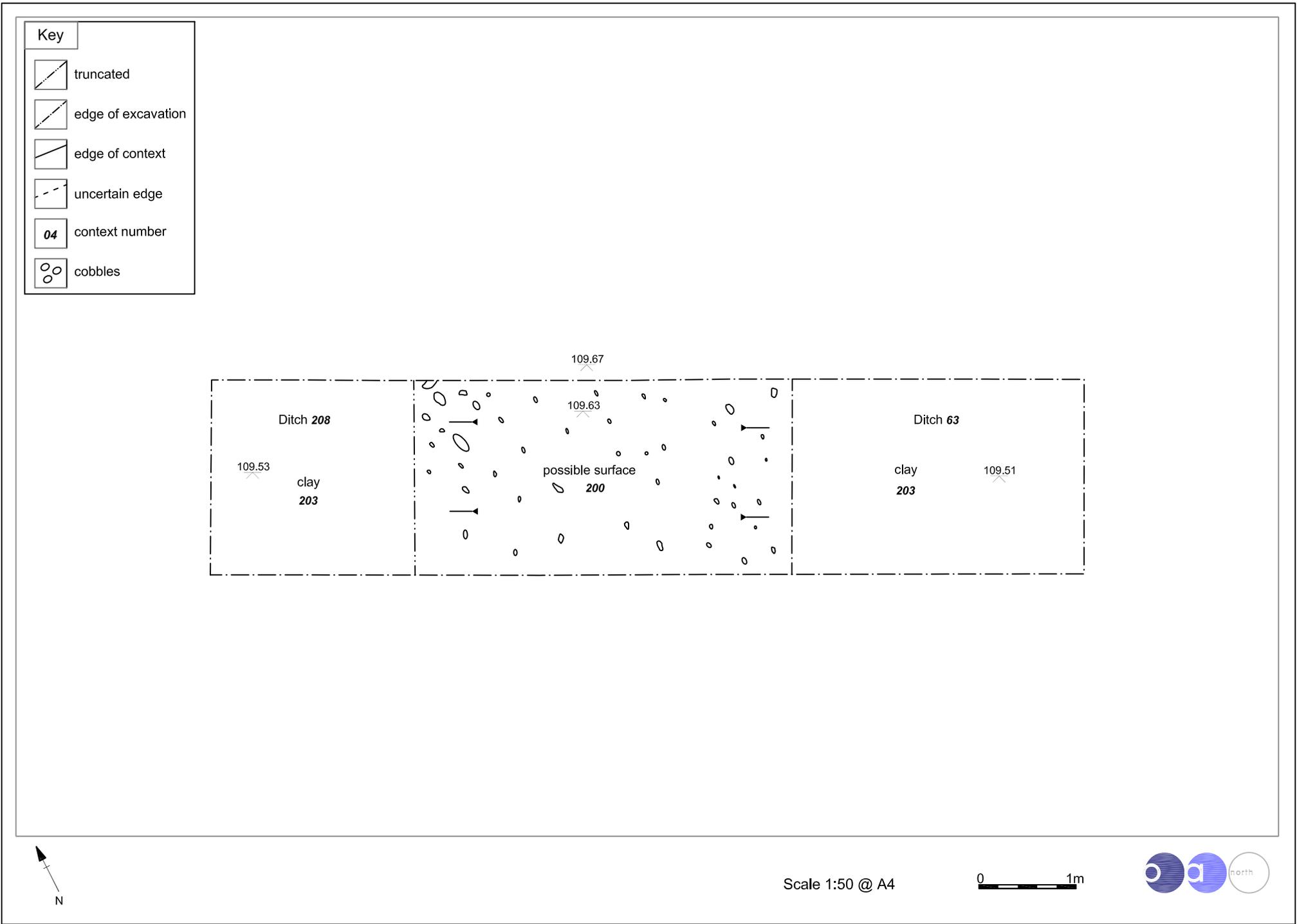


Figure 7: Plan of Trench 1, Site 09

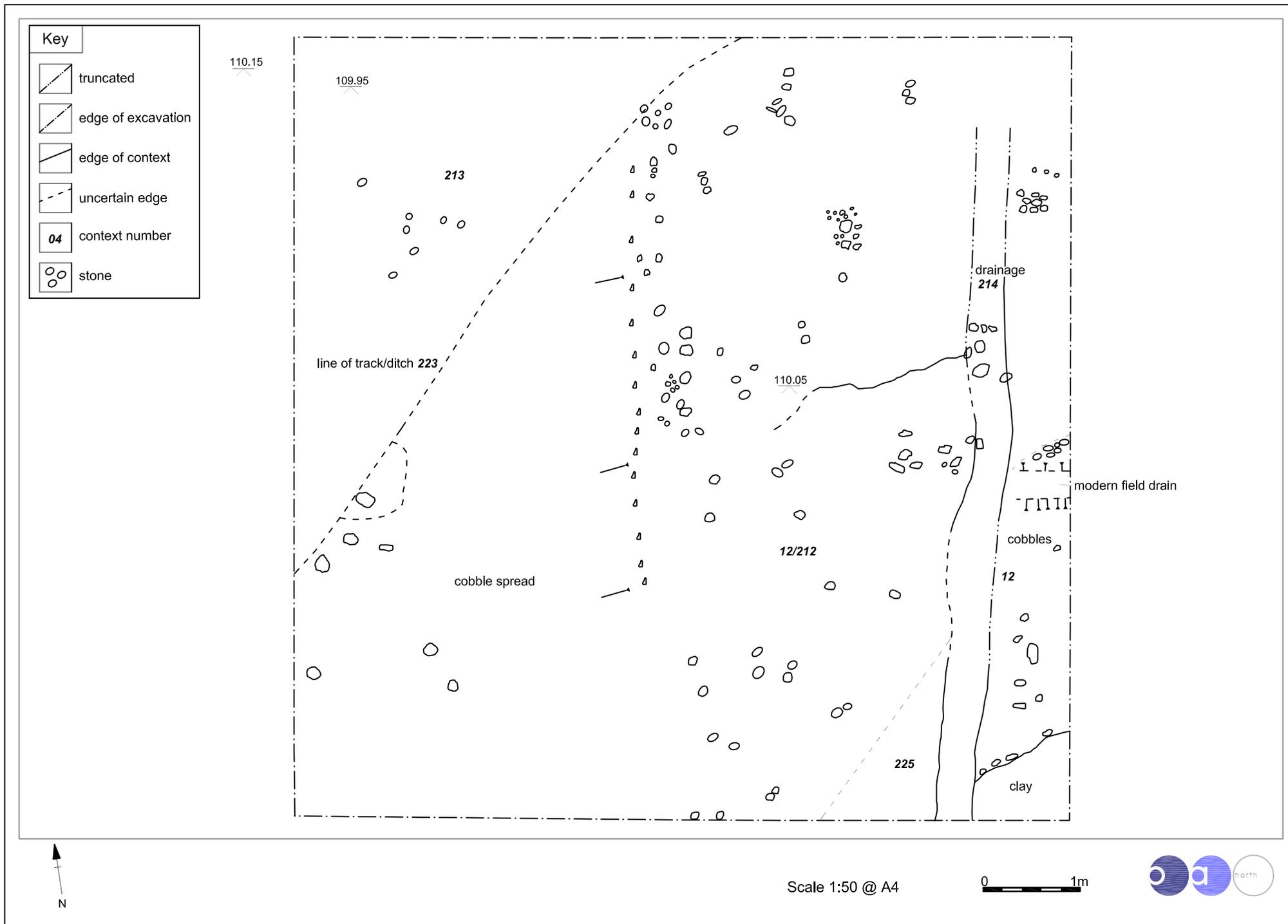


Figure 8: Plan of Trench 5, Site 09

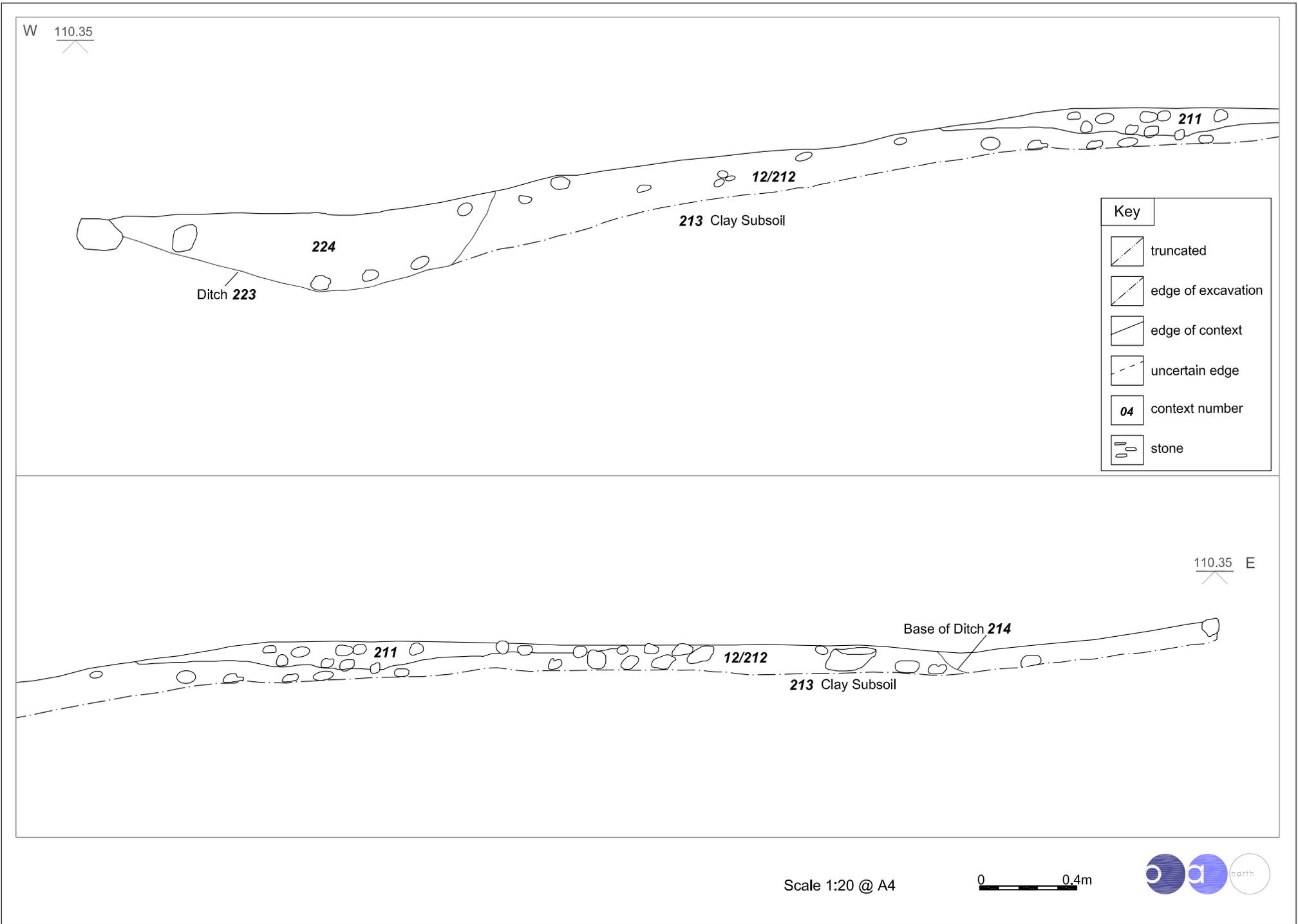


Figure 9: South-facing section through Roman Road in Trench 5, Site 09

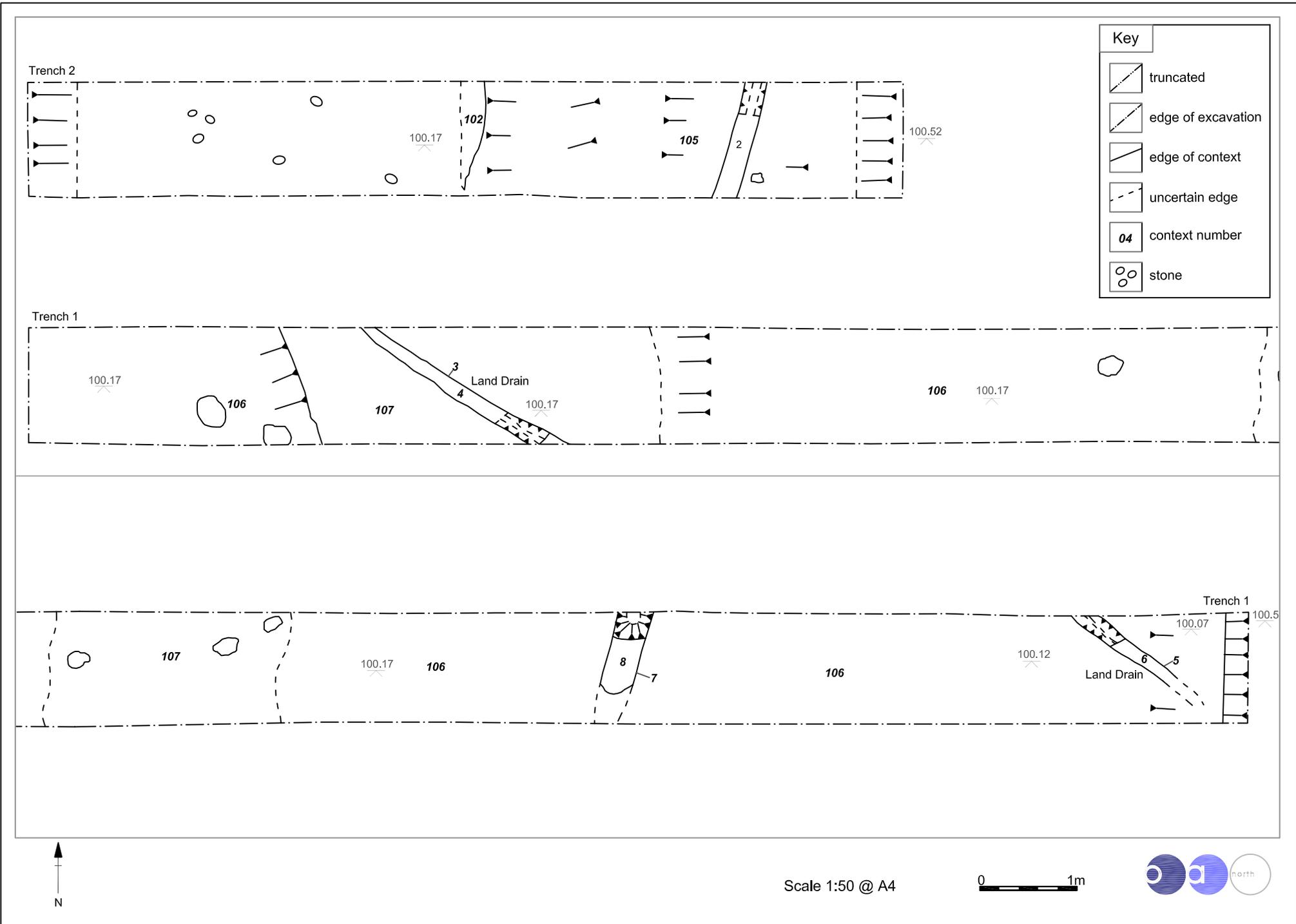


Figure 10: Plan of Trenches 1 and 2, Site 19



Plate 1: Ordnance Survey 1<sup>st</sup> Edition, 6" : 1 Mile map, showing Waddington (left) and West Bradford (right).



Plate 2: Aerial Photograph of Horse Hey Farm (centre right) and the River Hodder, showing the characteristic landscape of the Bowland Fringe and Pendle Hill



Plate 3: South-facing section through bank (Site **04**, Trench 1)



Plate 4: Site **04**, Trench 2, looking east



Plate 5: Site **09**, general shot of projected line of Roman Road looking south



Plate 6: Site **09**, Trench 3, looking east



Plate 7: Site **09**, Trench 5, looking north-east



Plate 8: Site **09**, Test Pit 7, looking north-east



Plate 9: Site **09**, Test Pit 8, looking south



Plate 10: Site **09**, example of cobble preservation (220) along the course of the Roman road, looking south



Plate 11: Site **09**, example of cobble preservation along the course of the Roman road, looking west



Plate 12: Site **09**, Roman road deviation, looking south-west along bank **216**



