NAA

ARCHAEOLOGICAL SURVEY, TRIAL TRENCHING AND WATCHING BRIEF REPORT

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CAM HIGH ROAD,

UPPER WENSLEYDALE,

YORKSHIRE DALES NATIONAL PARK

prepared for

The Cam Forest Trust

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CAM HIGH ROAD, UPPER WENSLEYDALE,
YORKSHIRE DALES NATIONAL PARK

ARCHAEOLOGICAL SURVEY, TRIAL TRENCHING AND WATCHING BRIEF

Summary

Northern Archaeological Associates were commissioned by Cam Forest Trust to undertake an archaeological evaluation, topographical survey and watching brief in advance of, and during, a programme of resurfacing works on Cam High Road, Upper Wensleydale, Yorkshire Dales National Park (NGR 378300 480300 to 381040 481325). This work was required (by the Yorkshire Dales National Park Authority YDNPA) as a condition of planning consent for the extraction of timber via the road.

Cam High Road comprises a mid-18th century turnpike, which was in use as a significant highway for approximately 50 years, before becoming redundant as the road was realigned up a neighbouring valley. The road is considered of regional importance, and its associated culverts, milestones, boundary markers and fords are considered of local importance. The post-medieval road follows the alignment of an earlier Roman road, leading to the fort of Virosidum *at Bainbridge, which is also considered of regional importance. Associated ditches and earlier road alignments appear to survive, though the agger has not been definitively proved to exist in the limited archaeological work undertaken in the road, which also indicates many of the supposed Roman ditches have been re-cut in modern times. An earlier desk-based assessment undertaken by NAA identified a total of 15 heritage assets within a 500m corridor centred on the road, all of which are undesignated heritage assets, and mostly comprise sites of post-medieval date of local importance.*

As a result of the potential impact of the resurfacing works upon undesignated assets of Roman and post-medieval date, a topographic survey and trial trench evaluation of the previously unassessed Dales Way section was requested, in accordance with NPPF Paragraph 128. The topographic survey targeted three areas of the track as a representative sample of the landscape as a whole, whilst the evaluation, comprising three trenches, investigated the potential sub-surface survival of deposits related to the Roman road and turnpike.

The topographic survey confirmed the complexity of the origins of the trackway, but seemed to indicate that most of the surviving remains were now of modern date, relating to the resurfacing of the route and the recutting of the ditches which had occurred over the last ten or more years. The results of the evaluation were also largely negative, though a section of earlier road, potentially of Roman date and comprising a metalled surface with associated ditches, was uncovered in Trench 2, off the line of the proposed new trackway. The watching brief did not uncover any new features, though a monitored section through the road did confirm that its base had been cut by machine.

The survey and evaluation demonstrated that the resurfacing works did not have an impact on any designated assets or undesignated assets within the development boundary, or in the immediate vicinity, a fact confirmed

by the results of the watching brief. The evaluation confirmed the possibility of survival of earlier road surfaces along the line of the modern route, but these are unlikely to be impacted upon by the present works.

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Project No: 1119

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ARCHAEOLOGICAL SURVEY, TRIAL TRENCHING AND WATCHING BRIEF

1.0 INTRODUCTION

1.1 Northern Archaeological Associates (NAA) were commissioned by Cam Forest Trust to undertake an archaeological evaluation and topographical survey in advance of, and a watching brief during, a programme of resurfacing works on Cam High Road, Upper Wensleydale, Yorkshire Dales National Park (NGR 378300 480300 to 381040 481325; Figure 1). This work was undertaken as a condition of planning consent for the extraction of timber via the road by the Yorkshire Dales National Park Authority (YDNPA).

1.2 The archaeological evaluation and topographic survey were undertaken ahead of construction to determine the presence or absence of any archaeological remains within the development boundary and to ascertain the extent, condition, character and date of any such remains, in accordance with the National Planning Policy Framework, Policy 8. The watching brief was maintained during all construction works that had the potential to impact upon heritage assets identified during the desk-based assessment (NAA 2013).

1.3 During investigations the remains of a road surface and associated roadside ditches were identified off the line of, and to the south of, the existing track. This road may have represented the remains of an earlier Roman road, although no artefactual material was identified to support this. The remainder of the exposed remains represented post-medieval features including the existing track, which probably represented the heavily worn and repaired remains of the turnpike road, and associated drainage ditches and a crude revetment.

1.4 The work followed a detailed written scheme of investigation approved by the Yorkshire Dales National Park Authority prior to work commencing, and followed all relevant standards and guidance published by English Heritage (2006, 2008) and the Institute for Archaeologists (2008). All phases of archaeological work were undertaken by Northern Archaeological Associates Ltd (NAA) for The Cam Forest Trust during April and May 2013. The following report details the results of all aspects of the archaeological work.

Plate 1: Cam High Road, facing south-west, from Pennine Way/Dales Way junction

Project Aims and Objectives

1.5 The principal aim of the project was to provide further evidence on the proposed survival (or otherwise) of archaeological remains within the corridor of the proposed access route, and to mitigate the loss of heritage asset significance which would be caused by the development, in accordance with NPPF Paragraph 128 and Policy B3 of the Yorkshire Dales Local Plan. In order to achieve the above, the following objectives were set out within the Written Scheme of Investigation (NAA 2013a) as approved by the YDNPA and comprised:

- A trial trench evaluation, totalling 120m² of trenching, to determine the nature, depth, stratigraphic complexity, level of preservation and date of any archaeological features or deposits affected by the proposed works;
- A topographic survey of three areas along the line of the road, totalling 3675m², to identify and record any surviving earthworks which lie within the survey boundaries and in order to place any archaeological deposits within a broader context;
- A watching brief, to be maintained throughout the course of the proposed groundworks;
- A report summarising the results and assessing the impact of the authorised works on the fabric and significance of the affected heritage assets; and
- The preparation of a suitable archive for submission to the appropriate museum.

Scope of the Project

1.6 The scope of the archaeological evaluation and topographic survey was limited to the area between Gayle Beck, and the junction of the Dales/Pennine Way. The remainder of the development area has been recognised as having lesser potential for archaeological remains (Gayle Beck to Far Gearstones) or has already been archaeologically examined (Dales Way/Pennine Way Junction to West Gate; ASWYAS 2008). Invasive groundworks along the entire length of the route were monitored as part of the watching brief.

2.0 METHODOLOGY

Topographic Survey

2.1 Three 35m x 35m areas were selected for sampled topographic survey, by means of Total Station Theodolite (TST) (Figure 2). The on-site survey work was undertaken in accordance with the procedures set out in Understanding the Archaeology of Landscapes; A Guide to Good Recording Practice (EH 2007), and a Level 3 survey was undertaken, at a scale of 1:500, to provide a record of features within the sample areas. The top, bottom and other pertinent breaks of slope of each feature was recorded in addition to any other relevant information. Once the basic survey was completed the resulting raw survey map was printed out and hand hachured onsite to ensure that all detail was included. A series of profiles across the survey area were also recorded. Plans and survey drawings

were produced in AutoCAD 2010 with structured layer control according to EH guidelines (English Heritage 1990). Full digital data (DWG and DXF formats) will be provided with the site archive.

Plate 2: Excavation commences on Cam High Road, facing south-west

Trial Trenching

2.2 Three 20m by 2m trial trenches were excavated perpendicular to, and bisecting, the course of the existing track and its associated ditches (Figure 2). The position of the trenches was surveyed using a TST (Total Station Theodolite) and the information was transferred to AutoCAD software and reproduced for incorporation within this report. All levels have been tied in to Ordnance Datum.

2.3 The initial site works comprised the stripping of overburden and non-archaeological subsoils within each trench. The overburden comprised loose stone and modern track surfaces across the line of the road, and modern topsoil and fills of the associated ditches to the sides. The removal of overburden was undertaken using a tracked mechanical excavator fitted with a toothless or ditching bucket that operated under direct archaeological supervision at all times.

2.4 The mechanical excavator removed overburden down to a level at which significant archaeological deposits were identified or down to natural subsoil deposits, whichever was encountered first. Machining of the modern track surfaces was undertaken in shallow spits in an attempt to reveal any earlier road surfaces. Excavation of the existing roadside ditches was also undertaken by machine under controlled and monitored conditions, to remove any modern material slumping into the ditch.

2.5 Where deposits and features were identified that pre-dated the turnpike, machine excavation ceased. Thereafter all archaeological work was undertaken by hand.

2.6 Hand excavation of archaeological features and deposits aimed to characterise the site's archaeology and attempted to recover artefactual and environmental evidence. Hand excavation concentrated on

gaining relationships between features and deposits to help determine phasing whilst also examining a representative sample of the different types of archaeological remains encountered. All the features and deposits were investigated by sections with a length of 1m, resulting in a minimum of a 50% sample of the archaeological features and deposits being excavated. No finds were identified within any of the features or deposits.

