



A66 Temple Sowerby Bypass and Improvements at Winderwath

Phase 2 Archaeological Works: Post- Excavation Assessment Report



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SUMMARY

This report presents an archaeological assessment of the results of the Phase 2 archaeological works conducted prior to the construction of the A66 Temple Sowerby Bypass and Improvements at Winderwath, by Skanska Construction UK Ltd. The route of the proposed bypass lies to the south of the current alignment of the A66, extending for 4.9km from Whinfell House (NY 589 287), west of the village of Temple Sowerby, to Lowmoor Row (NY 625 260), south-east of the village.

On the basis of the archaeological evaluation (Phase 1) results, four areas were identified where additional work was required in order to fully mitigate the impact of the scheme on archaeological remains.

- A strip and record excavation of part of the proposed bypass route (designated Area 1) situated south of Temple Sowerby.
- A strip and record excavation of part of the proposed bypass route (designated Area 2) immediately east of Spitals Farm and south-east of Temple Sowerby, and a watching brief on the adjacent access route into the proposed Spitals Farm Underpass.
- A watching brief on the site of the main works compound, between Areas 1 and 2.
- Works to preserve *in situ* remains associated with Field House, which were identified during the topographic survey of 2005 (OA North 2005, 17-18).

In Area 1, a number of earth-filled features were recorded, although none produced any artefactual materials, and their date could not be determined. Additionally, part of an old river channel was recorded within the extreme north-western end of the area, which is likely to represent an ancient course of the River Eden.

The programme of works for the Area 2 strip and record was revised and, following further evaluation, the part of the site lying within the footprint of the Spitals Farm Underpass was fully excavated. A well-preserved section of the Roman road linking the forts at Brougham and Kirkby Thore was revealed. A coin of AD 71 was found from within the modern topsoil that had lain above the disturbed cobbling on the northern edge of the road. Topsoil stripping within the footprint of the south access of the Spitals Underpass revealed two large, intercutting pits, interpreted as quarry-pits

The watching brief on the works compound revealed a number of pits, hollows and postholes, and two sherds of prehistoric pottery were recovered from one of the pits. Burial of the remains of Field House was carried out by under archaeological supervision in February 2006.

The assessment has examined the results of the fieldwork and determined the potential for further analysis of each category of archaeological data, as recommended by English Heritage (1991) in the guidance document *Management of Archaeological Projects* (MAP2). While the dataset has only limited potential, certain elements are worthy of further analysis and publication. It is recommended that the results are published in the *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*.

ACKNOWLEDGEMENTS

The programme of archaeological investigation along the route of the proposed A66 Temple Sowerby Bypass has been greatly facilitated by support and assistance from numerous people. In the first instance, OA North would like to express its thanks to Skanska Construction UK Ltd, particularly Gordon Grey, for commissioning and supporting the work, and to Paul Garner and Mike Pedley for logistical support. Further thanks are due to Jonathan Dempsey of Jacobs Ltd (formerly Jacobs Babbie), the client's archaeological consultants, for his support and enthusiasm.

The watching brief on the works compound site and the strip and record excavation in Area 1 were undertaken by Christina Clarke, Andy Bates, Jeremy Bradley and Rebekah Pressler. All the fieldwork in Area 2 and on the Spitals Underpass site (the initial watching brief on the topsoil strip, the additional evaluation and the subsequent excavation) was supervised by Andy Bates, assisted by Kathryn Levey, Jason Clarke, Andrew Frudd and Richard Colebrook. The environmental sampling was undertaken by Denise Druce, with assistance from Sandra Bonsall. The report was compiled by John Zant, with the drawings completed by Marie Rowland, and edited by Mark Brennand. The project was managed by Alan Lupton.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1 This report presents the results of the Phase 2 archaeological works conducted prior to the construction by Skanska Construction UK Ltd of the A66 Temple Sowerby bypass and associated improvements at Winderwath.
- 1.1.2 In 2002, a Desk-Based Assessment (DBA) of the proposed bypass route (Fig 1) and its environs was undertaken (Highways Agency 2002), and was followed by a geophysical survey during October and November of that year (GSB Prospection 2002). The DBA revealed 49 sites of cultural heritage significance, of which the majority dated from the Roman period, although the list included 13 finds of Bronze Age artefacts, and 22 Listed Buildings. The geophysical survey identified several areas of anomalies which suggested the potential existence of below ground archaeological remains.
- 1.1.3 As a result of this work, the contract for the construction of the bypass and the associated improvements at Winderwath included specific mitigation measures to address the potential impact of the scheme on the known and unknown archaeology of the area. The contract specified a staged programme of archaeological work, comprising an initial phase of field evaluation (Phase 1), followed by the development of strategies to mitigate the impact of the scheme on the archaeological and historic resource. These strategies might involve *in situ* preservation of archaeological deposits, and/or excavation and recording of threatened archaeological remains in advance of, or during, construction works.
- 1.1.4 Jacobs Ltd, acting as archaeological consultants for Skanska Construction UK Ltd, formulated a Written Scheme of Investigation (WSI) to undertake the Phase 1 works (Jacobs Babbie 2005). The evaluation comprised three main elements: topographic survey; archaeological evaluation trenching; and a watching brief of geotechnical inspection pits. The work was undertaken by Oxford Archaeology North (OA North) during a four week period in May and June 2005, and a report detailing the results was issued in August 2005 (OA North 2005).
- 1.1.5 On the basis of the evaluation results, four areas were identified where additional work was required in order to fully mitigate the impact of the scheme on archaeological remains identified during Phase 1 (Fig 2). A draft Archaeological Design for the Phase 2 works was prepared by Jacobs Ltd in February 2006 (Jacobs Babbie 2006), in which the following additional works were identified:
- i) a strip and record excavation of part of the proposed bypass route (designated Area 1) approximately 350m long and *c* 50m wide, situated immediately to the south of Temple Sowerby, and previously investigated by evaluation trenches 43-5 and 47;
 - ii) a strip and record excavation of part of the proposed bypass route (designated Area 2) immediately east of Spitals Farm and south-east of

Temple Sowerby (measuring 220m in length and up to 30m wide), previously investigated by evaluation trench 67, and a watching brief on the adjacent site (measuring c 23 x 20m) of the south access into the proposed Spitals Underpass, which was to provide access beneath the bypass to Spitals Farm;

- iii) a watching brief on the site of the main works compound, an area of up to 136 x 95m situated between Areas 1 and 2;
- iv) works to preserve *in situ* remains associated with Field House, which were identified during the topographic survey of 2005 (OA North 2005, 17-18). The remains of this structure, which is known from cartographic evidence to have been in existence prior to 1838 (Highways Agency 2002), are situated c 300m north-west of Area 1.

1.1.6 Subsequently, the programme of works for Area 2 was revised; the whole area was subjected to a further phase of evaluation, comprising the excavation and recording of eleven small trenches (Trenches 70-80). On the basis of the results of this work, that part of Area 2 lying within the footprint of the Spitals Underpass was ear-marked for full excavation, but no further work was to be undertaken over the rest of the area.

1.1.7 OA North was subsequently commissioned to undertake the Phase 2 works. Burial of the remains of Field House was carried out by under archaeological supervision in February 2006, the watching brief on the works compound was completed during late January and early February 2006, and the strip and record excavation in Area 1 was undertaken during February and March of the same year. In accordance with the original scheme of works, a watching brief on the southern access into the Spitals Underpass commenced at the end of March 2006. Within Area 2, the additional phase of evaluation was carried out in April and May 2006; excavation of the Spitals Underpass site was undertaken in two phases, the first in July 2006, and the second in June 2007.

1.2 LOCATION, GEOLOGY AND TOPOGRAPHICAL SETTING

1.2.1 Temple Sowerby lies within the undulating farmland of the Eden Valley, approximately 13km east of Penrith, in a part of east Cumbria formerly constituting the county of Westmorland (Fig 1). The village straddles the A66 trunk road (Plate 1). To the west of the River Eden the land slopes gently down, north-eastwards from Whinfell Forest towards the A66, from c 130m AOD to c 120m AOD. East of the river, the land gently undulates at about 110m AOD, with a slight rise towards a low mound near Spitals Farm, at c 128m AOD. The landscape surrounding Temple Sowerby consists of open and rolling farmland, of a mixed arable and pastoral character. The area is subdivided into rectilinear field patterns by fences and hedgerows, with mature trees (Countryside Commission 1998, 39).

1.2.2 The solid geology principally consists of Permo-Triassic sandstones, formed between 280 and 195 million years ago, when the area was under desert conditions, and covered in wind blown sand dunes. Within these deposits are

beds of gypsum, which is commercially extracted for use in plaster, and there are quarries located to the north of both Temple Sowerby and Kirkby Thore. The overlying glacial boulder clays / till, of Devensian date are a highly variable mix of sands, silts and clays, with different levels of stony inclusions and occasional large boulders, probably glacial erratics.

- 1.2.3 The soils in the Temple Sowerby area are of the Clifton Association, which are fine, reddish, loamy till soils of a stagnogley nature (Jarvis *et al* 1984). Along the Eden Valley floor itself in this locale the soils are of the Enborne Association, typical alluvial gley soils. The result is a fertile landscape suitable for the mixed arable and pastoral agricultural use.
- 1.2.4 The route of the proposed bypass lies to the south of the current alignment of the A66, extending for 4.9km from Whinfall House (NY 589 287), west of the village of Temple Sowerby, to Lowmoor Row (NY 625 260), south-east of the village (Fig 1). The route crosses the River Eden south-west of Temple Sowerby. The Phase 2 works were carried out on four sites situated east of the river, south and south-east of the village (*Section 1.1.5* above and Fig 2).

1.3 HISTORICAL BACKGROUND

- 1.3.1 The following historical background is derived from the Stage 2 DMRB desk-based assessment published in *Chapter 7: Cultural Heritage and Archaeology* of the Environmental Statement published in June 2002 (Highways Agency 2002).
- 1.3.2 **Prehistoric period:** during the prehistoric period the upper reaches of the River Eden provided an important natural route from the north east of England to the North West, with the area around Penrith seemingly acting as a focal point for activity. The fertile lands of the Eden valley have attracted settlement since the Neolithic period, and the location of monuments from this period within Cumbria appears to suggest a shift in the emphasis of Neolithic activity from the coastal plain to the edge of the Lake District hills and the Eden Valley (Hodgkinson *et al* 2000, 37). Fieldwork has indicated that the majority of Neolithic long barrows in the region are located within the Eden Valley, such as the long cairn at Crosby Garret (Waterhouse 1985, 7). Perhaps the best-known prehistoric monuments in the area are the two henges known as King Arthur's Round Table and Mayburgh, at Eamont Bridge, and Long Meg and Her Daughters stone circle near Langwathby (*ibid*).
- 1.3.3 Prehistoric activity in the Temple Sowerby area is represented by the cropmark of a possible Bronze Age ring ditch, and a large number of prehistoric artefacts that have been found in the area around the village. Most of these casual finds, which include stone and bronze axes, date to the Bronze Age, and point to activity in the area at that date, perhaps including settlement sites.
- 1.3.4 **Roman period:** during the Roman period the area continued to be strategically important with the nearest fort at Kirkby Thore less than 1km to the south-east of the scheme. Work on the site undertaken by OA North, in its former guise

as the Lancaster University Archaeological Unit (LUAU), and others, is summarised in LUAU 2001. Evidence from several sources, including the *Antonine Itinerary* of the early third century AD, and the *Notitia Dignitatum* of the later fourth century AD (Shotton 2004), suggests that the fort at Kirkby Thore can be equated with the Roman site of *Bravoniacum* (Salway 1981).

- 1.3.5 The A66 itself follows the route of the Roman road that connected Catterick in North Yorkshire with the fort and extramural settlement at Brougham, near Penrith. It is possible that in the hinterland of the road there may be as yet unknown sites dating to this period, some of which may be hinted at from the results of the geophysical survey undertaken as part of the archaeological assessment works for the current scheme. Other sites in the nearby area include cropmarks of potential Romano-British settlements or farmsteads, and a Roman milestone.
- 1.3.6 **Early medieval period:** although early church sites may have existed nearby, at Kirkby Thore and at Ninekirks (Simpson 1958, 75), very little is known of the origins and development of Temple Sowerby and the surrounding region during the early medieval period. The main evidence is from the name 'Saurby', which is may be Old Scandinavian for sour field. The *-by* element of the name appears to be more specifically Danish, and it is suggested that the distribution of settlements with *-by* could indicate the movement north-westwards of Scandinavian peoples, along the Eden Valley towards the Carlisle plain (Fellows-Jensen 1985, 67; 70).
- 1.3.7 **Medieval period:** in about 1228 the site or manor at 'Saurby' came into the possession of the Knights Templars, and the Temple element of the village's name was added. Nearly a century later, between 1312 and 1323, the manor was in the hands of Robert, Lord Clifford, and documentation shows the manor to have had eight cottages and a mill. This mill may have left some traces detectable as Mill Island on 1838 mapping, and it is possible for below ground remains to have survived. The order of the Knights Templars was dissolved in 1312, and after 1323 the manor was granted to the Knights Hospitallers, from which Spitals Farm at the eastern end of the scheme may derive its name. The Knights Hospitallers possessed the manor until the Dissolution of the Monasteries by Henry VIII (Highways Agency 2002).
- 1.3.8 A gold 'fede' brooch probably of late fourteenth-century or early fifteenth-century date, appears to have been found near to Temple Sowerby in Whinfield Park. Fede-rings are so called because of the two hands clasped in troth (faith). As a form, these brooches can trace their origins back to the Roman period when the motif was more common on finger rings. As brooches, fede-rings became very popular in the medieval period although complete examples are rare. The ring has an inscription on it which reads *To ye, ihe[s]u, my troth I plight, and to ye, Mary, his mother bright.* (Highways Agency 2002.)
- 1.3.9 Hutchinson's *History of the County of Cumberland* (1794) has a reference to a "ring or fibula.....[which] was found in 1778 in Whinfield Park, turned up by the plough, [it] is of pure gold and weighs 19dw". The description and illustration which accompany this statement make it clear that this is the same brooch. 'Whinfield' or Whinfield' Park lies between Brougham Castle and

Temple Sowerby, about five miles south-east of Penrith. In the fourteenth - fifteenth centuries it was a deer park belonging to the Clifford family. The quality of this brooch would be consistent with it having belonged to a member of the aristocracy.

