YORK ARCHAEOLOGICAL TRUST

ARCHAEOLOGICAL INVESTIGATIONS AT PICKERING TO WHITBY, NORTH YORKSHIRE, INTERSERVE UTILITY TRENCH

By Ben Savine

WATCHING BRIEF REPORT

Report Number 2016/26 March 2016

YORK ARCHAEOLOGICAL TRUST

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CONTENTS

Plates

Tables

Figures

Abbreviations

BGL Below Ground Level

CBM Ceramic Building Material

SAM Scheduled Ancient Monument

NON-TECHNICAL SUMMARY

An archaeological watching brief was carried out on the excavation of a utility trench, including joint bays and fibre pits, along the route of the A169. Starting at a point c.500 m south of the Fox and Rabbit where a 'spur' follows the line of the minor road which runs southwards from the A169 in the direction of Thornton-Le-Dale, the works extend northwards to Blue Bank above the village of Sleights (Figure 1). Groundworks were undertaken by Interserve Industrial Services and monitored by York Archaeological Trust on behalf of Northern Powergrid.

The works crossed or passed close to the location of four Scheduled Ancient Monuments, which were identified as being actually or potentially impacted by the proposed works (Whyman, 2014). The watching brief ran intermittently between 21st April 2015 and 16th February 2016 when ground works were underway at those locations.

The SAM locations were as follows:

- The Cross Dykes monument, SAM reference 1021170, SE 8465 8767 (Figure 2).
- East Toft Dyke, SAM reference 1021100, SE 8522 9218 (Figure 3).
- The Horcum Dyke monument, SAM reference 1020117, SE 8525 9370 (Figure 4).
- The Gallows Dyke monument complex, SAM reference 1019750, SE 8491 9408 (Figure 4).

KEY PROJECT INFORMATION

Project Name	Interserve Utility Trench, Pickering to Whitby
YAT Project No.	5834
Report status	Draft for comment
Type of Project	Watching Brief
Client	Northern Powergrid
NGR	SE 8465 8767 – NZ 8672 0586
OASIS Identifier	Yorkarch1-247011

REPORT INFORMATION

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1 INTRODUCTION

An archaeological watching brief was undertaken by York Archaeological Trust on ground works pertaining to the installation of an electricity cable by Interserve Industrial Services for Northern Powergrid. The works consisted of a machine excavated cable trench, 39 joint bays positioned at c. 0.5km intervals and 43 fibre pits also at c.0.5km intervals, along the c.18km route. The cable trench measured 0.6m wide and 1.2m deep, joint bays 8m X 2m X 1.2m and the fibre pits 0.9m X 0.9m X 0.8m.

The works extended across the location of two SAMs, the Cross Dykes monument, SAM reference 1021170, at SE 8465 8767 (Figure 2), and East Toft Dyke, SAM reference 1021100, at SE 8522 9218 (Figure 3). Works also passed close to the position of two other SAMs, the Horcum Dyke monument, SAM reference 1020117, at SE 8525 9370, and the Gallows Dyke monument complex, SAM reference 1019750, at SE 8491 9408 (Figure 4). Scheduled Monument Consent was obtained enabling the works to be undertaken at these locations. The watching brief to monitor and record any archaeological remains encountered during works on or immediately adjacent to all four of the SAMs was maintained and carried out in accordance with a WSI approved by Dr Keith Emerick, Historic England Regional Inspector of Ancient Monuments for the Yorkshire Region,. The conditions imposed by the Scheduled Monument Consent were followed throughout the course of the archaeological works. The extent of the cable trench excavation did not exceed a width of 0.6m or depth of 1.2m. Those joint bays or fibre pits initially positioned on or immediately adjacent to any of the SAMs were relocated, including joint bays 14 and 15 (Figure 4).

Graham Lee, Senior Archaeological Conservation Officer for the North York Moors National Park Authority was approached for his recommendations regarding the archaeological monitoring of groundworks.

Work commenced on 21st April 2015 at the Cross Dyke monument and continued intermittently, as and when ground works were in the vicinity of the SAMs, up until 16th February 2016. The works at the Cross Dyke monument and East Toft Dye comprised of a machine and hand excavated cable trench through the verge on the west side of the unnumbered Thornton-le-Dale road and the A169 respectively, over a distance covering the extent of the known position of each monument. The watching brief at these locations included observation of excavation, associated machine movement and soil disturbance.

