Humber Field Archaeology
Archaeological Consultants and Contractors

TRIAL EXCAVATIONS ON LAND TO THE SOUTH OF WELTON ROAD, BROUGH, EAST RIDING OF YORKSHIRE

May 2000

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Contents

1 SUMMARY

In May 2000, Humber Field Archaeology undertook trial excavations as part of a staged programme of archaeological evaluation on *c.* 51ha of land south of Welton Road, Brough on Humber, East Riding of Yorkshire. The work was carried out on behalf of Bovis Homes Ltd., through their agents Shirethorn Ltd., in advance of the construction of residential development, landscaping, public open space, access and infrastructure. Geophysical survey was carried out as the first stage in the evaluation, and this suggested the presence of features of likely archaeological origin. Trial excavation was recommended to test the results of the survey and to sample areas of the site where survey had not been possible due to ground conditions.

Nine trenches were excavated, though in the event, no features of archaeological significance were encountered. Opportunity was also taken to examine groundworks being carried out during construction of the Brough Southern Relief Road and associated drainage excavations, though no finds of archaeological were noted.

On the basis of the results it has been recommended that development over the majority of the site proceed without archaeological impediment. The exception is the south-eastern corner of the site, inaccessible to evaluation due to the presence of greenhouses, and in proximity to known archaeological remains, where it is considered desirable that archaeological monitoring be carried out during construction.

2 INTRODUCTION

2.1 Circumstances of the fieldwork

This report presents the results of archaeological trial excavations undertaken by Humber Field Archaeology, during May 2000, on *c.* 51ha land to the south of Welton Road, Brough, East Yorkshire (Site Code WEB 2000; National Grid Reference (centred on) SE 949 267; see Fig. 1). The work was carried out on behalf of Bovis Homes Ltd., through their agents, Shirethorn Ltd., in advance of proposed residential development. The excavations were carried out as part of a staged programme of archaeological evaluation.

The development area lies east of the walled Roman settlement at Brough, south of the Roman road from Brough to Welton, and close to a number of other sites of Iron Age and/or Romano-British date, some showing as cropmarks on aerial photographs. There was therefore the potential for the survival of archaeological remains within the area to be affected by the development. It was recommended that this potential be assessed through a programme of archaeological evaluation; this would help to establish the degree of survival, character and date of any archaeological features likely to be affected by the development of the site, and would allow decisions to be made regarding measures needed to record or protect them.

As a first stage of the evaluation of the site, a geophysical survey was carried out by GeoQuest Associates in December 1999. This detected a number of geophysical anomalies with potential archaeological origin, some of which were tentatively interpreted as minor-soiled filled ditches or chains of pits. Accordingly, it was decided that the site should be further evaluated by trial trenching in order to confirm the results of the survey as well as to evaluate the areas not suitable for survey. A specification was prepared for the trial trenching by Mr. D. Evans of the Humber Sites and Monuments Record (ref. DE/March 2000) and this enabled archaeological contractors to be approached. Humber Field archaeology (HFA) submitted a quotation, which was subsequently accepted. A project design was prepared with reference to the specification (ref. K. Steedman 22/3/00), and work commenced on site on 2nd May 2000.

2.2 Historical and Archaeological background

The site of the proposed development lies within an area of potential archaeological significance to the east of the Roman town of Brough (*Petuaria*), and to the south of the Roman road leading east-north-east from the east gate of the walled town towards the villa site on Welton Wold and beyond to the east (Sites and Monuments Record No. 6659). Although the road is shown as cropmarks of parallel straight ditches on aerial photographs in the fields to the north of the present site and west of the north-south return of Welton Road (Cambridge University Committee for Aerial Photography: refs BQT 009; 010 (July 1974); BRJ 12 (August 1974) a series of ditched boundaries can be seen bisecting or bisected by the road..

During March 1996 an evaluation was undertaken within an area of *c*. 10.5 ha (*c.* 26 acres) on the site of the former Elloughton Road Nurseries (centred on National Grid

Reference SE 9495 2725), to the north of the present site location. The majority of the site was found to be devoid of archaeological remains with the exception of the roadside flanking ditches from which a small assemblage of 2nd-century pottery was recovered. To the north of the road, a sequence of intercutting drainage/boundary ditches of probable Romano-British date were recorded (Tibbles 1996).

2.3 **Soils and geology**

The soils of the area are classified by the Soil Survey of England and Wales (1983, Sheet 1, Northern England, 1:250,000) as 512b-Landbeach, a gleyic brown calcareous earth. The underlying geology is classed by the British Geological Survey (1978 Sheet 80, Kingston Upon Hull, 1:50,000) as sand and gravel (including post-lacustrine levee sand) – Vale of York glacial lake deposits overlying Upper Jurassic Ancholme Clay Group deposits.

3 THE EXCAVATIONS

3.1 Methodology

The excavation was carried out over a period of two weeks in May 2000, with a team of five staff from Humber Field Archaeology. Nine trenches were excavated within the specified area, numbered 1-9 (see Fig. 1), to determine the archaeological potential of the geophysical anomalies found during the survey. The overburden was removed by mechanical excavator and the exposed contexts cleaned by hand.

Standard Humber Field Archaeology recording procedures were used throughout; each identified feature was allocated a context number and written descriptions recorded on *pro forma* sheets and plan sections were drawn on film sheets. A black and white print and colour transparency photographic record was also maintained.

On arrival on site it was found necessary to relocate some of the trenches to positions as near as possible to their specified locations in the specification, due to the ongoing construction of the Brough southern relief road and its associated services.

3.2 Results

Analysis of the stratigraphic sequence has enabled three broad chronological phases to be assigned to the site.

PHASE 1 Natural subsoil deposits
PHASE 2 Land drainage – late 18th to 19th century
PHASE 3 Modern horticulture – 20th century

Trench 1

Trench 1 was located in the north-western part of the site and was intended to investigate geophysical anomalies which may have represented a number of minor soil-filled ditches. It was aligned east-west and measured approximately 10m x 2m with a maximum depth of 0.40m (10.59mOD).

The material exposed was a white-orange coarse sand (1002) with patches of iron staining and is considered to be of a nature subsoil of geological origin. It is presumed that the patches represent the geophysical anomalies recorded during the survey. Sealing the sand was a loamy sand (1001) ranging in thickness between 0.25m-0.40m.

Trench 2

(Plate 1)

Trench 2 was positioned in the extreme south-western part of the site, to the immediate east of Elloughton Beck. It was located to investigate geophysical anomalies recorded there, and was approximately 10m long by 2m wide, with a maximum depth of 0.50m (7.28m OD). The earliest deposit was a natural mid white-orange coarse sand (2002) into which had been cut a north/south-aligned ceramic land drain (2003). The land drain was cylindrical in shape, with associated collars at each joint, and is considered to be of late 19th- or early 20th-century date (drain type 2b; Tibbles, forthcoming).

Sealing the land drain backfill (2004) was a layer of loamy sand topsoil (2001), varying in thickness between 0.25m and 0.38m. From within the topsoil, two sherds of well-abraded Romano-British greyware were recorded, though these are assumed to have been introduced to the site during later agricultural activity.

