



INDEX DATA	RPS INFORMATION
Scheme Title A650 Bingley Relief Road.	Details Archaeological Sample Excavations Assessment Report
Road Number A650	Date November 1999
Contractor Baubie.	
County West Yorkshire	
OS Reference SE13.	
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**A650 Bingley Relief Road
Bingley
West Yorkshire**

Archaeological Sample Excavations

Assessment Report

November 1999

Report No. 754

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Babtie Group Ltd

A650 Bingley Relief Road

Bingley, West Yorkshire

Archaeological Sample Excavations

Assessment Report

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1. Introduction

1.1 The town of Bingley is located on the eastern bank of the River Aire in a narrow valley bounded by hills and moorland (Fig. 1). The underlying geology of the area comprises alluvial deposits and glacial terminal moraine above Millstone Grit.

1.2 The route of the A650 Bingley Relief Road will impact upon a number of sites of potential archaeological interest. Five of these (Sites 6, 38, 50, 51, 52) were identified by Babtie Group Ltd for archaeological evaluation by sample excavation (Fig. 1).

1.3 The excavations were undertaken by Archaeological Services (WYAS), on behalf of Babtie Group Ltd. Site work was carried out as follows:

Site 52 Monday 16th - Thursday 26th August 1999

Site 38 Monday 13th - Friday 17th September 1999

Site 6 Wednesday 22nd September-Wednesday 6th October 1999

Site 50 Wednesday 22nd September-Wednesday 6th October 1999

Site 51 Wednesday 22nd September-Wednesday 6th October 1999

1.4 This report is an assessment of the results of the sample excavations. Following the background and method information the stratigraphic data from each site is described separately, presented in site order from south to north along the road corridor. Context and artefact catalogues and stratigraphic matrices are given in Appendices II, III and IV respectively. Pottery spot-dates mentioned in the text are provided by C. Cumberpatch PhD and listed in Appendix V.

2. Archaeological Background

2.1 A Stage 2 Archaeological Assessment, comprising a desktop study and walkover survey, was carried out by Babtie Group Ltd in 1996. A total of 48 sites of archaeological interest were identified, ranging from prehistoric lithic scatters to a Victorian refuse tip. A further five sites were added after consultation with Advisory Services (WYAS).

2.2 Following the recommendations made in the Stage 2 Assessment a number of sites were selected for further work involving topographic survey, geophysical survey, palaeoenvironmental sampling and sample excavation. The following site descriptions are taken from the Specification for Sample Excavation produced by Babtie Group Ltd.

2.3 Site 6 was identified during the Stage 2 Assessment and consists of an area of artefact scatters. The lithic finds include two stone axes, one of which was polished, dating from the middle to late Neolithic.

2.4 Site 49 was recorded on the West Yorkshire Sites and Monuments Record as a lynchet on a field boundary. The field to the south has been

ploughed although remains are visible in the field to the north. A vestige of a terraced trackway runs along the northern edge of the lynchet.

- 2.5 Site 50 was recorded on the West Yorkshire Sites and Monuments Record as an area of terraces and possible stone wall-footings not marked on the first or second edition Ordnance Survey maps.
- 2.6 Site 51 was recorded on the West Yorkshire Sites and Monuments Record as the remnants of water-filled channels possibly indicating the remains of a water control or power site in the area.
- 2.7 Site 38 was identified during the Stage 2 Assessment and consists of an area of dry-stone walled field boundaries north-west of Bingley North Bog. One area of walling is associated with mature trees and includes boulder walling which may be the remnants of earlier Iron Age or Romano-British field systems or enclosures. A number of the boundaries are also identified on the Ordnance Survey first edition map.
- 2.8 Site 52 was recorded on the West Yorkshire Sites and Monuments Record. It is possibly part of the original core and medieval town of Bingley. The area lies close to the ancient parish church on the medieval tenements.
- 2.9 Topographic survey was carried out by Babtie Group Ltd in advance of sample excavation at Sites 50, 51, 6 and 38. Geophysical survey was carried out by Geophysical Surveys of Bradford in advance of sample excavation at Sites 50, 51 and 6.

3. Method

3.1 Aims and Objectives

- 3.1.1 A specification for sample excavation was prepared by the Babtie Group Ltd (Appendix VIII), and an additional method statement was produced by Archaeological Services (WYAS) (Appendix IX).
- 3.1.2 As stated in the specification, the general aims and objectives were:
- to obtain information which will contribute to an evaluation of the significance of each site and which will enable further evaluation and/or mitigation measures to be designed.
- 3.1.3 More specifically the sample excavations would:
- determine or confirm (so far as possible) the presence or absence of buried archaeological remains;
 - determine or confirm the general nature of any significant archaeological features identified by geophysical survey and/or topographical survey;
 - determine or confirm the approximate date or date-range of the remains, by means of artefactual or other evidence;

- determine or confirm the approximate extent and/or layout of the remains;
- determine the condition or state of preservation of the remains;
- determine the degree of complexity of the horizontal and/or vertical stratigraphy of the remains;
- determine the likely range, quality and quantity of the artefactual evidence present and,
- determine the potential range, quality, quantity and nature of the palaeoenvironmental evidence present.

3.2 Excavation Method

3.2.1 The trenches were excavated, using a 360° mechanical excavator fitted with a toothless ditching bucket, in level spits to the top of the first archaeological horizon or undisturbed natural deposit. This was carried out under direct archaeological supervision. The resulting surface was cleaned manually and inspected for archaeological remains. In the case of Site 52 the position of overhead power lines and limited site access necessitated the use of a mini-excavator. The trenches at Sites 50, 51 and Trench B at Site 38 were stripped by hand.

3.2.2 All archaeological features were hand-excavated. Sections of at least 1.0m length were excavated through deposits and linear features, with the section located and recorded adjacent to the trench edge where possible. Discrete features were half-sectioned in the first instance and fully excavated where appropriate.

3.2.3 In accordance with the Archaeological Services (WYAS) standard method (Boucher 1995) a full written, drawn and photographic record was made of all features. Hand-drawn plans were made of excavated features at a scale of 1:20 or 1:50, and sections were drawn at a scale of 1:10 or 1:20. All sections and plans include spot-heights related to Ordnance Datum in metres as correct to two decimal places. The stratigraphy of each trench was recorded even where no archaeological deposits were identified.

3.2.4 A soil-sampling programme was designed for the identification and recovery of carbonised remains, vertebrate remains, molluscs and small artefactual material. Soil samples of up to ten litres would be taken from excavated features where appropriate.

3.3 Survey Information

3.3.1 At each site the trench limits were surveyed using a Geotronics Geodimeter 600 series Total Station and, when possible, fixed within the Ordnance Survey National Grid using survey control and base topographic data provided by Babtie Group Ltd.

3.3.2 During work at Site 6 it became apparent that the geophysical survey data for this site had been incorrectly located. No permanent markers remained in place and the correct position of the survey could not be

satisfactorily re-established. The results of the geophysical survey could therefore not be investigated during the sample excavation. This did not affect the establishment or survey of the trench locations.

- 3.3.3 Survey control data were not provided for Site 52 and therefore the trenches were located within a local grid and semi-permanent reference points by Archaeological Services (WYAS). The trench positions were then superimposed onto an Ordnance Survey National Grid digital map base using common reference points; primarily building and boundary outlines to the south and south-east of the site. A lack of reference points to the north, east and west of the site and the overgrown vegetation across the site limited the potential accuracy of this process.

4. Site 50

4.1 Introduction

- 4.1.1 The area of investigation lay to the south of the River Aire at SE 121 376, on pasture land under short grass and nettle cover. In accordance with the specification an area of 24m² was hand-excavated (Fig. 2).
- 4.1.2 Site visits were made by a Babbie Group Ltd archaeologist on the 30th September and 6th October in order to monitor the work in progress at Sites 50, 51 and 6.

4.2 Trench A

- 4.2.1 The trench was positioned to sample an area of geophysical anomalies which coincided with uneven ground on a steep slope above the River Aire, in an area which would be affected by one of the proposed viaduct piers.
- 4.2.2 The trench measured 12m by 2m and was oriented north/south, sloping down towards the north. The topsoil was 0.25m deep and directly overlay an undisturbed natural deposit; a firmly compacted orange-brown silty-sand containing frequent sandstone fragments. The natural was encountered at between 78.31m and 75.57m OD.
- 4.2.3 Five sherds of 17th to 19th-century pottery were recovered from the topsoil but no archaeological features were identified.

5. Site 51

5.1 Introduction

- 5.1.1 The area of investigation lay to the north of Site 50. A trench with an area of 20m² was excavated by hand (Fig. 2).

5.2 Trench A

- 5.2.1 This trench was positioned to sample an earthwork feature interpreted as an artificial water channel which would be affected by one of the viaduct piers.

- 5.2.2 The trench was located on low-lying land adjacent to the River Aire, in an area which had been disturbed by the root network of nearby mature trees. It measured 10m by 2m and was oriented north/south (Fig. 3).
- 5.2.3 The topsoil and subsoil deposits were each 0.2m deep. The surface earthwork feature was identified as an infilled linear channel (4001) oriented east/west. A sequence of deposition comprising distinct bands of silts and gravels (4003, 4004 and 4006) was identified within Channel 4001 (Fig. 4). Only the south side of the channel was located within the trench; it had a gradual, stepped profile and sloped downwards to the north towards the present course of the River Aire.
- 5.2.4 A total of 44 sherds of late-17th-century to 19th/20th-century pottery was recovered from these deposits. The assemblage was water-worn and clearly redeposited, with 19th/20th-century sherds found in the primary fill.
- 5.2.5 This feature is believed to be a naturally formed, and filled, water channel 'cut' into an undisturbed orange-brown natural sand deposit. The natural was encountered at between 69.55m and 68.26m OD.
- 5.2.6 It should be noted that even a short period of heavy rainfall during the excavation of this site resulted in a significant expansion of the River Aire, raising the water table and flooding the trench. To the west a natural river erosion feature (which may have once conjoined Channel 4001) had been modified to direct water towards the River Aire (Fig. 2). This modification may have reduced, perhaps deliberately, the quantity of water flowing through Channel 4001 and caused it to silt up.

6. Site 6

6.1 Introduction

- 6.1.1 The area of investigation lay on disused land on the northern flood plain of the River Aire at SE 120 377. The area was under short grass cover having been mown and cleared of thistles prior to the geophysical survey, and in some areas recent episodes of refuse burning and dumping were evident. In accordance with the specification two trenches were machine-excavated, with a total area of c. 120m² (Fig. 2).

6.2 Trench A

- 6.2.1 This trench was positioned to sample an area including geophysical anomalies of possible archaeological origin which would be affected by one of the proposed viaduct piers. Inaccuracies in the mapping of the geophysical survey meant that these anomalies could not be evaluated (3.3 above).
- 6.2.2 The trench measured 20m by 3m and was oriented east/west. The topsoil and subsoil were 0.39m deep. These overlay an undisturbed natural deposit; a firmly compacted light orange-brown silty-sand. The top of the natural lay at 69.82m OD and a machine-excavated sondage established that it continued to at least 68.71m OD.

- 6.2.3 Two sherds of 18th to 19th-century pottery and a fragment of clay tobacco pipe were recovered from the subsoil but no archaeological features were identified.

6.3 Trench B

- 6.3.1 This trench was positioned to sample an area near the junction between the flood plain and the foot of Rye Loaf Hill in which ferrous disturbance prevented the geophysical survey from recording any anomalies which may be present. This area would also be affected by one of the proposed viaduct piers.

- 6.3.2 The trench measured 15m by 4m and was oriented north/south. Excavation revealed 0.25m of topsoil and 0.2m of subsoil overlying a firmly compacted light orange-brown silty-sand. This undisturbed natural was encountered at 69.65m OD and was present to at least 68.6m OD.

- 6.3.3 A modern pit, cut through the topsoil, was identified in the northern end of the trench. No artefacts or archaeological features were identified.

7. Site 52

7.1 Introduction

- 7.1.1 The area of investigation lay within disused allotments located between the Leeds and Liverpool canal and the Airedale Line railway, west of Three Rise Locks and south of Bingley North Bog, at SE 106 593. The allotments were overgrown with long grass and coarse vegetation which was very dense in places, and in some areas recent episodes of refuse burial and dumping were evident. In accordance with the requirements of the specification six trenches were machine-excavated, with a total area of c.210m² (Fig. 5).

- 7.1.2 Site visits were made by a Babcie Group Ltd archaeologist on the 16th, 18th, 19th, 24th and 25th August in order to monitor the work in progress.

7.2 Trench A

- 7.2.1 The trench was located on disused and overgrown land to the south of the allotments. The ground was flat and covered with long grass and occasional dense scrub.

- 7.2.2 The trench measured 9m by 4m and was oriented north/south (Fig. 6). It was machine-excavated (and stepped) to a total depth of 3m from ground level (Fig. 7).

- 7.2.3 At the base a waterlogged clay undisturbed natural was identified at 75.95m OD and above this lay a 0.16m deep peat deposit. The three subsequent deposits were identified as buried subsoil (111), buried topsoil (110), and buried turf (109). The surface of the buried turf lay at 76.39m OD. Pottery from the buried topsoil and subsoil dates to the 18th to 19/20th centuries.

7.2.4 Above this lay a sequence of recent dumping and levelling deposits (Layers 100, 101, 102, 103, 104, 105, 106, 107 and 108) and topsoil. These deposits contained large quantities of artefacts including; 77 pot sherds, 49 pieces of clay tobacco pipe and 55 oyster shells plus glass, animal bone and slag. An articulated juvenile dog skeleton was identified at the interface between deposits 103 and 104, but apart from this the majority of these artefacts are probably residual, with the ceramics dating to the 18th to 19/20th centuries.

7.2.5 The area has clearly been subject to several episodes of dumping and disturbance, probably associated with the nearby railway and/or canal; the Airedale Line opened in 1846/7, and the Leeds and Liverpool canal opened in 1775 and was re-routed slightly in the 1990s as part of the Bingley Relief Road scheme.

7.3 Trench B

7.3.1 This trench was located within a disused allotment, in addition to overgrown shrubs and fruit bushes some sheds were still standing and modern rubbish had been dumped across the area. The ground level sloped gradually down towards the south.

7.3.2 The trench measured 7m by 5m and was oriented north/south (Fig. 8). The topsoil was 0.35m deep and directly overlay the undisturbed natural; a compact yellow-brown clay with occasional sandstone inclusions. The natural was encountered at between 79.2m and 78.65m OD, and a sondage showed that this deposit continued to at least 77.53m OD.

7.3.3 Several topsoil-filled modern features were identified, plus a shallow natural depression (200). Two post-holes (202 and 204) may be archaeological in origin but no dating evidence was recovered (Sections 3, 4 and 5, Fig. 12).

7.3.4 Unstratified deposits in this trench yielded four 18/19th-century potsherds, two fragments of clay tobacco pipe, two shells and a piece of glass.

7.4 Trench C

7.4.1 Again this trench was located within the disused allotments and overgrown shrubs, trees and fruit bushes covered the area of investigation. Substantial quantities of rubbish had been dumped very recently, but beneath this the ground was fairly level.

7.4.2 The trench measured 7m by 5m and was oriented north/south (Fig. 9). The topsoil was 0.45m deep and overlay a 0.33m deep subsoil. The top of the undisturbed natural lay at approximately 77.5m OD. The upper natural deposit was 0.3m deep and overlay 0.23m of grey clay with moderate small sandstone inclusions. Beneath this was a very compact yellow clay with very occasional large sandstone cobbles which was present to at least 77.43m OD.

7.4.3 A stone-capped drain (301) was identified in the southern part of the trench. It was aligned north-east/south-west, measured 0.4m in width and

was cut into an orange/grey mottled clay-sand natural deposit (Section 11, Fig. 12). An apparent alignment of very large cobbles (303) lay north-west/south-east and appeared to abutt the drain, these may have been natural in origin.

- 7.4.4 No artefacts were found in association with Drain 301, although twelve sherds of pottery, three fragments of bone and an iron object were recovered from unstratified deposits. The small ceramic assemblage is particularly mixed and indicates some activity in the area in the 13th to early 14th century, 16/17th century and 17th to 18th century.

7.5 Trench D

- 7.5.1 This trench was also located within a disused allotment; the ground cover was grass and brambles with several patches of rubbish dumping. The ground level sloped gradually down to the north.

- 7.5.2 The trench measured 7m by 5m and was oriented north/south. The topsoil was 0.25m deep and directly overlay the undisturbed natural; a compact orange-brown silty-clay with frequent sandstone and occasional very large cobble inclusions. The natural was encountered at between 79.0m and 79.57m OD.

- 7.5.3 Several small dumps of modern refuse were identified. Five sherds of 17th to 19th century pottery, two fragments of clay tobacco pipe and a fragment of animal bone were recovered from unstratified deposits.

7.6 Trench E

- 7.6.1 This trench was located to the north of Trench D. The ground level sloped from east down to west and the cover was long grass and weeds.

- 7.6.2 The trench measured 7m by 5m and was oriented east/west (Figs 10 and 11). The topsoil was 0.3m deep and beneath this a number of features were identified.

- 7.6.3 The undisturbed natural comprised a dark yellow-brown sandy-clay with occasional sandstone fragments and large cobbles. A sondage established that this natural deposit was 1.05m deep and overlay a very compact blue-grey clay deposit. The surface of the natural sandy-clay was identified at between 77.98m and 77.49m OD, and the underlying clay at 76.90m OD.

- 7.6.4 The earliest features were two stone-capped drains (504 and 511) which may have been contemporary (Fig. 10). Drain 504 was oriented east/west and was 0.5m wide, Drain 511 ran north-east/south-west and was 0.3m wide (Sections 9 and 10, Fig. 12). Pot sherds found in association with the drains indicate an 18th-century date (plus some residual 13th to early-14th-century sherds). Both drains had been truncated, removing evidence of any potential relationship between them.

- 7.6.5 Later, Drain 511 was utilised in the construction of a wall foundation (508) which was up to 0.7m wide and was constructed from large rounded sandstone cobbles which abutted the drain (Fig. 10; Pl. 1). Only

a single course of this foundation survived. Pottery evidence again suggests an 18th-century date, although this may be residual.

7.6.6 The later collapse of the wall resulted in the distribution of rubble (507) across the western part of the trench (Fig. 11), and the rubble was subsequently covered by a silty deposit (503). Later, a soakaway drain (501) was constructed from brick fragments in a shallow U-shaped cut, 0.48m wide and 0.15m deep (Section 14, Fig. 12).

7.6.7 The artefact assemblage for this trench comprised a total of 50 sherds of (mainly unstratified) pottery dated to the 13th to early 14th, 17th to 18th, and 18th to 20th centuries, plus sixteen fragments of bone, 23 pieces of (mainly unstratified) clay tobacco pipe, one piece of shell, two iron objects and a brick sample.

7.6.8 The structures in this area date to the 18th century or later and do not appear to have been substantial. No floor layers or other associated features were identified and the wall may simply relate to an allotment building or boundary.

7.7 Trench F

7.7.1 This trench was located on flat low-lying ground to the north-west of Trenches D and E. The ground cover was short grass and brambles and a large dump of building materials. It measured 7m by 5m and was oriented north/south (Fig. 13).

7.7.2 The natural deposits comprised a 0.75m deep peat deposit and below this was a compact white-grey clay with no inclusions. The surfaces of the peat and clay were encountered at 76.54m and 75.8m OD respectively.

7.7.3 Above the peat, extending across the whole trench, was a 0.3m deep, very compact, yellow-orange mottled clay (600) overlain by a 0.15m deep red-orange silt (601; Fig. 14). Two pot sherds from the clay make-up deposit (600) date to the 17/18th century and seven pot sherds and a clay-pipe bowl from the subsequent silt layer (601) also date to this period. Rather than dating the made-up ground these artefacts may have been residual in the redeposited clay.

7.7.4 In the northern part of the trench an east/west linear feature (602) was cut through the made-up ground. The cut had an irregular U-shaped profile and was 1.66m wide and 0.46m deep. The primary fill comprised a 0.15m deep layer of lime-plaster and sandstone fragments (603) and above this was 0.25m deep layer of sandstone fragments (604). These had been sealed by a clay layer (605), which was identical in composition to the earlier redeposited clay layer (600; Fig. 14). The plaster is probably pre-19th century (P. Thornborrow pers. comm.) and Fill 605 contained residual pottery of sherds of 17th-century date and a probable 18th-century brick fragment.

7.7.5 The artefact assemblage for this trench comprised 30 sherds of (mainly unstratified) pottery dated to the 17th to 19/20th centuries, three

fragments of bone, three fragments of brick, thirteen pieces of (mainly unstratified) clay tobacco pipe and a plaster sample.