Watching Brief

2.7 All ground disturbance works associated with the construction of the new track were to be subject to archaeological monitoring by the supervising archaeologist; however, in the event monitoring was limited to the excavation of a new section of track from Cam High Road (NGR 381042 481330) to Cam Plantation (NGR 381183 481391), as no significant groundworks, such as the clearance of ditches or excavation of culverts, were undertaken on the line of the road, and the installation of the new foundations for the bridge did not reveal any anthropogenic deposits. A new drain was excavated through the track at a position 6m north-east of West Gate, which allowed a profile of the track to be drawn at this point. No finds were identified within any of the deposits.

3.0 BACKGROUND INFORMATION

Location and Topography

3.1 The overall development boundary of the works comprised a 3.2km section of Cam High Road between Far Gearstones and Cam Plantation (Figure 2). The areas of evaluation and topographic survey were undertaken over a 1.5km length of the road forming part of the Dales Way between Gayle Beck (NGR 378300 480300) and the intersection of the Dales and Pennine Way at NGR 380200 480400). All invasive groundworks along the entire length of the route were monitored as part of the watching brief.

3.2 From the western end, the proposed access route enters a field to the east of the drive to Far Gearstones Farm, at approximately 320m AOD, and follows closely the line of the drystone wall along the edge of the B6255, before joining the Dales Way and following a further field wall south and downslope. The route crosses onto the floodplain of Gayle Beck through a drystone wall via a farm gate, and runs directly eastwards across the plain to a ford across the beck, at 313m AOD.

3.3 The route crosses the ford, and runs up the bank eastwards for 350m, gradually climbing to 329m AOD, where it crosses Axletree Gill. The route climbs to the south-east up the beckside for 115m, before turning sharply at 340m AOD. The route then follows an easterly bearing for 1090m up Broad Ray, to a height of 445m AOD. The route is joined by, and becomes, the Pennine Way, 930m from the end of this section.

3.4 The route then turns northwards again, following a north-easterly bearing for 1154m, rising constantly and crossing a further drystone wall at West Gate, at a height of 505m AOD. From West Gate, the proposed route leaves the Pennine Way, and follows an east-north-east bearing once again, heading downslope to a junction with existing tracks at the base of the slope at 443m AOD. Apart

from this latter section, which deviates downslope across an open pasture field, the entire route follows the line of an existing track.

Geology and Soils

3.5 The solid geology of the Dales Way section comprises interbedded limestone, argillaceous and sandstone bedrock of the Yoredale Group. To the east of the junction with the Pennine Way, the road crossed onto the Middle Limestone, and followed the boundary between the two groups. The soils are identified as slowly permeable seasonally water-logged fine loamy upland soils with a peat surface horizon of the Wilcocks 1 Association (Soil Survey of England and Wales 1993).

4.0 HISTORICAL CONTEXT

4.1 Northern Archaeological Associates undertook a desk-based assessment on behalf of The Cam Forest Trust in support of the planning application (NAA 2013b). The desk-based assessment identified a total of 15 heritage assets within a 500m corridor centred on the road, all of which are undesignated, and mostly comprise sites of post-medieval date, of local importance. Some of these sites are related to use of the landscape for extractive purposes (quarries and lime-kilns exist within the corridor and the wider landscape) and some relate to agricultural exploitation (small enclosures and sheepfolds).

4.2 Cam High Road has been suggested as following the line of a prehistoric routeway, as it follows the water-shed along high ground (Archetype 2003, 6). There is certainly evidence to suggest that during the later prehistoric period, the area was extensively farmed, with a combination of enclosed and unenclosed settlements, and there is evidence of prehistoric settlement within the vicinity. However, Hindle (1993, 26) notes that *'all the possible prehistoric tracks are difficult to authenticate.* [...] *The problem with such routes is that there has been a tendency to assume that any track running across isolated high ridges and passing the odd tumulus must automatically have prehistoric origins*'; this is almost certainly the case with Cam High Road.

4.3 Cam High Road is described as '*the clearest length of Roman road in the Dales*' (White 1997, 38), and runs from Ingleton to the Roman Fort at Bainbridge, known as *Virosidum* (meaning either '*the Settlement of True Men*' or '*the Settlement by the Ure*'). The Roman road was probably constructed by Agricola around AD80, to serve the fort at Bainbridge, and its location deep in Brigantian territory may indicate a connection with the Brigantian campaigns of *Quintus Petillius Cerialis* who was governor of Britain c.AD71. It is likely to have continued in use throughout the Roman period.

4.4 There is no archaeological evidence for activity during the Early Medieval period within the study area and little by way of documentary information until after the Norman Conquest. The road is likely to have continued in use following the end of Roman governance, as a convenient routeway through the Dales, but there is not likely to have been significant investment in it at this time. The land above Bainbridge, within which Cam High Road is located, formed part of the '*Forest of Wensleydale*' also known as the '*Forest of Bainbridge*', in the 11th century; by the 12th century, areas devoted to hunting had gradually diminished in size, as land was bestowed on monasteries and

priories through endowments from Norman lords, in return for prayers for the souls of themselves and their families (White 1997, 56). The land around Cam Fell seems to have fallen under the influence of Abbeys of Furness, Jervaulx and Fountains, and there are references to the road being in use as access to grazing and for transport of timber and other commodities.

4.5 In the post-medieval period, the road operated as a drove-way. Warburton's map of 1720 and Bowen's map of 1750 depict the road as the '*Devils Causeway',* the name probably deriving from the unpredictability and dangerousness of travel in the area. In 1751, the Richmond to Lancashire Turnpike Act was given Royal Assent by George II, and the Richmond to Lancaster Turnpike Trust was founded in the same year. Cam High Road was selected as an obvious route for the turnpike through the fells; the turnpike was opened in 1754, and in 1756 it was recorded that the route was 60 miles in length, 40 miles of which had been repaired and made good (ASWYAS 2008, 1). In 1795, the route across Cam Fell was replaced just east of Far Gearstones by a different route to Hawes, via Newby Head and Widdale, which still exists as the B6255.

4.6 Cam High Road now forms part of the regional route network with sections of its route utilised by three long distance routeways – the Pennine Way, the Pennine Bridleway and the Dales Way.

Previous Archaeological Interventions

4.7 An assessment of condition of the route between the B6255 and Cam Houses was carried out in 1986 by the Yorkshire Dales National Park Authority. The survey identified that 0.5km (10%) of the route was in good order, 3.16km (64%) was described as 'adequate' and 1.29km (26%) of the route was seriously damaged (YDNPA technical report cited in Archetype 2003, 7).

4.8 A watching brief by Archetype in 2005 on a stretch of the Cam High Road between Wether Fell and Bainbridge, east of the proposed access route and outside the study area, identified a gravel surface 0.05m to 0.10m deep, preserved beneath hill-wash and the later metalled surface of the turnpike road (Archetype 2005).

4.9 A further survey was carried out by the YDNPA in 2007, between Far Gearstones and Kidhow Gate, in order to assess the impact of recreational motor vehicles on the route. The survey recorded sections of the route as extensively damaged by recreational vehicles (YDNPA 2007, 8), most of the damaged rutted sections lie to the north-east of Cam End, and the section of the proposed access route was recorded as being '*in good condition*'. The route has now been classed as a restricted byway, and a traffic regulation order (TRO) is in place.

4.10 In 2008, a topographic survey, evaluation and watching brief were carried out by Archaeological Services WYAS (ASWYAS) on a section of the proposed route (Figure 3a and 3b). The work comprised: the survey of four 30m sections of the road (SA1 to SA4); the excavation of trenches across three sections of the road and ditches (T1 to T3); and the recording of three samples of culvert to be reinstated during the works (C3 to C7). The excavations failed to identify any evidence of ancient track surface or associated ditches, with modern track surfaces identified above natural

deposits. The ditches appeared from their profiles to have been machine-cut. Investigations of the culverts also failed to securely date them.

Plate 3: Survey Area 1, Cam High Road, facing north-east

5.0 RESULTS

Topographic Survey

5.1 A topographic survey and road profile were undertaken in three discrete areas along Cam High Road (Figure 2) as part of the current phase of works. Survey Area 1 (Figure 3) indicates that the road occupies a slight shelf within a landscape sloping gently southwards. The central track bed is approximately 2.85m in width, and preserves on its surface a distinct area of cobbling that may be a remnant of an earlier road surface. There were also shallow depressions showing where the road was being worn, but these had not yet formed distinct wheel ruts. The north side of the road contains a shallow road side ditch, with gentle sloping sides, which appears to have been recut in the recent past. The south side of the road appears to also have a faint trace of a ditch, though this does not appear to extend to the full width of the survey area, the north-eastern side perhaps having been buried by (later) road metalling. This could suggest that the track bed and ditches at this point were established at an earlier (? Roman) period, and were subsequently altered by the installation of a later (? turnpike) period of cobbling.