Plate 13: Field boundary 7 in Field 3



Plate 14: Field boundary **14** in Field 6

## APPENDIX 1: PROJECT DESIGN

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- 1.1 The construction of a new water main has been proposed by United Utilities (hereafter the client). The water main, known as the Ribble Main Link will be located within the area of the Bowland Fringe and Pendle Hill (SD 74574595). As the scheme affects a number of areas of archaeological significance recorded on the County Sites and Monuments, the Lancashire County Council's Archaeology Service (LCAS) issued a brief for a desk-based assessment and visual inspection to be undertaken.
- 1.2 The assessment (OA North 2003) highlighted a number of archaeological sites that would be affected by the pipeline, including an earthwork of unknown origin, the line of a Roman road and the site of Bronze Age hut circles. The assessment report recommended that a further programme of archaeological work be undertaken to mitigate the effects of the construction of the pipeline. The Sites and Monuments Record Officer at LCAS agreed with the recommendations.
- 1.3 The programme of further work includes a topographic survey of Site 04 (earthwork), and the evaluation of Site 04, Site 09 (Roman road), and Site 19 (hut circles). This project design details the methodology for undertaking the above work, and in addition includes the methodology for the visual inspection as previously specified in the LCAS brief.
- 1.4 OA North has considerable experience of the assessment, evaluation and excavation of sites of all periods, having undertaken a great number of small and large-scale projects during the past 20 years. Watching briefs, evaluations and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.
- 1.5 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an Institute of Field Archaeologists (IFA) registered organisation, **registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct.

## 2 OBJECTIVES

- 2.1 The following programme has been designed to provide for accurate recording of any archaeological deposits that are disturbed by the soil strip and trench cutting associated with the pipeline and to determine the importance, extent, function or state of preservation of archaeological sites potentially affected by the scheme corridor;
- 2.2 **Rapid visual inspection:** this will be undertaken to determine the extent and preservation of archaeological sites.
- 2.3 **Topographic survey:** an instrument survey will be undertaken for the purposes of producing topographic plans.

- 2.4 **Evaluation:** to undertake evaluation of at least 5% of the area of each specified site to determine the quality, extent and importance of any archaeological remains on the site.
- 2.5 **Report and Archive:** a report will be produced for the client within eight weeks of completion of the fieldwork. A site archive will be produced to English Heritage guidelines (MAP 2) and in accordance with the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990).

### 3 METHOD STATEMENT

#### 3.1 RAPID VISUAL INSPECTION

- 3.1.1 A level I walkover survey (*Appendix 1*) will be undertaken for the entire length of the pipeline corridor in order to relate the existing landscape to research findings. This will encompass a one hundred metre corridor along either side of the pipeline, walked in a systematic fashion. Archaeological features identified within the landscape will be recorded using the relevant OA North pro forma, and the features accurately positioned with the use of either a GPS, which can achieve accuracies of  $\pm 0.1\text{m}$  with respect to the OS national grid, or by manual survey techniques which will tie in new features to features already shown on the relevant OS map.

#### 3.2 TOPOGRAPHIC SURVEY

- 3.2.1 The topographic survey of Site 04 will comprise an instrument survey, which will utilise a total station (TST) with portable logger, the data from which will be downloaded into a CAD package (AutoCAD Release 14).
- 3.2.2 The plans produced will show outline detail and hachures only. The final drawings will be produced at a relevant scale (1:1000 to 1:2500). It is envisaged that where possible, the plans will be dropped onto Ordnance Survey maps.

#### 3.3 EVALUATION

- 3.3.1 Following initial topsoil removal by machine a minimum 5% sample of each of the specified sites (Sites 04, 09 and 19) will be subject to trial trenching (approximately 2 x 1.5m x 10m trenches for site 04, 1 x 1.5m x 10m trench for site 09, and approximately 3 x 1.5m x 10m trenches for site 19). The topsoil will be removed by machine (fitted with a toothless ditching bucket) under archaeological supervision to the surface of the first significant archaeological deposit. This deposit will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and inspected for archaeological features. Thereafter all excavation will proceed by hand in a stratigraphic manner.