Two joint bays, measuring 5m X 2m X 1.5m deep, were machine excavated on the west side of the A169 close to both Horcum Dyke and the Gallows Dyke monument complex. These joint bays were inspected after their excavation.

The works at Cross Dykes established a profile through SAM 1021170, revealing banks on both the north and south sides of an east-west aligned ditch. Where the works crossed the vicinity of East Toft Dyke no evidence for the monument was apparent. Joint bay 14 was excavated close to the Horcum Dyke monument but did not impact it directly and no archaeological deposits or features were encountered here or at joint bay 15 excavated close to the Gallows Dyke monument complex.

2 METHODOLOGY

The aim of the watching brief was to identify and record any archaeological features and deposits where the works impacted on the four SAMs highlighted in section 1, in accordance with the brief specified by English Heritage and the conditions of the Scheduled Monument Consent.

The excavation of the cable trench, as undertaken at the Cross Dyke monument and East Toft Dyke, was with the use of a 5 ton tracked mechanical excavator utilising a 0.6m wide flat bladed ditching bucket. The trench measured 0.6m wide and 1.2m deep and in both instances the trench was positioned on the verge along the west side of the carriageway. Stretches of trench approximately 50m in length were opened to allow inspection and recording to take place before ducting was laid and the trench backfilled. The works at the Cross Dyke monument was carried out on 21st May 2015 and at East Toft Dyke on the 24th and 25th June 2015.

Joint bay 14, situated close to the Horcum Dyke monument, had been relocated to 20m beyond the north entrance to the car park opposite the Hole of Horcum, and 1m from the west side of the carriageway. It measured 5m X 2m X 1.5m. Shoring had been installed to maintain the longer sides of the trench. Joint bay 15 was repositioned to the location of fibre pit 15. This repositioned it to a point on the south side of the carriageway approximately 55m from the eastern periphery of the Gallows Dyke monument complex. The trench measured 5m X 2m X 1.5m.

Archaeological deposits excavated were recorded using the standard YAT single context recording system. All contexts were recorded in section at 1:10 or 1:20 as deemed appropriate. Photographs of archaeological deposits and features were taken where observed in section. The photographic register consists of 35mm format black and white prints supplemented with digital photographs and 35mm colour slides.

The site records are currently stored with York Archaeological Trust under the project number 5834.

3 LOCATION, GEOLOGY & TOPOGRAPHY

The watching brief covers sites located on the western edge of the unnumbered Thornton-le-Dale road, and then the A169 between the Fox and Rabbit Inn and the Hole of Horcum, which lie a distance of approximately 7.5km apart (Figure 1). This route climbs northwards from Thornton-le-Dale, at *c.*50 m above Ordnance Datum (aOD) to almost 300m aOD above Blue Bank, close to its northern limit, with most of it running at between 150 – 250m aOD (Whyman, 2014). The solid geology in this area comprises Corallian sandstone and limestone (www.bgs.ac.uk). The current land use is largely agricultural, supporting both arable and pastoral farming. Here the soil mantle is c.0.4m thick. Extending to the north of the Hole of Horcum the solid geology shifts to sandstone and mudstone (www.bgs.ac.uk). Here farmland gives way to moorland where upland peat beds are present (Whyman, 2014).

The point at which works cross the line of SAM 1021170, the Cross Dyke monument, was located 480 m to the south of the Fox and Rabbit on the Thornton-le-Dale road. The Cross Dykes monument comprises ‘a ditch which is flanked by two parallel banks constructed of

earth and stone and the earthworks have an overall maximum width of 13m'. The full Sites and Monuments entry for this SAM is reproduced in Appendix 3 (WSI).

The works cross the line of SAM 1021100, East Toft Dyke, approximately 45 m north of the access road in to High Horcum Farm. The line of the works follows that of the existing mains water supply. The East Toft Dyke comprises a c.580m long ditch and bank; the full Sites and Monuments entry for this SAM is reproduced in Appendix 3 (WSI).