- 1.3.10 **Post-medieval period:** Henry VIII, in 1543, granted ‘the whole manor of Temple-Sowerby, with the appurtenances, excepting the mines of coal and lead, in Westmorland and Cumberland, late the property of the priory of St John, of Jerusalem, and parcel of the possessions of the late preceptor of the mount of St John Baptist, Co. York,’ to Thomas Dalton, Esq. It remained in the Dalton family until it passed, through marriage, to William Norton, Esq. William Norton was the landowner responsible for enclosing Temple Sowerby Moor in about 1784. The manor of Temple Sowerby then fell to a Mr Edmondson and, subsequently, to William Hodgson Esq. His sister married John Boazman, Esq of Aycliff, County Durham, and it passed into their family (Highways Agency 2002).
- 1.3.11 The descendants of Thomas Dalton built a manor house at Acorn Bank. Other possible remains in the area traversed by the scheme dating to the post-medieval period include the bridge over the Eden constructed at about 1748 as a replacement for an earlier bridge built in 1575, and a possible trackway near Acton Lodge, thought to have been created by Lady Anne Clifford. To the west of the trackway, is the site of ‘Field House’, a structure marked on a map of 1838 (Highways Agency 2002).
- 1.3.12 In 1851 the village of Temple Sowerby was described as consisting of ‘two spacious streets, in which are many good houses, and three inns. Two important fairs for sheep and cattle are held here annually, on the last Thursday in January, February, and March, on the second Thursday in May, and last in October. They were established about forty years ago’ (Highways Agency 2002). This demonstrates that the village was relatively prosperous and a focus for activity within the surrounding landscape.
- 1.3.13 The arrival of the railways in the nineteenth century brought a new mode of transport to Temple Sowerby. The Carlisle to Settle route ran north of the village, and the branch line between Appleby and Penrith was to the south. There was a station associated with the latter, just to the south of the village. The branch railway went out of use in the mid-twentieth century, and was eventually dismantled. The result has been the return to road use, and the reliance of the A66, which has become a dominant feature within the landscape of the area.
- 1.3.14 The population of Temple Sowerby has not seen any drastic increases, just a steady progression. In 1641/2 there were an estimated 140 people, 30 years later the estimated number had only increased by seven. By 1787 there were 301 and in 1801 the level was about the same, at 299 inhabitants (Highways Agency 2002).

2 AIMS AND OBJECTIVES

2.1 AIMS AND OBJECTIVES OF THE PHASE 2 WORKS

2.1.1 This section provides a summary of the aims and objectives of the Phase 2 archaeological works, as set out in the Phase 2 Archaeological Design (Jacobs Babbie 2006). The overall aim was to ensure that archaeological remains identified by the Phase 1 evaluation, or other remains that were not identified by the previous investigations, should be adequately excavated and recorded in order to mitigate the impact of the road construction on the archaeological resource.

2.1.2 In addition to this general aim, a series of more specific objectives was also identified:

- to identify, investigate and record any such archaeological remains to the extent possible by the methods put forward in the Design (*ibid*);
- to identify archaeological remains which cannot be adequately recorded within the resources available, and undertake consultation in respect of such remains with all interested parties, to determine and implement the appropriate nature and scope of mitigation works required;
- to determine (so far as possible) the stratigraphic sequence and dating of the deposits or features identified;
- to preserve the remains of Field House *in situ*;
- to disseminate the results through deposition of an ordered archive at the local museum, the deposition of a detailed report at the HER, and publication at a level of detail appropriate to the significance of the results.

3 SUMMARY OF FIELDWORK RESULTS

3.1 INTRODUCTION

3.1.1 This chapter provides a summary of the results obtained from the archaeological fieldwork undertaken during Phase 2. Attention is focused upon three areas, where the evaluation recorded potentially significant archaeological remains (OA North 2005), and which were therefore subjected to further detailed excavation (Fig 2). A fourth area, that of the site of Field House, was not subjected to further investigation, as a mitigation strategy was devised to preserve the remains of this structure *in situ*. The first piece of work to be completed was the watching brief maintained during machine stripping of topsoil within the works compound, which was undertaken in late January and early February 2006. This was followed in late February and March by the strip and record excavation within Area 1, which involved the investigation and recording of all archaeological features exposed following mechanical removal of the modern topsoil. The third phase of work took place in Area 2, where a watching brief commenced in late March 2006 on the south access into the Spitals Underpass. A further phase of archaeological evaluation in Area 2, completed during April and May 2006, was followed by a two-phase excavation in July 2006 and May 2007 of archaeological deposits within the footprint of the Spitals Underpass, where remains of the Roman road from Brougham to Kirkby Thore were exposed.

3.2 THE WORKS COMPOUND

3.2.1 Machine stripping of modern topsoil within the area of the main works compound revealed a number of features of potential archaeological interest, dug into the natural subsoil (Fig 3). With the exception of a small pit or hollow of possibly recent date (**I12**), situated on the northern part of the compound, most of the features were concentrated in a limited area towards the centre of the stripped area, measuring *c* 20 x 15m, located (Fig 3). The first to be revealed, and probably the most archaeologically significant, was an oval pit (**I04**) of which only the western half survived (Plate 2), the rest having been destroyed by a modern field drain (**I15**). This pit measured 2.03m north-to-south, at least 0.63m wide, and 0.26m deep, with a gently-rounded, U-shaped profile, and a shallow lip on its southern edge. It was filled with dark brown silty sand containing numerous flecks of charcoal and medium-large stones (**I03**). This deposit produced a small amount of prehistoric pottery, initially thought to be of possible Iron Age date, but now identified as Bronze Age material (*Section 4.4* below).

3.2.2 Approximately 11m north-east of **I04** was a circular pit (**I06**), 2.1m in diameter, and 0.45m deep. The lower 0.2m of this feature was filled with a yellow-brown stony sandy silt (**I14**), overlain by an upper fill of mid-grey-brown sandy silt (**I05**), containing many small stones. Neither deposit produced any artefactual material, and the feature therefore remains undated. Four other shallow pits or hollows were also located in this area, two (**I10** and **I13**) immediately north of feature **I06**, one (**I17**) to the south, and one (**I07**),

south-west of pit **104**. All were relatively shallow, no more than 0.17m deep (**107** was only 70mm deep), and were filled with pale/mid-brown silty sand similar in character to the natural subsoil. None produced any artefacts and cannot, therefore, be dated, although the fill (**108**) of **107** was flecked with charcoal, whilst the fill (**109**) of **110** contained some grey, ashy material. In view of the fact that nearby pit **104** produced Bronze Age pottery, a similar date cannot be ruled out for these features. Conversely, a north-east to south-west alignment of four oval post holes (**118**) situated immediately west of the other features in this area was thought to be of fairly recent date, since one contained a modern nail (not retained). These features, each of which measured *c* 0.3-0.5 x 0.25-0.35m and 0.15-0.25m deep, were spaced at regular intervals of 3.1m. Two isolated post holes of unknown date (**102**, **107**) were located, respectively, *c* 7m to the west and *c* 3.5m east of the post row.

3.3 AREA 1

3.3.1 Mechanical stripping of the modern topsoil (**120**) within Area 1 revealed a number of earth-filled features dug into the natural orange-pink sandy subsoil (**122**). Most were situated towards the south-eastern end of the area (Fig 4), although a small number were also found further north. There, one of the most significant discoveries was part of an old river channel (**132**) aligned in a north-west to south-east direction across the extreme north-western end of the investigated area. This was approximately 12m wide and 0.5m deep, with a quite steep eastern edge, a shallow, sloping western edge and a flat base. The bottom of the channel was filled to a depth of 0.15m with a fine, pale reddish grey sand containing occasional large pebbles (**135**). This was sealed by up to 0.3m of clean, pale yellow-grey silty sand (**134**), that was in turn overlain by an upper fill of pale grey-brown sandy silt (**133**). It seems likely that feature **132** was associated with an ancient course of the River Eden, for although today the river lies over 250m to the west, it is likely to have shifted its position considerably over time. At the extreme northern end of Area 1, the trench was crossed by a shallow ditch, on a north-east to south-west alignment, which was 1.7m wide and 0.1m deep (**124**), and filled with pale grey-brown silty sand (**123**). This feature seems to have been associated with the southern edge of Acton Lane, which runs south from Temple Sowerby towards the river.

3.3.2 The only other features of note recorded on the northern part of Area 1 were a pit (**129**) and a fragment of a probable drystone wall foundation (**126**). The pit was situated 15m east of the eastern edge of the palaeochannel, and was oval in plan, with a maximum diameter of 1.8m, and a depth of 0.25m. It was filled with loose, grey-brown silty sand containing many small and medium-sized pebbles and angular stones (**128**). The wall foundation was initially recorded during the evaluation phase of the project, within trial trench 43 (OA North 2005, 23; feature **1703**), when it was tentatively interpreted within the limited area investigated as a possible cobble bank or part of a field clearance cairn. When exposed in a larger area during the course of the Phase 2 works, it was seen to comprise a linear arrangement of unbonded river cobbles and sub-angular stones up to 0.5m in size, packed into a flat-bottomed foundation trench (**127**), 1.85m wide and 0.23m deep. Spatial considerations suggest that

the feature cut the eastern edge of the in-filled palaeochannel, although this is not explicitly stated in the site records. A single sherd of medieval pottery was recovered from within the fabric of the wall stones, and a badly abraded sherd of medieval pottery and a sherd of post-medieval pottery were recovered from a more loose spread of cobbles and large sandstone fragments (**126**), possibly representing collapsed and/or demolished wall stones.

- 3.3.3 Part of a second wall foundation (**130 = 131**), sharing the same north-east to south-west alignment as **126**, was recorded in trial trench 44 during the Phase 1 works, some 78m to the south-east (OA North 2005, 24; feature **1626**). A single sherd of medieval pottery was loosely associated with the foundation of this feature. The exact provenance of this object is uncertain; it may have come from topsoil that had worked its way between the cobbles, or from a putative feature that was thought to pre-date the foundation (*ibid*), although no trace of such a feature was found during Phase 2. Wall **130/131** was observed running across the full width of Area 1, following the machine-strip (a distance of just over 10m), where it was seen to comprise unbonded but tightly-packed cobbles set in a flat-bottomed foundation trench 1.55m wide and 0.3m deep. The north-east to south-west alignment of foundations **126** and **130/131** is shared by many of the upstanding field walls in the area, suggesting that they represented either the remains of demolished late post-medieval field boundaries, or formed part of an earlier field system superseded by the present walls. It is possible that both features were demolished in relatively recent times, to increase field sizes in order to facilitate modern agricultural practices.
- 3.3.4 The concentration of features at the south-eastern end of Area 1 was, for the most part, represented by a scatter of small pits or hollows (**141, 143, 145, 147, 149, 151, 155, 157, 159** and **166**). Some of these features had almost certainly formed naturally, although a north-east to south-west aligned ditch (**139**) was also recorded (Fig 4). This feature was up to 2.3m wide, and 0.2m deep, and was traced across the full width of the investigated area. The single fill (**136 = 137 = 138**) of loosely compacted brown sandy silt contained a few rounded pebbles and cobbles. Although no pottery or other artefacts were recovered, the ditch shared a close alignment to a modern field wall, suggesting either that it was of later post-medieval date, or formed part of an earlier field system on the same alignment.
- 3.3.5 The ten other features recorded in this area included two obviously modern post holes (**141, 143**) and four shallow, oval hollows (**149, 151, 155, 159**). Each of the latter was filled with dark brown/black organic peaty material, containing varying quantities of small pebbles and angular sandstone fragments. These features, which varied in size from 0.6m in diameter and 0.25m deep (**155**), to 1.3 x 1.16m and 0.33m deep (**151**), are thought to have been of natural origin. Three of the four remaining features (**145, 147, 166**) were shallow oval pits filled with pale brown or red-brown stony, sandy silts. All were in the region of 2-2.5m in length, 1.4-1.55m wide, and 0.3-0.45m deep, with fairly gently sloping sides and flat or slightly rounded bases. The tenth feature (**157**) was a sub-circular posthole, 0.8m in diameter, and 0.63m deep, filled with red-brown silt and large packing stones.

3.3.6 No pottery or other artefactual materials was recovered from any of the features on this part of the site, although a prehistoric flint flake (IRF 1000; *Section 4.8* below) was recovered from the base of the topsoil directly above pit **166**. With the exception of ditch **139** and postholes **141**, **143** and **157**, it is possible that all the features in this area were formed by natural processes, rather than anthropogenic activity.