- 3.3.2 Any investigation of intact archaeological deposits will be exclusively manual. Selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal. It is hoped that in terms of the vertical stratigraphy, maximum information retrieval will be achieved through the examination of sections of cut features. All excavation, whether by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features, which appear worthy of preservation *in situ*.
- 3.3.3 All information identified in the course of the site works will be recorded stratigraphically, using a system, adapted from that used by Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times.
- 3.3.4 Results of all field investigations will be recorded on *pro forma* context sheets. The site archive will include both a photographic record and accurate large scale plans and sections at an appropriate scale (1:50, 1:20 and 1:10). All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.
- 3.3.5 The deposition and disposal of any artefacts recovered in the evaluation will be agreed with the legal owner and an appropriate recipient museum prior to the work taking place.
- 3.3.6 Where environmental deposits are encountered, an appropriate sampling strategy will be agreed with LCAS. (Environmental sampling would be subject to a variation to this project design).
- 3.3.7 **Health and Safety:** OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1997). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.
- 3.3.8 OA North has professional indemnity to a value of £2,000,000, employer's liability cover to a value of £10,000,000 and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.
- 3.4 **ARCHIVE/REPORT**
- 3.4.1 **Archive:** the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English

Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct. OA North conforms to best practice in the preparation of project archives for long-term storage. This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the Lancashire SMR (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects (paper, magnetic and plastic media) with the appropriate County Record Office.

- 3.4.2 **Report:** one bound and one unbound copy of a written synthetic report will be submitted to the client, and a further two copies (one digital on CD-ROM) submitted to the Lancashire SMR within eight weeks of completion of fieldwork. The report will include a copy of this project design, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and will include a full index of archaeological features identified in the course of the project, together with appropriate illustrations, including detailed plans and sections indicating the locations of archaeological features. The report will also include a complete bibliography of sources from which data has been derived.
- 3.4.3 This report will identify areas of defined archaeology. An assessment and statement of the actual and potential archaeological significance of the identified archaeology within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, section drawings, and plans. This report will be in the same basic format as this project design.
- 3.4.4 **Confidentiality:** all internal reports to the client are designed as documents for the specific use of the Client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

## 4 PROJECT MONITORING

- 4.1 Monitoring of this project will be undertaken through the auspices of the LCAS Archaeologist, who will be informed of the start and end dates of the work.

## 5 WORK TIMETABLE

- 5.1 The rapid visual inspection is expected to take in the region of six to ten days to complete and the topographic survey two days. The trial trenching for Site 04 will take approximately three days, Site 09 two days and Site 19 five days.
- 5.2 The final client report will follow within eight weeks of completion of all of the fieldwork elements.

## **6 STAFFING**

- 6.1 The project will be under the direct management of **Alison Plummer BSc (Hons)** (OA North senior project manager) to whom all correspondence should be addressed.
- 6.2 Present timetabling constraints preclude detailing at this stage exactly who will be undertaking the fieldwork.

## APPENDIX 2: CONTEXT LIST

| <b>Context</b> | <b>Field</b> | <b>Site</b> | <b>Trench</b>  | <b>Description</b>                                  |
|----------------|--------------|-------------|----------------|---|
| <b>1</b>       |              | <b>19</b>   | 2              | Linear feature                                      |
| <b>2</b>       |              | <b>19</b>   | 2              | Fill of <b>1</b>                                    |
| <b>3</b>       |              | <b>19</b>   | 1              | Linear feature (east)                               |
| <b>4</b>       |              | <b>19</b>   | 1              | Fill of <b>3</b>                                    |
| <b>5</b>       |              | <b>19</b>   | 1              | Linear feature (west)                               |
| <b>6</b>       |              | <b>19</b>   | 1              | Fill of <b>5</b>                                    |
| <b>7</b>       | 3/4          |             | Watching Brief | Field boundary bank                                 |
| <b>8</b>       | 3            |             | Watching Brief | Field drain   |
| <b>9</b>       | 4            |             | Watching Brief | Field drains (17)                                   |
| <b>10</b>      | 5            |             | Watching Brief | Field drain   |
| <b>11</b>      | 5            |             | Watching Brief | Field drain   |
| <b>12</b>      | 6            | <b>09</b>   | 5              | Cobble surface (same as <b>212</b> )                |
| <b>13</b>      | 6            | <b>09</b>   | Watching Brief | Hollows at south edge of track                      |
| <b>14</b>      | 6            |             | Watching Brief | Boundary ditch                                      |
| <b>15</b>      | 6            | <b>09</b>   | Watching Brief | Cobble surface within <b>14</b>                     |
| <b>16</b>      |              | <b>19</b>   | 1              | Linear feature                                      |
| <b>17</b>      |              | <b>19</b>   | 1              | Upper fill of <b>16</b>                             |
| <b>18</b>      |              | <b>19</b>   | 1              | Lower fill of <b>16</b>                             |
| <b>19</b>      |              | <b>19</b>   | 2              | Mixed yellow/grey clay subsoil                      |
| <b>20</b>      |              | <b>19</b>   | 2              | Natural yellow clay                                 |
| <b>21</b>      |              | <b>19</b>   | 2              | Grey clay interface between <b>19</b> and <b>20</b> |