- 7.7.6 This activity appears to date to the 18th century or later. The area has clearly been made-up with redeposited clay in an attempt to reduce the instability and water-logging of the underlying peat, and the linear feature appears to be the foundation trench for a fairly insubstantial structure.

8. Site 38

8.1 Introduction

8.1.1 The area of investigation was located between the Leeds and Liverpool canal and the Airedale Line railway, west of Five Rise Locks at SE 107 399. The site consists of an area of dry-stone walled field boundaries north-west of Bingley North Bog. The land is presently under pasture and the ground cover is short grass. In accordance with the specification three trenches were excavated with a total area of *c.*115m² (Fig. 15). The trenches were machine-excavated, apart from the central area of Trench B which was excavated by hand.

8.1.2 Site visits were made by a Babtie Group Ltd archaeologist on the 13th, 16th and 17th September in order to monitor the work in progress.

8.2 Trench A

8.2.1 This trench was positioned to sample an area to the south-east of a possible lynchet. It was located on flat low-lying ground which was very soft and prone to water-logging.

8.2.2 The trench measured 7m by 5m and was orientated north-west/south-east. Topsoil, measuring on average 0.2m in depth, overlay an undisturbed natural grey-brown clay deposit. A modern pipe drain was oriented north-west/south-east in the north-east corner of the trench (not illustrated).

8.2.3 The top of the natural was encountered at 77.14m OD. A sondage established that the clay deposit overlay a dark black-brown peat deposit at 77.0m OD. The peat extended to at least 76.14m OD.

8.2.4 Seven sherds of pottery, dating from the 17th to 19th centuries, and a fragment of vitreous slag were recovered from unstratified contexts.

8.2.5 It should be noted that a stream known as Dimple Sike ran along the modern boundary to the south of Site 38 until its course was diverted by the construction of the Leeds and Liverpool canal in the late 18th century (Fig. 2). Its route can be seen on Saxton's map of 1592 and can also be traced on the first edition Ordnance Survey (1852) map of the area. The area investigated by Trench A lies on the flood plain of the Dimple Sike.

8.3 Trench B

8.3.1 This trench was positioned to investigate a possible lynchet. In consultation with the Babtie Group Ltd archaeologist the trench was

relocated slightly to the west due to dense shrub and tree cover in the vicinity.

- 8.3.2 The trench measured 15m by 2m and was orientated north-west/south-east, located on land which sloped steeply to the south (Fig. 16). A natural peat deposit (2013) lay at between 77.12m and 77.68m OD. Approximately 8.6m from the south-eastern limit of excavation a change from the underlying natural peat was noted; a yellow-brown silty-clay, containing frequent chalk and gravel inclusions, and a lighter yellow-white chalky gravel. This latter deposit sloped from 77.9m to 79.3m OD and was similar to that observed in Trench C.
- 8.3.3 In the southern part of the trench the peat deposit (2013) was overlain by two shallow clay deposits (2014 and 2015). To the north a slag-rich deposit (2012) lay directly above the peat and was itself overlain by Deposit 2011 (Fig. 17).
- 8.3.4 Cut through Deposits 2014 and 2015 was a modern linear soakaway drain (2010), which was orientated east/west. The cut was lined with flat sandstone slabs and filled with water-worn cobbles.
- 8.3.5 Later, a dry-stone wall (2007) had been constructed on Deposit 2015 (Figs 17 and 18; Pl. 2). It was orientated east/west and was 0.6m in width and had a maximum height of 0.8m. Four courses of the wall survived on the southern side, however, on the northern side only two courses were observed.
- 8.3.6 Constructed upon Deposit 2011 was one course of large cobbles (2009), measuring 0.4m in width. Although not proven stratigraphically, they appeared to be forming the foundations of a later wall. A dump of irregular sandstone fragments (2008) appeared to represent the heartings of Structure 2009, which had utilised the existing wall (2007) to redefine and/or extend the boundary.
- 8.3.7 Two slumped deposits (2017 and 2001) appear to have been accumulated after the construction of the dry-stone wall (2009).
- 8.3.8 Topsoil overlay Deposit 2001 and also covered the structures (2007 and 2009). Above this an irregular spread of large stones were identified as tumble, resulting from the collapse of the wall, and represent the abandonment of the boundary.
- 8.3.9 Three fragments of 17th-century pottery were recovered from Deposit 2011 and one fragment of the same date from Deposit 2015. This suggests a post-medieval or later date for the construction of the wall.

8.4 Trench C

- 8.4.1 This trench was positioned to sample a small plateau to the north-west of Trench B.
- 8.4.2 The trench measured 7m by 5m and was orientated north-west/south-east. Topsoil was noted for a depth of 0.25m and overlay 0.35m to 0.56m of subsoil. Beneath this lay a loose, light yellow-white, chalky gravel

deposit, identified as undisturbed natural, which was observed at between 82.94m and 83.38m OD.

- 8.4.3 No archaeological features were identified in this trench and only one sherd of unstratified 18th/19th-century pottery was recovered.

9. Artefact Record

9.1 Medieval and Post-medieval Pottery (C. Cumberpatch PhD)

- 9.1.1 The excavations yielded a total of 280 sherds of pottery. The assemblage was examined on the 18th October 1999 with a view to producing a basic catalogue of the types present, spot dating of the sites and contexts and an assessment of future work, but stopping short of a full analysis and description. A summary of the assemblage is presented in Appendix V.

9.1.2 Site 6

The pottery from Site 6 consisted of sherds of 18th to 19th-century date.

9.1.3 Site 38

Although the assemblage of pottery from Site 38 was small it was significant in being of predominantly 17th-century date. In addition contexts 2012 and 2011 contained burnt material which may indicate the presence of pottery manufacture in the pre-industrial period. Whether this is the result of dumping or of pottery manufacture in the vicinity is unclear.

9.1.4 Site 50

Site 50 produced only one sherd of indeterminate, but pre-20th-century, date.

9.1.5 Site 51

All the pottery from Site 51 showed evidence of abrasion in an active watercourse. The majority was of post-medieval in date, although the longevity of coarseware forms and the worn condition made definitive identification difficult. Two contexts are worthy of particular note.

- 9.1.6 The sherds from context 4002 had all been all heavily abraded in a river/active watercourse. The assemblage comprised: a late 17th-century pancheon base and walls, recent whiteware (China), unglazed red earthenware (probably flowerpot), 19th-century stoneware, small sherds of colour glazed earthenwares (18th to 19th century) plus a large fragment of sewer pipe of 19th to 20th-century date.

- 9.1.7 Context 4005 contained some heavily abraded sherds of a Yellow ware pancheon or pancheons with unabraded sherds of blue and white tablewares plus a sherd of stoneware (preserve jar), flowerpot and later Blackware type (18th century).

9.1.8 Site 52

Site 52 was the only one of the assemblages examined to produce medieval pottery, dating to the 13th or earlier 14th centuries. The

majority of the pottery was of later date, with the 17th and 18th centuries being particularly well represented. Context 103 included some examples of Chinese derived decoration (landscapes), presumably of 19th-century date, with coarsewares of possibly earlier type. The material requires further research to find parallels (and thus dates and possible origins) for the whitewares. Sherds of whiteware cross-join with sherds from the unstratified context.

9.2 Faunal Remains (J. Richardson PhD)

- 9.2.1 Approximately 50 fragments of animal bone were recovered during the sample excavations (Appendix VI). Many more fragments of bone were encountered at Site 52 where the burial of animal carcasses (cattle and sheep/goat) in the topsoil of the allotments was fairly common. These modern bones were not retained.
- 9.2.2 The animal bones from Sites 51 and 52 are reasonably well preserved with only a few bones displaying eroded bone surfaces. The bone fragments from Site 51, however, were found in association with a water channel and were redeposited. The single fragment (of a sheep/goat humerus) from Site 38 is poorly preserved with a cracked and flaking surface.
- 9.2.3 The range of species (or lower order categories) identified from Site 52 includes cattle, sheep/goat, dog, domestic fowl and a small wild bird species (probably a passerine). Three of the bones, two of cattle and one of sheep/goat, were butchered. Unfortunately the majority of the bone assemblage was retrieved from unstratified deposits (and only a sample was recovered for identification), and there is reason to believe that a proportion of the bones was recently deposited. Certainly large domestic fowl and sheep/goat bones were identified and these probably represent animals bred after the agricultural improvements of the 18th century. Three fragments of cattle rib were recovered from Site 51 and all three show some signs of butchery. The reduction of these bones probably relates to the preparation of meat joints prior to cooking.

9.3 Clay Tobacco Pipe

- 9.3.1 A total of 108 fragments of clay pipe were recovered, largely from unstratified contexts (Appendix VII). The assemblage comprised 97 stem fragments, ten bowl fragments and two almost complete pipes. The majority of these (85%) came from Site 52 and, more specifically, from the 19th to 20th-century disturbance and levelling deposits in Trench A.
- 9.3.2 The earliest forms were represented by two small bowl fragments, both bulbous in shape, dating to the late 17th century; one from an unstratified context at Site 38, Trench A and the other from a levelling deposit (601) at Site 52 in Trench F (cf. Lawrence 1973: 63, Type 7, c. 1650-70). Apart from these the assemblage appears to be almost entirely late 18th to 19th century in date. The later pipes typically have leaf designs along the seams of the bowls but are otherwise plain. Where present the spurs are

fairly pointed and ten of the stem fragments have orange-glazed mouthpieces. Two of the bowls had been burnished.

9.3.3 Three stem fragments and the stem of one of the complete pipes had been stamped with the maker's initials and town - 'EC KEIGHLEY'. It has not been possible to identify this maker and no similar examples are located in the Manor House Museum, Ilkley (G. Edwards pers. comm.). Two Keighley makers are listed in Lawrence (1973); Henry Dobbs (HD) 1886-93 and John Hutchinson (IH) 1838. All the stamped fragments were recovered from Site 52 - from unstratified contexts but dispersed widely across the site in Trenches A, B and E.

9.3.4 Both of the complete pipes were unstratified in Trench A, Site 52. The stamped complete pipe had a spur, a stem of minimum length 120mm, and a leaf design on the seams of the bowl. The other complete pipe was manufactured from an orange-pink clay fabric with a smaller bowl and thinner stem than the stamped example. The stem had a minimum length of 100mm. It had no spur or heel and the bowl was decorated with a worn symbol-based design with leaves at the seams. Both complete pipes appear to date to the 19th century (*cf.* Lawrence 1973: 71; Ayto 1987: 6).

9.4 *Miscellaneous*

9.4.1 The remainder of the artefact assemblage comprised:

- 27 fragments of glass, all from 20th-century contexts;
- 61 complete or fragmented shells, mainly oyster shells;
- 10 iron objects and an unstratified lead object;
- 24 fragments of industrial residue;
- 12 fragments of brick/tile and,
- a wooden button.

10. *Environmental Record*

10.1 In consultation with the Babbie Group Ltd archaeologist it was determined that no archaeological deposits suitable for environmental sampling were identified at any of the sample excavation sites.

11. *Statement of Potential*

11.1 *The Stratigraphic Data*

11.1.1 At each of the sites excavation has revealed post-medieval and/or modern deposits directly overlying undisturbed natural deposits. Where present the post-medieval features appear to relate to either insubstantial structures or drainage. The areas of investigation did not produce any evidence of occupation or industrial activity.

11.1.2 The quantity of artefacts recovered from each site is adequate to provide spot-dating for the majority of the features. Where artefacts are absent the

stratigraphic evidence provides relative dating in most instances, although at Site 52 two possible post-holes (Trench B), and a drain (Trench C) remain undated.

11.1.3 Should more detailed dating be required, documentary and cartographic research may provide additional evidence for the dating of structural and boundary features at Sites 38 and 52.

11.1.4 The excavations have recovered sufficient information to evaluate the archaeological significance of these sites, and the aims and objectives, as set out in paragraph 3.1, have been achieved.

11.2 *The Pottery Assemblage (C. Cumberpatch PhD)*

11.2.1 The pottery assemblages from the Bingley Relief Road, although small in size, are of considerable interest by virtue of the fact that little other material has been recovered from the town. The small quantities of medieval material indicate the existence of medieval activity in the area, but little about its nature. The larger quantities of 17th and 18th-century material are consistent with the historical evidence for the growth of the town in the early modern period.

11.2.2 The assemblages require full description and analysis, in line with the standards laid down in the forthcoming minimum standards guidelines shortly to be published by the Medieval Pottery Research Group (M.P.R.G. in prep.). This will involve quantification by sherd weight and count and a description of the types with reference to the local county type series.

11.2.3 Further analysis is not required in order to fulfill the aims and objectives of this project.

11.3 *The Faunal Assemblage (J. Richardson PhD)*

11.3.1 Given that the majority of the animal bone assemblages are not associated with archaeological deposits no further analysis is recommended.

11.4 *The Clay Tobacco Pipe Assemblage*

11.4.1 Whilst a significant clay pipe assemblage was recovered, the majority of the contexts were redeposited or unstratified. These contexts had, in many cases, also yielded datable pottery finds. Therefore, whilst further research to identify the Keighley manufacturer would enhance records of local clay tobacco pipe production, this additional analysis would not contribute significantly to the dating or interpretation of these sites.

11.5 *Other Artefacts*

11.5.1 The majority of the other artefacts were retrieved from redeposited or unstratified contexts. In the absence of a significant archaeological context they are not considered to be suitable for further analysis.

12. Storage and Curation

12.1 The written, drawn, photographic and digital records are currently held by Archaeological Services WYAS.

12.2 Where necessary the artefacts have been washed and packed and will be stored or discarded following consultation with the Babbie Group Ltd. Although no further analysis is required within the remit of this project it should be noted that the specialists have raised the following points:

- Given that little is known of pottery use and/or production in the Bingley area (in either the medieval or post-medieval period) further work would enhance artefact studies and there is therefore no justification for the disposal of this assemblage.
- Further study of the clay tobacco pipe assemblage may enhance records of local manufacturers. This assemblage should therefore be retained.
- In light of the unstratified nature of much of the faunal assemblage, and the potential for redeposition, all the animal bones may be discarded.
- Given the modern character of the artefact assemblage, it is recommended that the glass, shells, industrial residue and metalwork from modern and unstratified contexts should be discarded.

12.3 Where appropriate these materials are currently stored in controlled conditions. It is anticipated that the archive will be deposited at the following repository after completion of post-excavation analysis:

The Manor House Art Gallery and Museum, Castle Yard, Ilkley, West Yorkshire LS29 9DT.

13. Conclusion

13.1 Archaeological remains were identified at only three of the five sites selected for sample excavation. Where present these remains tended to be either post-medieval or natural in origin; a natural water channel which was possibly diverted and may have silted-up as late as the 20th century (Site 51), recent redeposition of 18th to 20th-century dumping (Site 52), 17th and 18th-century drainage features (Site 52), and a possibly 17th-century wall (Site 38). No earlier features were identified but some ceramic evidence of 13th and 14th-century activity was found at Site 52, albeit in redeposited contexts.

13.2 Whilst a fairly substantial artefact assemblage was recovered from these excavations few of the contexts related to significant archaeological deposits and the redeposition of material was common. Therefore although some parts of the assemblage may have further potential for artefact studies, further analysis would not contribute to the evaluation of these sites.

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Lawrence, S., 1979, 'York pipes and their makers', in Davey, P. (ed.), *The Archaeology of the Clay Tobacco Pipe. I. Britain: the Midlands and Eastern England*. BAR Brit. Ser. 63, 67-84

M.P.R.G., in prep. 'Minimum standards for the processing, recording, analysis and publication of post-Roman ceramics.' Medieval Pottery Research Group Report

Cartographic Sources

Ordnance Survey, 1852, surveyed 1849-51, six inches to the mile series, Sheet 201.

Saxton, C., 1592, Map of Priestthorpe. West Yorkshire SMR Township Files.

Acknowledgements

Client

Babtie Group Ltd

Project Management

Paul Wheelhouse BA

Supervision and Reporting

Andrea Burgess BSc, Louise Martin BSc

Survey

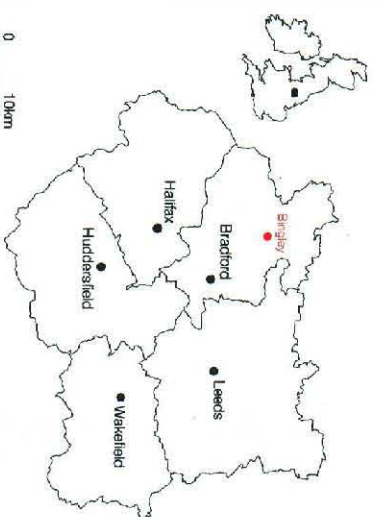
Paul Wheelhouse, Andrea Burgess

Illustration

Jon Prudhoe

Fieldwork

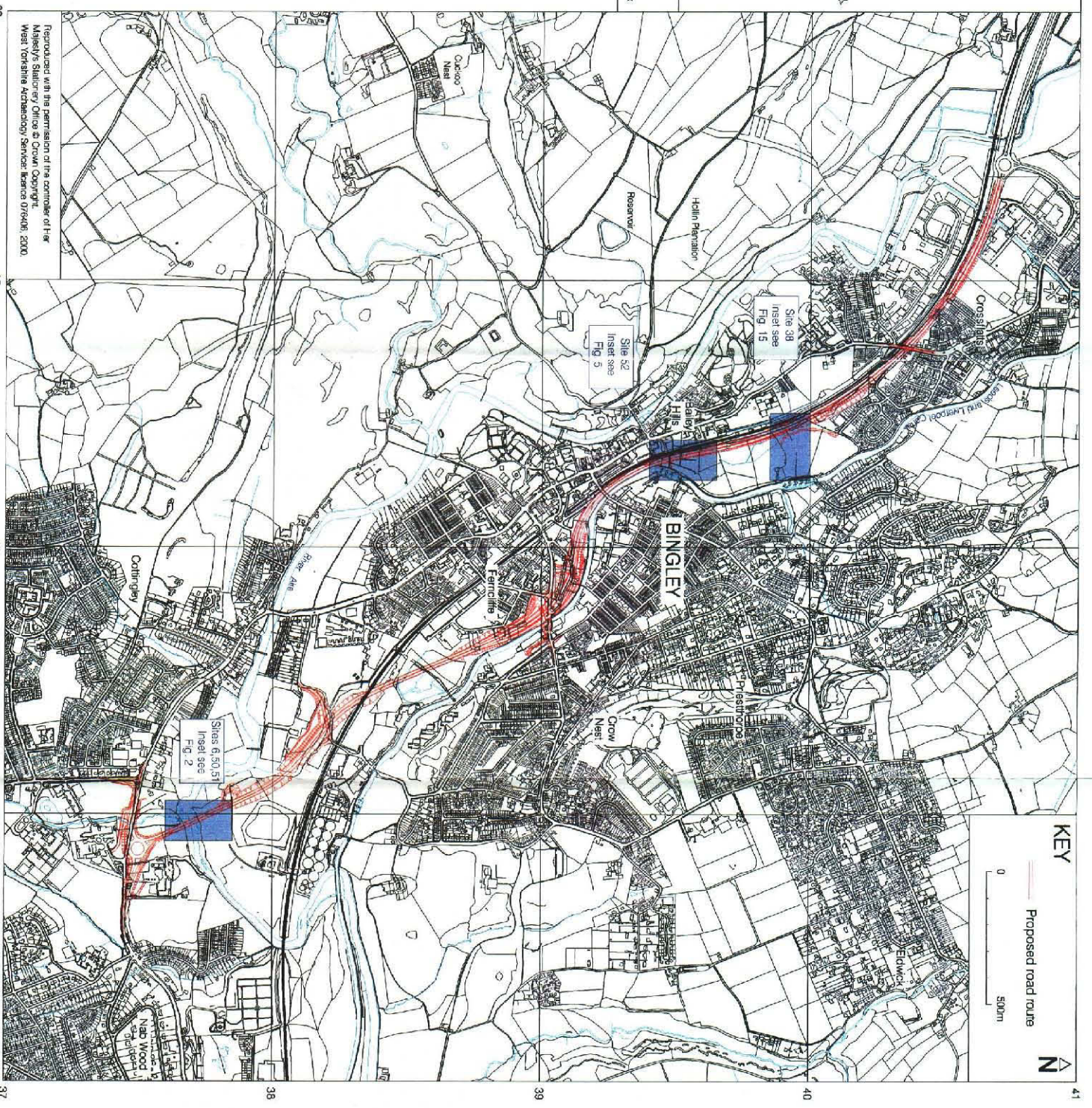
Helen Clough MA, Bernard McCluskey, Graham Robbins MA, Peter Robinson BA,
Marina Rose BSc