Joint bay 14 was relocated to c.20m north of the Horcum car park entrance. This placed it adjacent to the eastern periphery of SAM 1020117, the Horcum Dyke monument, at its far northern end. The joint bay was situated across the position of the existing mains water supply. The Horcum Dyke is a 1.5km long ditch and bank in a variable state of preservation; the full Sites and Monuments entry for this SAM is reproduced in Appendix 3 (WSI).

Joint bay 15 was repositioned to the location of fibre pit 15 approximately 55m to the east of the original intended location. Although the trench remained close to the northern rim of the Hole of Horcum repositioning moved it further away from the eastern periphery of SAM 1019750, the Gallows Dyke monument complex, on Saltergate Bank close to the hair-pin bend in the A169 carriageway. The Gallows Dyke monument complex comprises a cross ridge dyke and three adjacent round barrows; the full Sites and Monuments entry for this SAM is reproduced in Appendix 3 (WSI).

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 Prehistory

Archaeological interest in this area is largely concentrated in the Prehistoric period. Eleven SAMs lie within approximately 100m of the route of the utility works, all of which consist of elements that are wholly or partially attributable to the prehistoric period.

Each of the four SAMs affected by these works includes a cross dyke monument. The Scheduled Ancient Monument list entries for these SAMs state that 'Cross dykes are substantial linear earthworks typically between 0.2km and 1km long and comprising one or more ditches arranged beside and parallel to one or more banks. They generally occur in upland situations, running across ridges and spurs. They are recognised as earthworks or as cropmarks on aerial photographs, or as combinations of both. The evidence of excavation and analogy with associated monuments demonstrates that their construction spans the millennium from the Middle Bronze Age, although they may have been re-used later. Current information favours the view that they were used as territorial boundary markers, probably demarcating land allotment within communities, although they may also have been used as trackways, cattle droveways or defensive earthworks. Cross dykes are one of the few monument types which illustrate how land was divided up in the prehistoric period. They are of considerable importance for any analysis of settlement and land use in the Bronze Age. Very few have survived to the present day and hence all well- preserved examples are considered to be of national importance' (SAM 1021170). The list entry for SAM 1021170 goes on to point out that cross dyke monuments belong 'to a network of prehistoric boundaries, dividing the area to the south of the scarp edge of the Tabular Hills, between Newton Dale in the west and Stain Dale in the east. It is thought to represent a system of territorial land division which was constructed to augment natural divisions of the landscape by river valleys and watersheds and

it is one of many such groups found on the Tabular Hills. Networks such as these offer important scope for the study of land use for social, ritual and agricultural purposes during the prehistoric period' (SAM 1021170).

It is also noted that these monuments form 'part of a network of prehistoric boundaries which is surrounded by many other prehistoric monuments, including burials and field systems' (SAM 1021100). Other prehistoric features known to be associated with the SAMs include 'cup and ring ' marks located at SAM 1021170, the Cross Dyke monument, as well as round barrows and hollow ways found at SAM 1019750, the Gallows Dyke monument complex.

4.2 Post-Medieval

Evidence of later activity within the scheduled areas is concentrated in the post-medieval period. Two clamp kilns, used for the intermittent production of lime, have been identified within post-medieval quarries in the western and central sections of SAM 1021170, the Cross Dyke monument. The SAM list entry states that these 'lime kilns are important because they have been constructed within the banks of a cross dyke, and this demonstrates the diversity of form which it is thought rural clamp kilns had' and specifies an 18th or 19th century date for their use (SAM 1021170).

Elements of post-medieval boundaries are present at both SAM 1021170 and SAM 1019750. At the Cross Dyke monument there is a bank of earth and stone with a ditch and the Gallows Dyke boundary stones at either end marking an estate boundary.

5 RESULTS

5.1 SAM 1021170, the Cross Dykes monument

The first area observed under watching brief was located approximately 480m south of the Fox and Rabbit Inn on a minor road leading from the A169 to Thornton-le-Dale. An area of trenching over approximately 40m across the SAM was monitored. The trench measured 0.6m wide and 1.2m deep. Excavation was carried out with a 5-tonne tracked mechanical excavator employing a 0.6m wide flat bladed ditching bucket, working from south to north (Plate 1).