| <b>Context</b> | <b>Field</b> | <b>Site</b> | <b>Trench</b>  | <b>Description</b>  |
|----------------|--------------|-------------|----------------|---|
| <b>22</b>      |              | <b>19</b>   | 1              | Natural yellow clay   |
| <b>23</b>      |              | <b>19</b>   | 1              | Natural red clay  |
| <b>24</b>      |              | <b>19</b>   | 1              | Grey clay interface between <b>22</b> and <b>23</b>               |
| <b>25</b>      |              | <b>19</b>   | 1              | Topsoil   |
| <b>50</b>      |              | <b>04</b>   | 1              | Grey clay subsoil interface between <b>52</b> and <b>54</b>       |
| <b>51</b>      |              | <b>04</b>   | 1              | Ditch associated with bank <b>52</b> (west)                       |
| <b>52</b>      |              | <b>04</b>   | 1              | Earthen bank made up of red/brown clay-silt (same as <b>101</b> ) |
| <b>53</b>      |              | <b>04</b>   | 1              | Ditch associated with bank <b>52</b> (east)                       |
| <b>54</b>      |              | <b>04</b>   | 1              | Natural sand at the base of bank <b>52</b>                        |
| <b>55</b>      |              | <b>04</b>   | 1              | Topsoil   |
| <b>56</b>      |              | <b>04</b>   | 2              | Natural sandy-clay below bank <b>57</b>                           |
| <b>57</b>      |              | <b>04</b>   | 2              | Earthen bank made up of red/brown clay-silt                       |
| <b>58</b>      |              | <b>04</b>   | 2              | Stoney red clay horizon below <b>57</b> and above <b>56</b>       |
| <b>59</b>      |              | <b>04</b>   | 2              | Topsoil   |
| <b>60</b>      |              | <b>04</b>   | 2              | Ditch   |
| <b>61</b>      |              | <b>04</b>   | 2              | Turf overlying <b>59</b>  |
| <b>62</b>      |              | <b>04</b>   | 2              | Silty-sand below <b>56</b>  |
| <b>63</b>      |              | <b>09</b>   | 1              | Drainage ditch  |
| <b>100</b>     | <b>1</b>     | <b>04</b>   |                | Topsoil above bank  |
| <b>101</b>     | <b>1</b>     | <b>04</b>   |                | Subsoil of bank (same as <b>52</b> )                              |
| <b>102</b>     |              | <b>19</b>   | 2              | Grey clay subsoil   |
| <b>103</b>     | <b>2</b>     |             | Watching Brief | Lees Wood field boundary  |
| <b>104</b>     |              |             |                | Not Used  |
| <b>105</b>     |              | <b>19</b>   | 2              | Natural yellow clay   |
| <b>106</b>     |              | <b>19</b>   | 1              | Natural yellow clay   |