0 10km



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KEY
 Proposed road route

0 50m



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Fig. 1. Location of sites

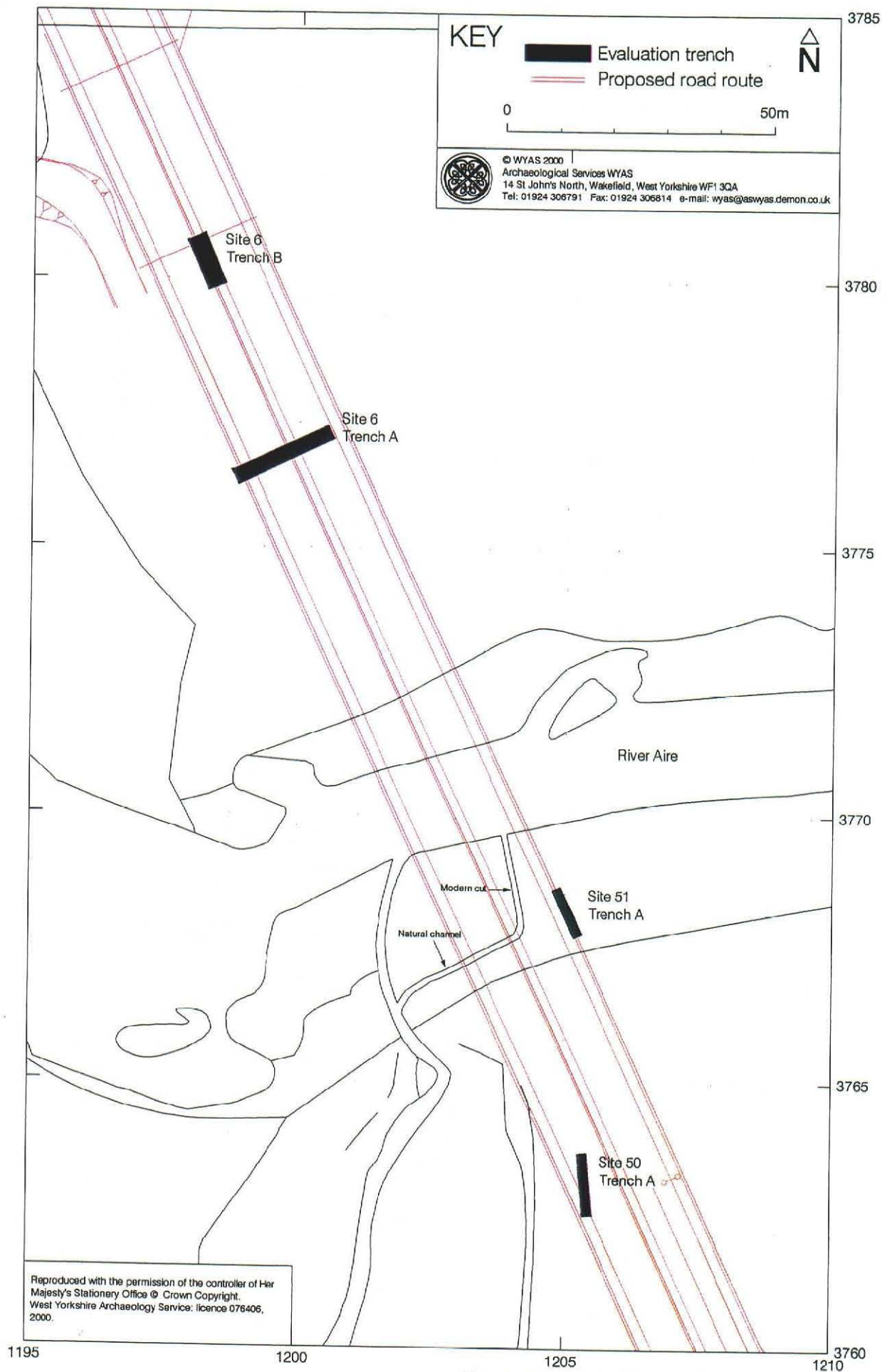


Fig. 2. Trench locations at Sites 6, 50 and 51

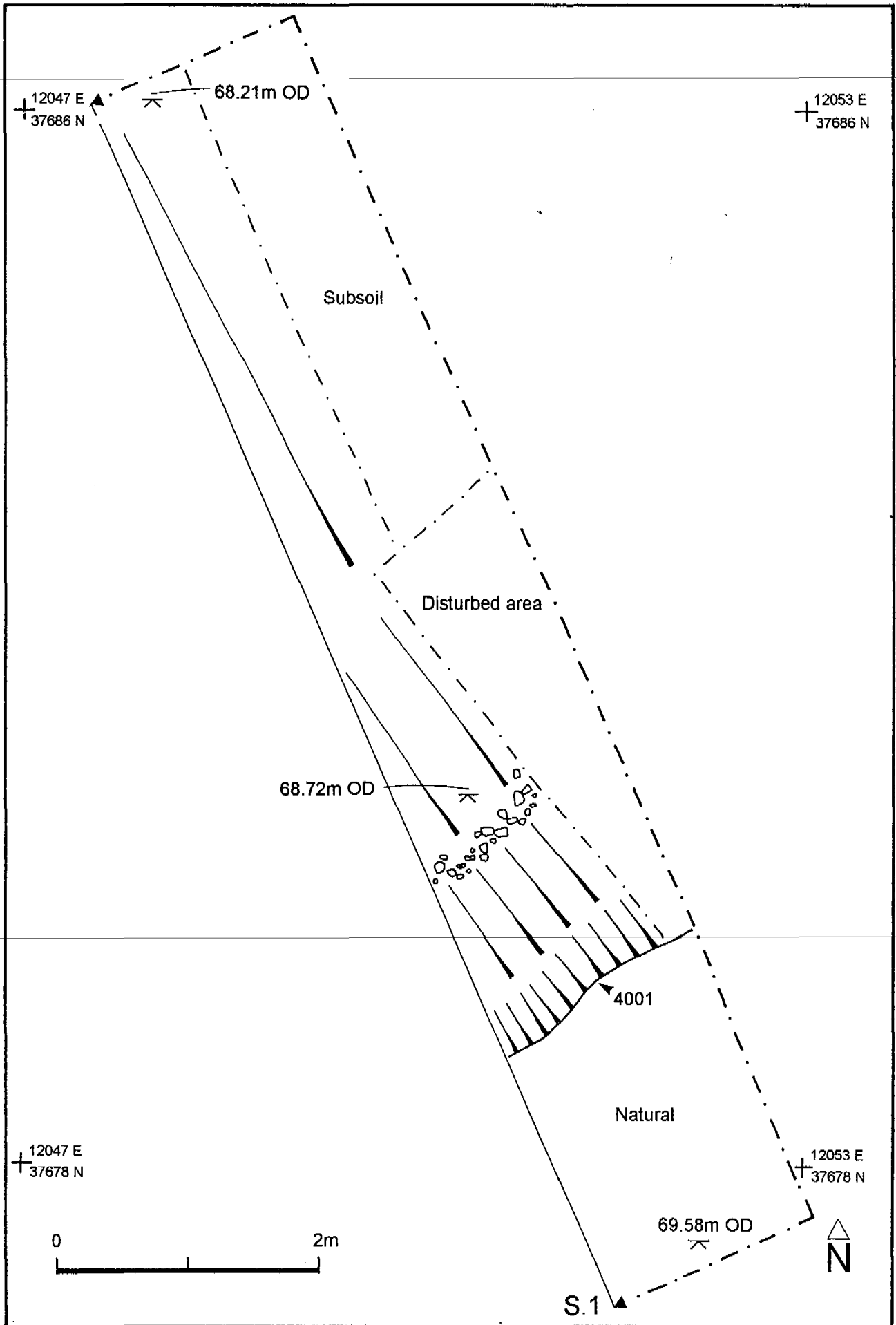


Fig. 3. Site 50, Trench A

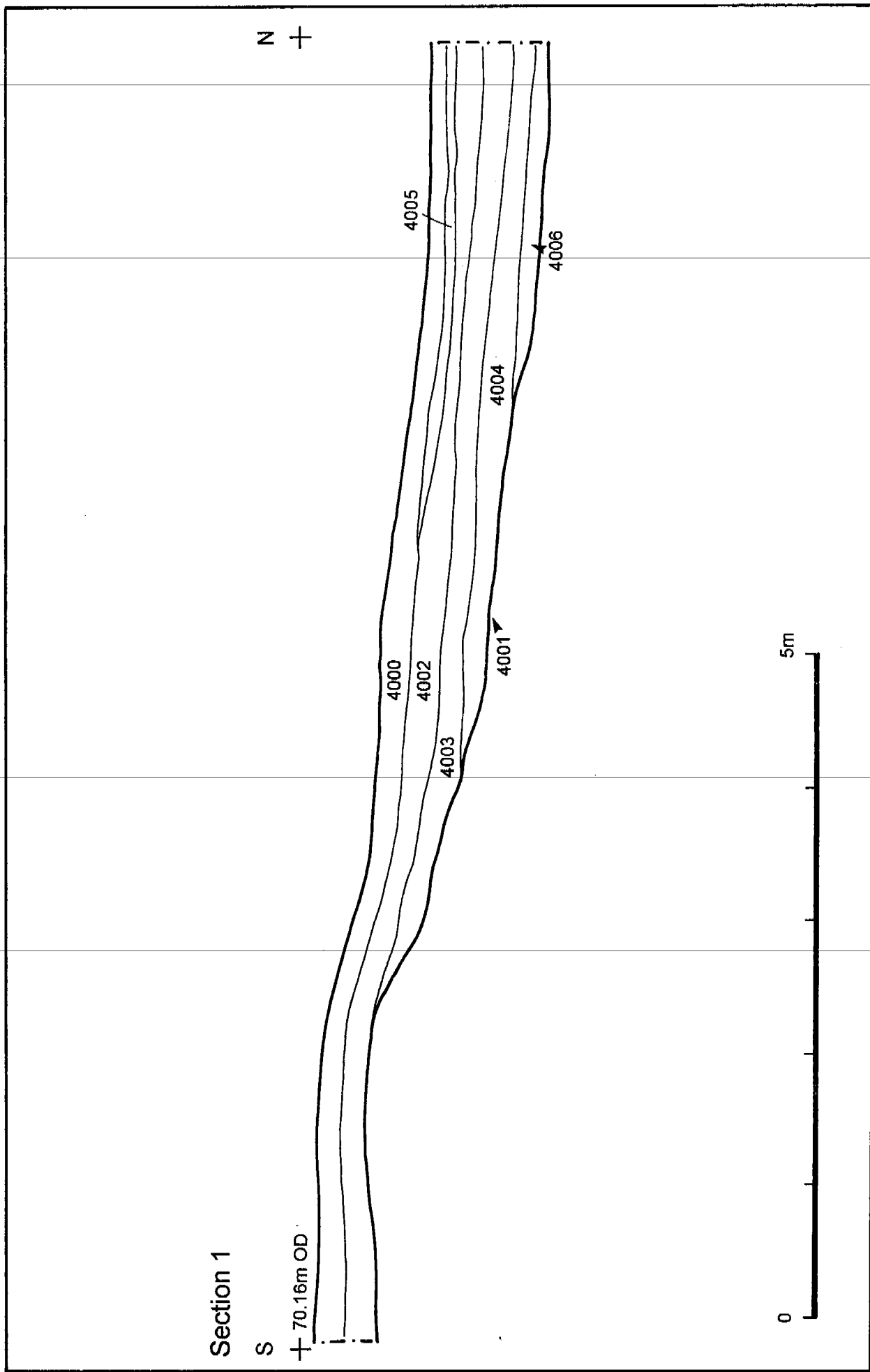


Fig. 4. Site 50, Trench A

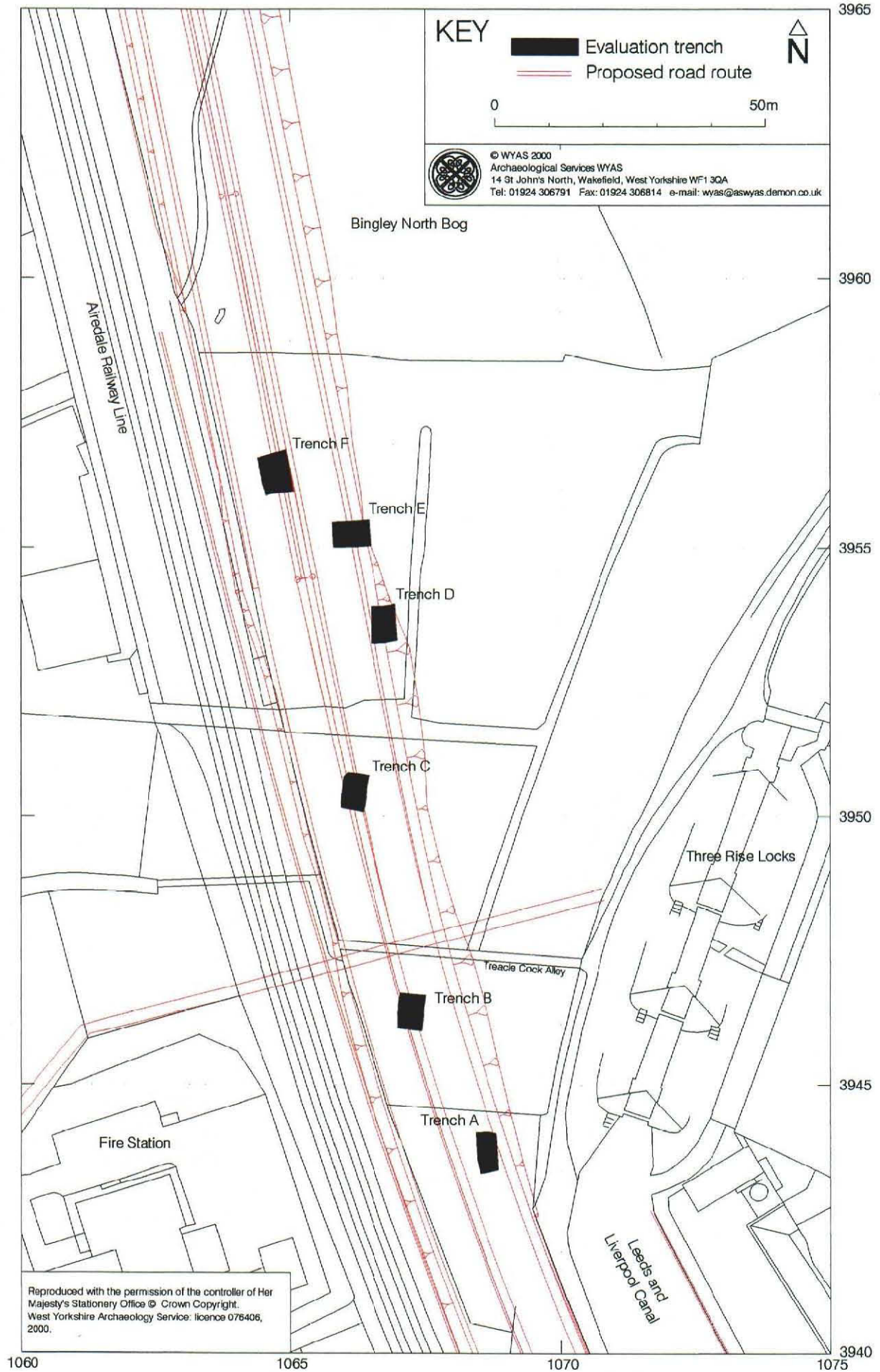


Fig. 5. Trench locations at Site 52

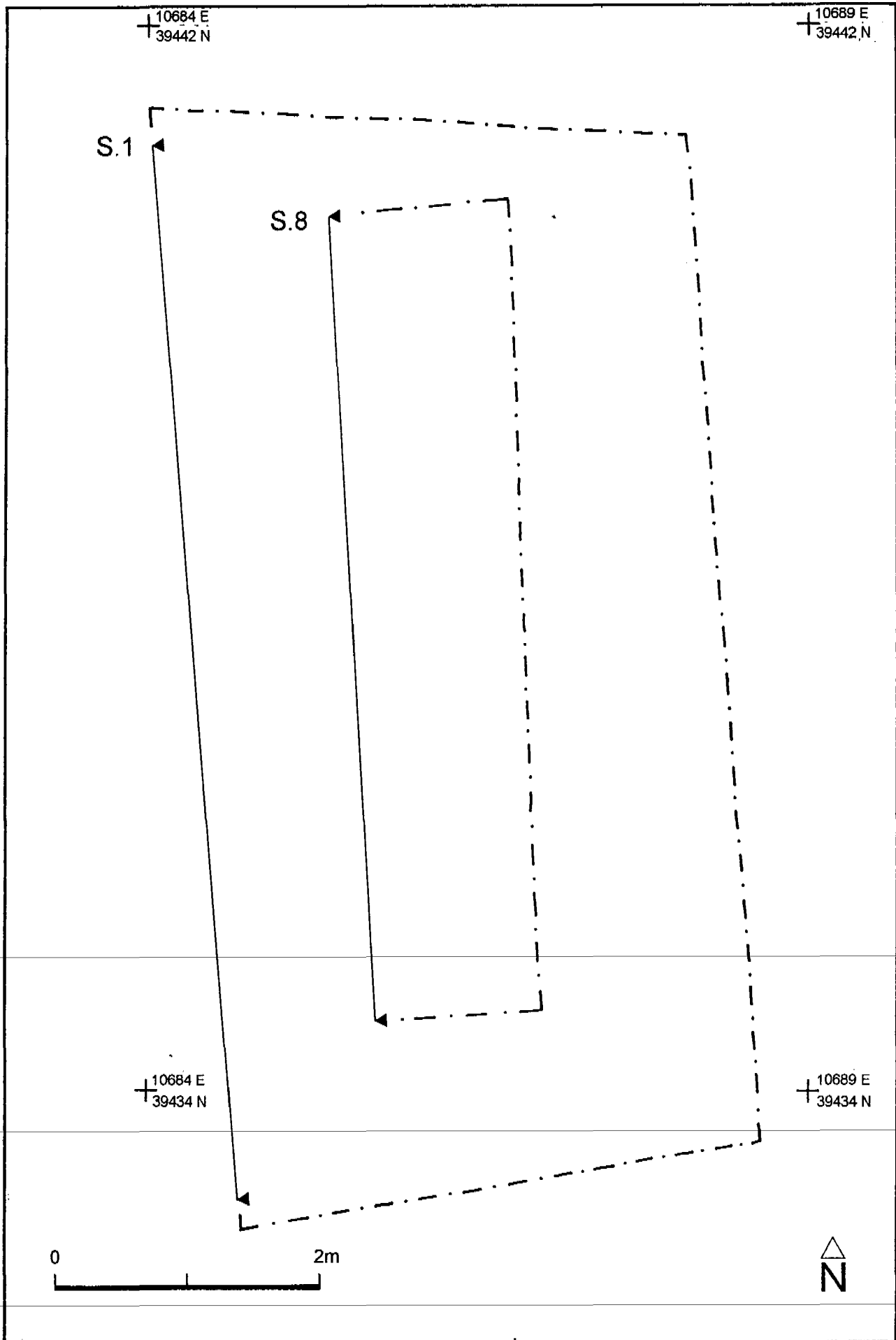