3.4 AREA 2

3.4.1 Topsoil stripping within the footprint of the south access of the Spitals Underpass commenced at the end of March 2006, during which an archaeological watching brief was maintained, and a small number of features were exposed and recorded. The only features of any archaeological significance were two large, intercutting pits, interpreted as quarry-pits, situated at the north-west corner of the site (Fig 5). The earliest (**153**) measured in excess of 8.6m east-to-west, extending beyond the area of excavation to the north and west, and being truncated to the east by a later pit (**152**). The second pit (**152**) was 6m long, and at least 4m wide, but also extended beyond the edge of the excavation to the north. Both were mechanically excavated to a depth of *c* 1.2m and were found to have been infilled with mixed grey-brown and red-brown sands (**172**, **173**, **174** in **153**; **167**, **168**, **169**, **170**, **171** in **152**) containing varying quantities of sandstone fragments. Neither feature was excavated to its full depth. A few small fragments of nineteenth-century pottery were recovered from the fills of **152**, but these were not retained. No artefacts were recovered from the material within **153**, but it is perhaps likely to be of a broadly similar date.

3.4.2 Although initially planned as a strip and record excavation, the archaeological scheme of works for Area 2 as a whole was subsequently revised, partly due to problems with spoil management. Following consultations with the client's archaeological consultants, and Cumbria County Council's Archaeology Service, it was agreed that an additional phase of evaluation, involving the opening of eleven evaluation trenches (Trenches 70-80), should be carried out within this area (*Section 1.1.6* above). Eight of the new trenches contained little or nothing of archaeological significance, but towards the north-western end of Area 2 the cobbled surface of the Roman road from Brougham to Kirkby Thore was exposed in three trenches (Trenches 71, 72 and 73), located within the area of the proposed Spitals Underpass (Fig 6). Consequently, these trenches were extended northwards in order to expose more of the road, in an attempt to establish its width and precise alignment. In view of the significance of these deposits, it was subsequently agreed that all archaeological remains within the footprint of the underpass should be fully excavated.

3.4.3 The stratigraphically earliest deposit recorded in this area (Fig 7) was a buried soil horizon (**1896**) that lay directly above the natural orange-red sandy subsoil (**1892**). This deposit, which was also recorded in evaluation Trenches 71, 72 and 73 (**1880**, **1857** and **1807** respectively in these areas), comprised a layer of fine, dark brown or grey-brown sandy silt up to 0.5m thick, but generally rather thinner, containing only a few small pebbles and sandstone fragments.

Within the area of the Spitals Underpass excavation, the soil was sealed by the Roman road material (see below). However, it was also observed in evaluation Trench 70 (**1837**), which was located immediately north of the excavation site, and in Trench 74 (**1835**), immediately to the south, where no trace of the road was found. In these areas, it was overlain by patchy deposits of fine, pale orange-brown sandy silt (**1806, 1838, 1856, 1879**), that were in turn sealed by modern topsoil.

- 3.4.4 The Roman road (**1901**) was traced on a north-west to south-east alignment across the full width of the excavated area (Fig 7; Plate 3). As it survived, it was up to 9.5m in width, although it is possible that post-Roman cultivation had disturbed its edges (particularly the northern, upslope, edge) and that it had originally been wider. conversely, it is known that the progressive layers of road make-up often slump, creating an impression of greater width than originally constructed. The upper surface of the road (**1901**) was found to have been almost completely removed, perhaps as a result of heavy wear during its lifetime and the effects of subsequent agricultural activity. Traces of the metalled surface, which comprised a highly compacted layer of small, sub-rounded and sub-angular stones 70mm thick, were, however, recorded in evaluation Trenches 72 and 73 (**1861**), and patchy remains were also noted elsewhere during the excavation.
- 3.4.5 The compacted layer of small, sub-rounded and sub-angular stones that formed the road surface overlay and was mixed within a possible foundation of small to medium-sized sub-angular sandstone fragments (averaging 60 x 50 x 40mm), mixed with a little dark grey sandy silt. This foundation (**1818, 1877, 1878**) was only discernible as a distinct layer in some areas. Generally speaking, the stones in the northern part of this deposit were smaller than those on the southern edge of the foundation, some of which measured up to 250 x 250 x 170mm. The depth of the road make-up also seems to have increased generally from south to north, down the natural slope, from as little as 50mm at its northern edge to c 0.2m on the south. This was probably due in part to the fact that the upslope edge of the road was more vulnerable to the effects of post-Roman agricultural activity than the rest of the feature. Alternatively, it may also have been a deliberate feature of the road construction, the deeper make-up on the south compensating for the natural north to south slope. Traces of a kerb of larger stones defining the southern edge of the road were also recorded (Plate 4), although this had been destroyed over the greater part of the excavated area. A moderately worn *as* of AD 71 (IRF 1001; *Section 4.6* below) and a copper-alloy pin head (IRF 1002; *Section 4.7* below) of probable Roman date came from the modern topsoil that had become mixed with the disturbed cobbling on the northern edge of the road.
- 3.4.6 The southern edge of the road was truncated by a U-profiled ditch (**1909**) up to 0.85m wide and 0.7m deep (Fig 6; Plate 4). The feature was filled with a fine, dark grey clay-sand (**1908**), containing some cobbles and stone fragments, presumably derived from the road surface itself. Although this feature ran broadly parallel to the edge of the road, it did not share precisely the same alignment, and clearly post-dates the road foundation. During the course of the excavation, the ditch was thought to be of post-Roman date, although no

artefactual materials were recovered from the feature. The ditch may equally be of Roman period date, post-dating the original construction of the road, but contemporary with use in the following centuries.

- 3.4.7 A second ditch, up to 1.2m wide and 0.3m deep (**1898=1900**), was also recorded, some 3m north of the surviving northern edge of the road (Fig 6). Like **1909**, this feature is undated, but was considered to be probably post-Roman in date. Whilst this interpretation may be correct, the possibility that features **1998** and **1909** actually represent the truncated remains of Roman roadside ditches cannot be completely discounted. If this were so, it would suggest that on the northern (upslope) edge of the road, even allowing for a berm, the edge of the road had been completely removed by post-Roman agricultural activity. The southern ditch obviously truncated the road surface, but this in itself may have been a replacement for a ditch further to the south, beyond the area of excavation. Allowing for a truncation of the northern edge of the road, the distance between the inner edge of the two ditches is 11.55m wide, although the southern ditch is secondary. This distance equates to 39 Roman feet (*pedes Monetales*), taking the *pes Monetalis* (*p. M.*) as 0.29617m (Walthew 2005, 273), or very nearly one-third of an *actus* (120 *p. M.*). Since there is good archaeological evidence for the regular use of the *actus*, and fractions thereof, in the laying-out of forts, camps and other military sites in Roman Britain (Richardson 2000), this observation may be significant.
- 3.4.7 Elsewhere in Area 2, few other remains of archaeological significance were recorded. A number of shallow linear features, most probably plough furrows of indeterminate (but probably fairly recent) date, were observed in some of the evaluation trenches, but were not recorded during the excavation. All cut the natural subsoil, and were filled with pale brownish sandy soils. The majority were aligned roughly north-west to south-east, broadly parallel to both the Roman road and nearby modern field boundaries.
- 3.4.8 Over the whole of the excavated area, all earlier deposits were either directly overlain by modern topsoil *c* 0.15-0.4m thick (**1893**), or by an intermittent but often quite thick deposit of pale-mid grey or brown silty sand up to 0.6m deep (**1890**). This material was recorded in most of the evaluation trenches, and over much of the area excavated subsequently. This material, which can probably be interpreted as a post-medieval agricultural soil, was itself sealed by the topsoil.

3.5 WELLS ADJACENT TO THE CLIBURN ROAD

- 3.5.1 During the course of the Spitals Underpass excavation the archaeological team were notified by the contractor of the discovery of two stone-lined wells during the course of topsoil stripping towards the western end of the bypass route. Both features were situated on the south side of the current A66, adjacent to its junction with the Cliburn Road. Neither could be excavated, but brief field notes were made and the location of the features was plotted. The first well was located *c* 7.5m west of the Cliburn Road, and *c* 4.3m south of the southern edge of the A66. It was circular in plan with a shaft 1.04m in diameter, internally, lined with dressed sandstone blocks. The second feature

was situated *c* 14m east of the Cliburn Road, and *c* 12.7m south of the A66. It too was circular and sandstone lined, with an internal diameter of 1.2m. Its uppermost fill contained large sub-rounded and angular sandstone fragments measuring up to 0.7 x 0.55 x 0.5m. These features could not be dated, but are presumed to be of later post-medieval date.

4 ASSESSMENT RESULTS

4.1 ASSESSMENT AIMS AND OBJECTIVES

4.1.1 The principal aim of the present assessment is to evaluate all classes of archaeological data generated by the Stage 2 works of 2006/07, in order to formulate a project design for a programme of further analysis. A statement of the significance of the results from each element of the project archive is given below. These statements are based on the assessment work undertaken and the original academic themes expressed in the project design.

4.1.2 The objectives of the assessment correspond to, and are prescribed by, *Appendix 4 of Management of Archaeological Projects (MAP 2)* (English Heritage 1991). They are:

- to assess the quantity, provenance and condition of all classes of stratigraphic, artefactual and environmental data;
- to comment on the range and variety of the material;
- to assess the potential of the material to address new research questions raised by the assessment;
- to formulate any further questions arising from the assessment of the excavated data.

4.1.3 This assessment presents:

- a factual summary, characterising the quantity and perceived quality of the data contained within the site archive;
- a statement of the academic potential of the data;
- recommendations on the storage and curation of the data.

4.2 PROCEDURES FOR ASSESSMENT

4.2.1 The entire paper and material archive generated by the Stage 2 works was examined for the purposes of this assessment. The methodologies adopted varied depending upon the class of material that was under examination, but are described in the relevant sections below.

4.3 STRATIGRAPHIC DATA

4.3.1 **Quantification:** the context record generated by the Stage 2 works can be subdivided in broad chronological terms as follows:

Natural geology	16
Pre-Roman	7
Roman (or possibly Roman)	25
Post-Roman (or possibly post-Roman)	39

Modern	33
Uncertain	65
Total	185

4.3.3 The archive of primary field drawings and photographs comprises the following:

Plans	32
Sections	55 (19 sheets)
Colour prints	107
Monochrome prints	516
Colour slides	688
Digital photographs	183

4.3.4 **Potential:** the stratigraphic data will provide the framework within which all other analyses will take place. The Stage 2 work has allowed a complete record to be made of the surviving archaeological remains present on the targeted areas of the site, stretching from the Roman period to the present day. The section of the Roman road from Brougham to Kirkby Thore, which was excavated at the Spitals Underpass site, represents the most significant discovery, although the presence of at least one Bronze Age feature, associated with fragments of pottery, and the survival of a pre-Roman buried soil horizon sealed by the Roman road, are also noteworthy.

4.4 THE PREHISTORIC POTTERY (*Carol Allen*)

4.4.1 **Quantification:** two sherds of pottery weighing 52g were recovered from context **103**, the fill of pit **104**, which was recorded during the watching brief on the works compound site.

4.4.2 **Evaluation:** the sherds are from the same pot, and may have been conjoining, but the edges are friable and no longer fit together. A small part of the rim survives, which is bevelled internally and flat, whilst its size and thickness (10mm) suggests that this was a fairly large pot. There is no decoration on the surviving sherds, although evidence of finger-moulding is apparent on both the interior and exterior.

4.4.3 The fabric is unoxidised and grey throughout, and contains a moderate amount (10-19%) of coarse (1-3mm) white, soft tempering material. The Temple Sowerby site lies in an area of Permo-Triassic sandstones, and within these deposits are beds of gypsum which lie at shallow depths (Taylor *et al* 1971, 92). The white material in the sherds may well be gypsum, but thin-sectioning would be required to confirm this identification. It does seem probable that the pottery was made from material obtained locally.

4.4.4 The sherds are from a Bronze Age vessel, possibly an undecorated Collared Urn (Longworth 1984), although the exterior finish is rather uneven for this type. As little of the pot survives, the identification cannot be certain, but the sherds are most likely to be from a straight-sided jar-shaped pot or urn of the early to middle Bronze Age (Gibson 2002, 104-5; Needham 1996), *c* 1700-1300 cal BC. The sherds are slightly abraded, and may have been deliberately placed in the feature or possibly transported by agricultural activity.

4.4.5 **Potential:** the two potsherds from pit **104** provide good dating evidence for this feature, and represent a useful addition to the existing corpus of data for Bronze Age activity in the Eden Valley.

4.5 THE MEDIEVAL AND POST-MEDIEVAL POTTERY

4.5.1 **Methodology:** All artefact fragments were examined by visual inspection, and an outline computer record was created using Microsoft Access. Data were recorded in a standardised format, noting provenance, type of object, material, period, and a brief written description. This will form the basis for any further work recommended, or will comprise the archive record, as appropriate.

4.5.2 **Quantification:** 18 fragments of ceramic vessels were examined (Table 1). In general the material was in relatively small fragments, as with the bulk of the collection, and the principal vector of deposition was probably manuring. A small number of earlier vessels was represented, in the main by small and abraded fragments, suggesting their recovery from highly disturbed ploughsoils.

4.5.3 Seven medieval sherds were recorded. All were relatively small and abraded. The earliest fabrics noted were Gritty wares, a dark red fabric probably similar to those from Carlisle, dated to the twelfth to thirteenth centuries, and a less gritty buff fabric with a similar or slightly later date range. The latter was from a small cooking jar. Incompletely reduced and late medieval fully reduced fabrics were also noted, amongst the former part of a large strap handle. All were glazed, presumably deriving from jugs or similar serving vessels. In general terms the gritty, incompletely reduced fabric probably dates from the thirteenth-fourteenth century, and the finer, fully reduced fabric, reminiscent of Silverdale ware, can be given a similarly broad date-range from the fifteenth to the earlier seventeenth century.

4.5.4 By far the remainder of the vessels represented were attributable to the eighteenth century or later. A fragment of mid-eighteenth century slip-decorated press-moulded dish is probably the earliest vessel represented, with fragments of creamware, industrial slipwares, and underglaze transfer-printed white earthenwares indicating that deposition continued well into the nineteenth century. The remainder of the group are kitchen wares, including large black-glazed redwares, which can only be attributed a broad, later eighteenth to early twentieth century date.