Trench 3

(Plate 2)

Trench 3 was positioned close to the southern side of Welton Road, in an area where it had not been possible to investigate by geophysical survey. To the immediate north of, and parallel to, Trench 3 was a further trench in the process of being excavated by the on-site contractors. The depth was approximately 1.5m and when examined was found to contain no features of any date, excluding the modern cable cut, cutting into the natural white-orange sand (3002). Trench 3 was aligned east-west and measured approximately 10m by 3m, with a maximum depth of 0.77m (11.10m OD).

The natural white/orange sand (3002) appeared mottled by numerous shrub boles and had been cut by two ceramic land drains (3003, 3005). The earlier land drain (3005) was aligned approximately NNE/SSW and was likely to be of late 18th-century date (drain type 1a; *ibid.*). Its alignment had been cut by the later insertion of drain 3003, aligned N/S and was found to contain a double collared drain of probable late 19th- or early 20th-century date (drain type 2b; *ibid.*).

A 0.25m-0.35m thick layer of grey brown loamy silt topsoil (3001) sealed the land drains.

Trench 4

This trench was positioned to investigate an area of the site were it was not possible to undertake a geophysical survey due to ground conditions. The trench was roughly north-east/south-west aligned, 20m long and 2m wide, with a mean depth of 0.40m (9.90m OD). A maximum depth of 1.40m (8.85m OD) was however recorded within an exceptionally deep land drain cut (see below). The earliest deposits encountered were a loose mid brown natural sand with patches of iron staining.

A 0.35m-wide vertical sided cut (4003) with an excavated depth of 0.60m extended across the trench at its southern end, cutting into the natural sand. Its full depth was not ascertained due to the continual influx of ground water, which caused the sides of the feature to begin to collapse almost immediately. A loose mid grey-orange silty sand with frequent patches of silty clay (4004) filled the feature but was devoid of dating inclusions, though the 'clean' appearance of the fill within the feature suggests that it may have been of a relatively recent date.

Extending diagonally across the trench was a 2m-wide shallow depression (4005), approximately 0.20m deep, with shallow sloping sides. No dating evidence was recovered from within its fill (4006), a loose orange-brown silty sand containing occasional pebbles. Such a feature may represent a rough path or track, perhaps formed through the passage of animals. Extending along, and cutting, the northern edge of the feature was an exceptionally deep vertical sided cut (4007), 1.05m deep (8.85m OD) and 0.20m wide, containing a ceramic water/land drain at its base. Its backfill (4008), a grey-brown silty sand, contained a few rootlet fragments but no dating evidence.

Running parallel to, and possibly cutting the northern edge of, 4007 were traces of a further land/water drain cut (4009) containing fragments of a ceramic pipe within a loose mid grey silty-sand. At the eastern end of the cut, a 0.40m-deep steep sided pit (4011) had been inserted, its upper edge shallowing to the south for approximately 0.30m. The pit was filled with a loose mid orange-grey sand devoid of finds but was presumed to be of recent origin. The upper fill of the pit was represented by a 0.15m thick layer of topsoil (4001), presumed to be the result of animal disturbance.

Sealing all the features was a 0.35-0.40m thick layer of loamy sand topsoil (4001), containing frequent fragments of modern concrete towards the southern end of the trench.

Trench 5

(Plate 3)

Trench 5 was positioned close to the southern edge of the site and had to be repositioned due to the surrounding site works, particularly the construction of the southernmost relief road roundabout and its associated exits. It was located to investigate a cluster of anomalies recorded within the geophysical survey that were tentatively interpreted as a 20m-long continues chain of discrete anomalies which may represent a chain of pits or tree boles, or alternatively a shallow soil filled ditch. The trench was aligned east-west and measured 15m by 2m with a maximum depth of 0.66m (7.03m OD).

The earliest feature recorded was a 0.68m wide and 0.45m deep shallow-sided gully (5005), orientated north/south, and cutting into the natural sands (5002). The loose mid grey-brown silty sand (5006) which filled the gully was devoid of finds and inclusions, and the feature is supposed to have been of natural origin.

At the eastern end of the trench was a north-east/south-west aligned land drain (5003), of a type (drain type 1a; *ibid.*) thought to be late 18th century or later in date. Within the backfill (5004) of the land drain cut, a single sherd of Spongeware pottery was recovered, suggesting a date post-1850 for insertion of the drain. At the western end of the trench, approximately 9.20m distant, was a second land drain (5007), running parallel to the first, but this was of a later, cylindrical, type (drain type 2b; *ibid.*).

Sealing the land drains was a dark grey-brown silty loam topsoil (5001) ranging in thickness between 0.40 and 0.55m.

Trench 6

Trench 6 was positioned within an area of dismantled greenhouses where it had not been possible to conduct a geophysical survey. It was aligned NNE-SSW, was 15m long by 2m wide, and had a maximum depth of 0.50m (10.72m OD).

As with the previous trenches, the material exposed was a mottled white to orange natural sand into which two land drains (6004 and 6006) had been inserted to a depth of 0.76m (1017m OD). Their backfills (6005, 6007) were a grey/orange sandy silt that contained no inclusions. A dark grey brown sandy-loam topsoil (6001) sealed the trench into which an iron pipe (6005), associated with the recent horticultural activities, had been inserted.

Trench 7

Also within the area of the dismantled greenhouses, Trench 7 was positioned but further south and close to the new relief road under construction. It had an overall length of 15m and a width of 2metres with a mean depth of 0.40m (8.69m OD).

The earliest material encountered was a orange-grey natural sand (7002), with patches of iron staining, into which a NE/SW-aligned land drain (7003), of probable 18th-century date, had been inserted. Further south, two square/rectangular pits with rounded corners had been inserted, 0.21m wide by 0.12m deep and 0.41m long by 0.28m wide and 0.10m deep. Both features were backfilled with a dark grey mottled silty sand (7006, 7008) with pebbles. It is assumed that both features are associated with the recent horticultural activity.

A dark grey/brown silty loam topsoil, 0.33m thick, sealed all the features within the trench.

Trench 8

Trench 8 was positioned where it was not possible to undertake a geophysical survey. Due to the saturated ground conditions it was impossible for the JCB to reach the location of the second choice for the trench position without becoming 'bogged' down and therefore once again it was necessary to re-locate this trench onto firmer ground to the north.

The trench measured 10m by 2m with a maximum depth of 0.51m (11.39m OD), and was aligned approximately north-south.

The earliest deposit encountered was a natural orange coarse sand (8002) with dark grey mottling – the result of animal activity. Extending across the centre of the trench was an east-west aligned land drain cut (8005) ,at least 0.70m deep, containing a late ceramic land drain with base plate (18th/19th century, drain type 1a; *ibid.*). It had been backfilled with a dark grey-orange, charcoal-flecked sandy silt (8006). Its eastern continuation was recorded within Trench 9 (9003).

Three circular post pits (8003, 8007, 8009) measuring approximately 0.24m in diameter were recorded in a north-south alignment, 1.8m apart. Each had been backfilled with concrete with the upper, mostly truncated, fills (8004, 8008, 8010), comprising loose dark grey-brown loamy sand, similar in composition to the topsoil. Such features represent residual greenhouse structures from the recent horticultural activities.