5.2 The road in Survey Area 2 (Figure 4) lies within a distinct hollow, 13m in width and approximately 1m deep, within a broadly flat landscape, which climbs gently eastwards. The width and depth of

this hollow, in relation to the surrounding landscape, suggests a considerable degree of wear from traffic at this point, which would imply that earlier deposits are likely to have been eroded away here. The track bed has a central raised strip of cobbles surviving, which looked to be the remnant of a former road surface, probably dated to the turnpike phase (mid to late 18th century). The current road surface had two wide, parallel and shallow areas of wearing. The south and north sides of this track are defined by flanking roadside ditches, which are active. The southern ditch had been re-cut twice into new channels leaving the former channels still visible.

5.3 The road in Survey Area 3 (Figure 5) was less clearly defined; the track bed occupies only a very slight hollow, with the current metalled road surface containing some evidence of wearing. The profile indicates a single roadside ditch to the south, which has clearly been recut. There is a faint suggestion of earlier ditches on both sides of the track, perhaps with earlier alignments of track, but these are only very slight, and not easily defined.

Plate 4: Trench 1, showing road deposits, facing north

Trial Trenching

Trench 1

5.4 Trench 1 was located towards the western end of the development area approximately 160m to the east of Gayle Beck (Figure 6). It was situated on a slight south-facing slope at a height of 324m AOD and was aligned north to south.

5.5 Removal of topsoil and overburden exposed light grey and yellow natural boulder clay (2 and 6) at a maximum depth of 0.3m below ground level. The natural subsoil was overlain by a series of deposits and features towards the northern end of the trench which may originally have been associated with the turnpike road. These comprised material associated with road construction (4 and 5), a crude

revetment (28) and ditch 20 (Figure 6).

5.6 The earliest material associated with road construction was a bedding layer (4). It comprised light grey sandy silt that had a maximum thickness of 0.14m and was 2.4m wide which continued beyond the extent of the trench to the east and west upon the course of the later road surface. This material appeared to have been deposited to produce a terrace upon the bank side for construction of the overlying road surface 5. The road was 2.6m wide and comprised a 0.2m thick deposit of sub-rounded limestone cobbles (individually up to 0.2m in size) that were compacted in a sandy matrix which probably represented the heavily worn remains of the turnpike road. It also included quantities of uniform angular gravel that represented recent attempts to resurface and repair the existing track.

5.7 The revetment (28) was identified 3.5m to the north of road surface 5, beyond the location of a later ditch (20; discussed below), and was aligned parallel to it. It had been constructed in a slight cutting (23) that was 0.9m wide with a 'U'-shaped profile to a depth of 0.2m that continued for the full width of the trench. The revetment (28) comprised a number of sub-rounded cobbles that were individually up to 0.15m in size set within a light yellow and grey clay matrix which would have limited land slip onto either the surface of the turnpike road or into any earlier phase of ditch 20 to the south.

5.8 Following construction of the revetment a thin turf line formed (26) prior to the area being sealed below two layers of re-deposited natural subsoil (24 and 27). The subsoil layers had a combined thickness of 0.16m and may have represented up-cast from the excavation of a roadside ditch that had been completely removed by the excavation of later ditch 20.

5.9 Ditch 20 was aligned parallel to the track at a distance of *c*.1m. It was 1.8m wide and 0.65m deep with a stepped 'V'-shaped profile which suggested it was excavated, or re-excavated, by mechanical means. It was filled primarily by dark grey brown clayey silt (22) which was overlain by mid-grey brown silty clay (21). The upper level of the ditch remained open and functioned as a drain.

5.10 All features and deposits were sealed by up to 0.3m of dark brown silt topsoil and turf apart from the track surface (5), which remained clear due to use.

Trench 2

5.11 Trench 2 was equidistant between Trenches 1 and 3 and was sited upon a west-facing slope at a height of 364m AOD (Figure 7). It was aligned north-north-west to south-south-east.

5.12 Topsoil was removed to a depth of 0.3m which exposed dark grey and yellow boulder clay (34) that was overlain to the south by a possible Roman road surface (3) and associated ditches (14 and 16), and to the north by the existing track (18) and ditches 30 and 32 (Figure 7).

5.13 The possible Roman road surface (3) was located at a distance of 1m to the south of the course of the existing track surface and appeared to adhere to the same west-south-west to east-north-east alignment. It was 2.1m wide by 0.05m deep and was formed by rounded pebbles that were individually up to 0.05m in size set within a silty sand matrix. The road was flanked to the south by

ditch 14 and to the north by ditch 16. Ditch 14 was 0.8m wide with a shallow 'V'-shaped profile to a depth of 0.16m and was filled by dark brown silty clay (13); this deposit was sampled for palaeoenvironmental potential. The fill of ditch 14, and road surface 3 were sealed by a 0.04m thick deposit of sandy gravel (17) that appeared to represent material washed from the underlying surface (3). The second ditch (16) was 0.69m wide by 0.18m deep with a flat-based 'V'-shaped profile and was filled by a mid brown grey sandy deposit that included quantities of sub-rounded sandstone (15) which may have represented slump from the adjacent road surface.

Plate 5: Trench 2, possible Roman road, facing west

5.14 The existing track surface (18) was 3.25m wide by 0.2m deep and was constructed from material equivalent to that outlined within Trench 1 (discussed above). During investigations a 0.06m thick deposit of mid-brown orange sandy clay (29) was identified which appeared to pre-date the existing track and may have represented material deposited during levelling to the route of the turnpike road prior to its construction.

5.15 The remains of two ditches were identified to the north of the existing track which had both been cut through 0.2m of dark brown silt topsoil and turf line (33). Ditch 30 was situated at a distance of 1.5m from the edge of the track and was 0.8m wide with a 'U'-shaped profile to a depth of 0.26m. It survived as an open drain and therefore contained no fill other than turf. The second ditch (32) was located 4m further to the north and was 1m wide by 0.33m deep with a 'U'-shaped profile. It was filled by mid-brown grey silty clay (31) which included numerous fragments of sandstone that allowed water to percolate through the feature.

Plate 6: Trench 3, facing south-east

Trench 3

5.16 Trench 3 was the easternmost trench investigated as part of the evaluation and was located 200m to the west of the junction of the Dales Way and Pennine Way. It was aligned north-north-west to south-south-east and was situated upon a moderately steep east-facing slope at a height of 416m AOD (Figure 8).

5.17 Machine clearance of topsoil and overburden exposed light grey orange sandy boulder clay (7) at a maximum depth of 0.5m below ground level. The natural subsoil was overlain by the existing track surface (10) flanked by ditch 11 (Figure 8).

5.18 The existing track (10) was 3.5m wide and had a maximum thickness of 0.3m. It was formed by material equivalent to that described above (5.6 and 5.14) and again probably represented the heavily worn and repaired remains of the turnpike road.

5.19 Ditch 11 was situated 1.5m to the south and was slightly uphill of the track surface. It was 3.3m wide with a 'V'-shaped profile to a depth of 0.6m and also appeared to have been excavated by machine. The ditch was filled by dark brown silt (12) that was indistinguishable from the overlying topsoil (8).

5.20 Topsoil 8 comprised 0.25m of dark brown silt which was overlain by 0.28m thick layer of mid-grey yellow sandy clay (9) towards the northern end of the trench. This deposit may have represented material removed from the course of the turnpike road prior to its construction, or could represent material machine excavated from ditch 11.

Plate 7: Construction of the new track, facing east

Watching Brief

5.21 A watching brief was undertaken on a section of new track that ran from Cam High Road (NGR 381042, 481330) to Cam Plantation (NGR 381183, 481391) (Figure 9). The works took six days and consisted of excavation along the side of a steep slope, followed by filling with stone from a quarry at the edge of Cam Plantation. The topsoil was a dark brown peat with a clay component and was generally around 0.20m deep. There was no subsoil and the topsoil lay directly on top of natural yellow clay.

5.22 No archaeological deposits were discovered on the slope itself. Where the new road intersected with Cam High Road a section of the road was removed to allow a drainage pipe to be placed. This allowed a profile of the road to be drawn and analysed (Figure 9). The current metalled surface (35) was a yellowish white limestone and appeared to be modern in date. No earlier surfaces were recognised though there were several different layers of road construction material (36-39). The layers immediately below the current wearing surface appeared to have been in a cut (44) and deposited with a mechanical excavator and as such are thought to be modern. Further upslope a series of layers (43, 42, 41 and 36) were partially excavated but no dateable material or previous surfaces were located. The layers respectively comprised re-deposited natural clay providing a base for a sandstone road which was overlain by colluvial material and topsoil. A series of intercutting road terraces and roadside ditches were observed as upstanding earthworks immediately upslope to the northwest for a distance of 25m which indicated that the course of the road had moved over time.