Fig. 6. Site 52, Trench A

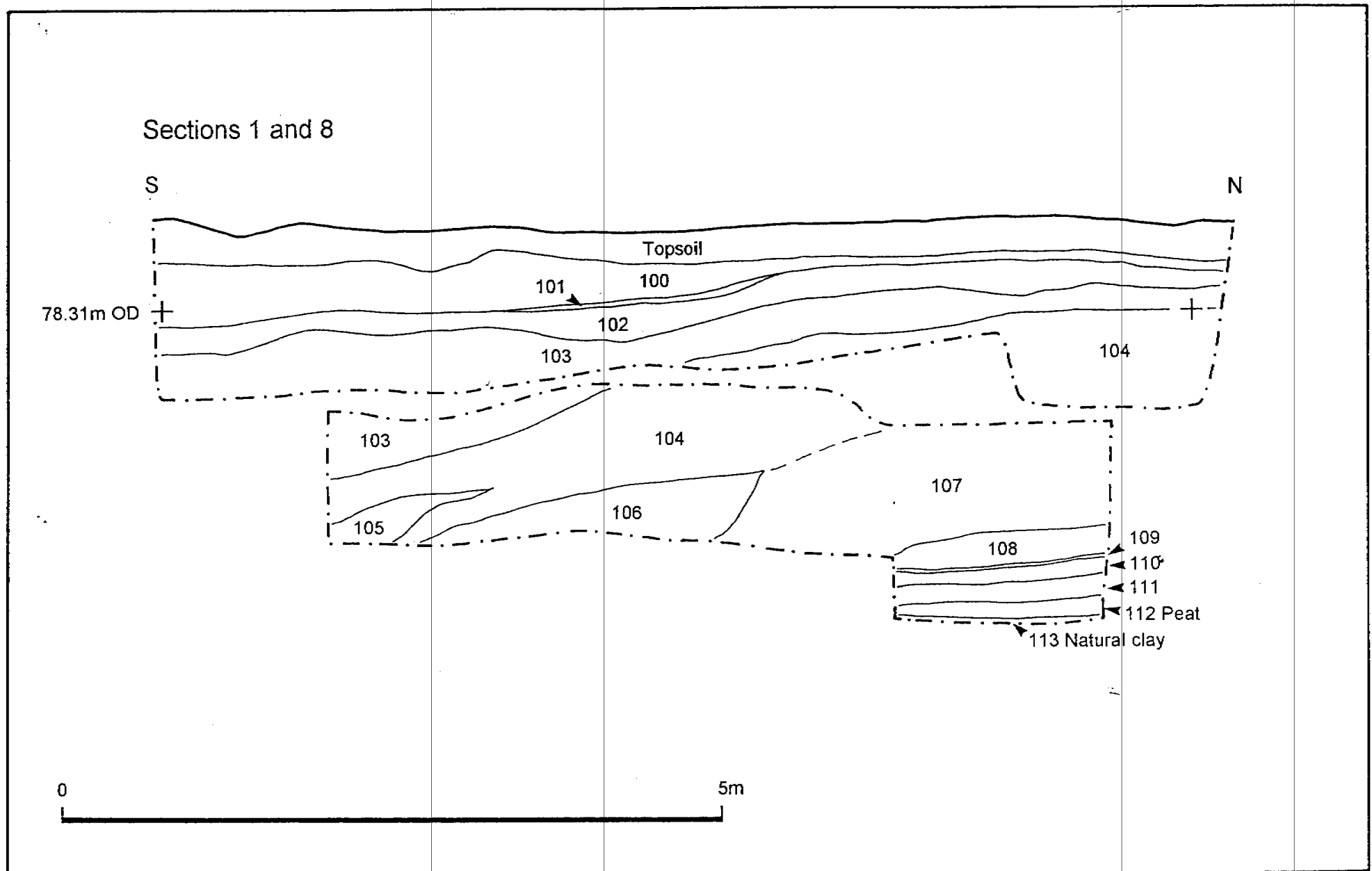


Fig. 7. Site 52, Trench A

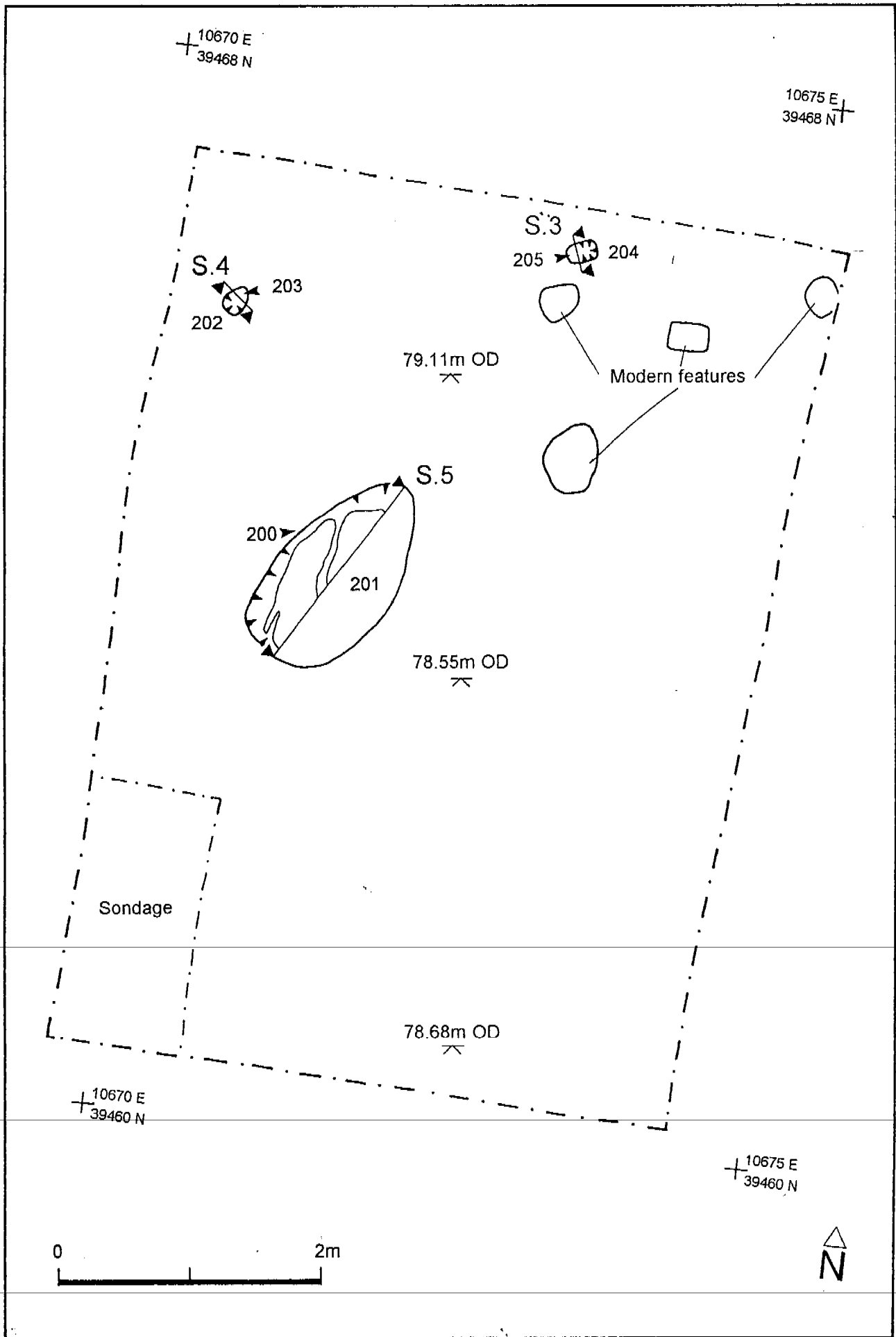


Fig. 8. Site 52, Trench B

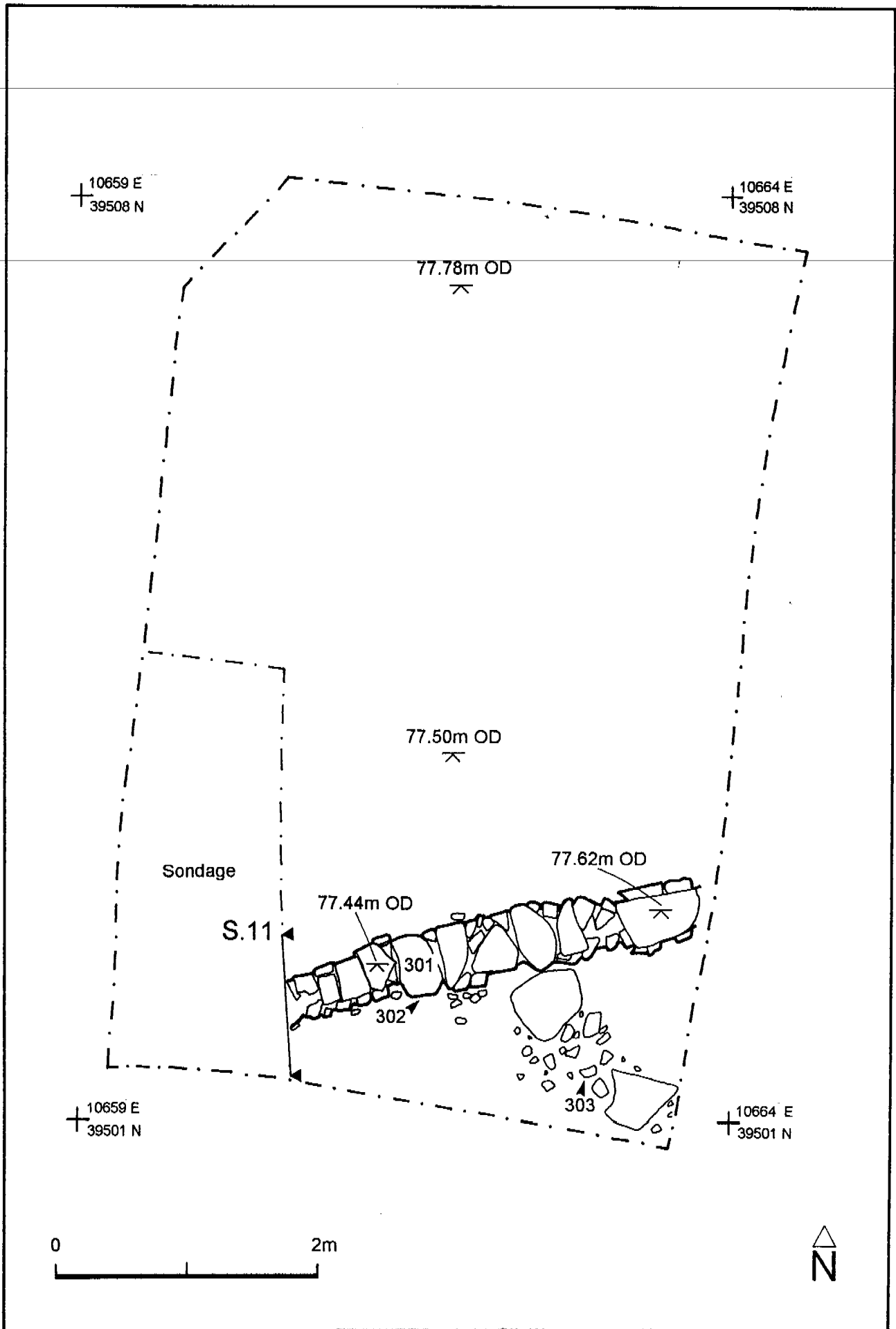


Fig. 9. Site 52, Trench C

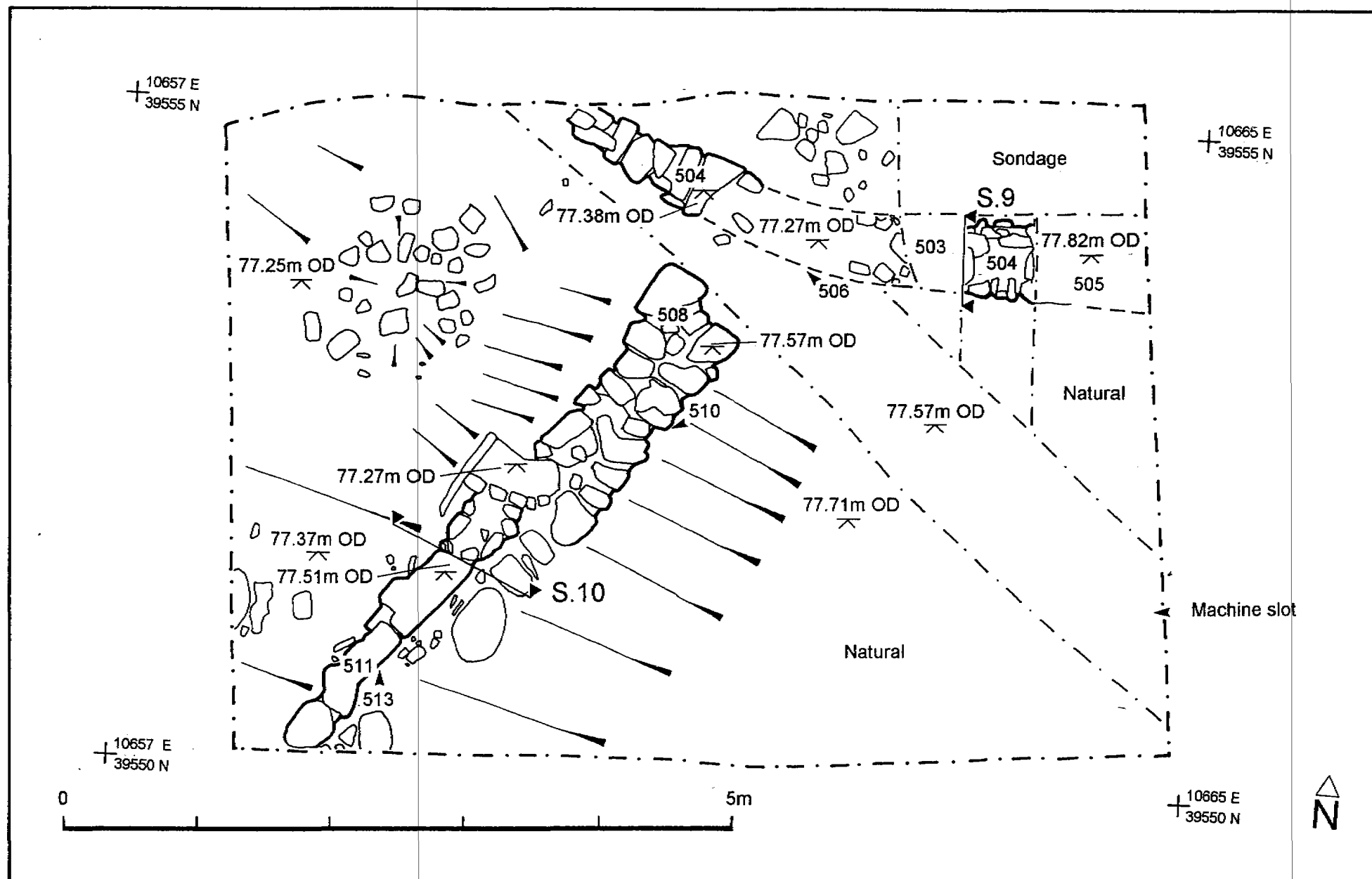


Fig. 10. Site 52, Trench E, earlier features

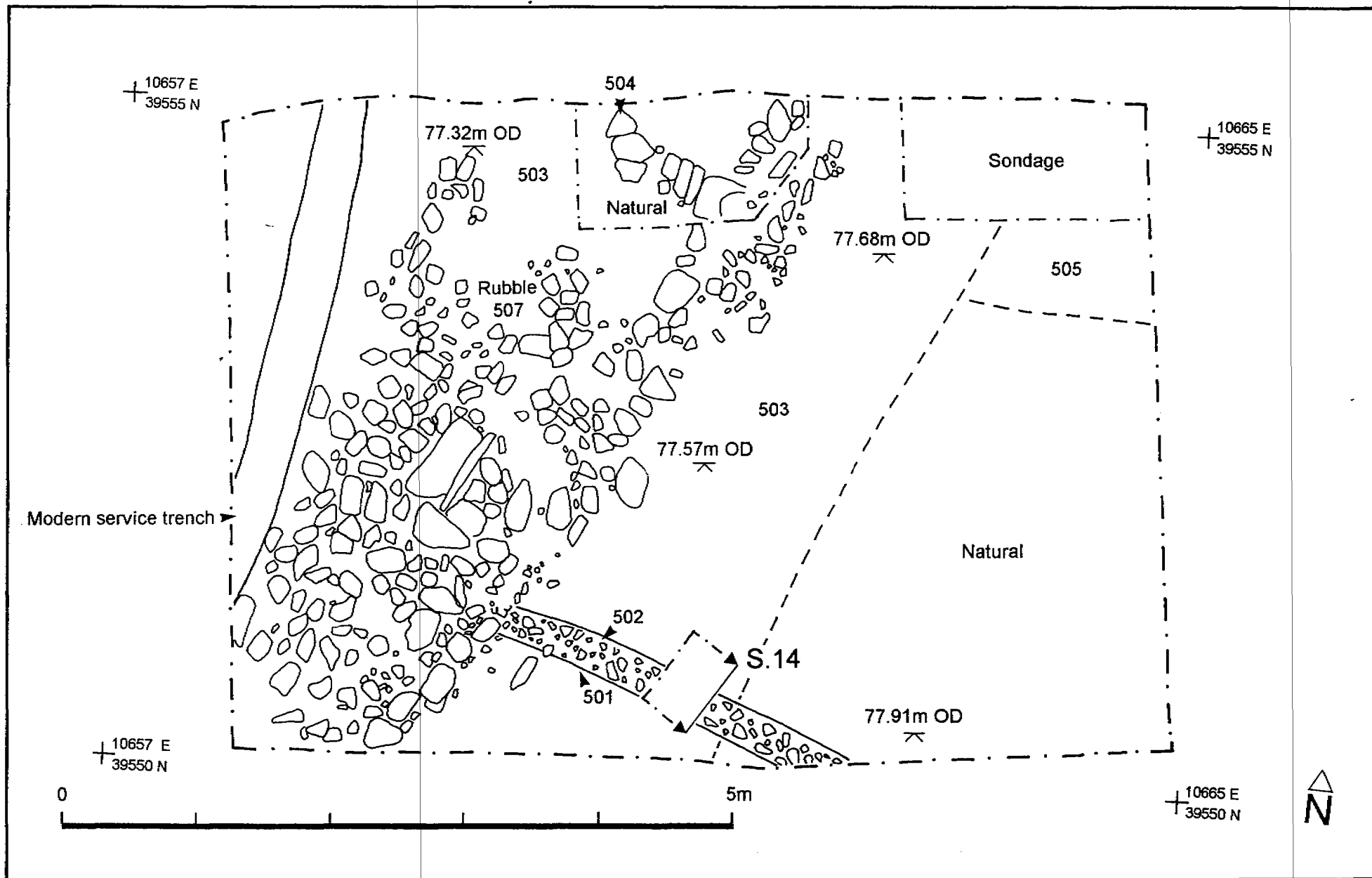


Fig. 11. Site 52, Trench E, later features

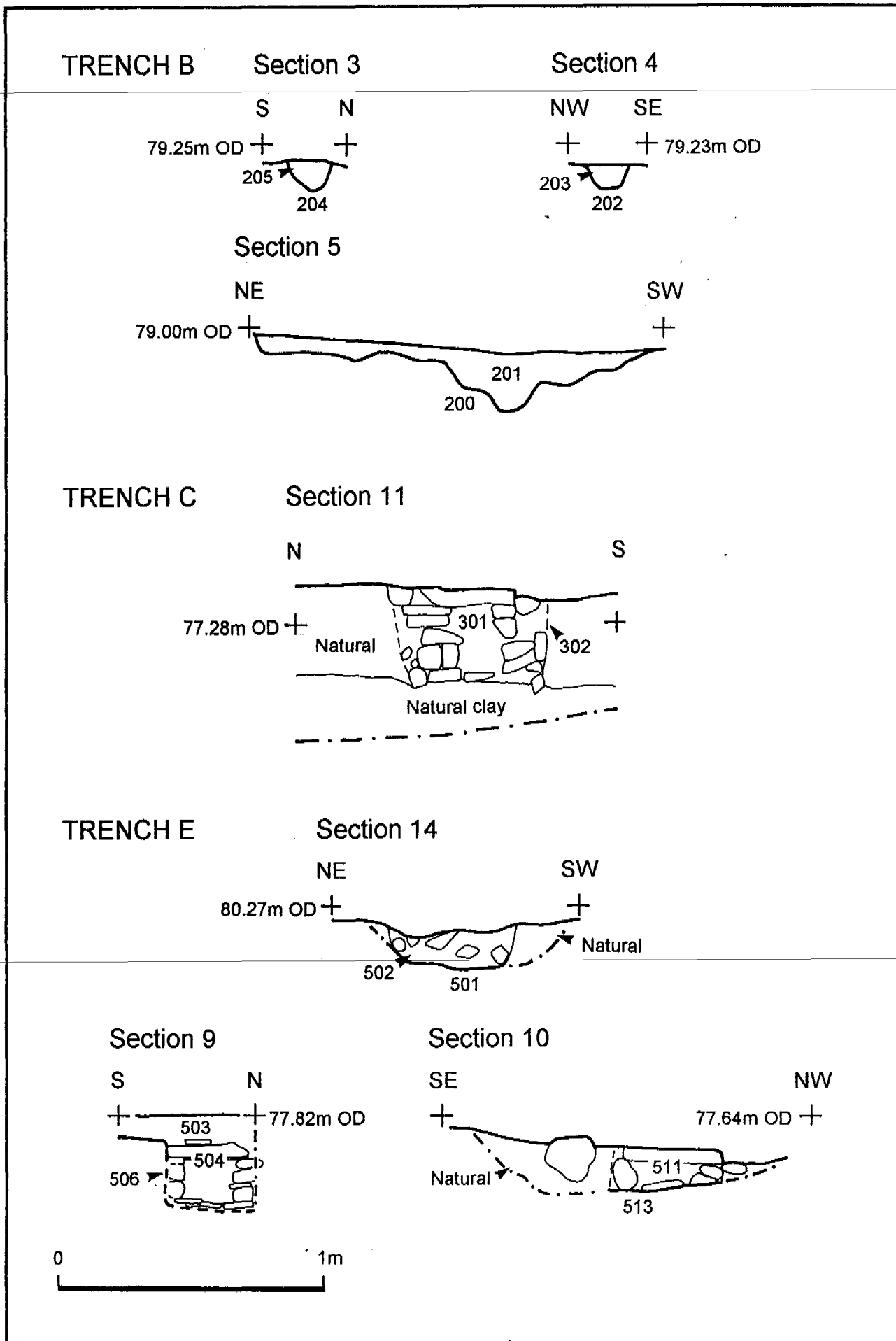


Fig. 12. Site 52, Trenches B, C and E

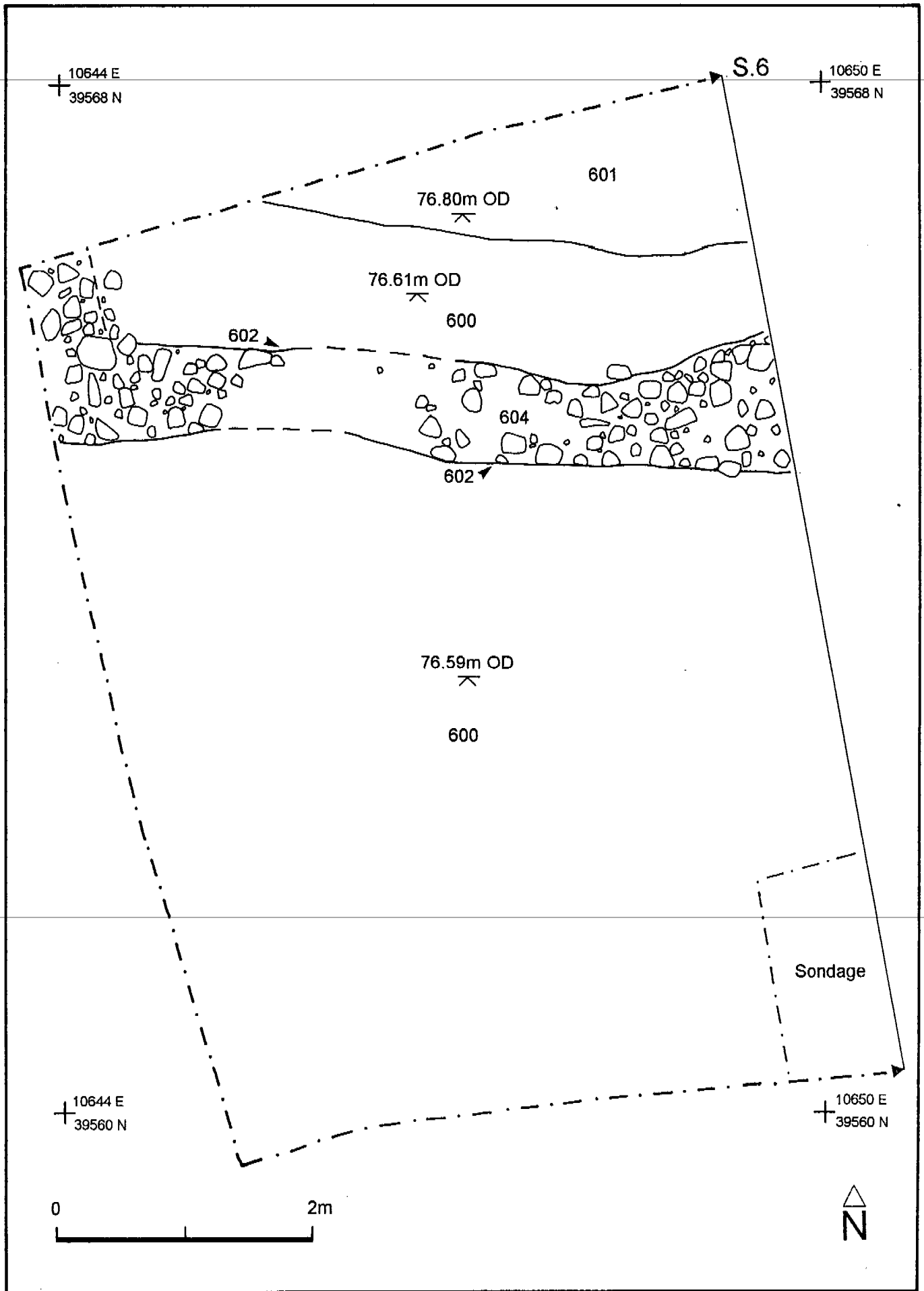