A layer of grey-brown sandy-loam topsoil (8001), with a mean thickness of 0.30-0.35m, extended over the trench.

Trench 9

Trench 9 was relocated for the same reasons as Trench 8, and was finally positioned approximately 60 metres to the east of Trench 8, close to the eastern boundary of the development area. It was aligned north-south and measured 8.20m in length by 2m wide, with a maximum depth of 0.44m (11.14m OD).

The earliest deposit was a grey-white-orange natural sand (9001) which had been cut by land drain 9003, the eastern continuation of 8005, at the northern end of the trench. No other features were encountered within this trench, which was sealed by a 0.30-0.35m thick layer of grey-brown loamy sand topsoil (9001). At the northern end of the trench, a 2.60m wide by 0.30m thick layer of recently re-deposited silty sand (9004) had been dumped above the existing topsoil.

Contractors' excavations

(Plate 4)

Throughout the period of archaeological evaluation, landscaping and earth movements undertaken by on-site contractors in the course of road construction and service trenching, were continually monitored for additional archaeological information. Close to Welton Road, and to the west of Trench 3, excavation for a culvert had resulted in the exposure of a 4m deep section face (Plate 4). The geological strata exposed were undisturbed sands and gravels below a sandy loam topsoil. Within the upper parts of the sandy-loam, a possible cut feature was observed, though 19th-century domestic refuse was noted within the material into which the 'feature' had been cut.

The southern continuation of the newly culverted Main Drain remained open, was tree-lined along its eastern edge, and extended to the southern end of the development area. Recent machine clearance and consolidation alongside the drain produced the opportunity to examine the freshly cut western side for surviving archaeological features. The exposed orange-white sands revealed no features of earlier than a 20th- century date along its 300m length.

To the east of, and parallel to, the Main Drain, the route of the southern arm of the relief road extending to its southern roundabout had been stripped of topsoil to the upper surface of the natural sands. The full extent of the stripped area was examined, and with the exception of an occasional glass filled pit from the horticultural activities, no archaeological features were observed.

The several spoil heaps associated with the landscaping and service trenches were examined for archaeological artefacts. A single sherd of medieval Coarse Sandy Ware pottery was recovered from the spoil heaps close to Trench 3 (approximately 60m south) alongside the relief road, but the majority of finds were scatters of pottery of late 19th-century to early 20th-century date. The recent material from the spoil heaps was noted but not retained.

4 DISCUSSION AND RECOMMENDATIONS

4.1 Discussion of the results

These trial excavations provided an opportunity to determine the extent of early occupation in a large area on the south-eastern side of the modern village of Brough. Evidence of prehistoric and Romano-British settlement is known from the immediate area, and the Roman road leading east-north-east from the eastern gate of the Roman town of *Petruaria* passes a short distance to the north of the proposed development site. However, evaluation of the site by geophysical survey, followed by these trial excavations, has failed to identify any signs of occupation of the Roman period or earlier, other than two sherds of worn Roman greyware pottery recovered from the topsoil in one trench, and doubtless transported to the site as a result of more recent agricultural activities. Evidence of medieval settlement was similarly lacking.

The dearth of early settlement remains suggests that the area was either considered unsuitable for occupation due to environmental factors, or was open pasture. The presence of crop marks representing prehistoric or Roman settlement on land just south of the railway line does, however, suggest that the area *was* suitable for occupation, at least at that date. Subsequently, rising sea-levels in the post-Roman period may have been a key factor in determining land use; there was no evidence of ridge and furrow representing medieval arable cultivation, implying that the land remained as pasture or marshland grazing land.

The trial excavations did, however, record at least two major phases of land drainage schemes in the late 18th and 19th centuries, involving the laying of ceramic pipes. These actions, in conjunction with the network of drainage dykes which border or cross the development area, rendered at least some of the land suitable for arable cultivation. The presence of 19th-century rubbish in the topsoil in those plots in the western part of the site, between Main Drain and Elloughton Beck, represents 'nightsoiling' – manuring of arable fields from domestic latrine pits and middens.

4.2 Recommendations for the future treatment of archaeological remains on the site

These trial excavations suggest that the development area is largely devoid of significant archaeological remains. The following recommendations are, however, only those of the archaeological contractors, and will not necessarily be those of the local planning authority or their archaeological advisor.

The majority of the area planned for development has been evaluated, though some parts of the site lay beneath buildings, principally greenhouses, which had not yet been demolished, thus rendering them unsuitable for survey. For the most part, there is no reason to suppose that these areas contain archaeological remains, though those in the south-eastern corner of the site (corresponding to Phase F of the development programme; see Fig. 1) lie close to an area of cropmarks, south of the railway, considered to represent prehistoric and Roman settlement remains. It may be appropriate, therefore, that any groundworks in the area of Phase F be subject to archaeological monitoring by means of a watching brief. Depending on the progress

of construction works on site to date, this could comprise a two-stage approach, with infrastructure (road and service) excavations being monitored first, and dependant on the results of that first stage, this to be followed by monitoring of individual house foundations. Should the first stage fail to recover evidence of archaeological remains, then the second stage would not be required.

ACKNOWLEDGMENTS

These trial excavations were carried out on behalf of Bovis Homes Ltd, though their agents Shirethorn Ltd., and thanks are extended to them for their help and co-operation throughout. The work was carried out to a specification produced by Mr. D.H.Evans of the Humber Sites and Monuments Record.

The fieldwork was undertaken by permanent and temporary staff of Humber Field Archaeology, under the supervision of John Tibbles: Neil Adamson, Douglas Jobling, James Langthorne and David Marchant. The excavation account and archive were produced by John Tibbles.

David Atkinson created the digital plans from versions produced by David Marchant, while the site photographs were taken by Neil Adamson and John Tibbles, with the finished prints the work of BM Photographics. The report was compiled and edited by Ken Steedman. Georgina Richardson provided administrative support throughout.