The Cross Dyke monument was exposed and recorded from the trench section. It was seen as an east-west aligned ditch, Context 107, with a bank on either side, Context 103 to the north and Context 108 to the south. From the top of the banks the ditch measured 5.84m across and 0.84m deep.

The ditch cut measured 4.1m across and was exposed to a depth of no more than 0.24m from the point at which it cuts into the underlying natural deposits, at a depth of c.0.9m BGL (Figure 5).

Banks on both the north and south side of the ditch were made of re-deposited sand. This was seen to be slightly paler in hue in the top 50-60mm, probably due to exposure and erosion in the past. The banks were seen to extend from the top of the ditch cut continuing at close to the same angle of inclination.

The southern bank, Context 108, had been built up on top of natural deposits of sand, Context 109. It measured 7.6m across and up to 0.7m in height. The top of the bank was within 0.3m of the current ground level. The north face of the bank was relatively steep, continuing on from the side of the ditch cut at an angle of close to 45°, the angle gradually decreased towards the top of the bank and continued relatively flat over a distance of approximately 3m. The south side of the bank gradually sloped down over a distance of c.3m.

The northern bank, Context 103, was also situated on top of natural sands, Context 109. It measured 4.4m across and up to 0.56m in height. The top of the bank was within 0.24m of the current ground surface. The north face of the bank was relatively steep, again continuing on from the side of the ditch cut at an angle close to 45°. The top of the bank flattened out abruptly on the south side, producing a fairly flat top over a distance of 2.4m. The north face of the bank was seen to be concave, sloping gradually over a distance of c.1.5m.

Three backfilling deposits were identified within the ditch, Contexts 104, 105 and 106. Deposit 104 was up to 0.28m thick and was very similar to the thin layer of weathered material on top of the banks. The two remaining deposits were part of a sequential infilling of the ditch, partially encroaching over the leading edge of the banks (Figure 5). A single 10 litre sample was retrieved from Context 106 for environmental processing. Processing and subsequent analysis revealed the sample to be of extremely low interpretative value, with the majority of environmental indicators likely to be of fairly recent origin (Appendix 3).

Despite truncation to the Cross Dyke monument caused by the construction of the Thornton Dale road the below ground remains of the dyke had retained a good level of preservation. The dyke measured 16m across with the ditch being 5.84m across when measured from the tops of the banks, which survive up to a point no less than 0.3m BGL. Although only the top 0.84m of the dyke was exposed by the cable trench the ditch clearly continues to a greater depth. It could be expected that the depth would fall within the observed range of deeper sections of the ditch, described in the SAM entry as being 1.5m-2m deep where measured from the tops of the banks. The infilling of the top of the dyke, Context 105, appears to have been a fairly rapid and deliberate process. In contrast Context 106 was very clean and has been interpreted as likely deriving from the gradual erosion of the banks and ditch.

5.2 SAM 1021100, East Toft Dyke

The second area of the watching brief was located on the west side of the A169 a short distance to the north of High Horcum Farm, covering a stretch of trenching approximately 50m in length (Plate 2). The trench measured 0.6m wide and 1.2m deep. Excavation was carried out with a 5 tonne tracked mechanical excavator employing a 0.6m wide flat bladed ditching bucket, working from north to south.

At the point where it was expected that the dyke would be bisected by the cable trench, two postholes, approximately 5.4m apart, were seen in section below the subsoil at 0.63m and 0.68m BGL. The northern posthole, Context 204 (Figure 6, section 2, Plate 3), was exposed to a depth of 0.6m, and the southern posthole, Context 210 (Figure 6, section 3, Plate 4), extended to a depth of 0.75m. Both measured 0.2m in diameter and continued beyond the limit of excavation at the base of the trench. The postholes cut through three layers, Contexts 204,

205 and 206. These deposits had accumulated between the subsoil and top of natural deposits. These deposits included Context 205, lying approximately 0.8m BGL, which may be the weathered surface of a buried soil, Context 206. The top of natural sands lay at around 0.95m BGL.