Assessment of Site Archive

5.23 As part of the assessment of the site records analysis of the archive has been undertaken. Matrices

have been drawn up for the excavated trenches showing the stratigraphic relationships between the individual contexts. No artefactual material was recovered during the evaluation to allow dating of the recorded features and deposits although a distinction has been made between the possible Roman road and associated features, and the turnpike, and post-turnpike remains. Plans and sections were checked against context records to ensure full cross-referencing. Catalogues of context and illustration records and digital and print photographs have been input into a database.

5.24 The sample retrieved from context 13, comprising two 10L tubs, was assessed for palaeoenvironmental potential. No artefacts or ecofacts were recovered from the sample (Lynne Lowrie *pers. comm.*).

5.25 The written, drawn and photographic records are currently held by Northern Archaeological Associates (NAA).

Primary archive inventory

Context descriptions	34
Drawing sheets, A1	5
Drawing sheets, A3	2
Plans	4
Sections	7
Digital photographs (images)	159
Black and White prints and negatives (films)	1

6.0 CONCLUSIONS

Discussion

6.1 A programme of archaeological recording was carried out prior to and during resurfacing works on Cam High Road. The works comprised survey and trial trench evaluation on the Dales Way section, in order to record the extant road surfaces and other features, prior to sealing by the new road surface. A watching brief was also maintained during the works, primarily on the new road cut eastwards to the plantation.

6.2 The topographic survey identified that the track varies quite considerably in each survey location, in some sections occupying a hollow, whilst in others seemingly more raised. This was different to the results recorded by ASWYAS (2008), which seemed to indicate that the track occupies a shelf for much of its recorded length, and in part reflects the differences in topography along the length of the route, and the differences in wear from traffic which this has caused. In most cases a metalled road surface was identified, seemingly corresponding to the turnpike surface recorded by ASWYAS in

2008, and also investigated by NAA in the trial trench evaluation for this phase. The results of the trenching in both 2008 and the present works demonstrated unequivocally that the track is a combination of turnpike surface and modern resurfacing (the watching brief clearly identified that the track to the north-east of West Gate sits within a modern machine-made cut). ASWYAS recorded putative earlier alignments of the track, but these were not really clearly visible in the three surveyed areas as earthworks, though there were faint suggestions of levelled areas in all three, and indications that the original track may have lain outside of the current alignment, either north or south of the present course of the track.

6.3 Perhaps the clearest indication of this was the section of earlier road surface uncovered in Trench 2, tentatively identified as a Roman road surface, and comprising a broadly 2m wide metalled track with shallow flanking ditches. The road surface lay south of the current track alignment and appears to mark the straightening of a meander in the road, perhaps some 50m in length, where the track climbs the side of Broad Ray before joining with the Pennine Way. The interpretation of the surviving metalled surface as a Roman road is, perhaps, open to question. No dating was recovered from the surface of the track, and its dimensions are relatively small in comparison to other examples, which tend to be 5-6m in width, and have stone foundations, which this did not. It seems likely that this track pre-dates the turnpike, but its origins remain unclear.

6.4 Roadside ditches were recorded in different positions in all three survey areas, again perhaps indicating the complexity of the genesis of the current track. Most of the ditches identified appeared to be modern recuts, and were active, and so their position relative to the track probably now has little bearing on their original use; in some cases their position and alignment has also changed. Some ditches have silted up and gone out of use. ASWYAS (2009) recorded ditches running along the north-western (upslope) side of the track, which had clearly been recut in recent times, to judge by the evaluation trench results.

Recommendations

6.5 The present programme of works were requested to more fully evaluate the archaeological potential for the site prior to sealing by the new road surface, and given that there has been a lack of archaeological investigation in the vicinity, a programme of archaeological survey, evaluation and watching brief was recommended, in accordance with NPPF Paragraph 128.

6.6 The results served to confirm the generally negative results of the earlier phases of investigation, though the survival of an earlier section of track to the south of the current alignment was significant. Further more in-depth investigation along the entire length of the track may identify further possible areas of survival, though this lies outside the remit of this project.

6.7 The current report is considered to be a comprehensive record of the works undertaken on Cam High Road, and as such no further work is recommended, though the client may also wish to fund an article for a local journal on the history of the road and the results of the evaluation.

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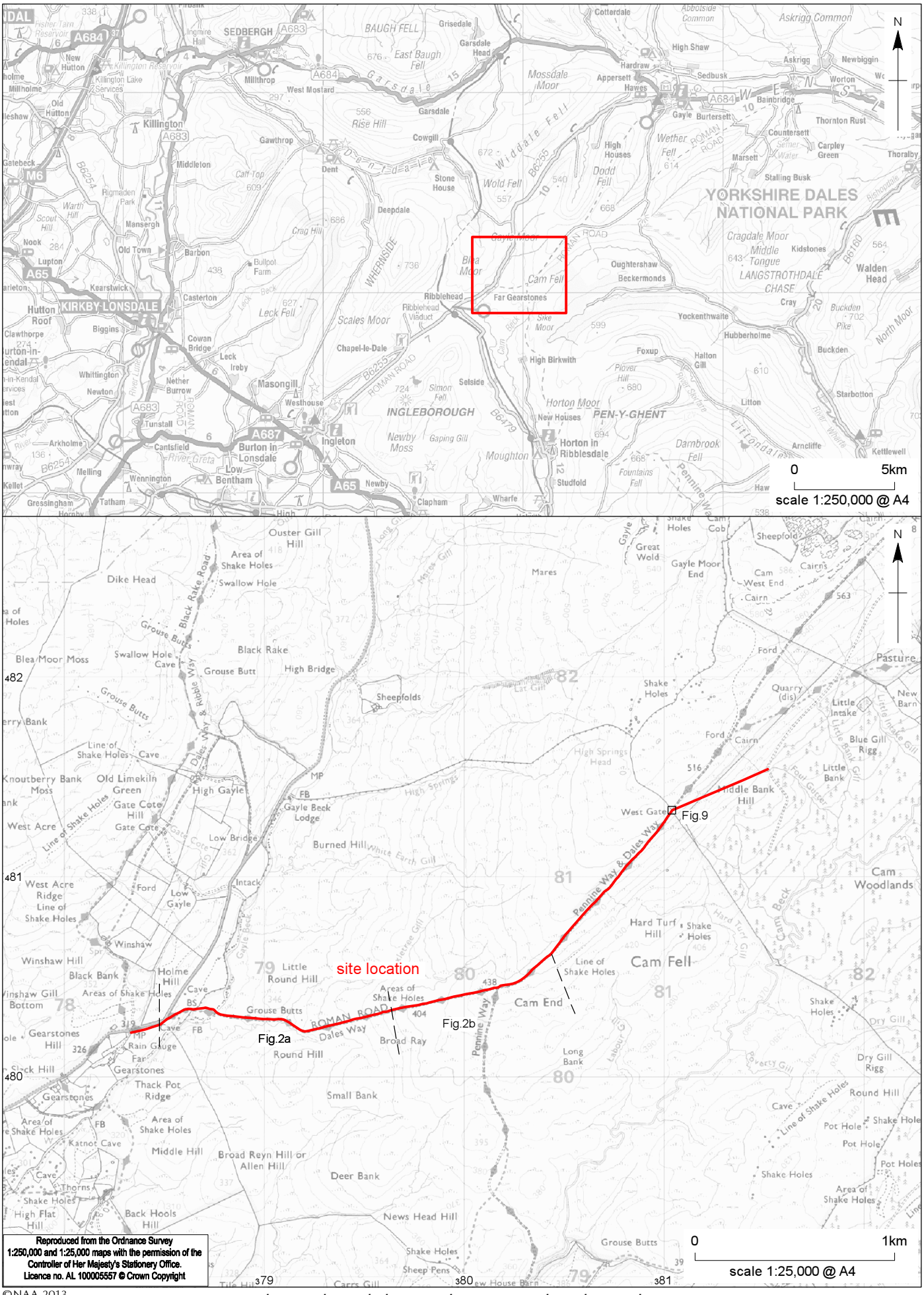
APPENDIX A: CONTEXT CATALOGUE