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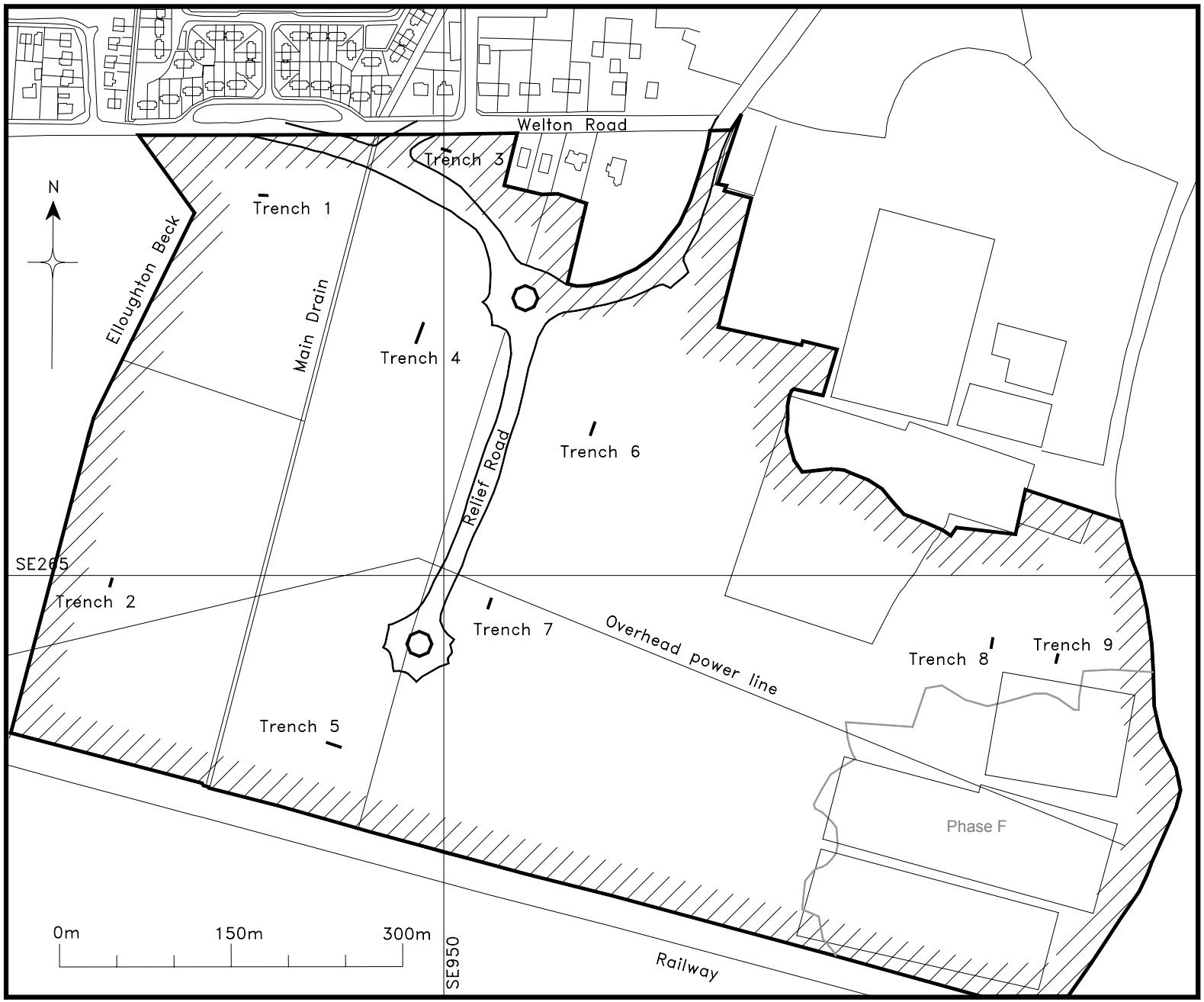

Figure 1: Plan of the south-eastern part of Brough on Humber, with the outline of the development area shown hatched. Trial trench positions (Trenches 1-9) are indicated, and development Phase F is delineated. Ordnance Survey National Grid superimposed.

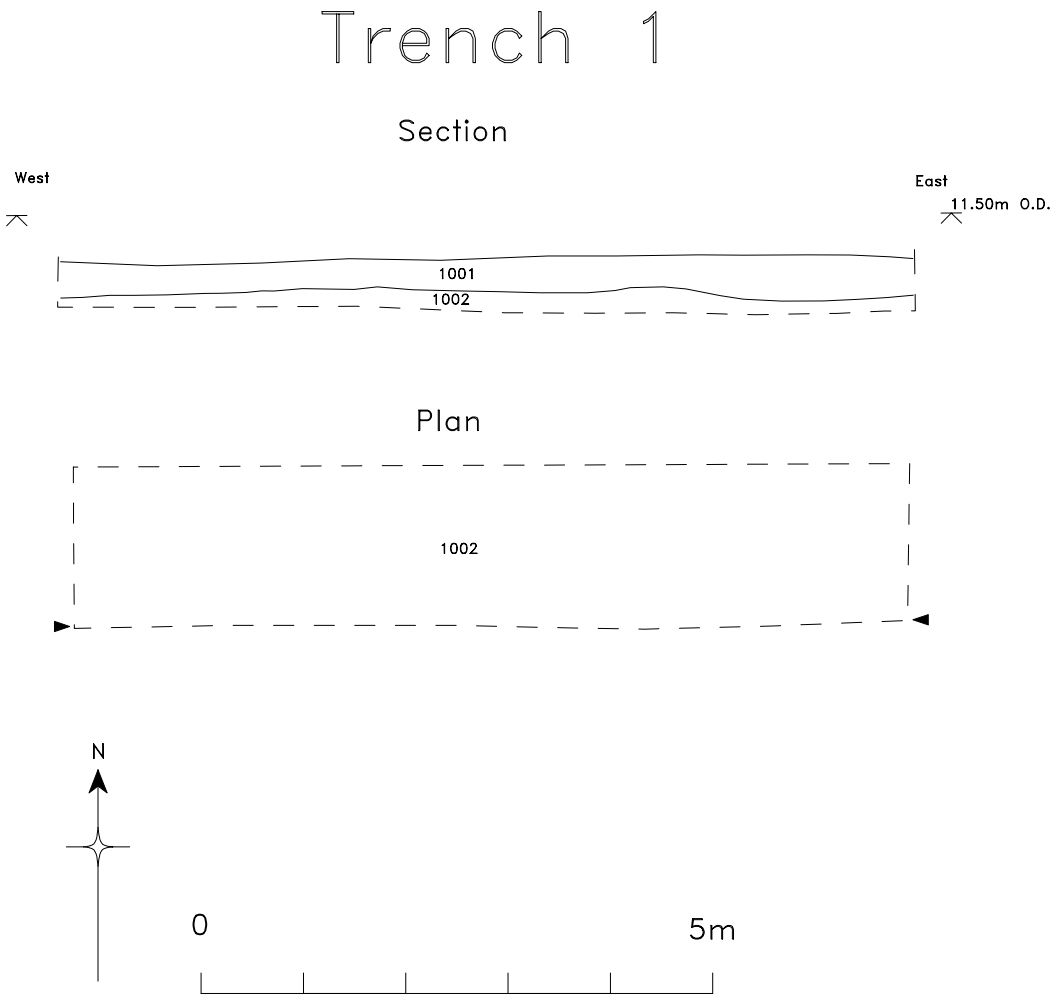

Figure 2: Trench 1 in plan and section.