4.5.5 **Potential:** This is a relatively small group and on its own will sustain little further analysis. It should be considered alongside the pottery from the Phase 1 works, and a note and catalogue prepared for the final report.

Context	OR	Material	Category	No	Description	Period
126	3191	Ceramic	vessel	1	Fragment red gritty ware.	Twelfth-thirteenth century
126	3191	Ceramic	vessel	1	Fragment green-glazed incompletely reduced ware	Thirteenth-fourteenth century
126	3191	Ceramic	vessel	1	Fragment black-glazed redware.	Nineteenth century or later.
128	-	Ceramic	vessel	1	Fragment fine fully reduced green glazed ware. Silverdale?	Fifteenth-seventeenth century?
Above 166	3194	Stone	flint (worked)	1	Possibly debitage. Some light retouch visible.	Not closely dated
167	3201	Ceramic	tobacco pipe	1	Undiagnostic stem fragment.	Post-medieval
167	3203	Ceramic	vessel	1	Fragment creamware.	Late eighteenth-early nineteenth century
167	3203	Ceramic	vessel	1	Fragment transfer-printed blue and white ware	Late eighteenth century onwards
168	3195	Ceramic	vessel	1	Fragment large black-glazed redware bowl.	Nineteenth century or later.
169	3199	Ceramic	vessel	2	Fragment creamware.	Late eighteenth-early nineteenth century
169	3199	Ceramic	vessel	1	Fragment black-glazed redware.	Nineteenth century or later.
169	3199	Ceramic	vessel	1	Fragment white ware	Late eighteenth century onwards
170	3192	Ceramic	vessel	1	Fragment industrial slipware	Late eighteenth-early nineteenth century
1813	3210	Ceramic	vessel	1	Fragment creamware plate with blue feathered edge.	Late eighteenth-early nineteenth century
1813	3210	Ceramic	vessel	1	Fragment slip-decorated press-moulded plate	Mid-late eighteenth century
us	3197	Ceramic	vessel	2	Fragments (one body, one handle) fine fully reduced green glazed ware. Silverdale?	Fifteenth-seventeenth century?
us	3190	Ceramic	vessel	1	Fragment incompletely reduced green glazed ware.	Thirteenth-fourteenth century
us	3198	Ceramic	vessel	1	Rim fragment buff gritty fabric. Cooking jar.	Twelfth-fourteenth century

Table 1: summary of the pottery

4.6 THE ROMAN COIN

4.6.1 **Quantification:** a single Roman copper-alloy coin (IRF 1001) was recovered during the course of the Stage 2 works, from modern topsoil (**1893**) that had

become mixed with what remained of the cobbling on the disturbed northern edge of Roman road **1901**. It is conceivable that the coin derived from the make-up of the road itself, but the poor condition of the road's northern edge meant that this could not be proven.

- 4.6.2 **Evaluation:** the coin is a moderately worn *as* of Vespasian (*RIC* II (Vespasian), 497), minted in AD 71.

Obverse: [IMP CAES VESPASIAN AVG CO]S III

Reverse: Eagle on globe SC

- 4.6.3 **Potential:** the provenance of the coin means that it cannot be used to date any of the Roman deposits recorded on the site, although it is perhaps likely to have been lost, either during road construction or by a traveller, in the late first or earlier second century AD.

4.7 THE COPPER-ALLOY ARTEFACT

- 4.7.1 **Quantification:** the head of a round-headed copper-alloy pin (IRF 1002) was recovered unstratified from the modern topsoil (**1893**) overlying the surface of Roman road **1901**, on the Spitals Underpass site.

- 4.7.2 **Evaluation:** the object is poorly preserved and fragmentary, comprising the rounded head of the pin and a very short segment of the shaft. A Roman date for this item seems likely.

- 4.7.3 **Potential:** as an isolated object that occurred residually in modern topsoil, this artefact has limited archaeological potential. Its presence is, however, suggestive of activity on or in the vicinity of the site during the Roman period.

4.8 THE PREHISTORIC FLINT

- 4.8.1 **Quantification:** a single prehistoric flint artefact (IRF 1000) was recovered from the modern topsoil directly overlying the upper fill (**164**) of pit **166** in Area 1.

- 4.8.2 **Evaluation:** The item is a small flake, with some cortex attached. The flake cannot be closely dated, beyond the later prehistoric period (Neolithic and Bronze Age).

- 4.8.3 **Potential:** the item has little potential on its own, other than representing evidence of prehistoric activity in the area, although it will add to the growing corpus of lithic material from the Eden Valley. A note on this, and the lithic material recovered during the Phase 1 works, should be included within the final report.

4.9 THE ANIMAL BONE

- 4.9.1 **Quantification:** in all, 158 fragments of animal bone were recovered, 157 fragments from a sheep burial (Trench 46, **1638**) and one unfused distal epiphysis of a sheep metapodial from the backfill of feature **152**. The state of

preservation and the stratigraphic position of the burial suggests this was of recent date. The later feature is dated to the post-medieval period.

4.9.2 **Statement of potential:** this small assemblage bears no potential for further analysis.

4.9.3 **Further work:** no further work is recommended.

4.9.4 **Discard policy:** it is recommended that this material be discarded, having no archaeological value.

4.10 CHARRED AND WATERLOGGED PLANT REMAINS

4.10.1 **Quantification:** six, ten-litre environmental bulk samples, from securely stratified contexts at Spitals Underpass, were assessed for charred and waterlogged plant remains. It was hoped that the samples would yield information about the former environment and economy of the site. Four samples were taken from varying depths within context **1896**, the buried soil sealed beneath Roman road **1901** on the Spitals Underpass site. Two other samples came from contexts **1902** and **1904**, which are equated with **1908**, the fill of the possible roadside ditch (**1909**) on the southern edge of road **1901**.

Sample	Context	Type	Flot	Flot description	Plant Remains	Potential
4139	1896 (0-100mm)	Buried soil	50 ml	Charcoal (4), quartz grains (4), modern roots (4), earthworm egg cases (1)	CPR (1) <i>Avena</i> WPR (1) inc <i>Chenopodium album</i> , <i>Fumaria officinalis</i> , <i>Polygonum aviculare</i>	Medium
4140	1896 (100-200mm)	Buried soil	20 ml	Charcoal (4), quartz grains (4), insect remains (1), modern roots (3), earthworm egg cases (1)	WPR (1) inc Poaceae, <i>Fumaria officinalis</i> , <i>Chenopodium album</i>	Low
4142	1896 (300-400mm)	Buried soil	70 ml	Charcoal (4), quartz grains (4), modern roots (3), earthworm egg cases (1)	CPR (1) <i>Avena</i> WPR (1) inc <i>Agrostemma githago</i> , <i>Fumaria officinalis</i> , <i>Chenopodium album</i>	Medium
4143	1896 (400-500mm)	Buried soil	120 ml	Charcoal (4), coal (1), quartz grains (4), modern roots (2)	CPR (1) <i>Avena</i> , <i>Triticum</i> WPR (1) inc. <i>Fumaria officinalis</i> , <i>Stellaria media</i>	Medium
4146	1902	Ditch fill	15 ml	Charcoal (4), coal (2), insect remains (2), earthworm egg cases (1), modern roots (4)	CPR (2) <i>Avena</i> , <i>Triticum</i> WPR inc. <i>Chenopodium album</i> , <i>Fumaria githago</i>	Medium
4147	1904	Ditch fill	145 ml	Charcoal (4), quartz grains (4), earthworm egg cases (1), modern roots	WPR (2) inc <i>Chenopodium album</i> , <i>Stellaria media</i> , <i>Fumaria officinalis</i> , <i>Urtica dioica</i>	Low

Table 2: summary of charred and waterlogged plant remains

CPR = charred plant remains, WPR = waterlogged plant remains

- 4.10.2 **Methodology:** the samples were hand-floated and the flots collected on a 250 micron mesh and air dried. The flots were scanned with a Leica MZ60 stereo microscope, and the plant material was recorded and provisionally identified. The data are shown in *Table 2* below. Botanical nomenclature follows Stace (2001). Plant materials and other remains were scored on a scale of abundance from 1-4, where 1 is rare (up to 5 items) and 4 is abundant (>100 items). The components of the matrix were also noted.
- 4.10.3 **Evaluation:** all the samples were very low in preserved plant remains (*Table 2*), although three of the four samples from buried soil context **1896** and the sample from ditch fill **1902** contained the charred grains of oats and wheat.
- 4.10.4 **Potential:** very small assemblages of charred and waterlogged plant remains were present in all six samples selected for assessment. In all cases, however, the remains are too sparse and poorly preserved to warrant further analysis, although the charred cereal grains would provide enough material for AMS radiocarbon dating.

4.11 POLLEN

- 4.11.1 **Quantification:** four sub-samples were taken from soil monolith 4137 and assessed for pollen content. The material came from context **1896**, the buried soil horizon sealed beneath Roman road **1901** on the Spitals Underpass site.
- 4.11.2 **Methodology:** four sub-samples of 10mm³ were prepared for pollen analysis using a standard chemical procedure (method B of Berglund and Ralska-Jasiewiczowa 1986), using HCl, NaOH, sieving, HF, and Erdtman's acetolysis, to remove carbonates, humic acids, particles >170 microns, silicates, and cellulose, respectively. The samples were then stained with safranin, dehydrated in tertiary butyl alcohol, and the residues mounted in 2000 cs silicone oil. Slides were examined at a magnification of 400x (1000x for critical examination) by ten equally-spaced traverses across at least two slides, to reduce the possible effects of differential dispersal on the slide (Brooks and Thomas 1967). Two *Lycopodium* tablets (Stockmarr 1972) were added to a known volume (10ml) of sediment at the beginning of the preparation so that pollen concentrations could be calculated.
- 4.11.3 **Evaluation:** the results of the assessment are summarised in *Table 3*.

Depth (mm)	Content	Preservation	Potential
120-130	<i>Lycopodium</i> , organic material, charcoal, rare pollen	Fair	Low
260-270	<i>Lycopodium</i> , organic material, charcoal, rare pollen	Fair/crumpled	Low
310-320	<i>Lycopodium</i> , organic material, charcoal	n/a	Low
460-470	<i>Lycopodium</i> , organic material, charcoal, rare pollen	Poor	Low

Table 3: results of pollen assessment

4.11.4 **Potential:** pollen was preserved in three of the four sub-samples, although concentrations were extremely low. As the *Lycopodium* marker spores were preserved in high concentrations and in good condition, the paucity of fossil pollen can be attributed to taphonomic conditions rather than any problem with processing. It is recommended that no further palynological analysis should be carried out upon this material.

5 CURATION AND CONSERVATION

5.1 INTRODUCTION

5.1.1 The results of the fieldwork will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (English Heritage 1991) and those of the United Kingdom Institute of Conservation (UKIC 1984; Walker 1990). 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 Institute of Field Archaeologists in that organisation's code of conduct.

5.2 RECIPIENT MUSEUM

5.2.1 The paper and finds archives for the archaeological work undertaken during Phases 1 and 2 will be deposited with Penrith Museum, the nearest museum that meets the Museums and Galleries Commission criteria for the long term storage of archaeological archives (Museums and Galleries Commission 1992). The museum have indicated their willingness to accept the material, in accordance with their guidelines.

5.2.2 All artefacts found during the course of the project will be donated to the receiving museum, with the permission of the relevant landowners.

5.3 STORAGE

5.3.1 The complete project archive, which includes written records, site drawings, black and white and colour photographs, artefacts, ecofacts and sieved residues, will be prepared for storage following guidelines set out by the United Kingdom Institute of Conservation (UKIC 1984; Walker 1990). All finds will be packaged according to the recipient museum's specifications, in either acid-free cardboard boxes, or in airtight plastic boxes for unstable material.

5.4 CONSERVATION

5.4.1 The two Roman copper-alloy items recovered from the site (coin IRF 1001 and pin head IRF 1002) will require cleaning and conservation if they are to be stabilised for long term storage.

6 STATEMENT OF POTENTIAL AND RECOMMENDATIONS

6.1 INTRODUCTION

6.1.1 The Phase 2 works recorded a full as possible stratigraphic record to be made of the archaeological remains within the road construction area. The span of activity stretches from the Bronze Age through to the post-medieval period, although evidence of activity is not continuous throughout this time. The sparse nature of the evidence does not indicate dense settlement in the area at any time, and it is most likely that the area formed part of an agricultural landscape for much of its history. The construction of the Roman military road may have led to some disruption of land boundaries and field systems, but ultimately became the route of a road still in use up until the present day. The features recorded had most likely suffered from damage or truncation from ploughing, and the majority of those excavated contained no artefacts, leaving them undated or only datable by association.

6.2 PRINCIPAL POTENTIAL

- 6.2.1 **Stratigraphic data:** the archaeological works on the A66 Temple Sowerby bypass yielded a limited amount of data of variable quality and importance. The area with the greatest archaeological potential is clearly the Spitals Underpass site, where a section of the Roman road from Brougham to Kirkby Thore was excavated. With the exception of the Middle Bronze Age pit located during the watching brief in the works compound, most of the other recorded features are of low potential. Consideration should be given to disseminating data on some of the more significant features recorded during the Phase 1 archaeological works, however, which could be integrated into the Phase 2 report. This should include the few features of possible medieval date (OA North 2005, 47).
- 6.2.2 **Pottery:** the two sherds of Middle Bronze Age pottery recovered from pit 104 in the works compound are certainly of local significance, as indicators of Bronze Age activity in the area. The small assemblage of Roman, medieval and post-medieval pottery, including the material generated by the Phase 1 evaluation (OA North 2005, 33-5), is of interest in the local setting, but does not contain significant research potential.
- 6.2.3 **Other artefacts:** the small artefactual assemblage is generally of low potential. However, the Roman coin and probable Roman pin head from the Spitals Underpass site, the small assemblage of prehistoric flints (including the material generated by the Phase 1 evaluation) and the small group of clay tobacco pipe fragments (all from Phase 1), should be included in the final publication.
- 6.2.4 **Faunal remains:** the faunal remains assemblage is not believed to be of any antiquity, and thus has little archaeological value. There is no potential for further analysis

- 6.1.4 **Palaeoenvironmental remains:** the sparse assemblages of pollen and charred and waterlogged plant remains have no potential for further analysis.