East Toft Dyke survives as an earthwork in the field east and west of the A169, however no evidence of a ditch or bank was found in the trench excavated on the west side of the carriageway. It should be noted that the cable trench was cut directly through disturbed ground overlying the existing water main. In addition the monument is much less prominent in fields to the west of the A169. The postholes are unlikely to be of any considerable date. One possibility is that they relate to the adjacent field boundary which may have been moved to allow the water main to be installed. Perhaps of more significance are Contexts 205 and 206 which may be a buried soil. No sample was taken from here as the likelihood of contamination resulting from disturbance caused by the existing service trench was extensive. The disturbance caused by existing service trenches and the proximity of the road appear to have obscured or removed the monument in this area.

5.3 Joint bay 14 adjacent to SAM 1020117, Horcum Dyke

The joint bay 14 trench was relocated to a point close to the north end of the Horcum Dyke. It measured 5m long , 2m wide and 1.5m deep and cut through the line of the existing water main on the west side of the A169. The top 0.5m consisted of disturbed topsoil. The topsoil was seen to overlie a layer of dark peaty soil, measuring 0.5m thick that in turn overlay bedrock (Plate 5).

No distinct archaeological features or deposits were identified in joint bay 14.

5.4 Joint bay 15 east of SAM 1019750, the Gallows Dyke monument complex

The joint bay 15 trench was repositioned to a point c.55m east of the Gallows Dyke monument complex SAM. The trench measured 5m long, 2m wide and 1.5m deep. The top 0.5m consisted of mixed disturbance and topsoil. The remaining 1m depth of excavation was of bedrock (Plate 6).

No archaeological features or deposits were observed.

6 DISCUSSION

The relocation of joint bays 14 and 15 successfully fulfilled the aim of minimising impact on SAMs 1020117 and 1019750 respectively. The presence of definite archaeological deposits or features could not be established during excavation of either of these trenches. Bedrock was encountered directly below a 0.5m depth of topsoil in joint bay 15, and although a 0.5m thick peaty deposit extended from below the topsoil to the top of bedrock in joint bay 14 there was no clear indication that this material had accumulated through or been influenced by anything other than natural depositional processes.

The trench excavated through the line of the East Tofts Dyke SAM 1021100 appears to have largely followed the line of an existing water main (also picked up further to the north in joint bay 14), despite this an informative profile was forthcoming from the east facing section of the cable trench in this area. Unfortunately no evidence for the dyke monument was apparent. The absence of a ditch and bank at the point where the cable trench passed through the line

of the monument could be for a number of reasons. It is possible that the construction, use or maintenance of the road has erased any physical remains of the dyke, perhaps exacerbated by the installation of modern services. There is the possibility that the horizontal deposits observed are variations in the backfill of the earlier service trench, the consistent nature of the material observed however suggests that this is unlikely. Disruption to the line of the dyke need not been relatively recent, for example a deliberate break may have been created through the monument to facilitate access across it. For example at Gallows Dyke two access routes in the form of hollow ways are known, and although their date is not known they are thought to be of some antiquity (SAM 1019750). Despite this being an intriguing possibility no substantive evidence that would definitively indicate the presence of a hollow way at East Toft Dyke was found.

The trench at Cross Dykes SAM 1021170 has proved to be more informative, particularly in respect of establishing the level of preservation of the dyke monument at this location. The top of both banks were observed within 0.3m of the existing ground surface. In addition it appears likely that the ground surface contemporary with the construction of the dyke survives beneath the banks at between 0.8m and 1m below the current ground level. Unfortunately no dateable material was recovered during the course of works.

LIST OF SOURCES

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Illustrations were produced by B. Savine and K. Weston.

APPENDIX 1 – INDEX TO ARCHIVE

Item	Number of items
Context sheets	21
Levels register	-
Photographic register	2
Sample register	1
Drawing register	1
Original drawings	4
B/W photographs (films/contact sheets)	7
Colour slides (films)	2
Digital photographs	217
Written Scheme of Investigation	1
Report	1