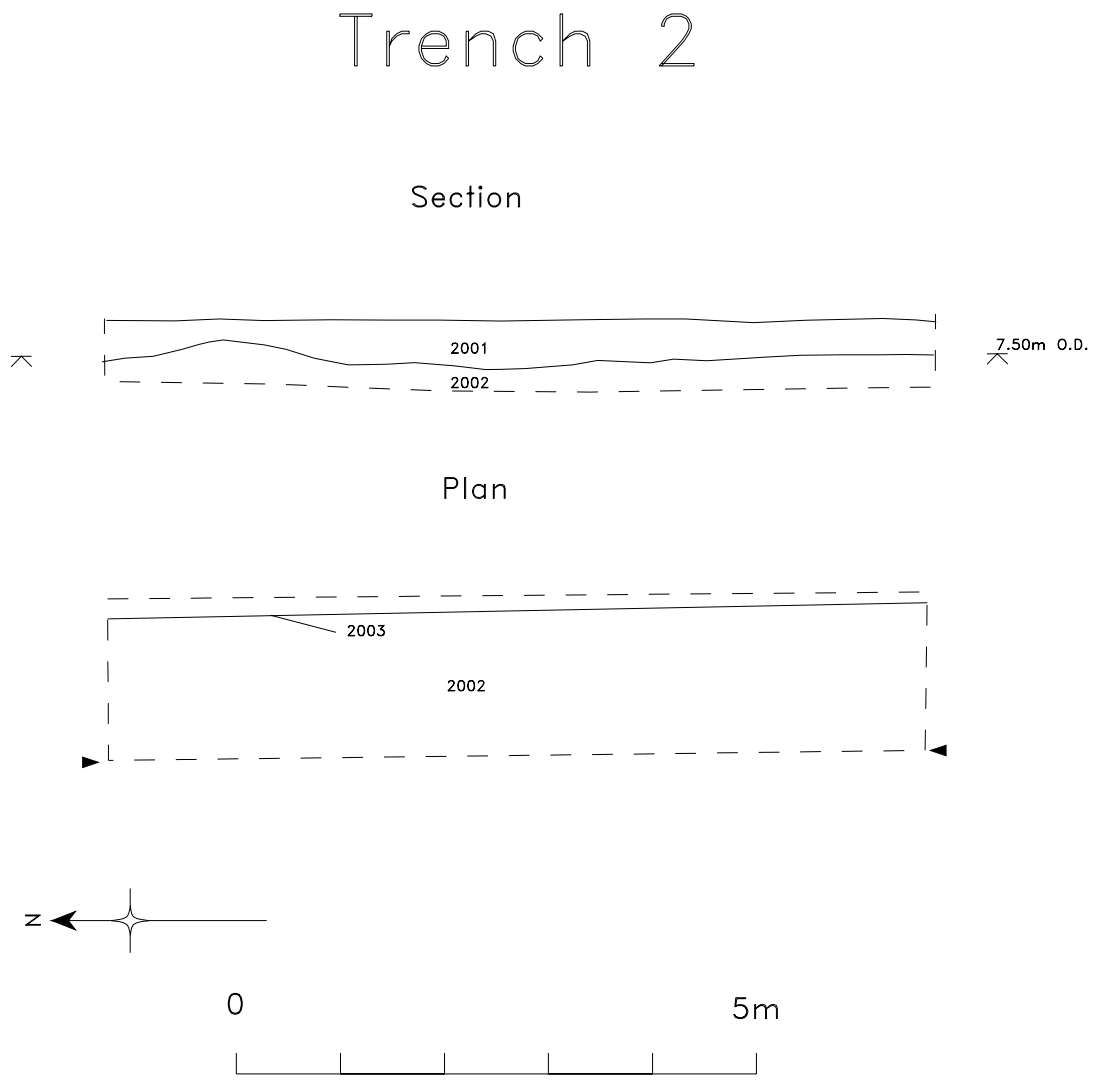

Figure 3: Trench 2 in plan and section.

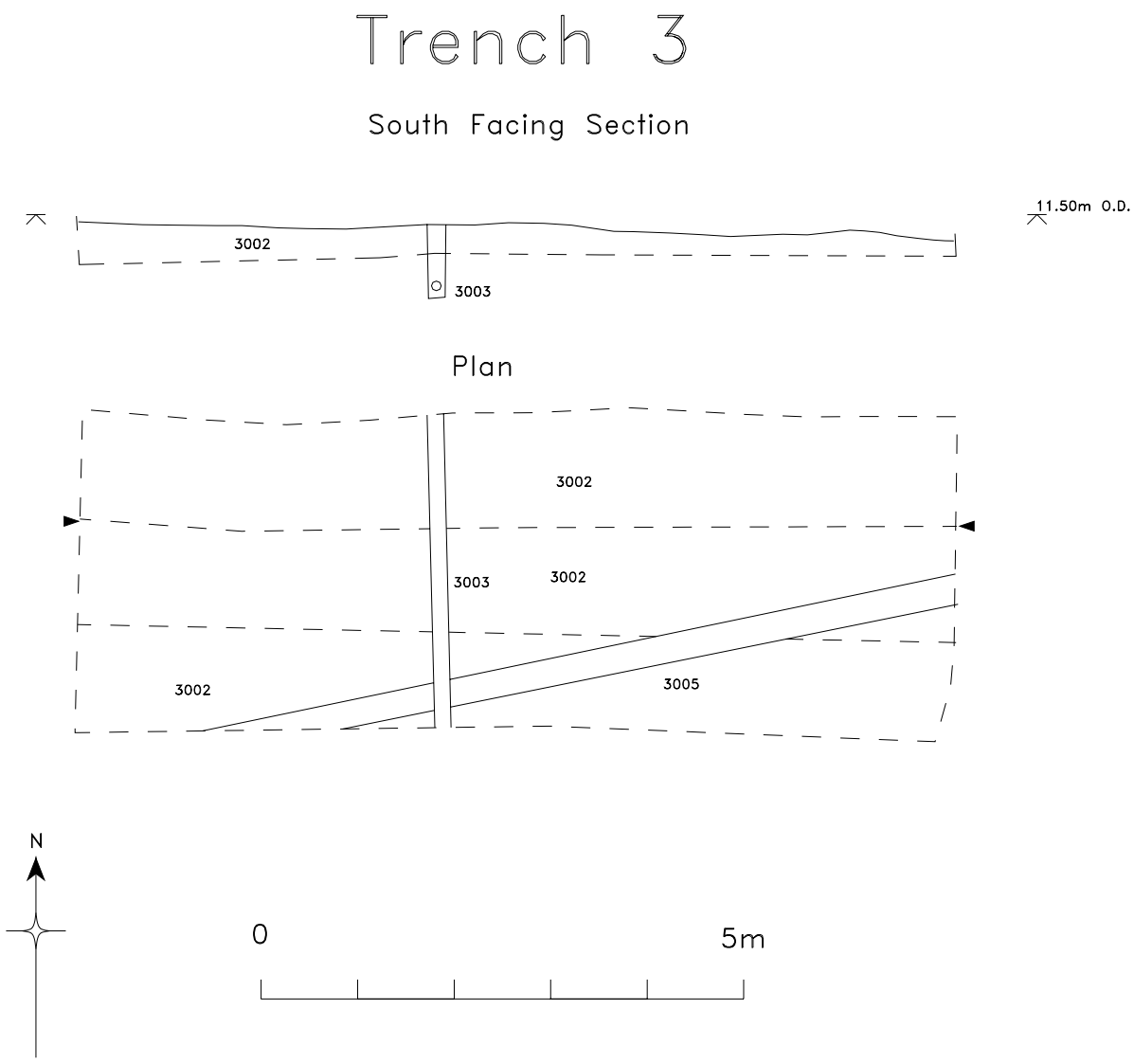

Figure 4: Trench 3 in plan and section.