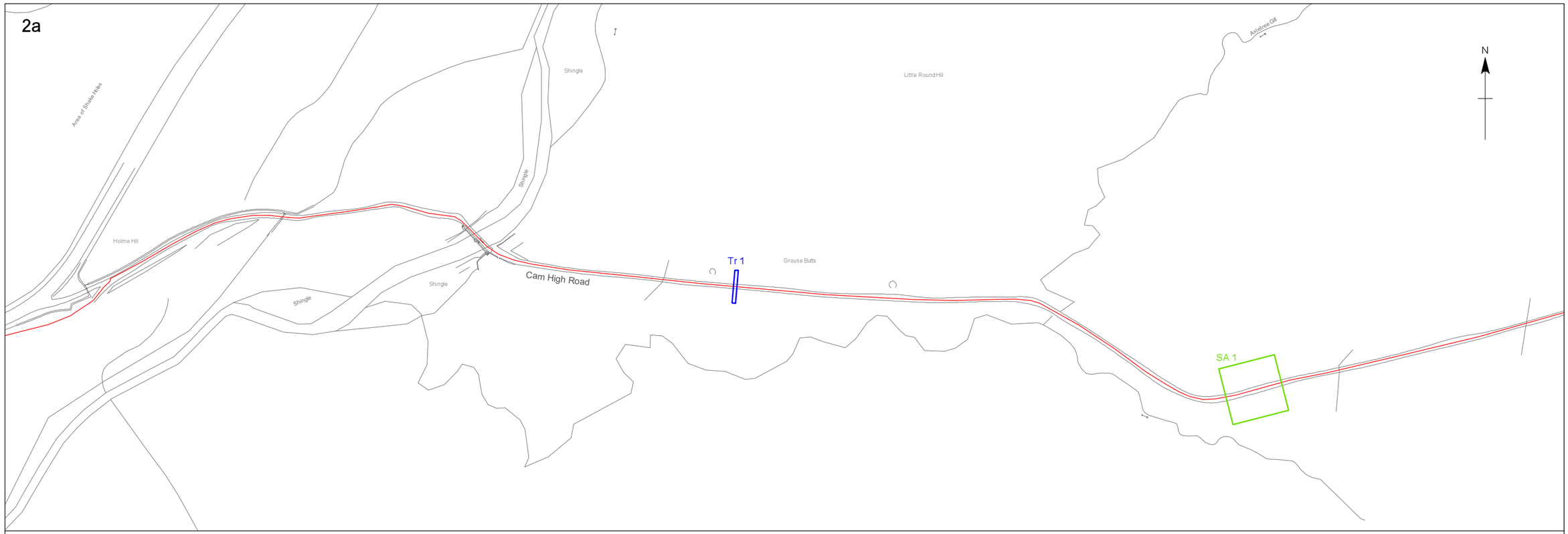
Context	Interpretative description	Relationships	Trench
1	Topsoil	Above 4, 19, 21, 25 and 6; below 5.	1
2	Natural	Below 4, 19, 20, 23 and 6.	1
3	Metalled surface, possible Roman road	Above 34; below 17.	2
4	Road construction deposit	Above 2; below 1.	1
5	Metalled surface, existing road surface	Above 1.	1
6	Stone spread	Above 2; below 1.	1
7	Natural	Below 10 and 11.	3
8	Topsoil	Above 10 and 12; below 9.	3
9	Re-deposited natural	Above 8.	3
10	Metalled surface, existing road surface	Above 7; below 8.	3
11	Cut of ditch	Above 7; below 12.	3
12	Fill of ditch 11	Above 11; below 8.	3
13	Fill of ditch 14	Above 14; below 17.	2
14	Cut of roadside ditch	Above 34; below 13.	2
15	Fill of ditch 16	Above 16; below 33.	2
16	Cut of roadside ditch	Above 34; below 15.	2
17	Gravel spread	Above 3 and 13; below 33.	2
18	Metalled surface, existing road surface	Above 33.	2
19	Road construction deposit	Above 2; below 1.	1
20	Cut of ditch	Above 27; below 22.	1
21	Upper fill of ditch 20	Above 22; below 1.	1
22	Lower fill of ditch 20	Above 20; below 21.	1
23	Cut for revetment	Above 2; below 28.	1
24	Re-deposited natural subsoil	Above 26; below 27.	1
25	Buried turfline	Above 27; below 1.	1
26	Buried turfline	Above 28; below 24.	1

27	Ditch upcast	Above 24; below 20 and 25.	1
28	Revetment wall	Above 23; below 26.	1
29	Bank/upcast from road construction	Above 34; below 33.	2
30	Cut of open ditch functioning as a drain	Above 33.	2
31	Fill of ditch 32	Above 32.	2
32	Cut of ditch functioning as a drain	Above 33; below 31.	2
33	Topsoil	Above 17 and 29; below 18, 30 and 32.	2
34	Natural	Below 14, 3, 16 and 29.	2
35	Metalled surface, existing road surface	Above 36	WB
36	Modern road make-up	Above 37, below 35	WB
37	Modern road make-up	Above 38, below 36	WB
38	Modern road make-up	Above 39, below 37	WB
39	Modern road make-up	Above 44, below 38	WB
40	Natural Substrate	Below 43	WB
41	Bank deposit	Below 36, above 42	WB
42	Bank deposit	Below 41, above 43	WB
43	Bank deposit	Above 40, below 42	WB
44	Cut for modern track	Above 42, below 39	WB



Cam High Road, Yorkshire Dales National Park: site location *Figure 1*

2a



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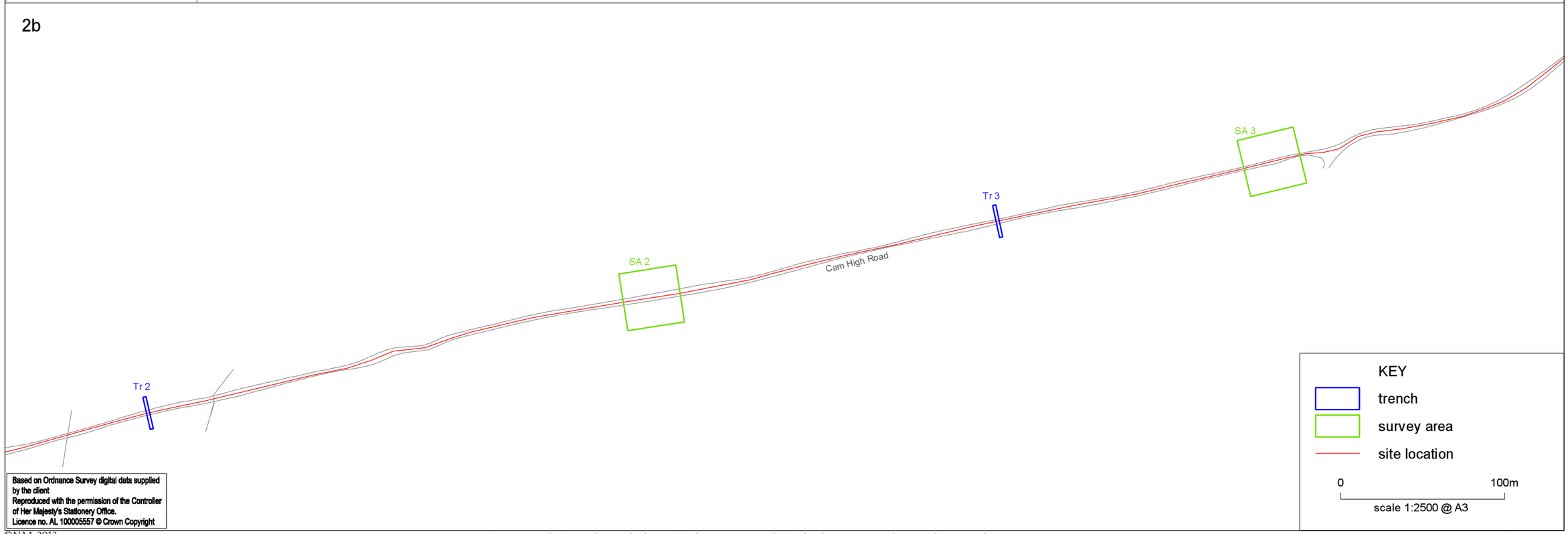
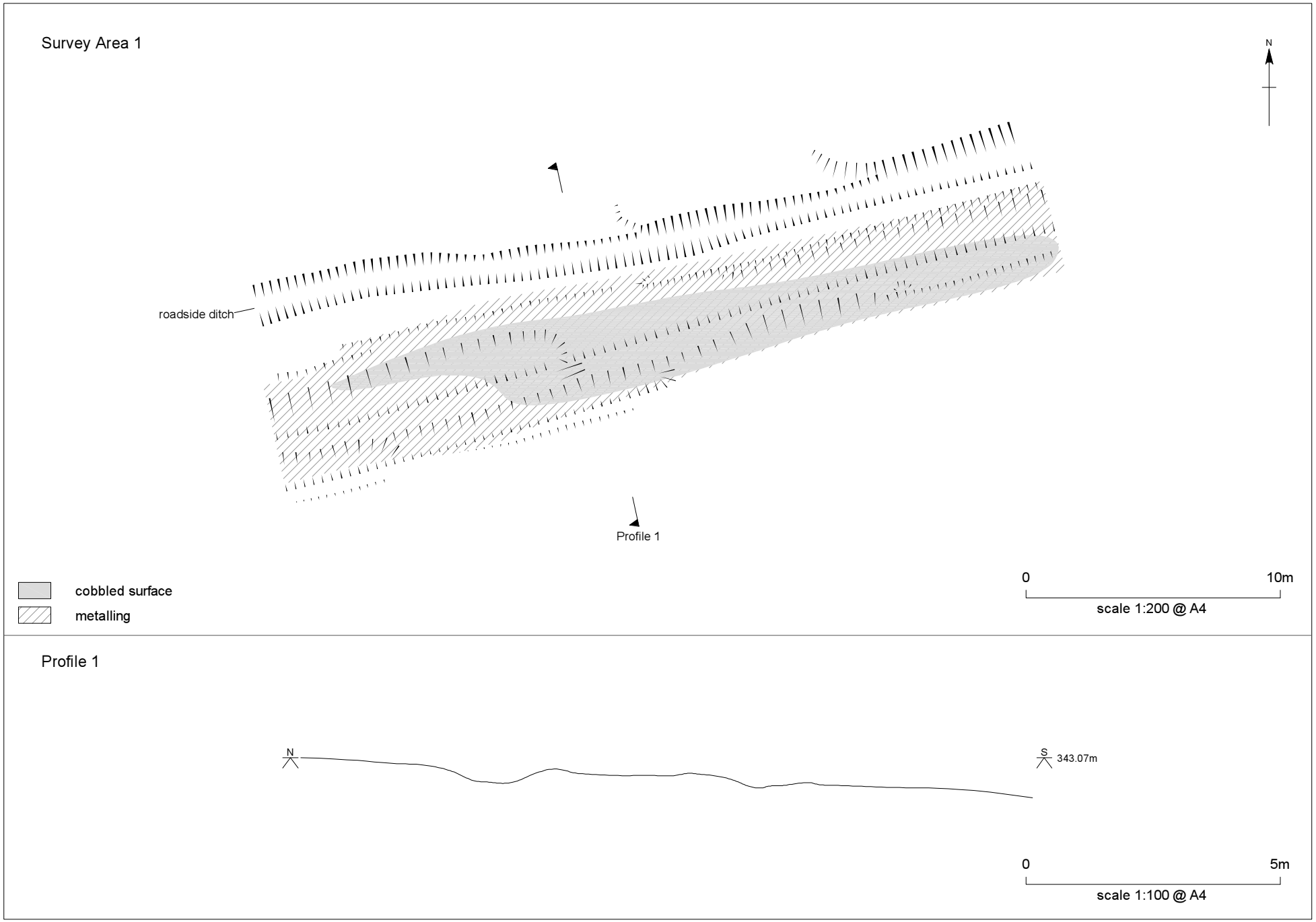