Fig. 13. Site 52, Trench F

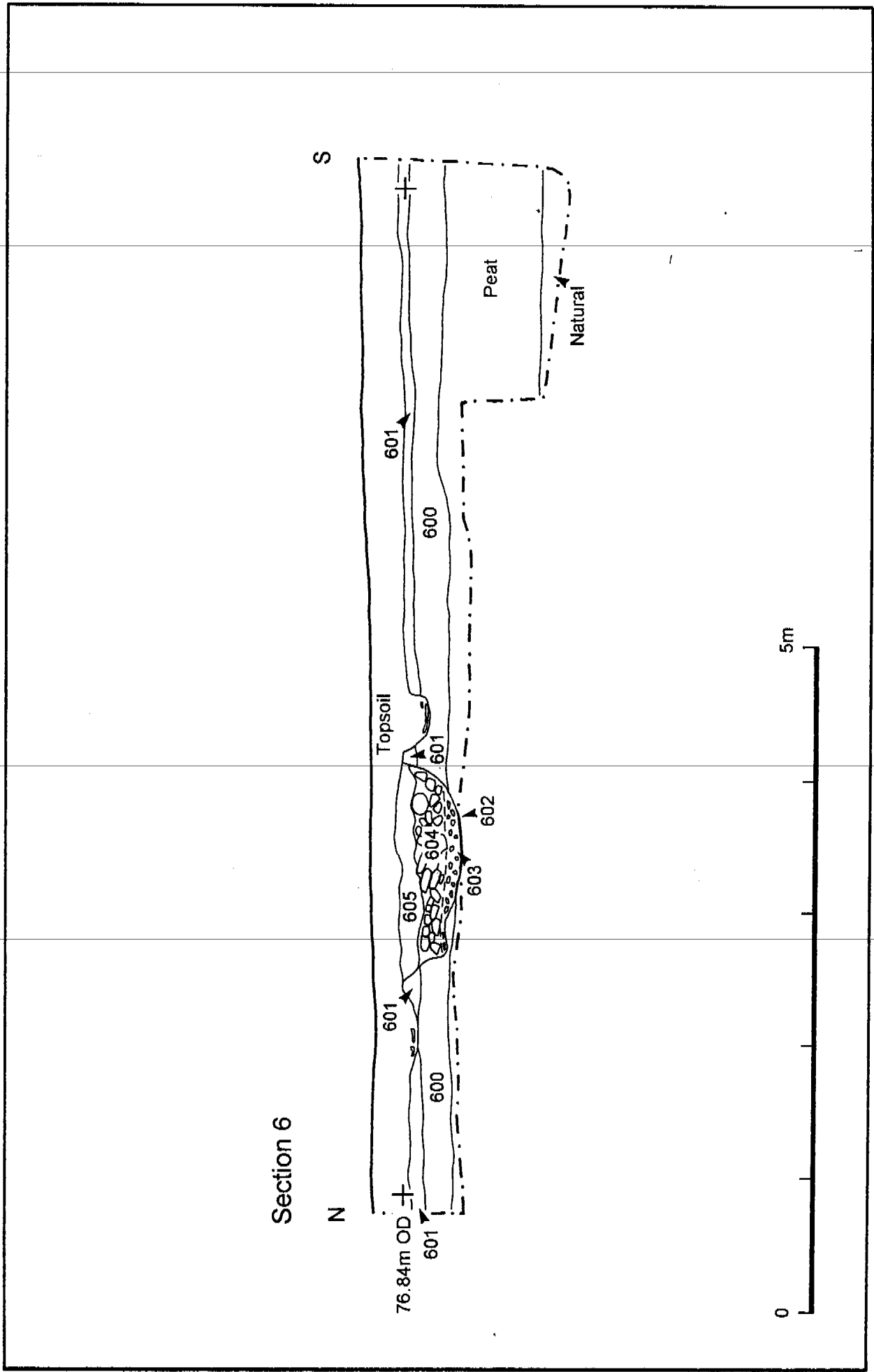


Fig. 14. Site 52, Trench F

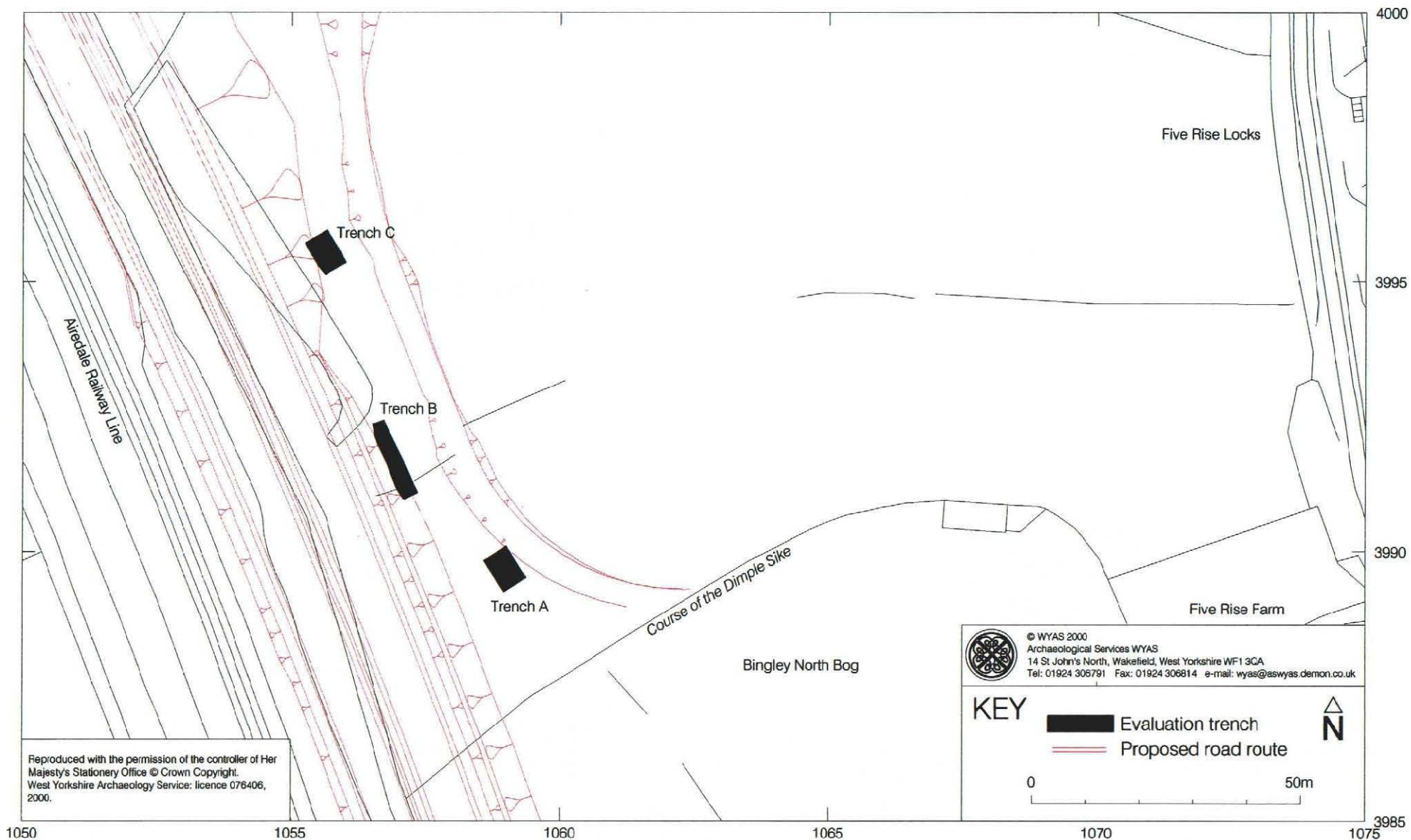


Fig. 15. Trench locations at Site 38

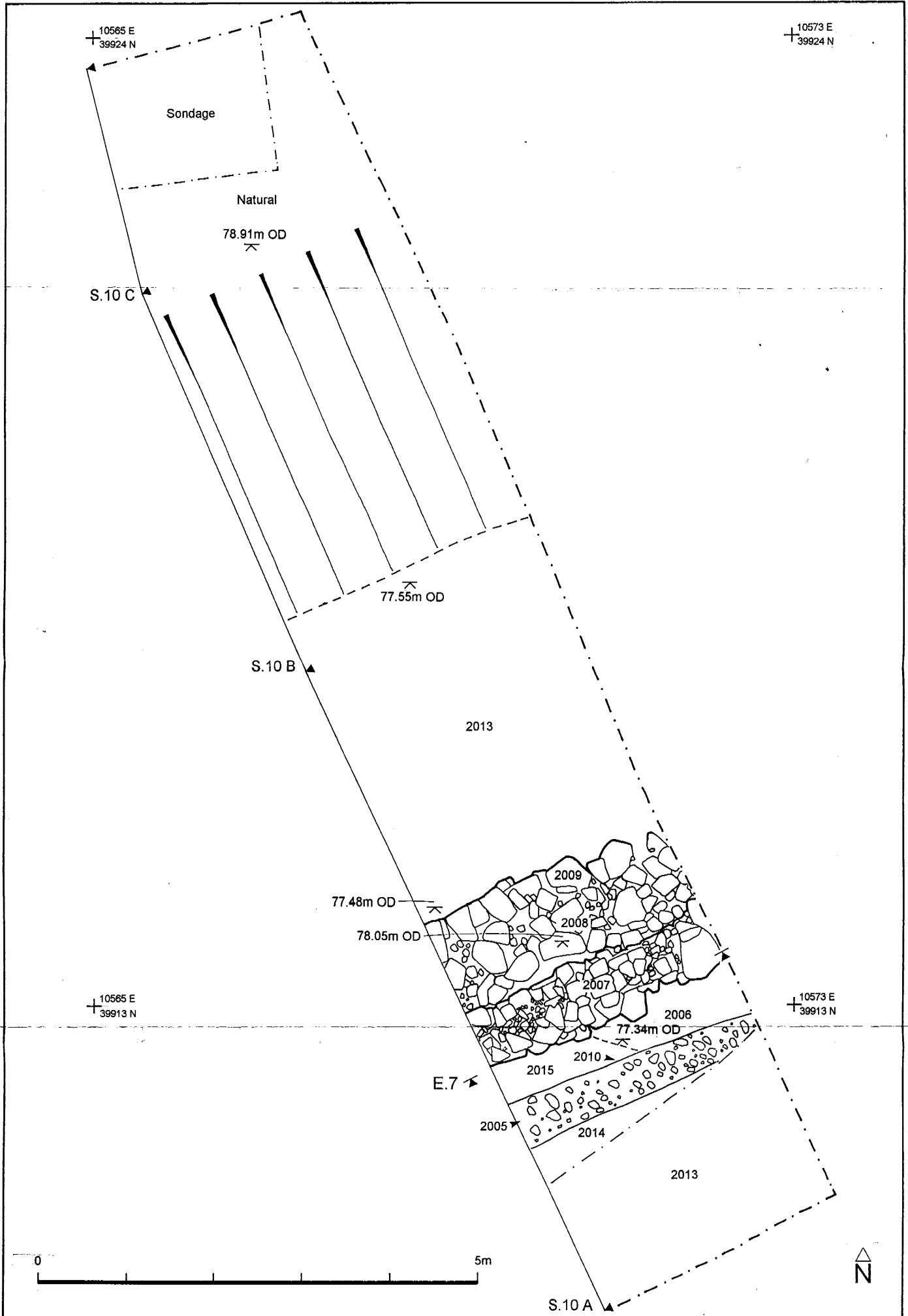


Fig. 16. Site 38, Trench B

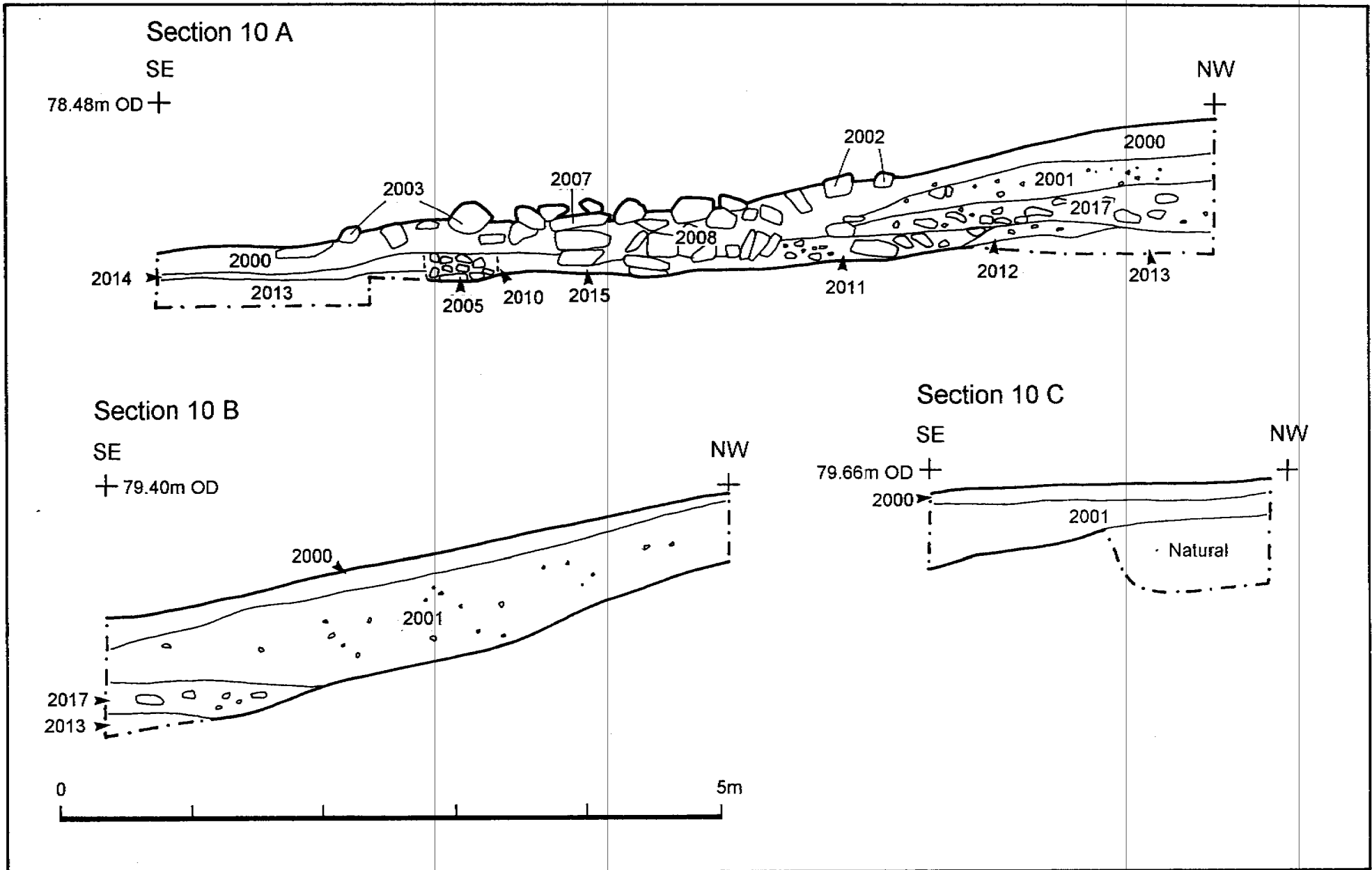


Fig. 17. Site 38, Trench B

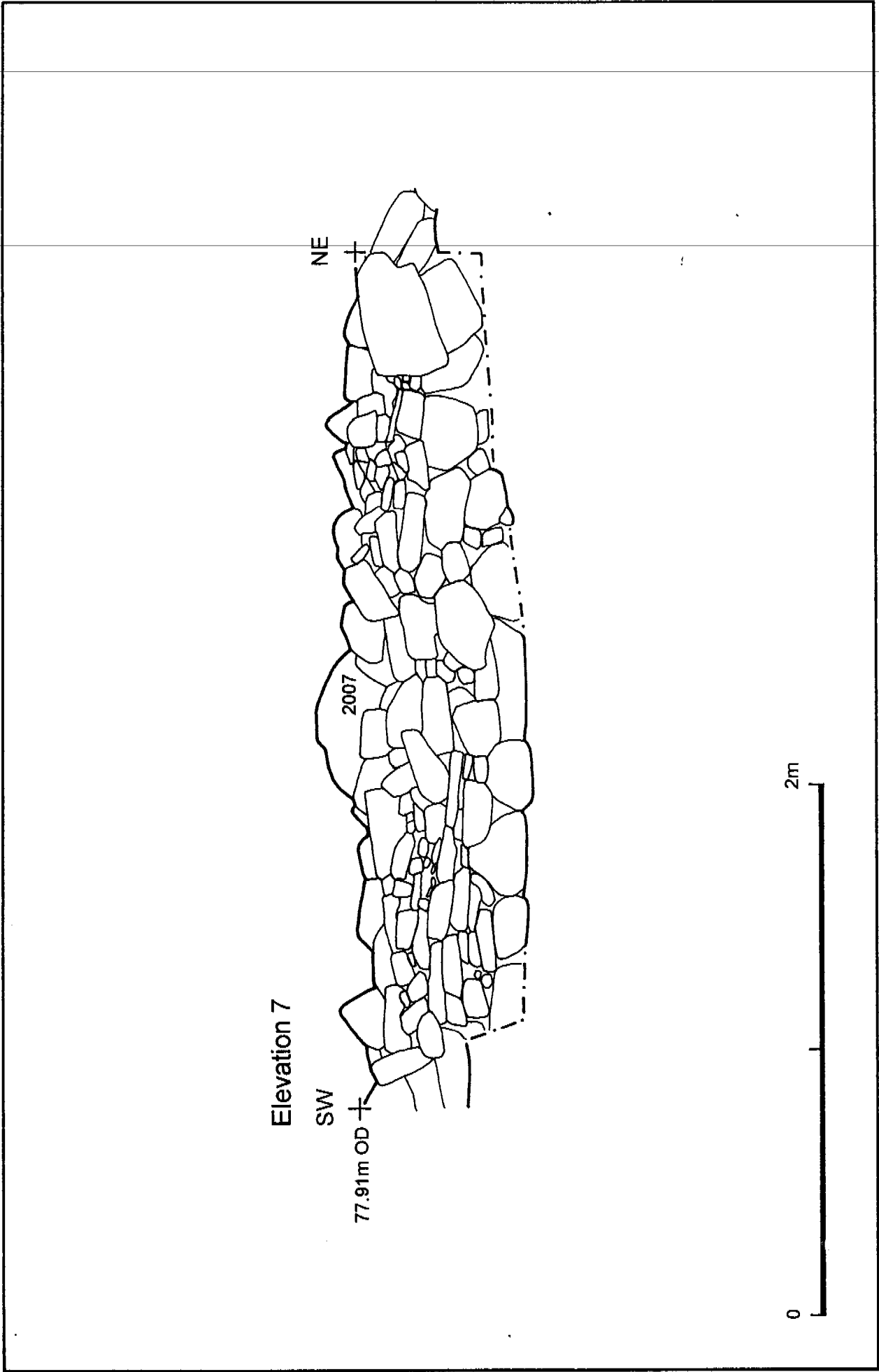


Fig. 18. Site 38, Trench B



Pl. 1. Site 52, Trench E looking north-east. Drain 511 and Foundation 508, with Drain 504 in the background.