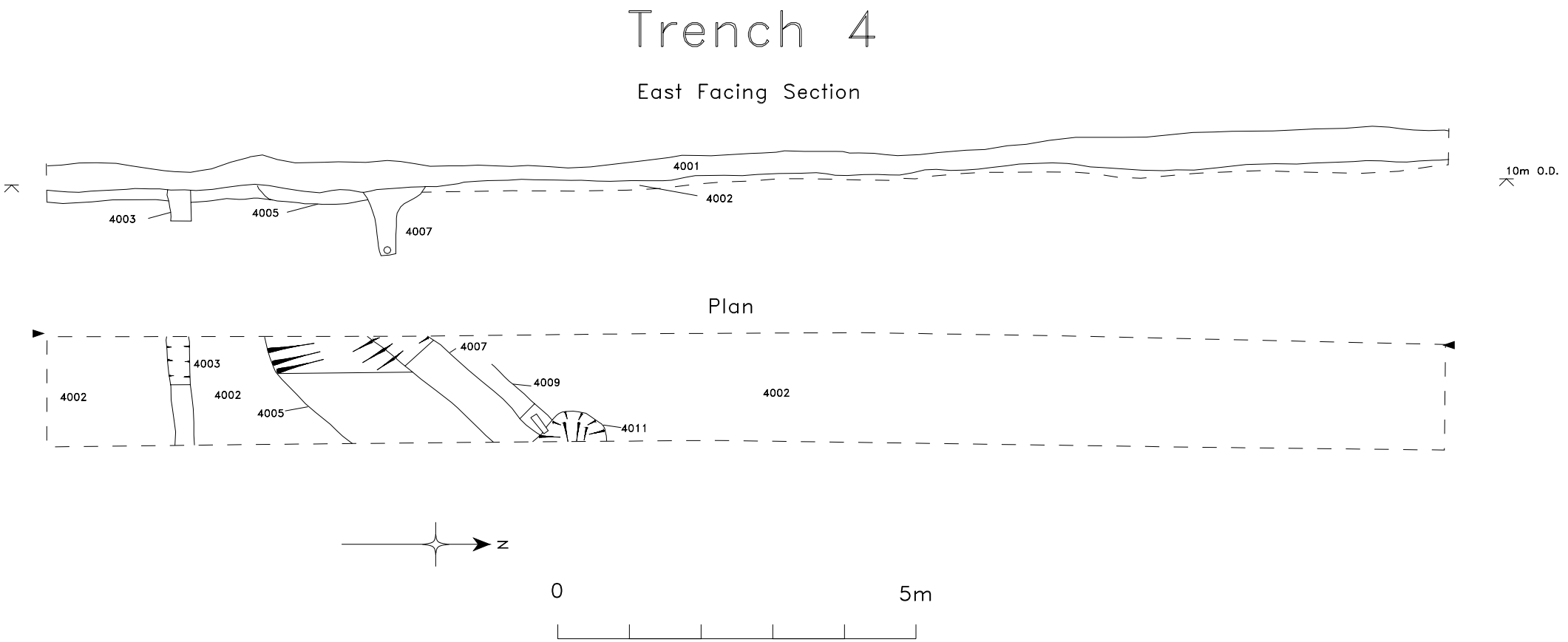

Figure 5: Trench 4 in plan and section.

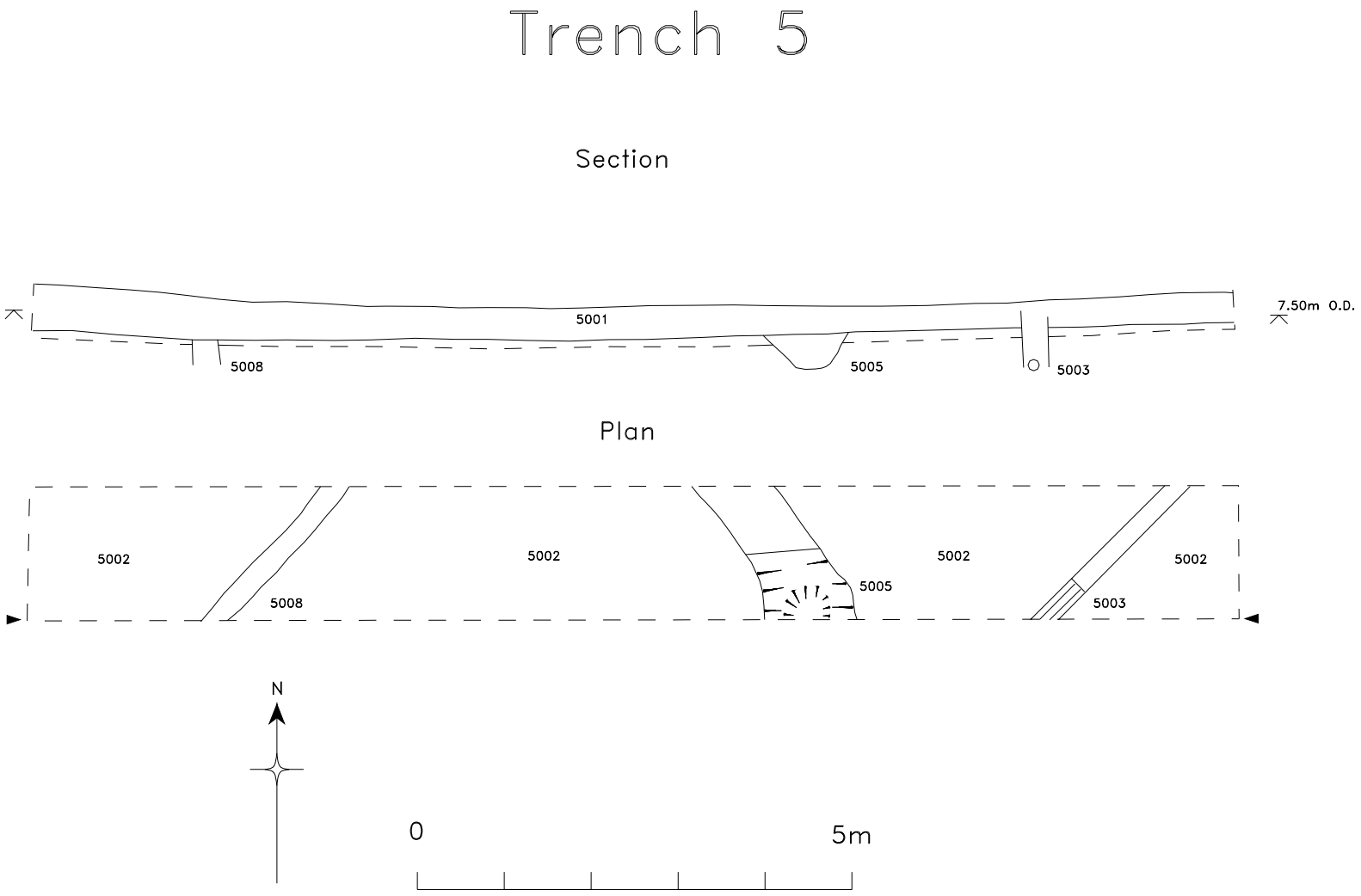

Figure 6: Trench 5 in plan and section.