6.2 REGIONAL RESEARCH PRIORITIES

- 6.2.1 The North West Archaeological Research Framework (Brennand 2006; 2007) has outlined identified research priorities for archaeology of all periods within north west England. While the results of the Phase 2 works are relatively restricted in terms of chronological depth, and the number of artefacts and ecofacts, they are still able to address research questions from the immediate and wider region.
- 6.2.2 **Bronze Age ceramics:** There is little in the way of a regional prehistoric ceramics typology or chronology at present, although collared urns are well represented within the relatively scant assemblage currently known regionally (Hodgson and Brennand 2006, 50). The study of any material will add to the regional corpus and potentially feed into a regional type series (Hodgson and Brennand 2007, 49).
- 6.2.3 **Roman roads:** while the routes of Roman roads have been the subject of considerable study (eg Ross 1916; 1920; Margary 1973; Graystone 2002; Richardson 1987; Richardson and Allan 1990; Richardson 2002), there has been little excavation of their fabric under modern conditions. Many examples also lie beneath modern roads that are still in use. The investigation and publication of such work will enhance the current state of knowledge of Roman military engineering for the area and region.
- 6.2.4 **Medieval and post-medieval pottery:** While the assemblage from the fieldwork is small, publications of descriptive notes and catalogue it will none the less contribute to the corpus of data from rural areas (Newman and Newman 2007, 96) and towards the study of distribution and trade patterns (*ibid*, 113).

7 UPDATED PROJECT DESIGN

7.1 UPDATED RESEARCH AIMS AND OBJECTIVES

7.1.1 English Heritage guidance recommends the formulation of updated research aims and objectives (English Heritage nd, 2-3), and that it is helpful to treat *aims* as major themes or goals to which specific *objectives* contribute, and to consider these aims and objectives as questions.

7.1.2 The original aims of the fieldwork are still valid, but these have now been updated, with new aims and objectives derived from the statement of potential set out in *Section 6* above. At the present stage of assessment, these necessarily emphasise the presence, absence and sufficiency of data to support further analysis of components of the archaeological record. This analysis would have two primary objectives in view: to add to the archaeological knowledge in the areas prioritised by the original fieldwork aims; and to understand how people lived in the area in the past.

7.1.3 **Aims:** the assessment of the fieldwork has demonstrated some potential for further analysis, of the stratigraphic record, and the cataloguing and publication of particular artefact groups. The preparation of this material for publication will not, however, require significant further work. A further analysis phase of the project would ultimately aim to:

- 1 characterise and, where possible date the archaeological features and deposits revealed during the excavations
- 2 contribute to an understanding of prehistoric activity in the Temple Sowerby area;
- 3 contribute to the corpus of prehistoric pottery from Cumbria;
- 4 contribute to an understanding of Roman military road construction in rural Cumbria;
- 5 contribute to an understanding of post Roman land division and allotment;
- 6 to secure the publication and dissemination of the results within a suitable publication format.

7.1.4 **Objectives:** the specific objectives to which the data can be interrogated are:

- a is it possible to determine the source and range of prehistoric, medieval and post-medieval artefacts recovered during the archaeological works?
- b is it possible to determine the status of individuals from such an assemblage?
- c is it possible to determine patterns of activity, trade and consumption from such an assemblage?

- d Is it possible to determine the nature of the activity represented by the archaeological evidence from the pits and postholes?
- e Is it possible to identify phases of construction and maintenance within the Roman road fabric?

7.2 PUBLICATION RECOMMENDATIONS

7.2.1 **Introduction:** it is recommended that the most significant results of both the Phase 1 and Phase 2 works (see below), should be prepared for publication in a suitably detailed and appropriately illustrated report. In view of the fact that the data can be considered to have local or regional, rather than national, significance, it is further recommended that the report is submitted as an article for inclusion in the *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*, which is published annually.

7.2.2 **Stratigraphy:** it is recommended that the results of the excavation undertaken on the Roman road at the Spitals Underpass site are published in full. The stratigraphic report should also include a limited number of other features, from both Phases 1 and 2, including the Bronze Age pit (**104**) in the works compound, and the few features from Phase 1 that are potentially of medieval date.

7.2.3 **Pottery:** the middle Bronze Age pottery from feature **104** should be included in the final publication report, although little, if any, additional analysis will be required above and beyond what has already been undertaken for the assessment. A catalogue of the most significant Roman, medieval and post-medieval potsherds, together with a short illustrated report, should also be prepared for publication.

7.2.4 **Other artefacts:** a short report on the Roman coin from the Spitals Underpass site should be included in the final publication. No additional analytical work will, however, be required above and beyond that undertaken for the assessment. A short report should also be prepared for the probable Roman pin head. The single prehistoric flint artefact from Phase 2 should be integrated with the small assemblage of lithic material generated by the Phase 1 evaluation (OA North 2005, 37), and a catalogue and short report prepared. The small assemblage of clay tobacco pipe, all from the Phase 1 works, should also be catalogued and a brief report prepared for the final publication (*op cit*, 35).

7.2.5 **Outline Synopsis**

Summary	
Acknowledgements	
Introduction and Background	
Circumstances of the project/site location	500 words
Historical Background	500 words
Archaeological Background	500 words
Results	
Prehistoric features	500 words
The Roman road	1500 words

Ceramics	1000 words
Other finds	500 words
Conclusions/Discussion	1500 words
Bibliography	
Total	7500 words

7.3 OTHER RECOMMENDATIONS

- 7.3.1 Once all work is completed, it is recommended that an entry be made into the Online Access to Index of Archaeological Investigations (OASIS) project. In addition, a copy of the report should be submitted to the Cumbria County Council Historic Environment Record (HER).

8 METHOD STATEMENT

8.1 INTRODUCTION

8.1.1 The following methods are required to disseminate adequately the most archaeologically significant results of the project.

8.2 MANAGEMENT, MONITORING AND REVIEW

(Task 1, to facilitate all objectives)

8.2.1 Management and monitoring tasks have been built into the project. These tasks will include project monitoring, advice and co-ordination and problem solving.

8.3 STRATIGRAPHIC ANALYSIS

(Tasks 2-7, to facilitate all objectives)

8.3.1 The most archaeologically significant stratigraphic data will be analysed in greater detail in order to refine the provisional stratigraphic sequence prepared during the assessment. Details of all contexts will be entered to the site database and final stratigraphic matrices will be produced.

8.3.2 A detailed analytical text of the stratigraphic information, accompanied by phase drawings, sections and other relevant line illustrations, as required, will be drafted. The draft text and phase drawings will form the basis of the final published report, and copies will be supplied to the in-house specialists working on the artefactual assemblages from the site. The phase plans, and selected plans and sections from the site will be digitised. The revised databases will result in all the context data being collated in a readily accessible digitised form, and this will also be made available to internal specialists.

8.4 PREHISTORIC POTTERY

(Task 8, to facilitate objectives a-d)

8.4.1 The short report on the Bronze Age pottery from the site that was prepared for the assessment (*Section 4.4* above) will be integrated into the final publication report. No further analytical work will be undertaken on the material.

8.5 OTHER POTTERY

(Task 9, to facilitate objectives a-d)

8.5.1 The assessment text on the Roman and post-Roman pottery from the Phase 1 and Phase 2 works will be utilised to form the basis of the final report text, and

a catalogue will be produced. Comparative material will be studied, a full bibliography will be compiled, and the discussion will place the material within a local context.

8.6 CLAY TOBACCO PIPES

(Task 10, to facilitate objectives a-d)

- 7.6.1 A catalogue of the clay tobacco pipe from the site will be compiled and a short report suitable for publication will be produced.

8.7 THE ROMAN COIN

(Task 11, to facilitate objectives b-c and e)

- 8.7.1 The short report on the Roman coin from the Spitals Underpass site that was produced for the assessment will be integrated into the final publication report. No further analytical work will be required.

8.8 THE COPPER ALLOY ARTEFACT

(Task 12, to facilitate b-c)

- 8.8.1 A short report on the copper alloy pin head from the Spitals Underpass site will be prepared for inclusion in the published report.

8.9 THE PREHISTORIC FLINTS

(Task 12, to facilitate objective a, c and d)

- 8.9.1 A catalogue of the prehistoric flint artefacts from the Phase 1 and Phase 2 works will be compiled, and a short report suitable for publication will be produced.

8.10 CONSERVATION AND DISCARD

(Tasks 13-14)

- 8.10.1 The two copper alloy artefacts recovered from the site (coin IRF 1001 and pin head IRF 1002) require conservation to prepare them for long-term storage. The long-term storage requirements for archaeological materials and archives are set out in documents compiled by Walker (1990) and the Museums and Galleries Commission (MGC) (1992). The metalwork requires a desiccated microenvironment and requires conservation before it will be accepted by the receiving museum.
- 8.10.2 On completion of the full post-excavation analysis a discard policy will be undertaken for certain classes of artefactual and palaeoecological materials. This will be completed in full consultation with Penrith Museum staff.

8.11 REPORT PREPARATION

(Tasks 15-17, to facilitate all objectives)

8.11.1 Following completion of the analysis of the stratigraphic and artefactual evidence, a text suitable for publication as an article in the *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society* will be compiled. This will incorporate as necessary any information from comparable excavations. As specialist reports are prepared, information of relevance to the interpretation of the stratigraphic sequence will be integrated into the text. In order to fully discuss the regional significance of the site, to find comparators for the excavated data, and to put the site into context, a degree of library research will be required in order to reference and obtain relevant specialist literature. The discussion will incorporate an overview of the finds from the site.

8.12 ILLUSTRATION

(Tasks 18-21)

8.12.1 During each part of the analytical programme, a selection will be made of appropriate material for illustration. This will cover general plans, section drawings, and artefacts, including the prehistoric pottery and the copper alloy object. The Roman coin will be illustrated through photography only. An experienced illustrator, using standard conventions, will compile these illustrations, either digitally, for the plans, or manually, as appropriate.

8.12.2 A selection of photographs will be selected from the excavation archive to accompany the final report text.

8.13 REPORT FINALISATION

(Tasks 22-26, to facilitate all objectives)

8.13.1 A final report text will be compiled, with tables, illustrations and photographs, cross referenced in the text.

8.13.2 The report will be subject to internal editing, revision, and review from all contributing staff, before submission to the journal. The editorial committee of the journal will then send the paper to two anonymous academic readers for review. Following the readers' comments, any necessary amendments will be made to the text prior to final submission of the report text and accompanying illustrations.

8.14 ARCHIVE DEPOSITION

(Task 27)

- 8.14.1 On submission of the completed text for publication, the archive will be updated as necessary, checked and then submitted to Penrith Museum. Material in boxes will be checked and box lists compiled and appended. The entire paper and material archive will be indexed, ordered and checked, and all parts returned to the receiving museum in good order.

9 RESOURCES, MANAGEMENT AND PROGRAMMING

9.1 PROGRAMMING

9.1.1 A task list (*Appendix 3*) and Gantt chart (*Appendix 4*) are provided below.

9.2 PROJECT TEAM

9.2.1 The team consists largely of internal OA North staff. The project will be managed by Dr Alan Lupton.

Name	Organisation	Tasks
Rachel Newman	OA North	Internal quality control
Andrew Bates	OA North	Stratigraphic analysis; production of publication text
Jeremy Bradley	OA North	Medieval and post-medieval pottery analysis and report
Mark Brenann	OA North	Project Management
Christine Howard-Davis	OA North	Analysis of individually registered finds, Roman pottery and clay tobacco pipe, and production of reports
Jenny Jones	Durham University	Artefact conservation
Joanne Levey	OA North	Archives Officer
Adam Parsons	OA North	Illustrator
Jenny Jones	Durham University	Conservator
Mark Tidmarsh	OA North	Illustrator

9.3 MANAGEMENT STRUCTURE

9.3.1 OA North operates a project management system. The team is headed by the Project Manager, who assumes ultimate responsibility for the implementation and execution of the Project Design and the achievement of performance targets, be they academic, budgetary, or scheduled.

9.3.2 The Project Manager may delegate specific aspects of the project to other key staff, who both supervise others and have a direct input into the compilation of the report. They may also undertake direct liaison with specialists who are contributing to the publication report, and the museum named as the recipient of the project archive. The Project Manager will define and control the scope and form of the post-excavation programme.

9.3.3 Communication between all concerned in the post-excavation programme is of paramount importance and it is essential that the staff involved liaise closely in order that comparable data are obtained. All information will be disseminated at regular intervals, thus ensuring that everyone is aware of current progress.

9.3.4 OA North places importance on the tight and effective management of projects in order to deliver best value to our clients. An element of managerial time will be dedicated to on-going quality assurance and internal monitoring. This is part of our internal quality assurance system and ensures the prompt delivery of the agreed report or other deliverables on time and budget.

9.3.5 OA North has considerable experience of excavation and post-excavation projects of all periods and is an Institute of Field Archaeologists (IFA) registered archaeological organisation (RAO 17). All members of staff operate to the IFA Code of Conduct.