Pl. 2. Site 38, Trench B looking north-east. Wall 2007 is to the left with the later addition, Wall 2009, to the right.

Appendix I

Inventory of Primary Archive

SITE 52

RECORD	DETAIL	QUANTITY
GENERAL DATA	Trench location plans	2 x A4, 2x A3
WRITTEN RECORD	Trench record sheet	6 x A4
	Context register	5 x A4
	Context sheets	43 x A4
DRAWN RECORD	Drawing register	2 x A4
	Plans and sections	15 x A3
PHOTOGRAPHS	Colour prints. Film No 5753	1 film
	Colour slides. Film Nos 5758, 5760	2 films
	Monochrome contacts. Film Nos 5761, 5763	2 films
	Photographic register	4 x A4
FINDS AND SAMPLES	Finds log	3 x A4
	Finds register	1 x A4

SITE 38

RECORD	DETAIL	QUANTITY
GENERAL DATA	Trench location plan	1 x A3
WRITTEN RECORD	Trench record sheet	3 x A4
	Context register	3 x A4
	Context sheets	21 x A4
	Levels	6 x A4
DRAWN RECORD	Drawing register	1 x A4
	Plans and sections	6 x A3, 4 x A1
PHOTOGRAPHS	Colour slides. Film Nos 5770, 5759	2 films
	Monochrome contacts. Film Nos 5762, 5769	2 films
	Photographic register	4 x A4
FINDS AND SAMPLES	Finds log	1 x A4

SITES 6, 50, 51

RECORD	DETAIL	QUANTITY
GENERAL DATA	Trench location plans	2 x A3
WRITTEN RECORD	Trench record sheet	4 x A4
	Context register	1 x A4
	Context sheets	7 x A4
DRAWN RECORD	Drawing register	1 x A4
	Plans and sections	2 x A3
PHOTOGRAPHS	Colour slides. Film No 4836	1 film
	Monochrome contacts. Film No 4837	1 film
	Photographic register	2 x A4
FINDS AND SAMPLES	Finds log	1 x A4

Appendix II

Inventory of Contexts

SITE 52

TRENCH	CONTEXT	DESCRIPTION
A	100	deposit
A	101	deposit
A	102	deposit
A	103	deposit
A	104	deposit
A	105	lens within 104
A	106	deposit
A	107	deposit
A	108	deposit
A	109	deposit - buried turf
A	110	deposit - buried topsoil
A	111	deposit - buried subsoil
A	112	deposit - redep. natural
A	113	deposit - peat natural
B	200	cut of natural feature
B	201	fill of 200
B	202	cut of post-hole
B	203	fill of 202
B	204	cut of post-hole
B	205	fill of 204
C	300	deposit - cleaning layer
C	301	masonry - drain
C	302	cut of drain 301
C	303	natural
E	501	cut - drain
E	502	fill of 501
E	503	deposit
E	504	masonry - drain
E	505	fill of 506

TRENCH	CONTEXT	DESCRIPTION
E	506	cut of drain 504
E	507	deposit - rubble
E	508	masonry - wall foundation
E	509	fill of 510
E	510	cut of foundation 508
E	511	masonry - drain
E	512	fill of 513
E	513	cut of drain 511
F	600	deposit - redep. natural
F	601	deposit
F	602	foundation cut
F	603	primary fill of 602
F	604	secondary fill of 602
F	605	final fill of 602

SITE 38

TRENCH	CONTEXT	DESCRIPTION
A	1000	topsoil
B	2000	topsoil
B	2001	subsoil
B	2002	deposit- wall tumble
B	2003	deposit- wall tumble
B	2005	fill of soakaway
B	2006	deposit
B	2007	narrow dry stone wall
B	2008	rubble component, part of 2009
B	2009	foundation stones
B	2010	cut of soakaway
B	2011	deposit
B	2012	deposit
B	2013	peat
B	2014	deposit
B	2015	deposit
B	2017	deposit
C	3001	topsoil
C	3002	subsoil

SITE 51

TRENCH	CONTEXT	DESCRIPTION
A	4000	topsoil
A	4001	cut of natural water channel
A	4002	subsoil
A	4003	deposit
A	4004	deposit
A	4005	deposit
A	4006	deposit

Appendix III
Inventory of Artefacts

SITE 52			
ARTEFACT TYPE	TRENCH	CONTEXT	QUANTITY
POTTERY	A	unstratified	53
	A	101	2
	A	102	6
	A	103	15
	A	106	1
	A	110	6
	A	111	2
	B	unstratified	4
	C	unstratified	4
	C	300	8
	D	unstratified	5
	E	unstratified	37
	E	503	3
	E	505	3
	E	510	2
	E	512	5
	F	unstratified	15
	F	600	2
	F	601	7
	F	604	3
	F	605	3
Total			189
ANIMAL BONE	A	unstratified	3
	A	101	1
	A	110	1
	C	unstratified	3
	D	unstratified	1

ARTEFACT TYPE	TRENCH	CONTEXT	QUANTITY
ANIMAL BONE	E	unstratified	15
	E	512	1
	E	603	2
	E	605	1
Total			28
CLAY TOBACCO PIPE	A	unstratified	40
	A	101	1
	A	102	1
	A	103	7
	A	110	2
	A	111	1
	B	unstratified	2
	D	unstratified	2
	E	unstratified	20
	E	502	1
	E	505	1
	E	509	1
	F	unstratified	9
	F	600	1
	F	601	1
	F	604	1
	F	605	1
Total			92
SHELL	A	unstratified	7
	A	105	49
	B	unstratified	2
	E	unstratified	1
Total			59
INDUSTRIAL RESIDUE	A	102	2
	A	105	6
Total			8

ARTEFACT TYPE	TRENCH	CONTEXT	QUANTITY
FE OBJECTS	A	unstratified	1
	C	unstratified	1
	E	unstratified	1
	E	503	1
Total			4
BRICK	E	502	3
PLASTER	F	603	2
BRICK	F	605	1
Total			9
GLASS	A	unstratified	8
	A	103	1
	B	unstratified	1
Total			10
PB OBJECT	E	unstratified	1

SITE 38

ARTEFACT TYPE	TRENCH	CONTEXT	QUANTITY
POTTERY	A	unstratified	22
	B	2008	2
	B	2011	14
	B	2015	1
	C	unstratified	1
Total			40
ANIMAL BONE	B	unstratified	1
CLAY TOBACCO PIPE	A	unstratified	13
	B	2005	1
	B	2006	1
Total			15
SHELL	C	unstratified	1
INDUSTRIAL RESIDUE	B	unstratified	1
	B	2005	2
	B	2006	10
	B	2011	1
	B	2012	1 (sample)
Total			15
FE OBJECTS	A	unstratified	4
	B	2011	1
	C	unstratified	1
Total			6
BRICK/TILE	B	unstratified	1
	B	2006	1
Total			2

SITE 6

ARTEFACT TYPE	TRENCH	CONTEXT	QUANTITY
POTTERY	B	unstratified	2
CLAY TOBACCO PIPE	A	unstratified	1

SITE 50

ARTEFACT TYPE	TRENCH	CONTEXT	QUANTITY
POTTERY	A	unstratified	5

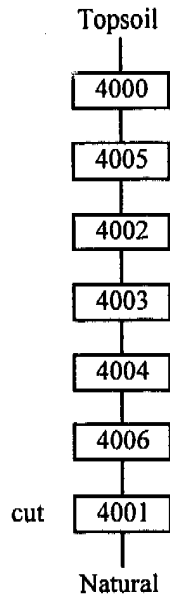
SITE 51

ARTEFACT TYPE	TRENCH	CONTEXT	QUANTITY
POTTERY	A	4000	2
	A	4001	2
	A	4002	24
	A	4003	13
	A	4004	1
	A	4005	2
Total			44
ANIMAL BONE	A	4002	1
	A	4003	2
	A	4005	1
Total			3
GLASS	A	4002	1
	A	4000	5
	A	4005	10
	A	4003	1
Total			17
SHELL	A	4003	1
INDUSTRIAL RESIDUE	A	4002	1
WOOD	A	4002	1
BRICK	A	4000	1

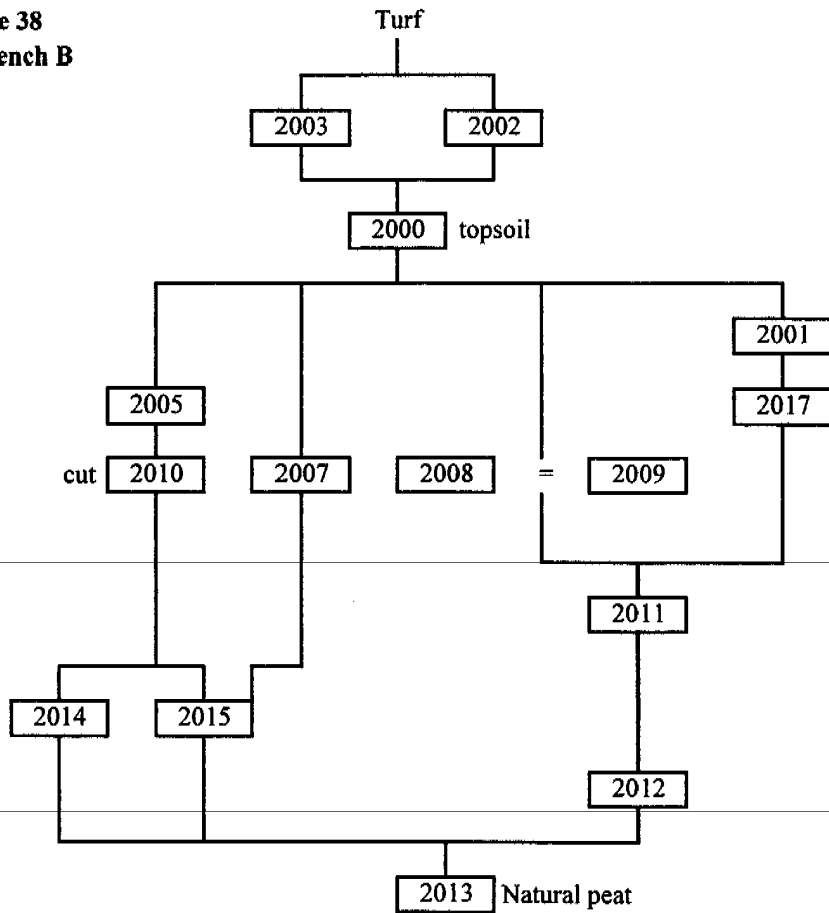
Appendix IV

Stratigraphic Matrices

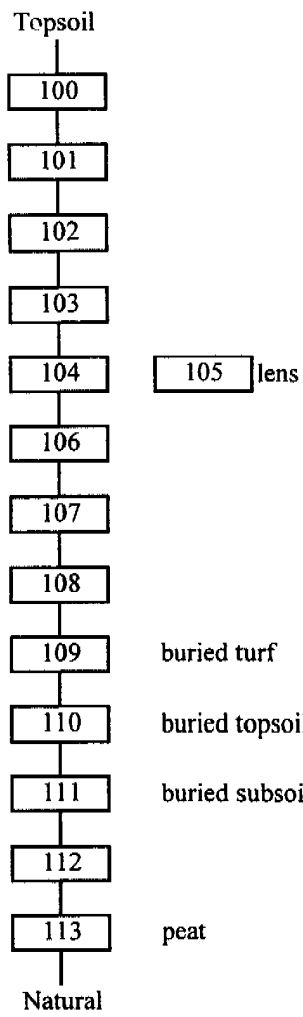
**Site 51
Trench A**



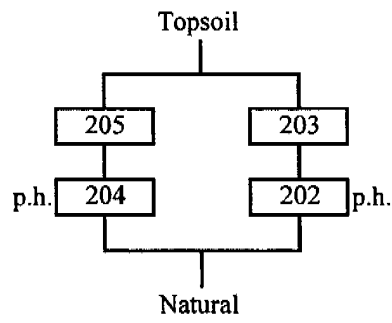
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Trench B**



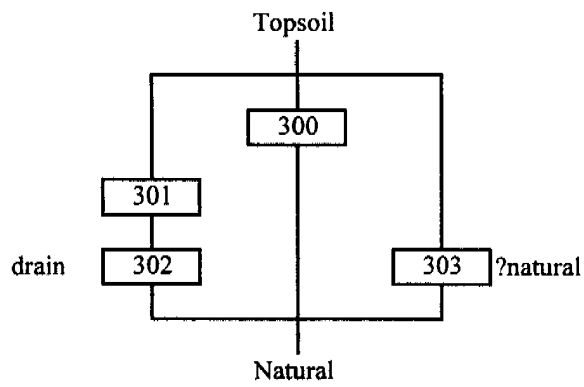
**Site 52
Trench A**



**Site 52
Trench B**

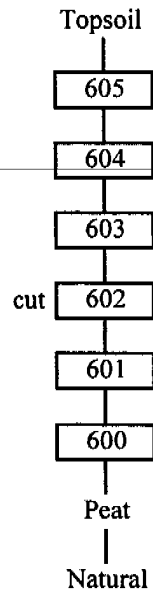
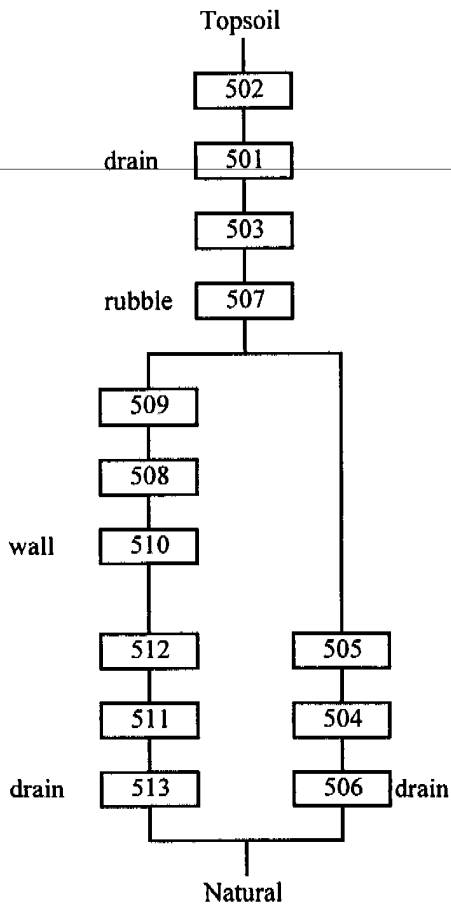


**Site 52
Trench C**



Site 52
Trench E

Site 52
Trench F



Appendix V

Summary of the Pottery Assemblage (C. Cumberpatch PhD)

SITE	TRENCH	CONTEXT	DATE RANGE	NOTES
6	A	Subsoil	C18th - C19th	One sherd, decorated stoneware, one handle in very late BGCw
6	A	Subsoil	Undated	Clay pipe stem
38	A	U/S	Undated	One fragment of vitreous slag
38	A	U/S	C17th - C18th/C19th	C17th slipware, Yellow ware, C17th/C18th Colour Glazed ware, C18th/19th Creamware type, stoneware, C19th tableware
38	B	2008	C19th - C20th	One sherd sewer pipe, one sherd drainpipe
38	B	2011	Undated	Heavily burnt fragment of vitreous slag from a high temperature pyrotechnical process
38	B	2011	C17th	Slipware 1 type pancheon/bowl, Purple Glazed ware, Redware type, sooted
38	B	2012	Undated	Fragment of burnt stone with yellow/brown glaze ?Part of a kiln
38	B	2015	C17th	Midland Purple type
38	C	U/S	C18th / C19th	Colour Glazed ware, blue and white tableware
50	A	Topsoil	C17th - C19th	Abraded C17th redware type with later glazed earthenwares; five sherds total
51	A	4000	C18th - C19th/C20th	Creamware type, Coarseware pancheon, transfer printed whitewares
51	A	4002	C17th / C18th	Brown Glaze Coarseware type pancheon, unidentified buff sandy ware sherd, also post-medieval
51	A	4002	LC17th - C19th/C20th	All pot shows signs of water abrasion; Yellow ware pancheon, stoneware, Whitewares, Flowerpot
51	A	4003	LC17th - C19th/C20th	Yellow ware pancheon, Brown Glazed Coarseware, Whiteware, transfer printed white ware, Stoneware jar, sewer pipe
51	A	4004	C18th (?EC19th)	Creamware type, small body sherd. Creamy colour suggests and earlier date
51	A	4005	LC17/C18th - C20th	Late Yellow ware pancheon, Stoneware preserve jar, Whitewares (tableware)
52	A	101	C19th/EC20th	Stoneware
52	A	102	LC18th - C19th	Very late BGCw and Yellow ware derivatives with whiteware base

SITE	TRENCH	CONTEXT	DATE RANGE	NOTES
52	A	103	C19th	Whiteware with blue figurative/landscape decoration
52	A	103	C19th	Yellow ware pancheon, Late BGCw
52	A	103	C19th	Colour Glazed tablewares
52	A	106	C18th/EC19th	Brown Glazed pancheon rim
52	A	110	C19th/C20th	Stoneware/ Whiteware, one small sherd ?post-medieval
52	A	111	C18th/?C19th	Stoneware handle, brown glazed red earthenware
52	A	U/S	C18th - C20th	BGCw and recent yellow ware ?Chamberpot rim
52	A	U/S	C19th	Stoneware bottle, flagon and other utilitarian stonewares
52	A	U/S	C19th	Whitewares with blue decoration, other colours hand painted on white
52	A	U/S	C19th	Brown and black glazed utilitarian ware
52	B	U/S	C18th / C19th	Unglazed red earthenware and one bowl base.
52	C	300	C13th/EC14th	Medieval Orange Gritty ware type; BS and handle
52	C	300	C16th/C17th	Cistercian ware / Blackware
52	C	300	C17th - C18th	Brown Glazed Coarseware, U/ID glazed earthenware
52	C	300	C18th	White Salt Glazed stoneware
52	C	U/S	C17th - C18th	Redware, Colour Glazed earthenware, Stoneware
52	D	U/S	C17th - C19th	C19th Stoneware, C17th Redware and Purple Glazed ware
52	E	503	C17th - C18th	Redware type, mottled glaze
52	E	505	C13th/EC14th	Medieval Gritty ware and sandy ware, one sherd of each
52	E	505	C17th	Redware (pale orange)
52	E	512	C18th	White Salt Glazed stoneware, Brown Glazed Coarseware
52	E	508/509	C18th	Brown Glazed Utilitarian ware