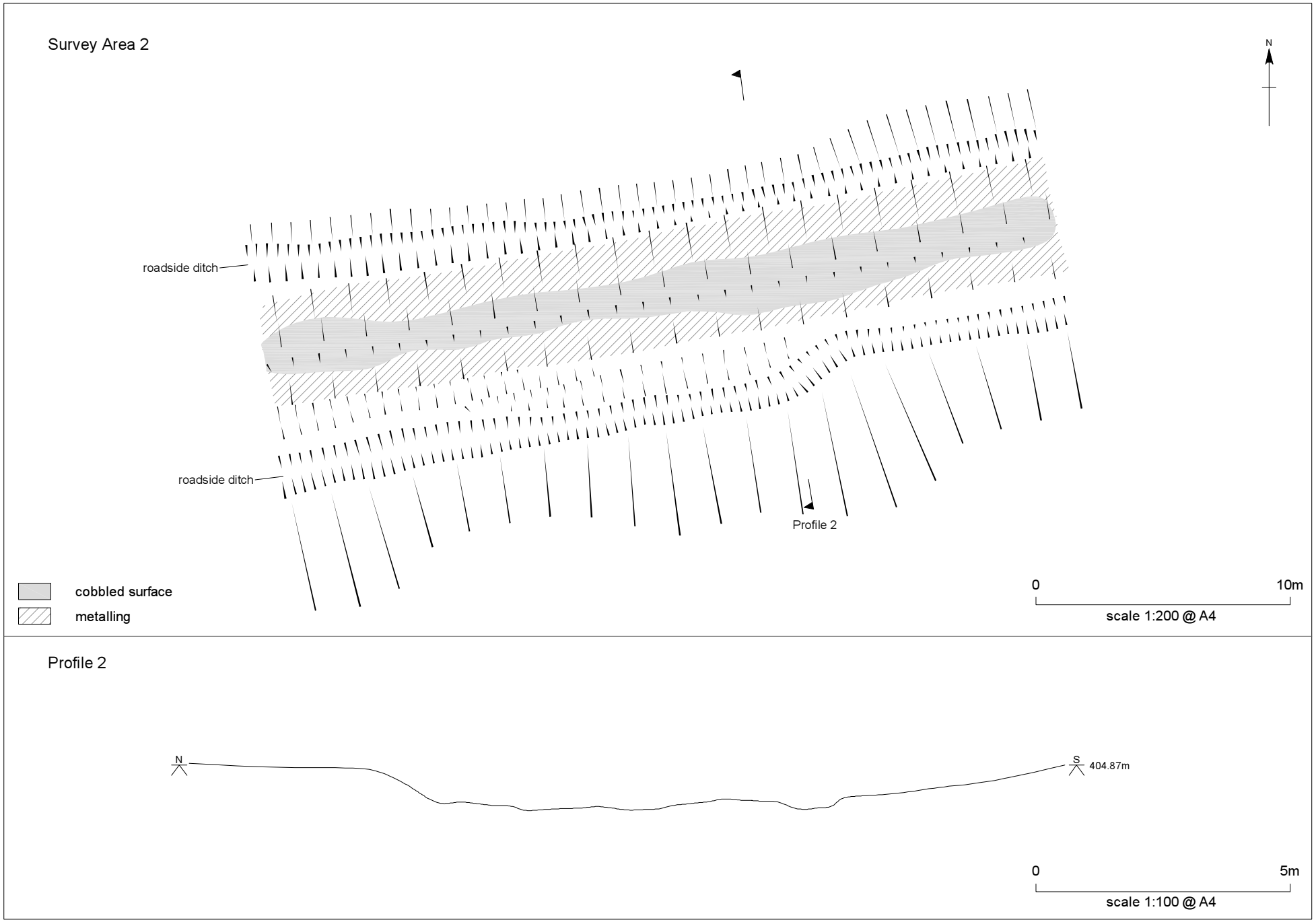
Cam High Road, Yorkshire Dales National Park: location of trenches and survey areas

Figure 2



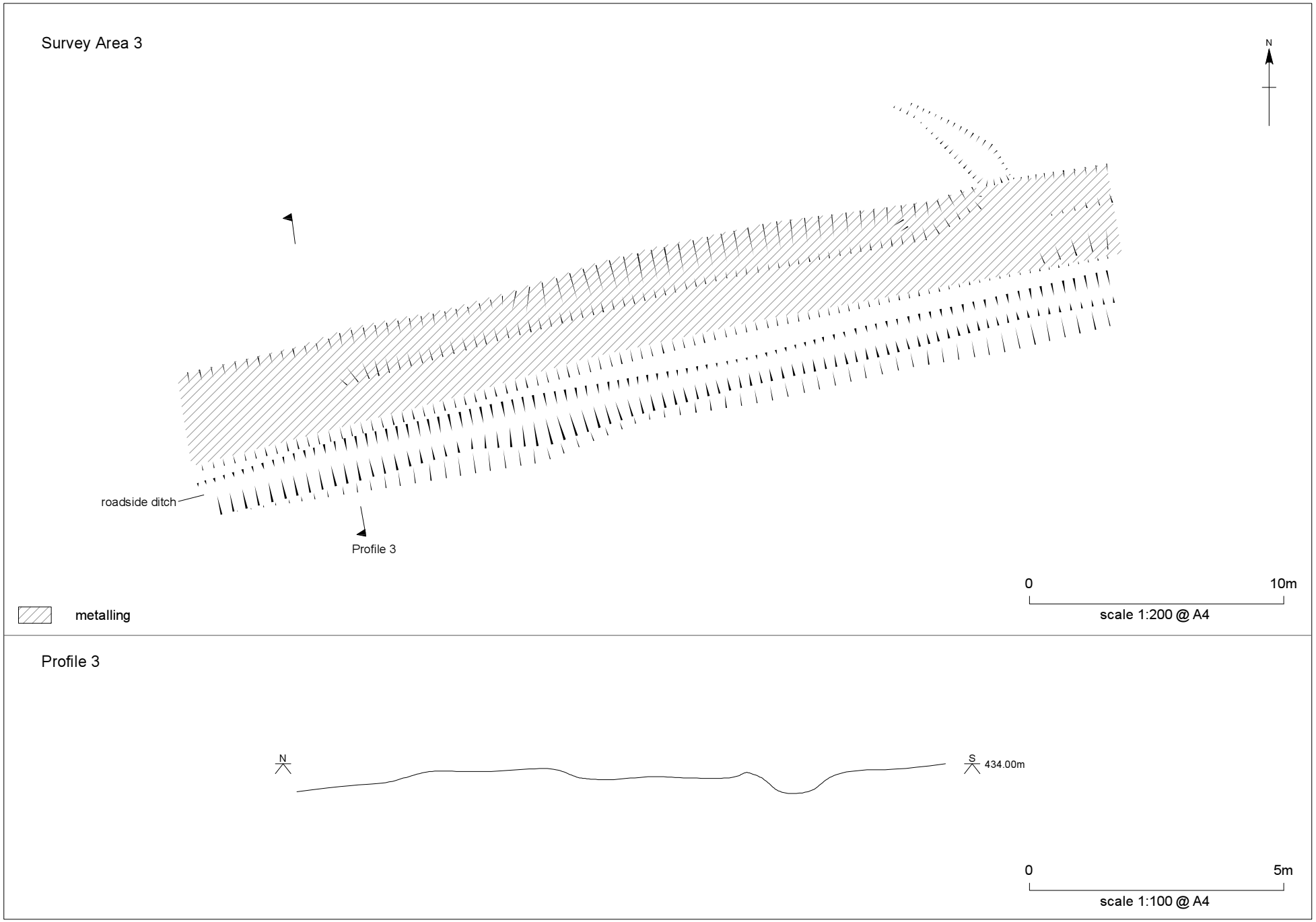
Cam High Road, Yorkshire Dales National Park: Survey Area 1, plan and profile