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APPENDIX 1: PROJECT BRIEF

APPENDIX 2: CONTEXT LIST

Context	Site	Trench	Description
100	Works Compound	-	Fill of post hole 102
101	Works Compound	-	Fill of post hole 102
102	Works Compound	-	Cut of post hole
103	Works Compound	-	Fill of pit 104
104	Works Compound	-	Cut of pit
105	Works Compound	-	Fill of pit 106
106	Works Compound	-	Cut of pit
107	Works Compound	-	Cut of pit/hollow
108	Works Compound	-	Fill of pit/hollow 107
109	Works Compound	-	Fill of pit 110
110	Works Compound	-	Cut of pit
111	Works Compound	-	Fill of pit/hollow 112
112	Works Compound	-	Cut of pit/hollow
113	Works Compound	-	Cut of pit
114	Works Compound	-	Fill of pit 106
115	Works Compound	-	Land drain
116	Works Compound	-	Fill of post hole 117
117	Works Compound	-	Cut of post hole
118	Works Compound	-	Post Hole row
119	Works Compound	-	Fill of pit 113
120	Area 1	-	Topsoil
121	Area 1	-	Wall foundation
122	Area 1	-	Natural subsoil
123	Area 1	-	Fill of hollow 124
124	Area 1	-	Cut of hollow
125	Area 1	-	Fill of hollow 124
126	Area 1	-	Fill of foundation trench 127 (wall foundation)
127	Area 1	-	Cut of wall foundation trench
128	Area 1	-	Fill of pit 129
129	Area 1	-	Cut of pit
130	Area 1	-	Wall foundation = 131
131	Area 1	-	Wall foundation = 130
132	Area 1	-	Cut of palaeochannel
133	Area 1	-	Fill of palaeochannel 132
134	Area 1	-	Fill of palaeochannel 132
135	Area 1	-	Fill of palaeochannel 132
136	Area 1	-	Fill of ditch 139
137	Area 1	-	Fill of ditch 139
138	Area 1	-	Fill of ditch 139
139	Area 1	-	Cut of ditch
140	Area 1	-	Fill of pit/post hole 141
141	Area 1	-	Cut of pit/post hole
142	Area 1	-	Fill of pit/post hole 143
143	Area 1	-	Cut of pit/post hole
144	Area 1	-	Fill of pit 145
145	Area 1	-	Cut of pit
146	Area 1	-	Fill of pit 147
147	Area 1	-	Cut of pit
148	Area 1	-	Fill of pit 149
149	Area 1	-	Cut of pit
150	Area 1	-	Fill of pit 151
151	Area 1	-	Cut of pit
152	Area 2	-	Cut of quarry pit
153	Area 2	-	Cut of quarry pit

154	Area 1	-	Fill of pit 155
155	Area 1	-	Cut of pit
156	Area 1	-	Fill of pit/post hole 157
157	Area 1	-	Cut of pit/post hole
158	Area 1	-	Fill of pit 159
159	Area 1	-	Cut of pit
160	Area 2	-	Fill of post hole 161
161	Area 2	-	Cut of post hole
162	Area 2	-	Fill of pit 163
163	Area 2	-	Cut of pit
164	Area 1	-	Fill of pit 166
165	Area 1	-	Fill of pit 166
166	Area 1	-	Cut of pit
167	Area 2	-	Fill of quarry pit 152
168	Area 2	-	Fill of quarry pit 152
169	Area 2	-	Fill of quarry pit 152
170	Area 2	-	Fill of quarry pit 152
171	Area 2	-	Fill of quarry pit 152
172	Area 2	-	Fill of quarry pit 153
173	Area 2	-	Fill of quarry pit 153
174	Area 2	-	Fill of quarry pit 153
1800	Area 2	72	Layer (cobble spread)
1801	Area 2	71	Layer (modern topsoil)
1802	Area 2	71	Fill of gully 1803
1803	Area 2	71	Cut of gully
1804	Area 2	73	Layer (modern topsoil)
1805	Area 2	73	Layer (buried soil)
1806	Area 2	73	Layer (buried soil)
1807	Area 2	73	Layer (pre-Roman buried soil)
1808	Area 2	73	Fill of animal burrow 1809
1809	Area 2	73	Cut of animal burrow
1810	Area 2	73	Layer (buried soil)
1811	Area 2	73	Layer (buried soil)
1812	Area 2	73	Layer (natural subsoil)
1813	Area 2	75	Layer (modern topsoil)
1814	Area 2	75	Layer (buried soil)
1815	Area 2	75	Layer (natural subsoil)
1816	Area 2	70	Layer (modern topsoil)
1817	Area 2	70	Layer (buried soil)
1818	Area 2	72	Layer (surface of road 1901)
1819	Area 2	75	Layer (buried soil)
1820	Area 2	70	Layer (buried soil)
1821	Area 2	70	Layer (natural subsoil)
1822	Area 2	70	Fill of linear feature 1823
1823	Area 2	70	Cut of linear feature
1824	Area 2	70	Fill of linear feature 1825
1825	Area 2	70	Cut of linear feature
1826	Area 2	70	Fill of ditch 1827
1827	Area 2	70	Cut of ditch
1828	-	-	Not issued
1829	Area 2	70	Fill of ditch 1830
1830	Area 2	70	Cut of ditch
1831	Area 2	74	Fill of linear feature 1832
1832	Area 2	74	Cut of linear feature
1833	Area 2	74	Later (modern topsoil)
1834	Area 2	74	Layer (buried soil)
1835	Area 2	74	Layer (pre-Roman buried soil)

1836	Area 2	74	Layer (buried soil)
1837	Area 2	70	Layer (pre-Roman buried soil)
1838	Area 2	74	Layer (buried soil)
1839	Area 2	76	Layer (modern topsoil)
1840	Area 2	76	Layer (buried soil)
1841	Area 2	76	Layer (buried soil)
1842	Area 2	76	Layer (natural subsoil)
1843	Area 2	79	Layer (modern topsoil)
1844	Area 2	79	Layer (buried soil)
1845	Area 2	79	Layer (natural subsoil)
1846	Area 2	79	Layer (buried soil)
1847	Area 2	77	Layer (modern topsoil)
1848	Area 2	77	Layer (buried soil)
1849	Area 2	80	Layer (modern topsoil)
1850	Area 2	80	Fill of linear feature 1851
1851	Area 2	80	Cut of linear feature
1852	Area 2	80	Layer (natural subsoil)
1853	Area 2	77	Layer (natural subsoil)
1854	Area 2	72	Layer (modern topsoil)
1855	Area 2	72	Layer (buried soil)
1856	Area 2	72	Layer (buried soil)
1857	Area 2	72	Layer (pre-Roman buried soil)
1858	Area 2	72	Layer (natural subsoil)
1859	Area 2	72	Fill of linear feature 1860
1860	Area 2	72	Cut of linear feature
1861	Area 2	72	Layer (surface of road 1901)
1862	Area 2	78	Layer (modern topsoil)
1863	Area 2	78	Layer (buried soil)
1864	Area 2	78	Layer (buried soil)
1865	Area 2	78	Layer (buried soil)
1866	Area 2	78	Layer (charcoal lens within 1865)
1867	Area 2	78	Fill of linear feature 1868
1868	Area 2	78	Cut of linear feature
1869	Area 2	78	Layer (natural subsoil)
1870	Area 2	71	Fill of gully 1803
1871	Area 2	74	Layer (buried soil)
1872	Area 2	74	Layer (buried soil)
1873	Area 2	72	Cut of ditch
1874	Area 2	72	Fill of ditch 1873
1875	Area 2	72	Fill of ditch 1873
1876	Area 2	71	Layer (surface of road 1901)
1877	Area 2	73	Layer (surface of road 1901)
1878	Area 2	71	Layer (surface of road 1901)
1879	Area 2	71	Layer (buried soil)
1880	Area 2	71	Layer (pre-Roman buried soil)
1881	Area 2	-	Cut of tree throw
1882	Area 2	-	Fill of tree throw 1881
1883	Area 2	-	Fill of linear feature 1884
1884	Area 2	-	Cut of linear feature
1885	Area 2	-	Fill of linear feature 1886
1886	Area 2	-	Cut of linear feature
1887	Area 2	-	Fill of linear feature 1888
1888	Area 2	-	Cut of linear feature
1889	Area 2	-	Layer (modern topsoil)
1890	Area 2	-	Layer (buried soil)
1891	Area 2	-	Layer (buried soil)
1892	Area 2	-	Layer (natural subsoil)
1893	Area 2	-	Layer (modern topsoil)

1894	Area 2	-	Fill of post hole 1895
1895	Area 2	-	Cut of post hole
1896	Area 2	-	Layer (pre-Roman buried soil)
1897	Area 2	-	Fill of ditch 1898
1898	Area 2	-	Cut of ditch
1899	Area 2	-	Fill of ditch 1900
1900	Area 2	-	Cut of ditch
1901	Area 2	-	Roman road
1902	Area 2	-	Fill of ditch 1903
1903	Area 2	-	Cut of ditch
1904	Area 2	-	Fill of ditch 1905
1905	Area 2	-	Cut of ditch
1906	Area 2	-	Fill of ditch 1907
1907	Area 2	-	Cut of ditch
1908	Area 2	-	Fill of ditch 1909
1909	Area 2	-	Cut of ditch

APPENDIX 3: TASK LIST

Task	Method	Description	Staff	Days
		Project set-up and monitoring		
1	8.2.1	Management	MB	3
		Stratigraphic analysis		
2	8.3.1	Stratigraphic analysis	AB	2
3	8.3.1	Input contexts to database	Assistant	1
4	8.3.1	Compile matrices	AB	1
5	8.3.2	Prepare stratigraphic text	AB	3
6	8.3.2	Compile phase plans and sections	AB	1
7	8.3.2	Digitise plans and sections	MT	3
		Finds analysis and reports		
8	8.4.1	Prehistoric pottery: integrate report into final report	AB	0.25
9	8.5.1	Other pottery: prepare report and catalogue(s)	CHD	1
10	8.6.1	Clay tobacco pipes: prepare report	CHD	0.5
11	8.7.1	Roman coin: integrate report into final report	CHD	0.25
12	8.8.1 8.9.1	Other artefacts: prepare report and catalogue(s)	CHD	0.25
		Conservation		
13	8.10.1	Conserve copper alloy coin and pin head	JJ	1
14	8.10.2	Discard selected material	CHD	0.25
		Report preparation		
15	8.11.1	Integrate specialist information into text	CHD	1
16	8.11.1	Library research	CHD	1
17	8.11.1	Discussion of finds	CHD	1
		Illustrations		
18	8.12.1	Stratigraphic illustrations	MT	5
19	8.12.1	Pottery	AP	0.75
20	8.12.1	Other artefacts	AP	0.5
21	8.12.2	Selection of publication photographs	AB	0.5
		Report finalisation		
22	8.13.1	Assemble final report	CHD	1
23	8.13.2	QA	MB RN	2 1
24	8.13.2	Final amendments	CHD MT	1 1
25	8.13.2	Final QA	RN	1
26	8.13.2	Submission to journal		
		Archiving		
27	7.13.1	Archive preparation and deposition	AB JL	1 1

APPENDIX 4: GANTT CHART

APPENDIX 5: FINANCIAL BREAKDOWN

The total cost quoted for the post-excavation is a fixed price which is inclusive of all management, overheads, and other disbursement costs (travel and expenses), to undertake the programme of detailed analysis as specified in *Section 9* above, the production of a text suitable for publication, and the costs for publication outlined in *Section 10*. Any other variations from this programme of work at the client's direction will require recosting. All staff costs are inclusive of holiday entitlement, as well as NI and Superannuation.

- All costs are exclusive of VAT
- Salaries and wages inclusive of NI, Superannuation and overheads
- The costs are submitted in line with 2007/2008 prices. Project duration beyond 31 March 2008 will require adjustment for inflation.