SITE	TRENCH	CONTEXT	DATE RANGE	NOTES
52	E	U/S	C13th/EC14th	One sherd Gritty ware
52	E	U/S	C17th - C18th	Redwares, Brown Glazed Coarsewares
52	E	U/S	C18th	White Salt Glazed Stoneware
52	E	U/S	C18th - C19th	Whitewares, Utilitarian wares
52	F	600	C17th/C18th	Glazed utilitarian ware
52	F	601	C17th	Glazed utilitarian wares (as found in Leeds)
52	F	604	C18th	Brown Glazed Utilitarian ware
52	F	605	C17th	Blackware type, Glazed Utilitarian ware
52	F	U/S	C17th - C19th/C20th	Slipwares, C18th century glazed types, tablewares

Appendix VI

Summary of the Faunal Assemblage (J. Richardsor: PhD)

SITE	TRENCH	CONTEXT	FRAGMENT COUNT	SPECIES	ELEMENT AND BUTCHERY
38	B	unstratified	1	sheep/goat	humerus
51	A	4002	1	cattle	rib: sawn into pieces
		4003	2	cattle	rib: ? sawn into pieces
		4005	1	cattle	rib: sawn into pieces
52	A	unstratified	3	dog	mandible and humerus (represent articulated skeleton)
				sheep/goat	first phalanx
		101	1	sheep/goat	long bone fragment
		110	1	sheep/goat	ilium
52	C	unstratified	3	domestic fowl	femur
				domestic fowl	tibiotarsus
52	D	unstratified	1	domestic fowl	coracoid
52	E	unstratified	32	cattle	tibia: chop to distal articulation
				cattle	femur: distal epiphyses
				cattle	astragalus: chop laterally
				sheep/goat	radius: mid-shaft chop
				sheep/goat	femur
				bird sp.	coracoid: domestic fowl- sized
				bird sp.	coracoid: song bird-sized
		512	1	sheep/goat	radius
Total			48		

Appendix VII

Summary of the Clay Tobacco Pipe Assemblage

SITE	TRENCH	CONTEXT	STEM FRAGS	BOWL FRAGS	DATE	NOTES
6	A	US	1			
38	A	US	12	1	17 ?19	1 bowl fragment has bulbous shape. 1 stem fragment with prominent leaf design extending along stem beyond heel/spur (not present)
38	B	2005	1			
38	B	2006		1	19	plain burnished bowl fragment, pointed spur. no seams.
52	A	US	35	3	18/19 ?19 18/19 18/19	8 stem fragments with orange glaze 1 stem stamped 'EC KEIGHLEY' on both sides 1 bowl is a second. thick and irreg bowl. seamed and plain, long heel. stress cracks at junction of bowl and stem. flaws on bowl - cracks and lumps plus visible large inclusions in clay fabric 1 bowl plain, no seam, burnished. heel/spur not observable (cf. Site 38; TrB; 2006) 1 bowl leaf design at seams
52	A	US	2 complete pipes		19 19	almost complete. stem broken at min length 120mm. stamped 'EC KEIGHLEY' on both sides. spur. plain bowl with leaf design on seams. cracks on bowl - low quality? stamped ⊙ at top of spur. almost complete. stem broken at min length 100mm. smaller bowl and thinner stem than above example. flat at heel. mottled pink-orange clay fabric. decorated in symbols plus leaves at seams. poss. masonic?
52	A	101	1			
52	A	102	1			
52	A	103	7			
52	A	110	2			
52	A	111	1			

SITE	TRENCH	CONTEXT	STEM FRAGS	BOWL FRAGS	DATE	NOTES
52	B	US	2			1 fragment stamped 'KEIG'
52	D	US	2			
52	E	US	2			
52	E	US	16	2		1 plain bowl with no seam. 18/19 2 stem frags have orange glaze. 1 stamped 'KEIGHLEY'
52	E	502		1	18/19	leaf design on seam
52	E	505	1			
52	E	509	1			
52	F	US	8	1	18/19	1 stem with spur 18/19 bowl has leaf design on seam
52	F	600	1			
52	F	601		1	L17	bulbous bowl shape, wide heel. cf. Lawrence 1973, p68, type 7. c. 1650-70
52	F	604	1			
52	F	605	1			

Appendix VIII

Specification for Sample Excavation (Babtie Group)

SPECIFICATION FOR SAMPLE EXCAVATION

1 INTRODUCTION

- 1.1 Babtie Group has been commissioned by the Highways Agency to undertake archaeological evaluations along the proposed route of A650 Bingley Relief Road.
- 1.2 The proposed route of the A650 Bingley Relief Road extends for approximately 4.2kms starting at the present A650 junction at Crossflatts, north west of Bingley. From here it follows the Airedale railway line to Bingley Station before diverging from the railway north towards the east side of Leeds and Liverpool canal. The proposed route then loops south to pass under the railway line at Dowley Gap before crossing the River Aire and terminating on the present line of the A650 close to Bankfield Hotel, Cottingley (see figure 1).
- 1.3 This document provides a Specification for sample excavation of Sites 6, 38, 49, 50, 51, 52. The Specification defines in detail the methodologies to be used and the area required for investigation. It requires the provision of a detailed report three months after completion of the on-site data gathering.

2 ARCHAEOLOGICAL BACKGROUND

- 2.1 A Stage 2 Archaeological Assessment as defined in Volume II of the Highways Agency's Design Manual for Roads and Bridges was completed by Babtie Group in 1996. The Stage 2 Assessment was carried out by means of a desk top and walkover survey and identified 48 sites of archaeological interest ranging from prehistoric lithic scatters to a Victorian refuse tip. A further five sites were added after additional consultation with West Yorkshire Archaeology Service. Following recommendations made in the Stage 2 Assessment a number of sites were identified for archaeological evaluation by sample excavation.

3 AIMS AND OBJECTIVES OF SAMPLE EXCAVATION

- 3.1 The general aims of the sample excavation programme are to obtain information which will contribute to an evaluation of the archaeological significance of each site and which will enable further evaluation and/or mitigation measures to be designed. More specific aims and objectives are as follows
- (i) to determine or confirm (so far as possible) the presence or absence of buried archaeological remains at Sites 6, 38, 49, 50, 51, 51, 52;
 - (ii) to determine or confirm the general nature of any significant archaeological features identified by geophysical survey and/or topographical survey at Sites 6, 38, 49, 50, 51, 51
 - (iii) to determine or confirm the approximate date or date-range of the remains, by means of artefactual or other evidence;
 - (iv) to determine or confirm the approximate extent and/or layout of the remains;
 - (v) to determine the condition or state of preservation of the remains;
 - (vi) to determine the degree of complexity of the horizontal and/or vertical stratigraphy of the remains;
 - (vii) to determine the likely range, quality and quantity of the artefactual evidence present;
 - (viii) to determine the potential range, quality, quantity and nature of palaeoenvironmental evidence present.

4 THE SITES

- 4.1 Identified during the Stage 2 Archaeological Assessment Site 6 (SE 1202 3770; Figure 2) consists of an area of artifact scatters on the floodplain of the River Aire west of Bankfield Hotel and South of Rye Loaf Hill. The lithic finds include two stone axes, one of which was polished, dating from the middle to late Neolithic. Roman coins have also been found along the river in this area.
- 4.2 Sample excavation of Site 6 will only take place in the areas directly affected by the foundations of the Cottingly Viaduct. The size, number and location of the sample excavation trenches will be decided by the results of the topographical and/or geophysical surveys. It is expected that the total area excavated will be 4% of approximately 2600m².
- 4.3 Site 49 (SE 121 376; Figure 2) consists of a lynchet on the northern field boundary a field west of the Bankfield Hotel; Bingley, recorded by West Yorkshire Archaeological Service SMR. The field to the south has been ploughed although remains are visible in the field to the north. A vestige of a terraced trackway runs along the northern edge of the lynchet.
- 4.4 Site 50 (SE121 376; Figure 2), also identified by West Yorkshire Archaeological Service SMR is an area of terraces and possible stone wall footings on a steep slope north of site 49 and north-west of the Bankfield Hotel. These terraces are not marked on the OS first or second editions.
- 4.5 Site 51 (SE 119 376; Figure 2) consists of the remnants of a water-filled channel recorded by West Yorkshire Archaeological Service SMR. It is located on the south side of River Aire, north west of Cottingly Beck. The general form of the riverbank and the possible presence of the channels in the general area indicated the possible remains of a water control or power site here.
- 4.6 Sample excavation of Sites 49, 60 and 51 will only take place in the areas directly affected by the foundations of the Cottingly Viaduct. The size, number and location of the sample excavation trenches will be decided by the results of the topographical and/or geophysical surveys. It is expected that the total area excavated will be 4% of approximately 2400m².
- 4.7 Site 38 (SE 10703990; Figure 3) was identified during the Stage 2 Archaeological Assessment. It consists of an area of dry stone walled field boundaries north-west of Bingley North Bog. One area of walling is associated with mature trees and includes boulder walling which may be the remnants of earlier Iron Age or Romano-British field systems or enclosures. A number of the boundaries are also identified on the OS 6-inch 1st edition map.
- 4.8 The size, number and location of the sample excavation trenches for Site 38 will be decided by the results of the topographical survey of this site. The area excavated is expected to be 5% of approximately 2800m².
- 4.9 Site 52 (SE 106 593; Figure 4) lies south of Bingley North Bog and immediately adjacent to the present railway and was identified by West Yorkshire Archaeological Service SMR. It is possibly part of the original core and Medieval town of Bingley. This area lies close to the ancient parish church on the Medieval tenements.
- 4.10 Six archaeological sample trenches totalling 210m² will be excavated across Site 52. The location of these trenches as shown is indicative and the exact location of these trenches will be determined after consultation with Babbie group immediately prior to excavation.

5 ON-SITE DATA COLLECTION: GENERAL PROVISIONS

- 5.1 The Sub-consultant will be required to demonstrate at the tender stage that all staff appointed to direct, supervise and work on this project are qualified and experienced in all elements of the work which they will perform.

- 5.2 Except where modified by the terms of this Specification, all survey work shall be planned, managed and carried out in accordance with the requirements and standards set by English Heritage in their publication "Management of Archaeological Projects" (2nd edition) (MAP2) and by the Institute of Field Archaeologists in their "Standard and Guidance for Archaeological Field Evaluations".

6 SAMPLE EXCAVATION METHODOLOGY

- 6.1 The locations of all trenches shall be accurately tied in to the Ordnance Survey National Grid and to the local grid used by the Highways Agency, and to local features. Survey control and base topographic data will be supplied by Babtie Group. The trenches shall be set out by the Sub-consultant and Babtie Group.
- 6.2 Topsoil and any other overburden shall be removed using a 360° mechanical excavator fitted with a toothless ditching bucket. In the case of Site 52 a 360° mechanical mini-excavator fitted with a toothless ditching bucket shall be used. All such mechanical excavation shall be undertaken under the direct and continuous supervision and control of an experienced archaeologist. Mechanical excavation shall cease when the first archaeologically significant horizon is encountered, or when the absence of any such horizon has been adequately demonstrated. Any further use of mechanical excavation shall not be undertaken without specific permission of Babtie Group. Trenches across Sites 38, 49 and 50 may have to be opened by hand and provision shall be made for this.
- 6.3 Each trench shall be accurately surveyed as excavated.
- 6.4 The whole of each trench shall be cleaned by hand after completion of machine excavation.
- 6.5 Sufficient of the features and deposits encountered shall be excavated by hand to achieve the general and trench-specific aims and objectives defined above. Care shall be taken not to compromise the integrity of archaeological features and deposits whose excavation is not required to achieve these objectives or which would be better excavated under the conditions pertaining to full excavation.
- 6.6 The depth and complexity of archaeological features and deposits across the whole site shall be evaluated. The stratigraphy of each trench should be recorded by both written and drawn methods even where no archaeological deposits have been recognised.
- 6.7 All excavated contexts shall be fully recorded by detailed written context records giving details of location, composition, shape, dimensions, relationships, finds, samples, cross-references to other elements of the record and other relevant contexts, etc.
- 6.8 All features and, where possible, all deposits shall be recorded on at least one plan at 1:10, 1:20 or 1:50 scale as appropriate and at least one section drawing at 1:10 (or, if absolutely necessary, 1:20) scale. A complete post-excavation plan of each trench at 1:20 or 1:50 scale shall be prepared. All drawings shall include such co-ordinate data as is necessary for the accurate location of the area planned or the section drawn and spot-highs related to the Ordnance Survey Datum and accurate to two decimal places.
- 6.9 All excavated features and deposits shall be recorded photographically using, as a minimum, both colour slide and black and white negative film.
- 6.10 All unexcavated archaeological features and deposits shall be recorded to the extent possible by the above methods.
- 6.11 All finds shall be recorded by context; individually significant finds ("special finds") shall be recorded three-dimensionally using a sequence of unique numbers. All artefacts recovered shall be retained and removed from site for conservation (if necessary) and specialist examination/analysis.

Cleaning may take place on site or after removal, as appropriate. All recording, cleaning, storage and conservation of finds shall be in accordance with the Institute of Field Archaeologist's "Guidelines for Finds Work".

- 6.12 The Sub-consultant is expected to be familiar with the relevant legislation relating to items of potential Treasure Trove and to finds of Human Remains, and shall notify the relevant authorities and obtain any necessary licences should such items be identified.
- 6.13 A programme of soil sampling shall be undertaken for the recovery of palaeoenvironmental evidence as appropriate. The scope of the programme shall be agreed with Babbie Group. Specialist advice shall be sought as necessary and provision shall be made for at least one site visit by each relevant specialist to each site.
- 6.14 This methodology may be varied by agreement with Babbie Group, but should be adhered to for pricing purposes.

7 SITE ARCHIVE

7.1 Prior to the start of fieldwork, the Sub-consultant shall liaise with the appropriate museum or other repository in which it is intended to deposit the archive, in order to:

- (i) inform them of the intended work, including its nature, location, start date and intended duration;
- (ii) obtain the agreement in principle of the museum to accept the archive for long-term storage and curation;
- (iii) identify any policies of the museum in respect of selection/retention of archive materials;
- (iv) identify any requirements of the museum in respect of the format, presentation and packaging of the archive records and materials;
- (v) identify any charges which will be applied by the museum.
- (vi) A policy for the selection, retention and disposal of excavated material shall be determined by consultation with the appropriate museum prior to excavation

7.2 Adequate resources shall be provided during fieldwork to ensure that all records are checked and internally consistent. Archive consolidation shall be completed immediately after the conclusion of fieldwork, to ensure that the site record has been checked, cross-referenced and indexed as necessary and that all retained finds have been cleaned, conserved, marked and packaged as appropriate.

7.3 Immediately after completion of fieldwork, all retained soil samples shall be appropriately processed in accordance with the sampling strategy agreed prior to the start of fieldwork, and appropriate records shall be kept.

7.4 A Site Archive shall be prepared in accordance with the standards set out in Appendix 3 of MAP2.

8 POST-EXCAVATION ASSESSMENT AND REPORTING

8.1 The Sub-consultant shall provide verbal progress reports and will provide interim plans or other data at any point during the contract, on request from Babbie Group.

8.2 Each category of data and material recovered by the fieldwork (site records/stratigraphic data, each category of artefact or other find, each category of palaeoenvironmental/ economic evidence, any

other data) shall be examined and assessed by a suitably qualified and experienced archaeologist or specialist in line with the principles set out in Chapter 6 of MAP2.

8.3 A full report on the sample excavation will be required within three months of the completion of all fieldwork. The report shall be prepared in line with the principles set out in Appendix 4 of MAP2, and shall include as a minimum:

- (i) a description of the background to and circumstances of the work;
- (ii) a brief description of the previously known archaeology of each site;
- (iii) a description of the methodology used;
- (iv) an objective description of the results of the evaluation ("factual data" in MAP2);
- (v) an assessment of each category of data ("statement of potential" in MAP2);
- (vi) a statement of the storage and curation requirements for each category of data;
- (vii) general and detailed location plans at appropriate scales;
- (viii) plans of each site and of each trench at appropriate scales, with keys and north points;
- (ix) detailed plans and sections of individual features where necessary;
- (x) a complete matrix for each trench.

8.4 One copy of a complete draft report should be submitted in the first instance for review/checking by Babbie Group. In finalising the report, the Sub-consultant shall take into account any comments made by Babbie Group and remedy any faults identified by Babbie Group. The Sub-consultant should note that three copies, one unbound copy and a floppy disk copy (with text in Word for Windows version 6.0) of the final report will be required. The finalised report shall be submitted to Babbie Group within five working days of receipt of Babbie Group's comments on the draft report.

8.5 Immediately on completion of the finalised report, the report and any data or other documentation produced during the post-excavation assessment process shall be integrated into the site archive. The Sub-consultant shall store the archive in suitable conditions in a secure location until instructions are received from Babbie Group for its deposition in the museum or other transfer.

9 TIMING OF THE PROJECT

9.1 It is intended that sample excavation for Site 52 shall begin no later than 9th August 1999 and shall be completed on or before 31st August 1999. In the case of Sites 6, 38, 49, 50, 51 it is intended that sample excavation shall begin on 13th September 1999 and on-site works shall be completed by 27 September 1999. The final report will be completed and delivered to Babbie Group by 17th December 1999.

9.2 The Sub-consultant shall submit a detailed programme of works after appointment and before commencing works.

10 ACCESS

10.1 Babbie Group shall be responsible for all negotiations and arrangements with land owners/occupiers relating to access and to the ownership of excavated materials. Access to the sites shall only be by the routes determined by Babbie Group. In the case of Site 52 provision shall be made for the dismantling and reinstatement of walls and other barriers for the access of plant to the site.

11 MONITORING

- 11.1 The Sub-consultant will be subject to regular monitoring and supervision by Babbie Group. This will ensure that the specification is being followed and that high professional standards are being maintained. It will also enable the Sub-consultant to raise any problems which arise during the course of the project.
- 11.2 During the fieldwork, monitoring may include visits to the site by Babbie Group or his representative, who will be given full access to any site records or other information, and who will discuss the project with the Sub-consultant. After the fieldwork, all documentation produced will be reviewed and the completed archive inspected by Babbie Group, and the Sub-consultant shall take into account any comments made by Babbie Group and remedy any faults identified by Babbie Group.