Figure 3



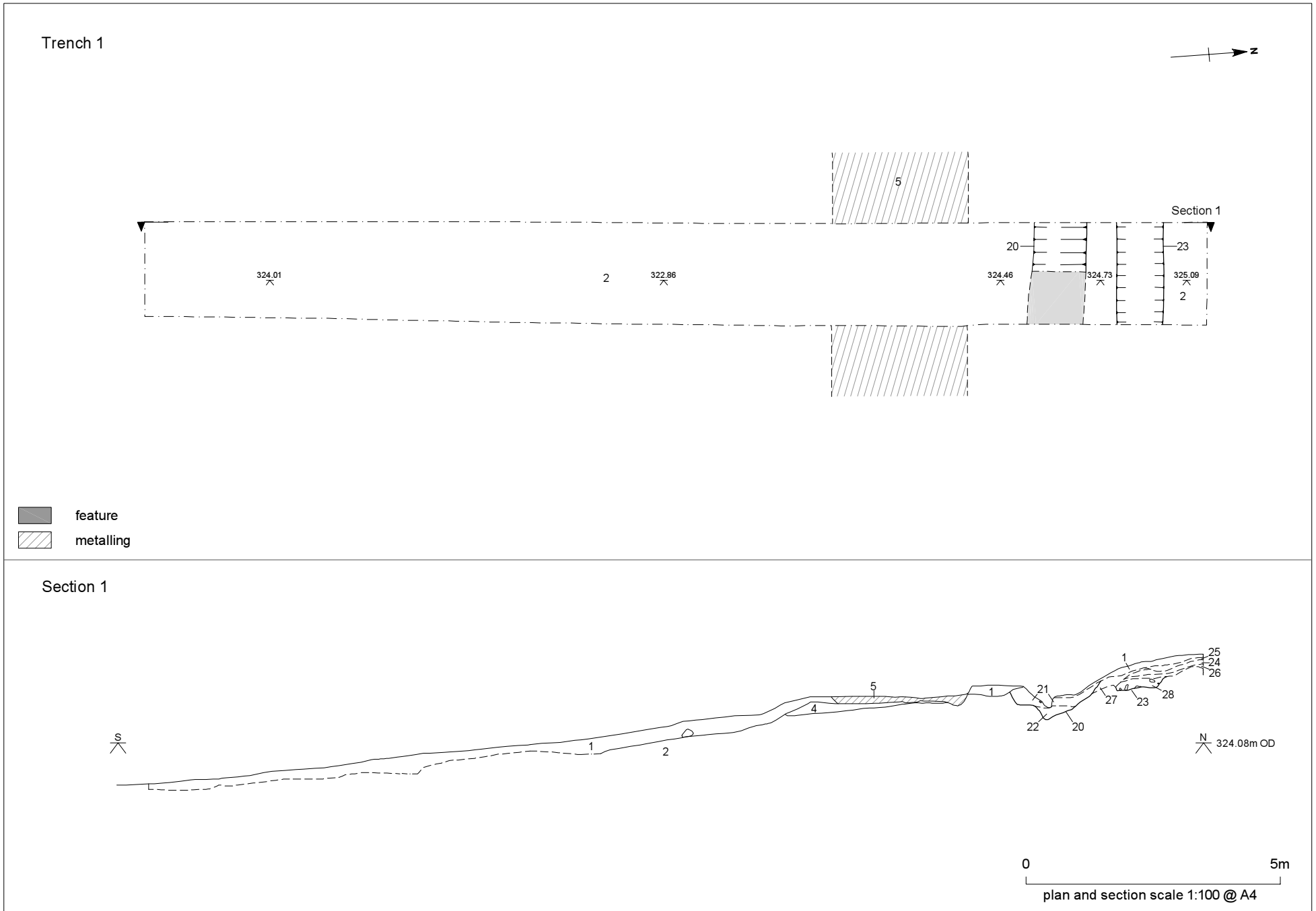
Cam High Road, Yorkshire Dales National Park: Survey Area 2, plan and profile