Staff costs

Name	Day Rate	No of Days	Cost
Andrew Bates	£157	8.75	1373.75
Mark Brennand	£232	5	1160
Christine Howard-Davis	£223	7.25	1616.75
Jenny Jones	£300	0.5	150
Joanne Levey	£122	1	122
Rachel Newman	£349	2	698
Adam Parsons	£129	1.25	161.25
Mark Tidmarsh	£129	9	1161
Assistant	£109	1	109
Total staff cost			£6561.75

Non staff costs

Publication	£525
Sub-total for analysis	£7076.75
Plus VAT at 17.5%	£1238.43
Total costs	£8315.18

FIGURES

FIGURES

Figure 1 Site Location

Figure 2 The proposed bypass route showing areas of excavation

Figure 3 Features in the Works Compound watching brief area

Figure 4 Strip and Record Area 1. Showing excavated areas and haul road

Figure 5 Strip and Record Area 2 with area of Spitals Underpass watching brief and Trenches 70-80, with Roman road area

Figure 6 Plan of the Spitals underpass Roman road excavation

Figure 7 Section across the Roman Road **1901**

PLATES

Plate 1 Aerial view of Temple Sowerby

Plate 2 Pit **104** from which prehistoric pottery was recovered

Plate 3 The exposed Roman road surface **1901** at the Spitals Underpass site

Plate 4 The kerb on the southern edge of the Roman Road, showing the truncation of the road surface by ditch **1909**

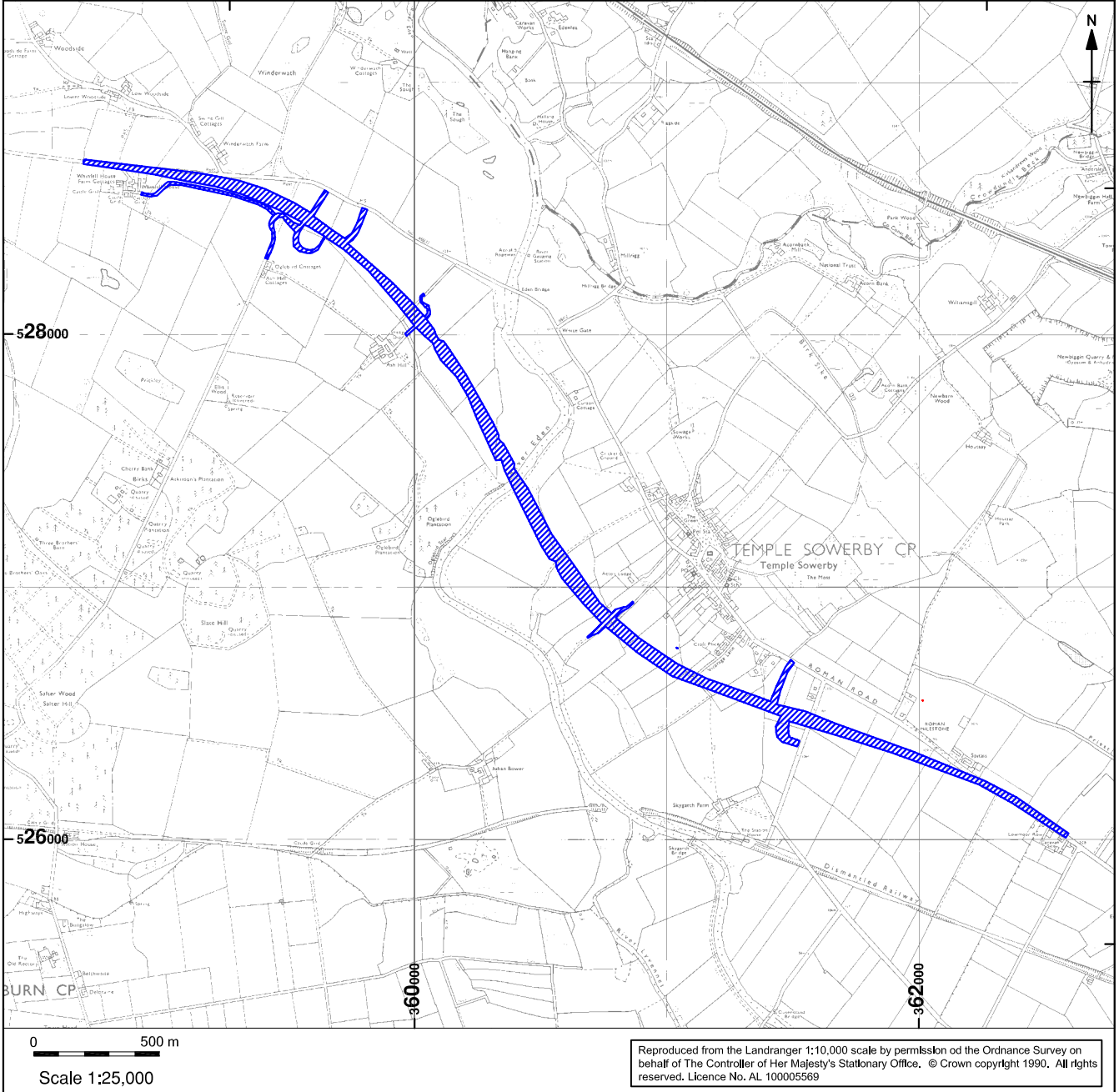
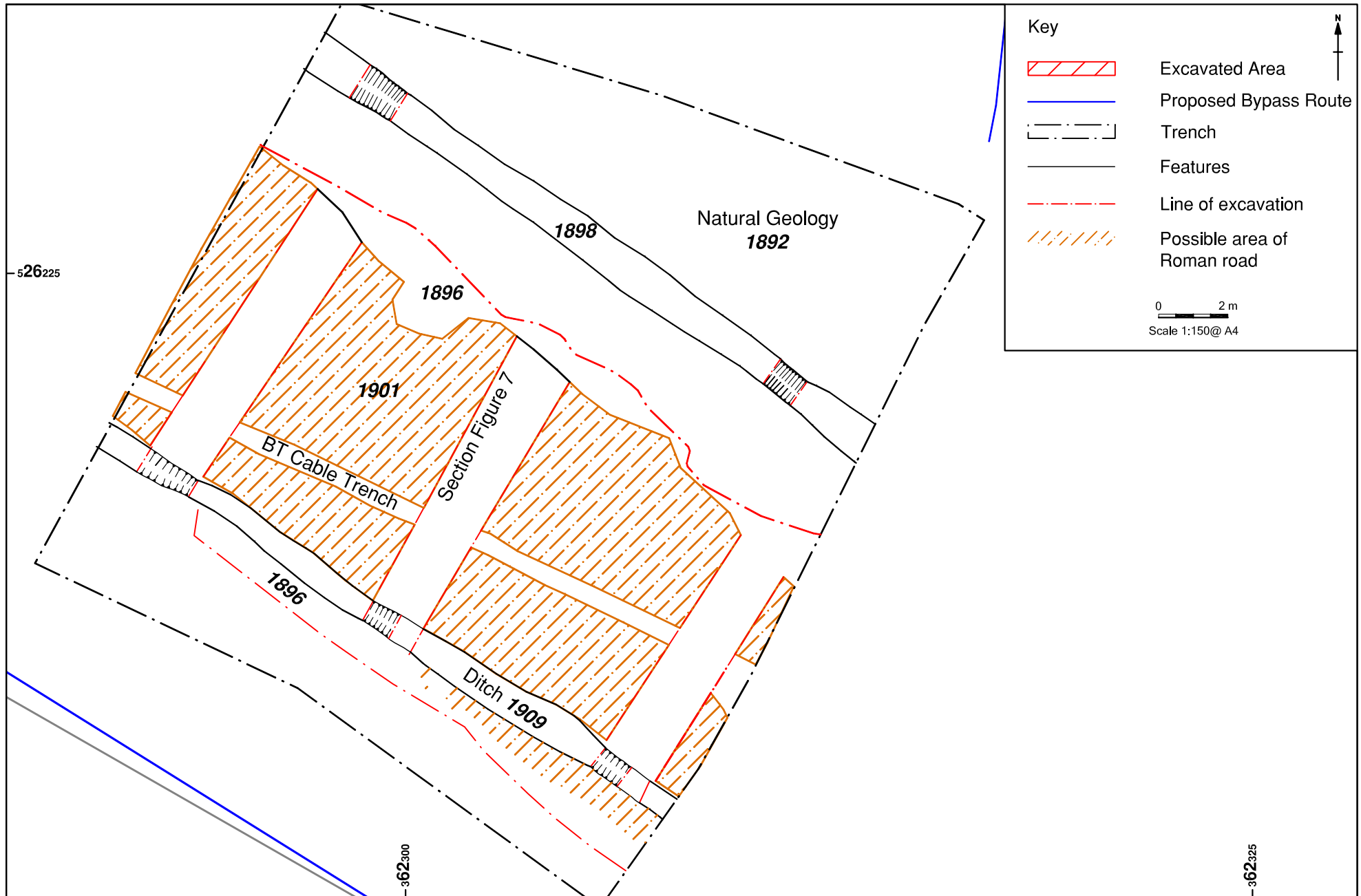


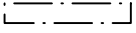





Figure 1: Site Location



Key

-  Excavated Area
-  Proposed Bypass Route
-  Trench
-  Features
-  Line of excavation
-  Possible area of Roman road

0 2 m
Scale 1:150@ A4

Figure 6: Plan of Spital's Underpass Roman Road Excavations

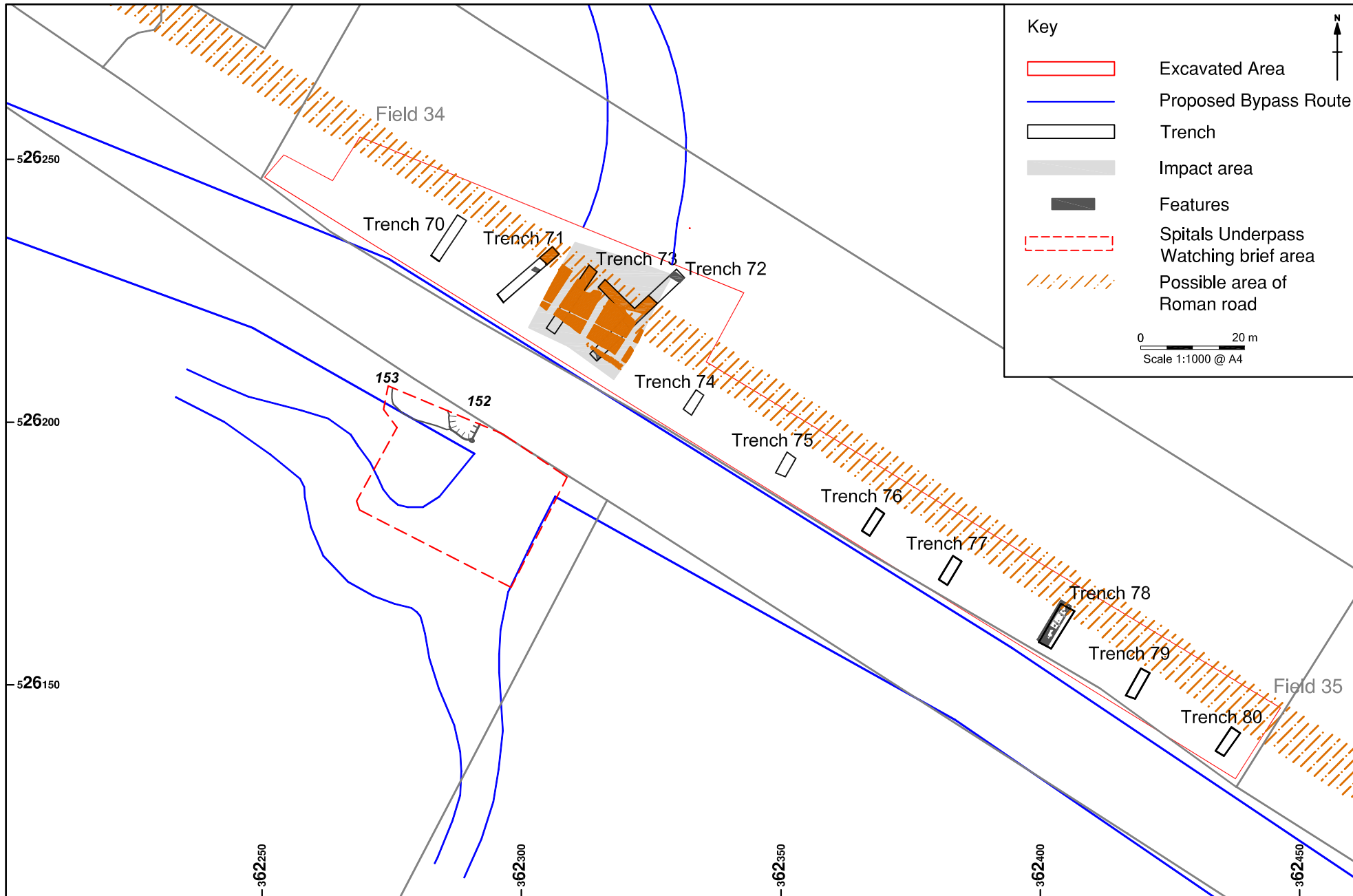


Figure 5: Strip and Record Area 2 with area of Spitals Underpass watching brief and showing Trenches 70-80, with Roman road area