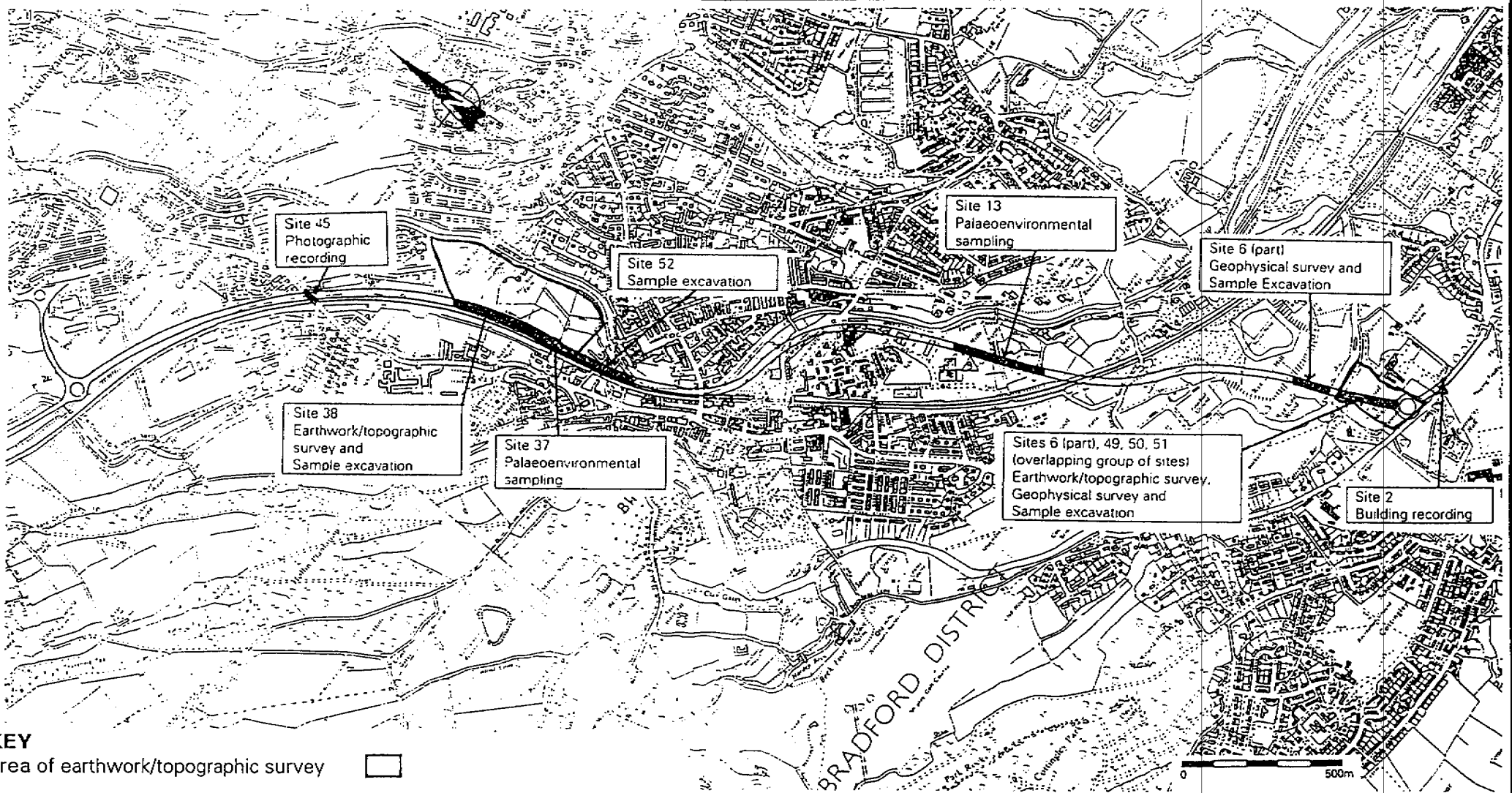
12 GENERAL

- 12.1 Where archaeological trial trenches are located in fields where livestock have access, temporary chestnut paling fencing shall be securely erected and maintained around the trench working area and plant at all times.
- 12.2 In the case of Site 52 provision shall be made for the necessary safety equipment to ensure compliance with the HSE Guidance Note GS6 Appendix A.
- 12.3 Provision shall be made for the location and avoidance of underground services either by use of appropriate scanning equipment or inspection pits excavated by hand.
- 12.4 The Sub-consultant shall ensure that the trenches are adequately supported during excavation in such a manner to enable personnel to enter safely and to permit in-situ hand excavation, recording and collection of finds and samples. All trench supports shall be inserted during excavation and lowered as excavation proceeds
- 1.12.1 The project may attract interest from local people or the media. This should not be encouraged and the Sub-consultant will refer any interested parties to Babbie Group without making any unauthorised statements or comments.

1.13 COPYRIGHT

- 1.13.1 The Sub-consultant shall assign copyright in any reports produced or other documentation produced by them as part of this contract to Babbie Group upon written request.


Client	Highways Agency
Scheme	A650 Bingley Relief Road
Title	Summary Of Proposed Archaeological Works

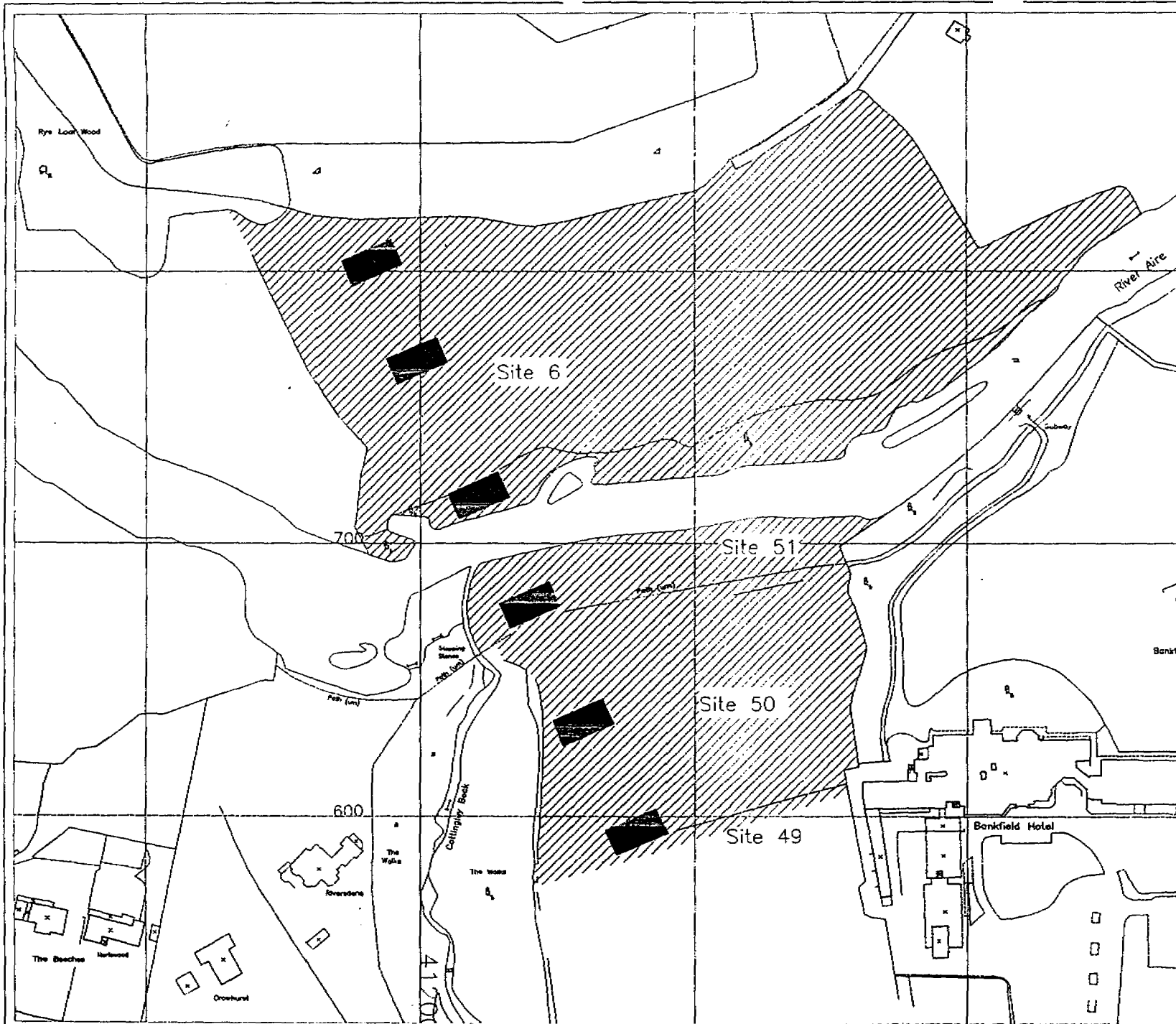





KEY
 area of earthwork/topographic survey
 area of other archaeological works

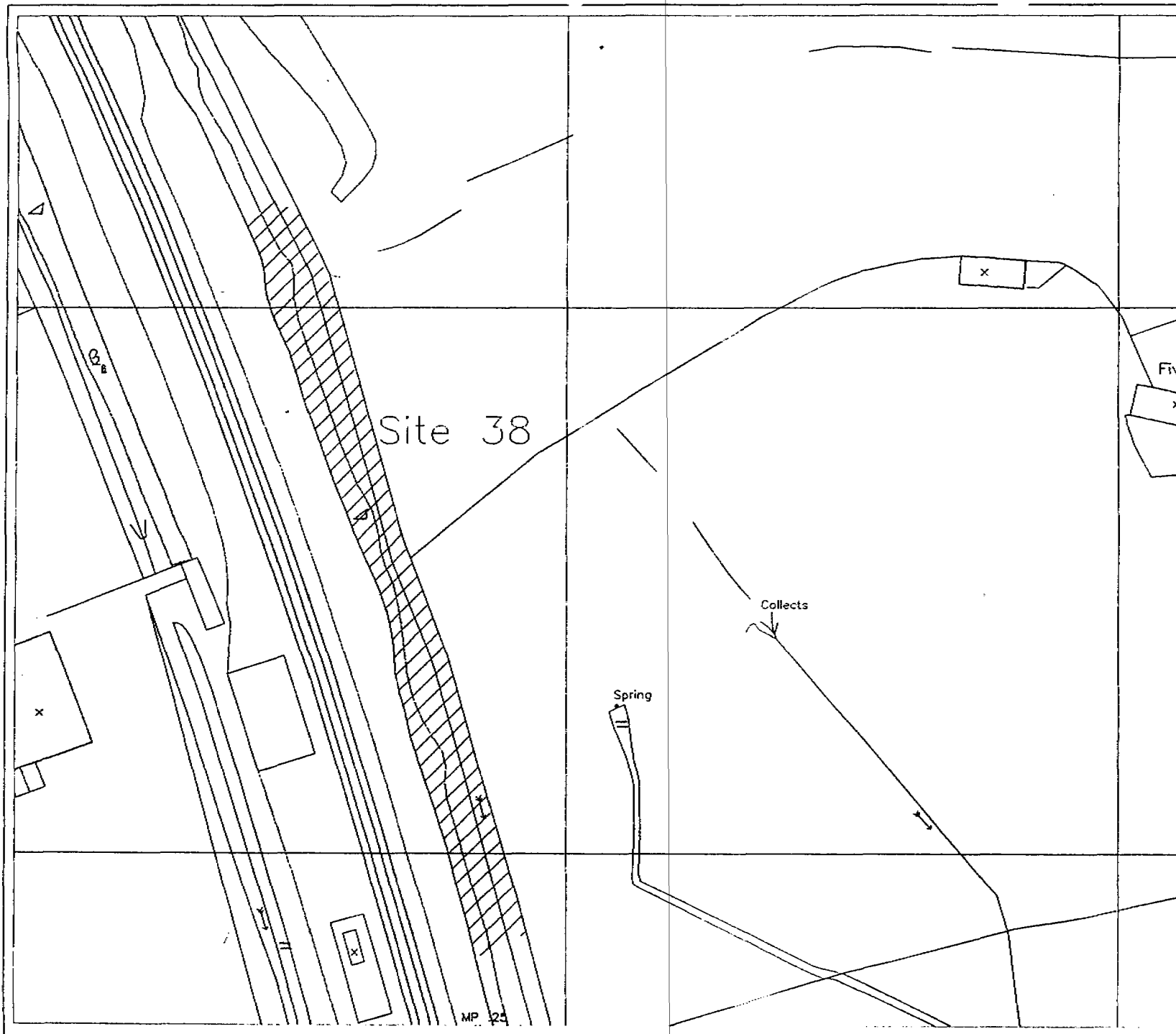
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 Babtie	Babtie Group Consulting Engineers Pearl House 32 Queen Street Wakefield WF1 1LE		Drawn By	DAJ	Job No.	BT1015958
	Checked By	WNL	Drawing No	TD4383/WD/1106		
	Approved	WNL	Date	20/04/99		



Drawing Number		
BTI 014383/ARCH/2		
Notes		
 Viaduct Foundation  Approximate Area of Archaeological Site		
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Rev	Date	Checked
		
Client	Highways Agency	
Project	A650 Bingley Relief Road	
Title	Fig 2 Location of Sites 6, 49, 50 and 51	
Drawing No.	BTI 014383/ARCH/2	
Scale	1:2000	Date July 99
Drawn JD	Checked MP	Approved MP
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Drawing Number
BTI 014383/ARCH/4

Notes
/// Area of Archaeological Site



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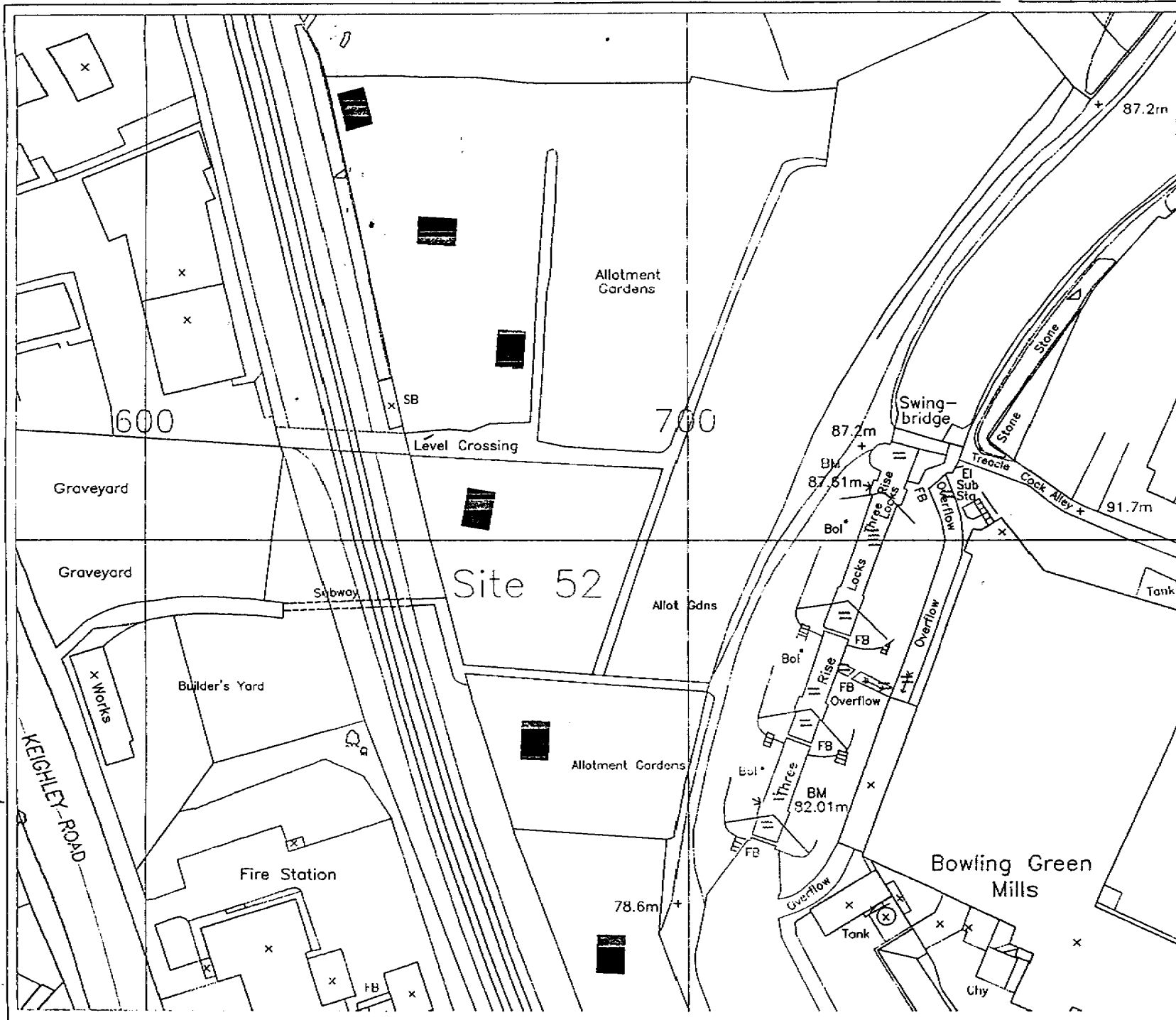
Client Highways Agency

Project A650 Bingley Relief Road

Title Figure 3 - Location of Site 38


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Notes

 Approximate Location of Trial Trench



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Rev	Date	Checked



Client Highways Agency

Project A650 Bingley Relief Road

Title Fig 4 - Site 52
Approximate Location of Trial Trenches

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Scale	1:1000	Date July 99
Drawn JD	Checked MP	Approved MP

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Appendix IX

Method Statement (Archaeological Services WYAS)

A650 Bingley Relief Road
Additional Method Statement

1. General considerations

- 1.1 Archaeological Services (WYAS) will adhere to the detailed specification of works produced by Babbie Group entitled, 'Specification for Sample Excavation'.
- 1.2 In order to clarify a number of points and provide additional information, this document should be seen as an addendum to the specification.

2. Resources and Programming

- 2.1 Although the personnel assigned to the project is unlikely to change, Archaeological Services (WYAS) cannot guarantee all staff being available at all times during the course of the project. Immediately prior to the commencement of the sample excavations a definitive list of the named staff appointed to supervise and work on the each site will be given to Babbie Group.
- 2.2 The officers appointed to direct the project are Ian Roberts and Paul Wheelhouse.
- 2.3 All appropriate specialists have been approached and are willing to undertake the work within the time-scales and parameters set out in the specification.

3. Insurance

- 3.1 Archaeological Services WYAS is covered by the insurance and indemnities of the City of Wakefield Metropolitan District Council.
- 3.2 Insurance has been effected with Zurich Municipal Insurance, Sterling House, 2 The Bourse, Leeds LS1 5EE.
- 3.3 The policy number is QLA 03R896 0013
- 3.4 Any further enquiries should be directed to :

The Chief Financial Officer, Insurance Section, Wakefield MDC, PO Box 55, Newton Bar, Wakefield WF1 2TT (Tel: 01924 306442).
- 3.5 Babbie Group have been supplied, as requested, with a copy detailing the above.

4. Monitoring

- 4.1 Archaeological Services (WYAS) would also wish to provide Babbie Group with mobile contact telephone numbers of the Project Supervisors on-site during the course of the project.

5. Recording and Reporting Guidelines

- 5.1 The general and more specific standards of both recording and reporting that will be adhered to during the project are listed below. This list will be updated, as necessary, during the project.

Association of Environmental Archaeology 1995 "*Environmental Archaeology and Archaeological Evaluations*"

English Heritage 1991 "*Management of Archaeological Projects*", Second Edition (MAP2)

Institute of Field Archaeologists "*Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*"

Institute of Field Archaeologists 1994 "*Draft Standard and Guidance for Archaeological Excavations*"

Institute of Field Archaeologists "*IFA Guidelines for Finds Work*"

Institute for Field Archaeologists Code of Conduct

McKinley, J.I. and Roberts, C. 1993 "*Excavation and post-excavation treatment of cremated and inhumed human remains*" IFA Technical Paper No. 13

Museums and Galleries Commission 1994 "Standards in the museum care of archaeological collections"

Philo, C and Swann, A. 1997 "*Preparation of Artwork for Publication*" IFA Technical Paper No. 10

United Kingdom Institute for Conservation 1990 "*Guidelines for the preparation of Excavation Archives for long-term storage*"

6. Sample Excavation Methodology

- 6.1 In addition to the requirements clearly set out in the Babbie Group specification, Archaeological Services (WYAS) will utilise Ordnance Survey Digital Map Data and provide a digital record (as well as paper copies) of all survey data in formats which Babbie Group use (e.g. DXF, DWG, NTF).
- 6.2 The sample excavation trenches will be set out using a Geotronics Geodimeter 600 robotic Total Station and used to establish benchmarks on-site. The equipment will also be used to accurately tie-in the site following completion, as well as being used to obtain three-dimensional co-ordinates for finds. The resulting survey data will be downloaded using Blue Moon Systems 'Landscape' software and data transferred into AutoCAD14/AutoCADMap software.
- 6.3 During the course of the machining the resultant spoil heaps will be routinely scanned for artefact recovery.

- 6.4 All artefacts and environmental samples recovered from site will be returned to Archaeological Services (WYAS) offices in Wakefield on a daily basis and stored in appropriate environmental conditions.

7. *Post-excavation assessment and reporting*

- 7.1 The GBA environmental samples selected for processing will be processed in-house by suitably experienced staff.

8. *Timing of the Project*

- 8.1 Archaeological Services (WYAS) will additionally produce a Gantt chart illustrating the detailed programme of works.

9. *Health and Safety*

- 9.1 Archaeological Services (WYAS) has its own Health and Safety policy which has been compiled using national guidelines such as SCAUM. These guidelines conform to all relevant Health and Safety legislation.
- 9.2 In addition each project undergoes a 'Risk Assessment' which sets project specific Health and Safety requirements to which all members of staff are made aware of prior to on-site work commencing.
- 9.3 Health and safety will take priority over archaeological matters. Necessary precautions will be taken over underground services and overhead lines at the outset of the project.
- 9.4 Each member of the project team will be required to read the 'Risk Assessment' and approved visitors to the site will also be requested to do so. Spare hard hats and high visibility vests will be made available to such visitors.

10. *Copyright and Publicity*

- 10.1 For the purposes of this project Archaeological Services (WYAS) agree to extend the copyright of any written, graphic or photographic record to Babbie Group. The use of such material by Babbie Group is on the understanding that there will be clear acknowledgement of the originating body (Archaeological Services (WYAS)) when such material is used.
- 10.2 Archaeological Services (WYAS) will agree with Babbie Group all aspects of publicity at the outset of the project.