Figure 4



Cam High Road, Yorkshire Dales National Park: Survey Area 3, plan and profile

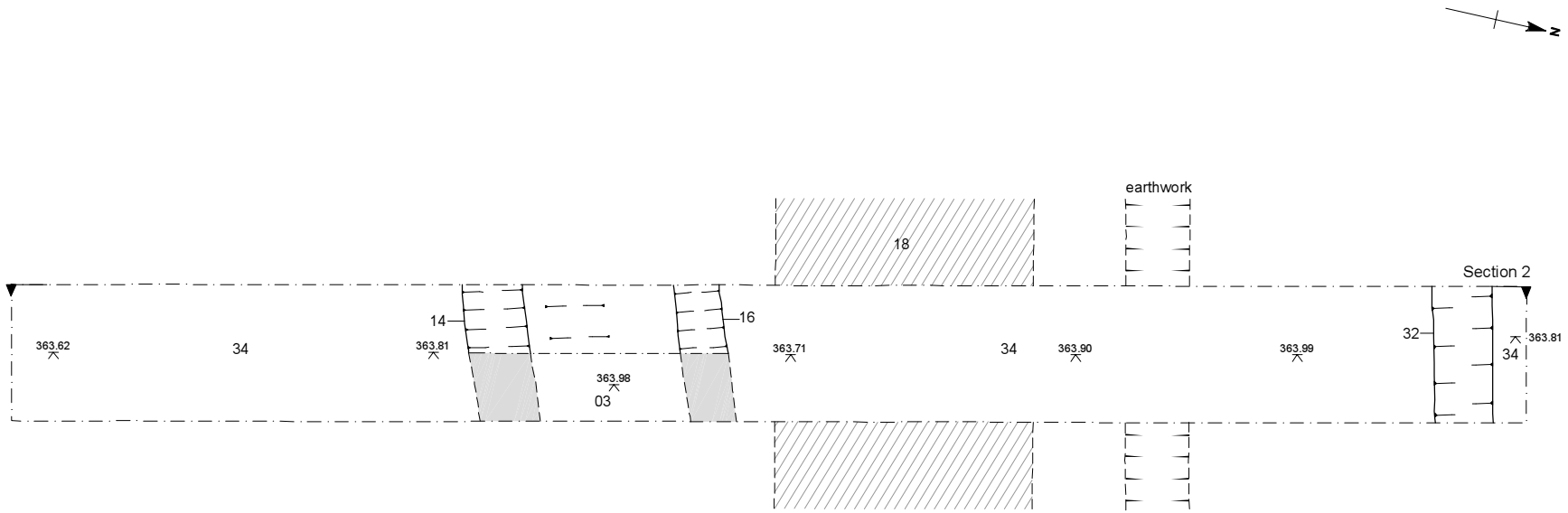
Figure 5



Cam High Road, Yorkshire Dales National Park: Trench 1, plan and section

Figure 6

Trench 2



Section 2

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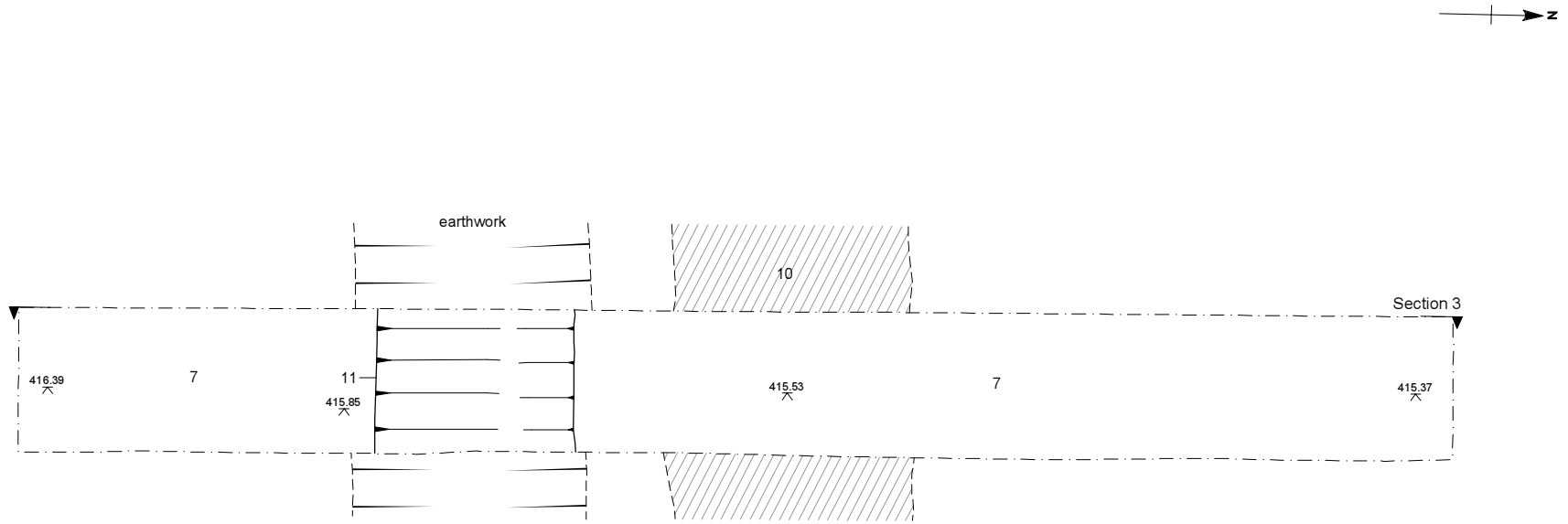
Cam High Road, Yorkshire Dales National Park: Trench 2, plan and section

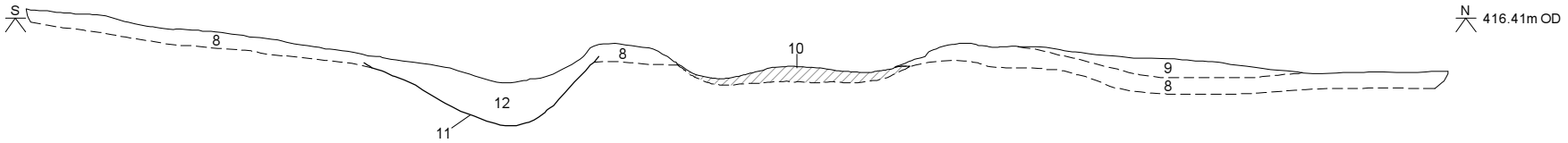
Figure 7

Trench 3



metalling

Section 3



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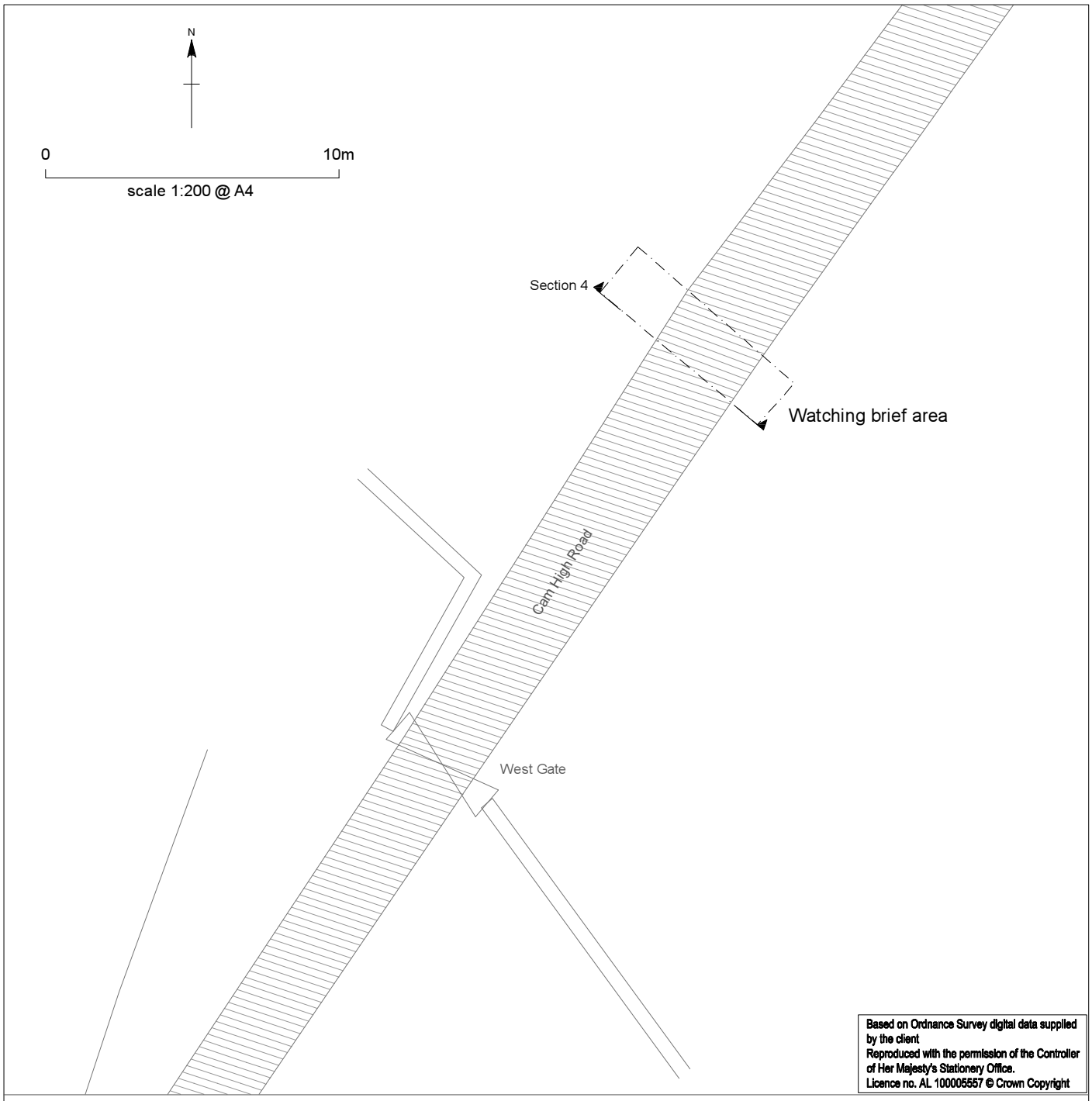
Cam High Road, Yorkshire Dales National Park: Trench 3, plan and section

Figure 8



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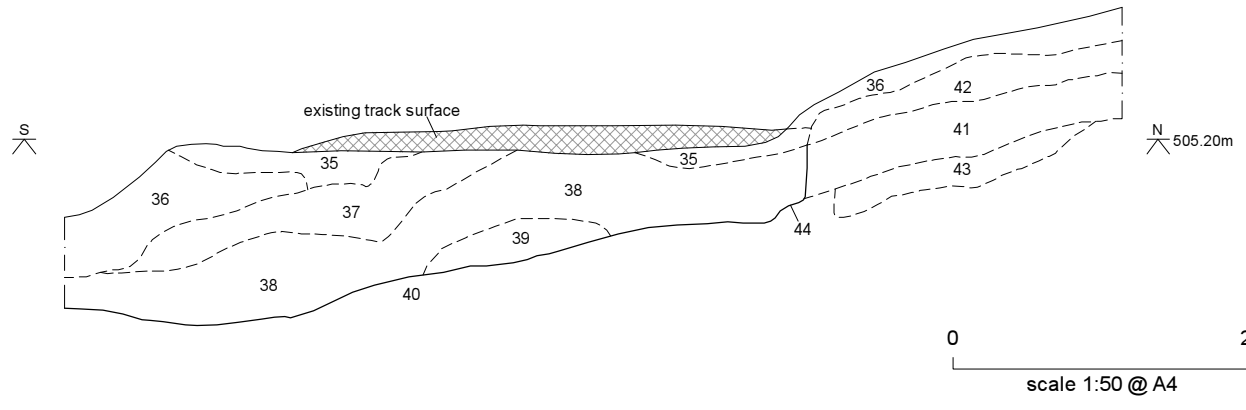

Cam High Road, Yorkshire Dales National Park: watching brief, location plan of trench and section

Figure 9