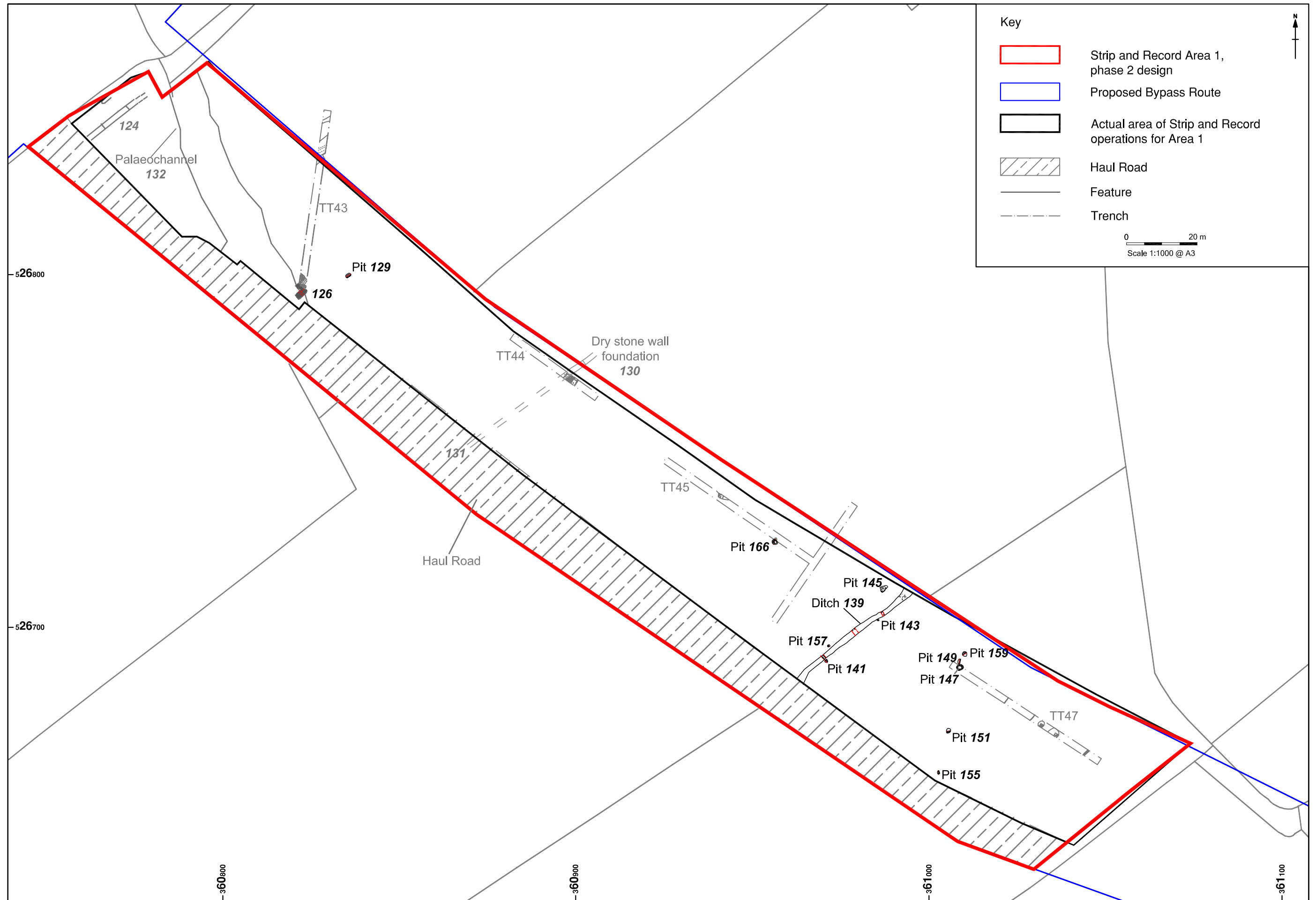


Figure 4: Strip and Record Area 1, showing excavated areas and haul road

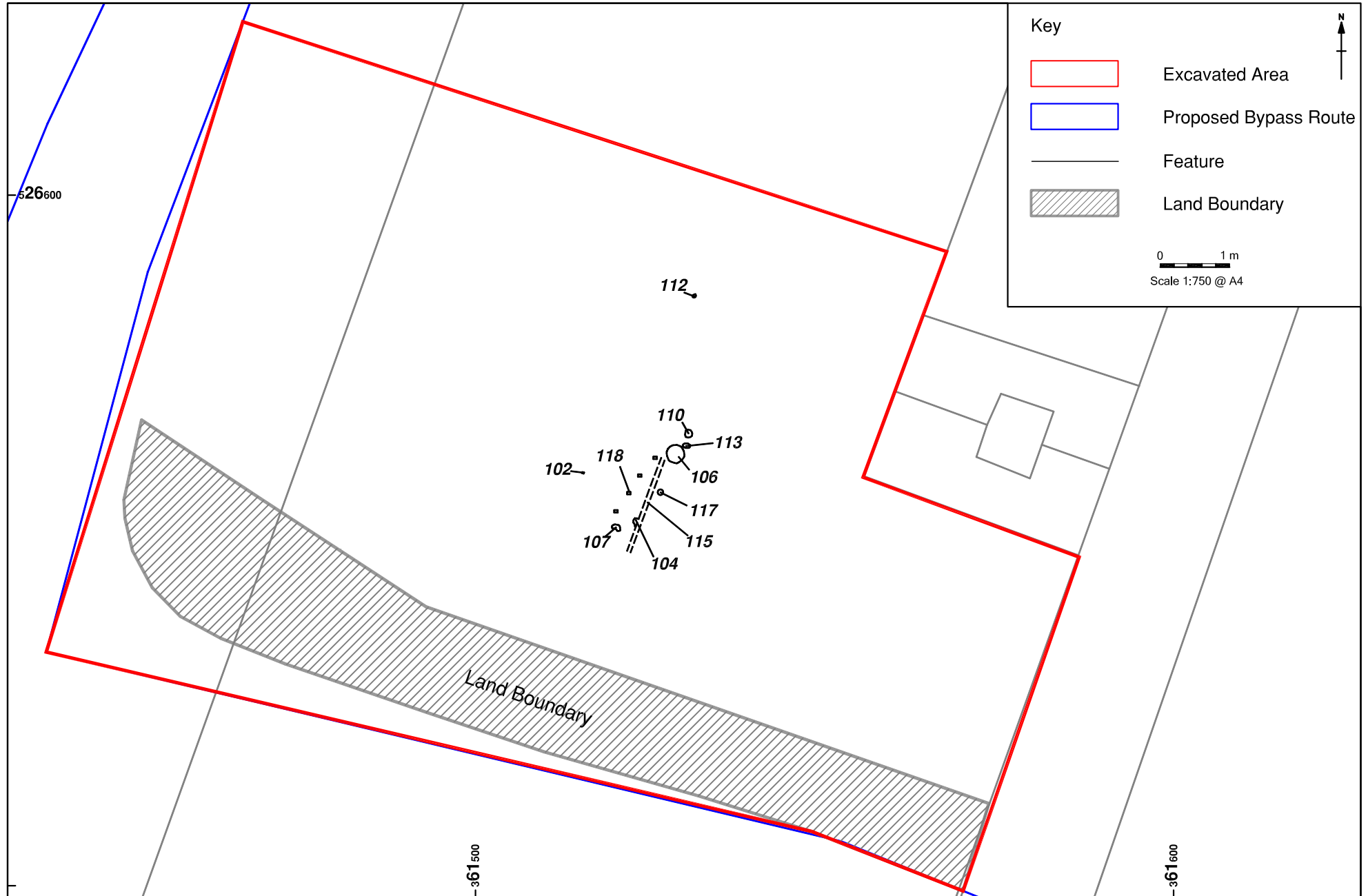


Figure 3: the Works Compound Watching Brief Area

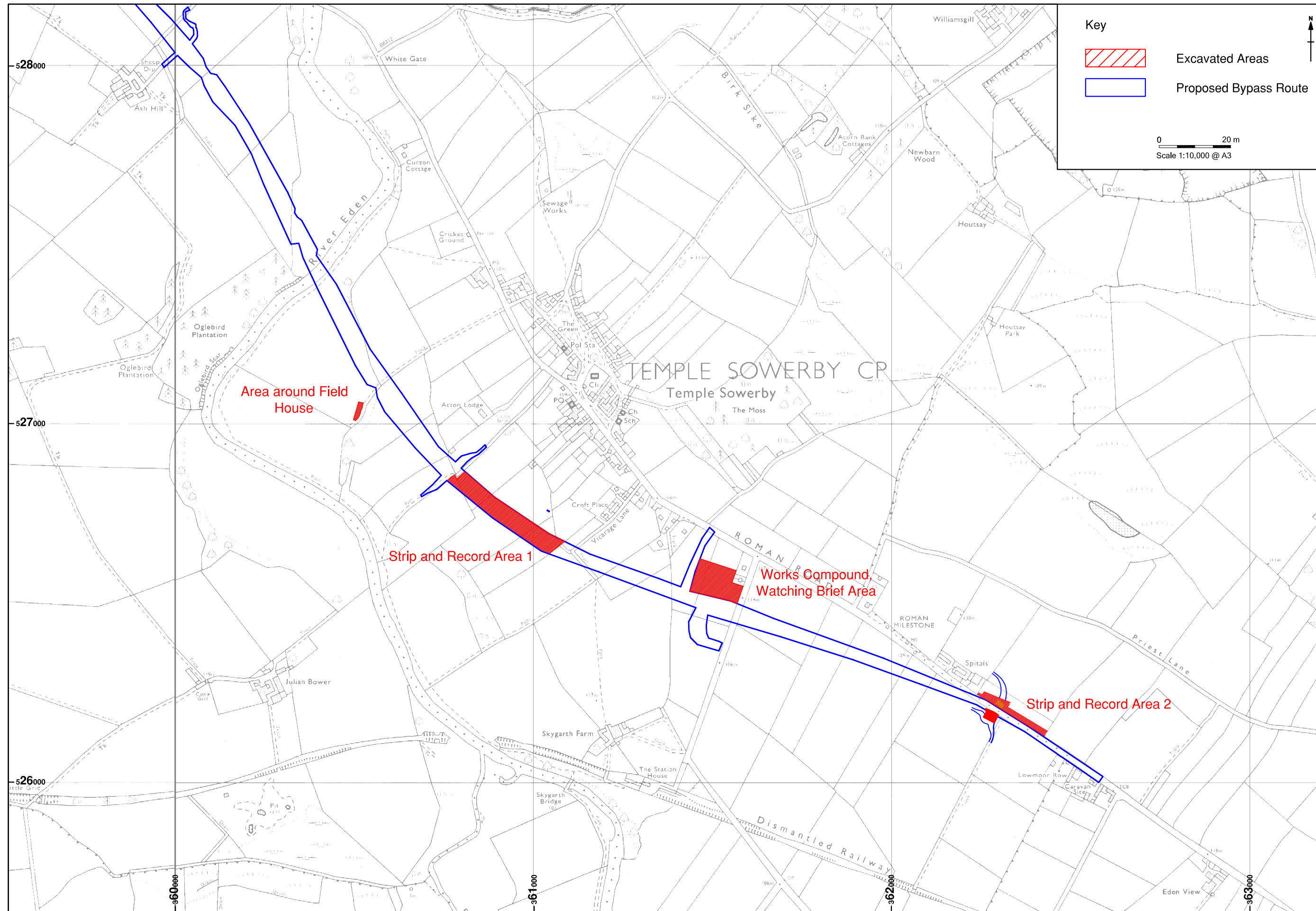


Figure 2: Proposed bypass route showing areas of excavation

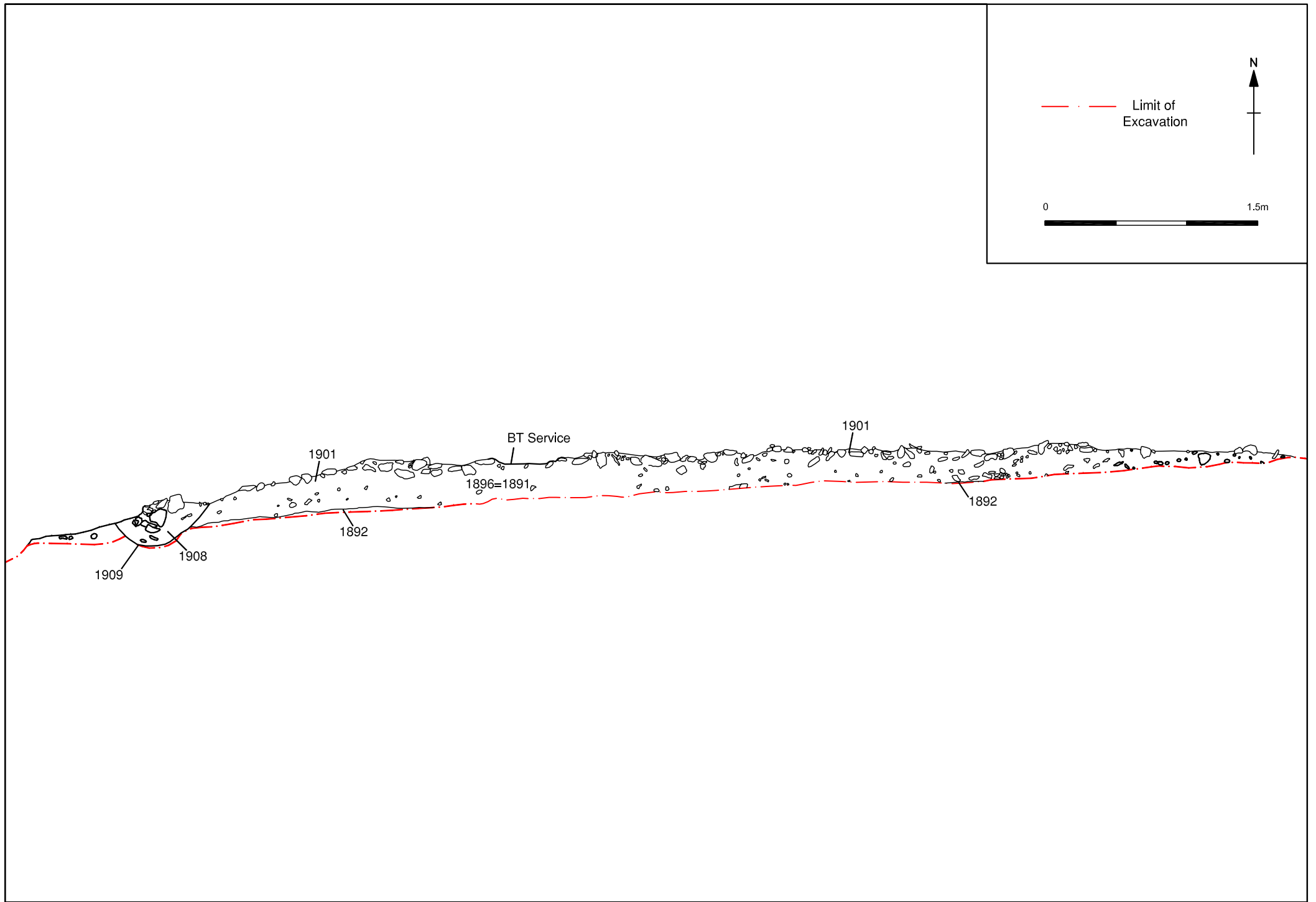


Figure 7: East-facing section across the Roman Road **1901**





Plate 1 Aerial view of Temple Sowerby



Plate 2 Pit *104* from which prehistoric pottery was recovered



Plate 3 The exposed Roman road surface *1901* at the Spitals Underpass site



Plate 4 The kerb on the southern edge of the Roman Road, showing the truncation of the road surface by ditch *1909*