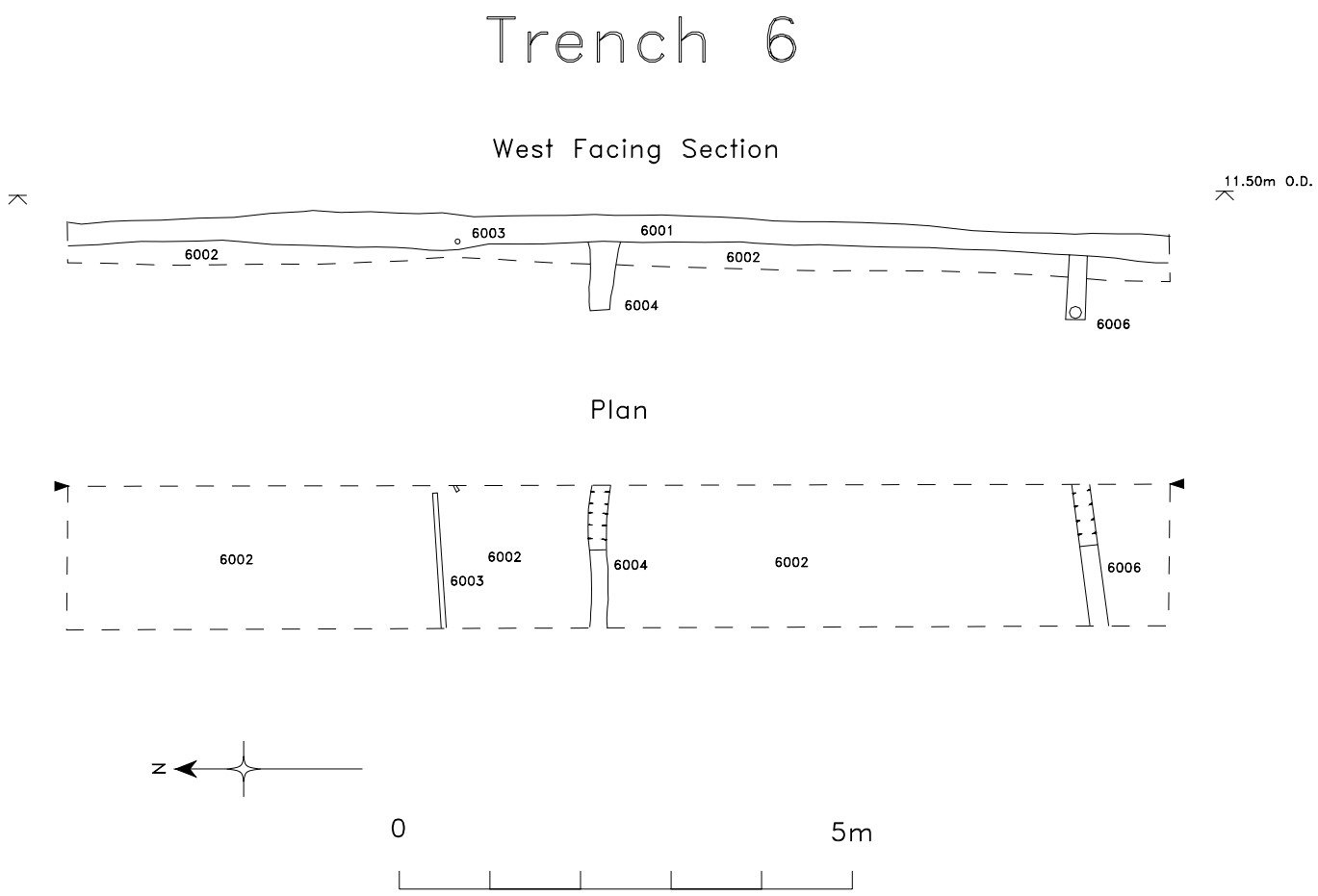

Figure 7: Trench 6 in plan and section.

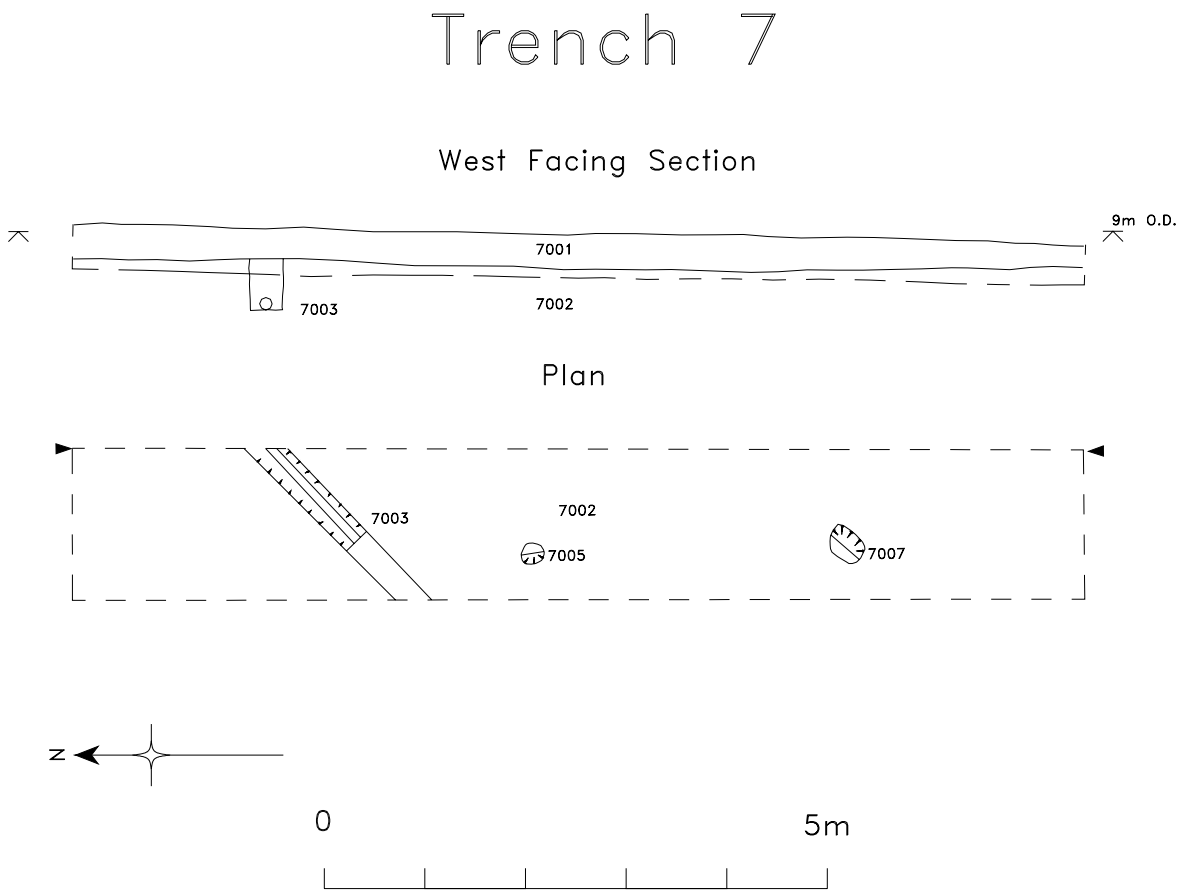

Figure 8: Trench 7 in plan and section.