| <b>Context</b> | <b>Field</b> | <b>Site</b> | <b>Trench</b>  | <b>Description</b>                               |
|----------------|--------------|-------------|----------------|--|
| <i>107</i>     |              | <b>19</b>   | 1              | Grey clay subsoil                                |
| <i>108</i>     |              | <b>04</b>   | 1              | Circular patches of tree remains                 |
| <i>200</i>     |              | <b>09</b>   | 1              | Cobble surface within topsoil                    |
| <i>201</i>     |              | <b>09</b>   | 1              | Topsoil  |
| <i>202</i>     |              | <b>09</b>   | 1              | Yellowish-brown silty-clay above <b>203</b>      |
| <i>203</i>     |              | <b>09</b>   | 1              | Yellowish red clay horizon below <b>200</b>      |
| <i>204</i>     |              | <b>09</b>   | 2              | Topsoil  |
| <i>205</i>     |              | <b>09</b>   | 2              | Orange/brown clay subsoil                        |
| <i>206</i>     |              | <b>09</b>   | 2              | Drain  |
| <i>207</i>     |              | <b>09</b>   | 2              | Drain  |
| <i>208</i>     |              | <b>09</b>   | 1              | Ditch  |
| <i>209</i>     |              | <b>09</b>   | 3              | Stone surface                                    |
| <i>210</i>     |              | <b>09</b>   | 3              | Topsoil  |
| <i>211</i>     |              | <b>09</b>   | 5              | Topsoil  |
| <i>212</i>     |              | <b>09</b>   | 5              | Cobble surface (same as <i>12</i> )              |
| <i>213</i>     |              | <b>09</b>   | 5              | Clay subsoil below <b>212</b>                    |
| <i>214</i>     |              | <b>09</b>   | 5              | Possible ditch along the east edge of <b>212</b> |
| <i>215</i>     |              | <b>09</b>   | 8              | Drainage ditch                                   |
| <i>216</i>     | 6            | <b>09</b>   | Watching Brief | Raised bank across the southern end of the field |
| <i>217</i>     |              | <b>09</b>   | 7              | Cobble surface                                   |
| <i>218</i>     | 6            | <b>09</b>   | Watching Brief | Bedding layer below <b>220</b>                   |
| <i>219</i>     |              | <b>09</b>   | 8              | Topsoil  |
| <i>220</i>     | 6            | <b>09</b>   | Watching Brief | Cambered sloping cobble road surface             |
| <i>221</i>     | 6            | <b>09</b>   | Watching Brief | Ditch  |
| <i>222</i>     |              | <b>09</b>   | 3              | Clean natural clay below <b>209</b>              |

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|     |  |    |   |                                       |
|-----|--|----|---|---------------------------------------|
| 223 |  | 09 | 5 | Drainage ditch (west)                 |
| 224 |  | 09 | 5 | Fill of 223                           |
| 225 |  | 09 | 5 | Possible eastern ditch for Roman road |

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**APPENDIX 3: FINDS SUMMARY**


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| <b>Field</b> | <b>Context</b>      | <b>Object number</b> | <b>No.</b> | <b>Material</b>    | <b>Description</b>  | <b>Date</b>         |
|--------------|---------------------|----------------------|------------|--------------------|---|---------------------|
| <b>1</b>     | <i>108</i>          | 1001                 | 1          | Stone              | Crinoidal limestone lump  | Not closely datable |
| <b>10</b>    | <i>Unstratified</i> | 1002                 | 1          | Pottery            | Glazed white earthenware  | 19th /20th century  |
| <b>4</b>     | <i>Unstratified</i> | 1003                 | 21         | Ceramic            | Drain fragments   | 20th century        |
| <b>10</b>    | <i>2</i>            | 1004                 | 1          | Clay               | Tobacco pipe stem   | 19th century        |
| <b>2</b>     | <i>Unstratified</i> | 1005                 | 1          | Industrial residue | Kiln furniture  | Not closely datable |
|              | <i>Unstratified</i> | 1006                 | 17         | Ceramic            | Drain fragments   | 20th century        |
| <b>17</b>    | <i>Unstratified</i> | 1007                 | 1          | Wood               | Tool handle fragment  | Not closely datable |
| <b>17</b>    | <i>Unstratified</i> | 1008                 | 3          | Ceramic            | Brown glazed red earthenware (fineware), glazed white earthenware, blue transfer Mayfield pattern | 18th/19th century   |
| <b>20</b>    | <i>Unstratified</i> | 1009                 | 4          | Ceramic            | Industrial slipware, glazed red earthenware (coarseware)  | 19th century        |
| <b>20</b>    | <i>Unstratified</i> | 1010                 | 1          | Clay               | Tobacco pipe stem   | 18th/19th century   |