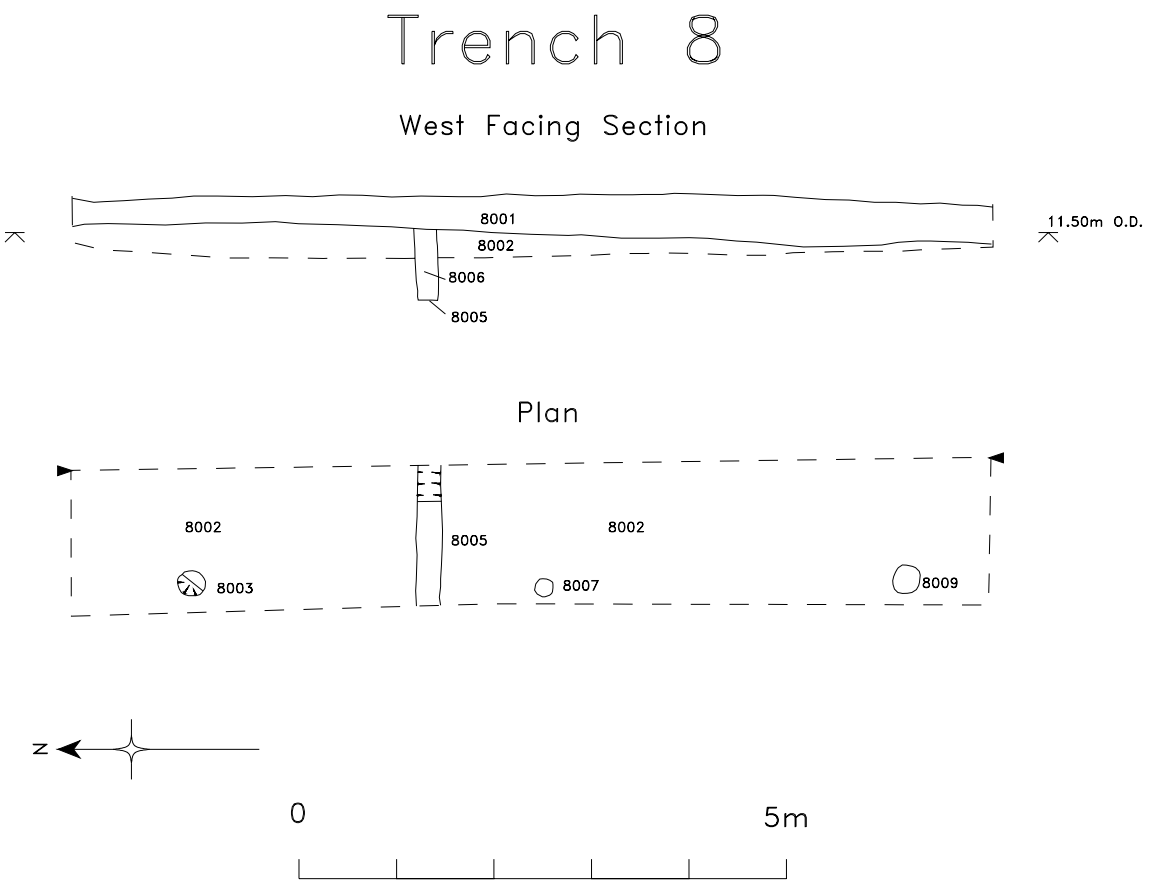

Figure 9: Trench 8 in plan and section.

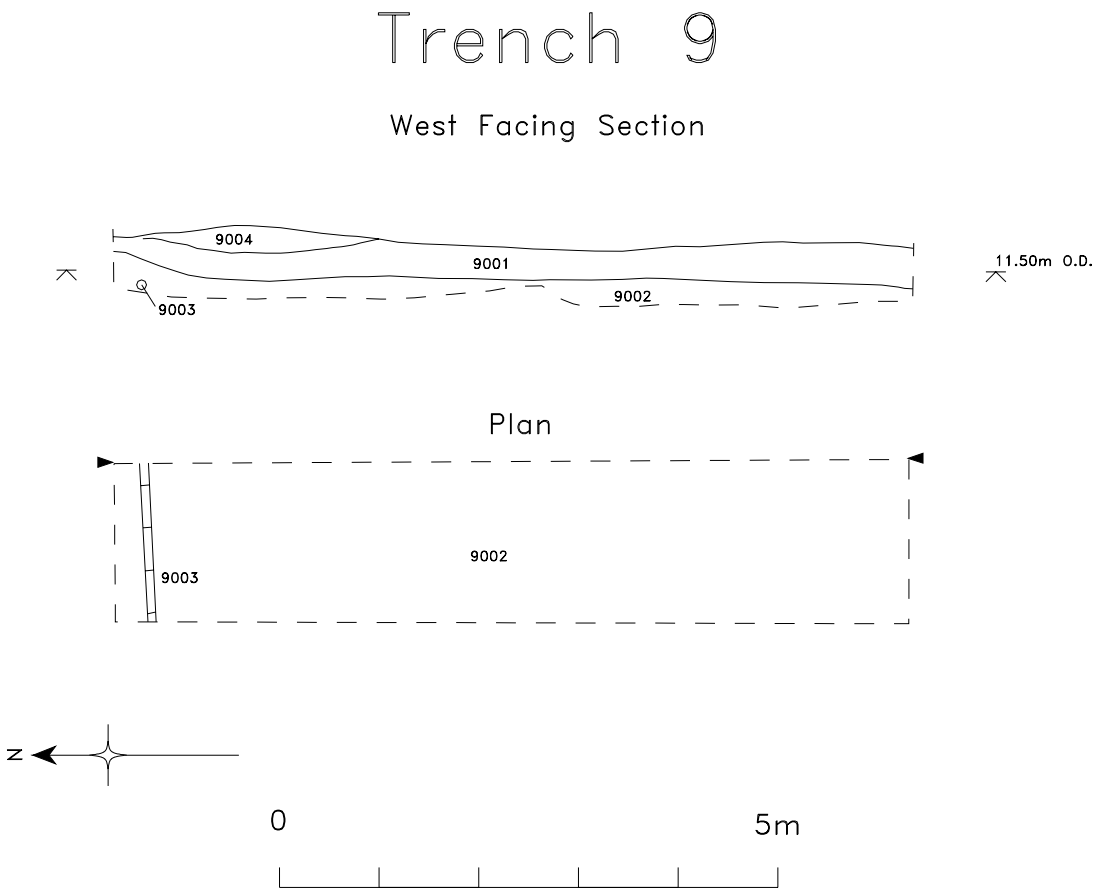

Figure 10: Trench 9 in plan and section.

Plate 1: *Trench 2* – detail of land drain with collars, looking to north (0.2m scale).

Plate 2: *Trench 3* – detail of discolourations in the natural sand due to root disturbance (0.2m and 1m scales).

Plate 3: *Trench 5* – view of trench, looking to west. Note land drains crossing trench.

Plate 4: Profile through natural sands exposed during culvert works by Main Drain.

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