Table 1 Index to archive

APPENDIX 2 – CONTEXT LIST

Trench	Context no.	Description
Cross Dyke	100	Surface. Farm track. Compacted angular stones embedded in to a friable, dark grey brown sandy silt. 0.26m thick.
Cross Dyke	101	Topsoil. Turf and vegetation. Friable dark grey brown sandy silt.
Cross Dyke	102	Subsoil. Friable dark grey brown sandy silt. Frequent roots and occasional post medieval CBM fragments.
Cross Dyke	103	Bank. South side of dyke. Friable brown orange sand. Frequent small and medium sized stone fragments, occasional friable dark brown sandy silt.
Cross Dyke	104	Ditch backfill. Friable dark grey brown sandy silt. Frequent roots.
Cross Dyke	105	Ditch backfill. Friable dark grey brown sandy silt. Frequent small and medium sized angular stones.
Cross Dyke	106	Ditch backfill. Friable dark grey brown sandy silt. No inclusions.
Cross Dyke	107	Ditch cut. Aligned E-W. Moderate break of slope at the top. Slightly convex sides. Measured from the top of the banks it is 5.82m wide and 0.84m deep. The base of the ditch was not encountered.
Cross Dyke	108	Bank. North side of dyke. Friable brown orange sand. Frequent small and medium sized stone fragments, occasional friable dark brown sandy silt.
Cross Dyke	109	Natural. Friable brown orange sand. Frequent small and medium sized sandstone fragments.
East Toft Dyke	200	Topsoil. Friable light to mid grey brown silty sand.
East Toft Dyke	201	Subsoil. Firm mid to light grey brown silty sand. Defuse interfaces. No inclusions.
East Toft Dyke	202	Build-up. Firm mid to dark brown sandy silt. Defuse interface with 201, sharp with 205. Moderate dark yellow orange sand flecks.
East Toft Dyke	203	Posthole backfill. Friable mid grey brown sandy silt. Occasional mid orange yellow sand flecks.
East Toft Dyke	204	Posthole cut. 0.2m wide, 0.6m deep. Sharp break of slope at the top. Vertical sides. Base not encountered.
East Toft Dyke	205	Buried soil. Firm dark brown sandy silt. No inclusions.
East Toft Dyke	206	Buried soil. Firm light grey sand. Sharp interface with 205, defuse with 207. No inclusions.
East Toft Dyke	207	Natural (disturbed?). Friable to firm, mixed mid grey brown, dark brown and orange. Sand and silty sand. Defuse boundaries. Occasional streak of iron panning lower down.
East Toft Dyke	208	Natural. Firm dark orange sand. Fairly defuse boundary with 207.

East Toft Dyke	209	Posthole backfill. Friable mid orange brown sandy silt. Frequent dark orange sand flecks.
East Toft Dyke	210	Posthole cut. 0.22m wide, 0.75m deep. Sharp break of slope at the top. Vertical sides. Base not encountered.

Table 2 Context list

APPENDIX 3 – ENVIRONMENTAL SAMPLE ASSESSMENT

Interserve Utility Trench, Pickering to Whitby; Watching Brief Sample Assessment

Jennifer Miller & Sharon Carson

Summary

During a watching brief undertaken by York Archaeological Trust relating to the installation of an electricity cable by Interserve Industrial Services for Northern Powergrid, a single bulk sample (106)[001] was recovered. The deposit represented the upper fill from the ditch at Cross Dykes scheduled ancient monument (SAM reference 1021170; SE 8465 8767). This was submitted to the Dickson Laboratory for Bioarchaeology for assessment of bioarchaeological potential. Processing and subsequent analysis revealed the sample to be of extremely low interpretative value, with the majority of environmental indicators likely to be of fairly recent origin. As such, it would support the archaeological interpretation mooted on site that the deposit is an erosional fill.

Method

The bulk sample was received within a 10 litre plastic tub, sealed to exclude light and air. There was no indication that it retained waterlogged fragile organic material so it was floted for the recovery of environmental evidence and artefacts using standard methods. This includes a bespoke adapted *Siraf* flotation system and a series of 500µm and 1mm calibrated mesh diameter *Endicot* sieves.

Once dried, the retent was sorted to 2mm using magnified illuminated lamps for all categories of artefacts and ecofacts. A magnet was employed to identify any magnetized stone and metals. Sorted materials were bagged and labelled and weighed (where relevant) using an *Ohaus CS200* digital scale calibrated to 0.01g. The sorted residue was also weighed on a digital scale, bagged and stored pending decision for disposal.

Sorting of the flot and identification of environmental materials was undertaken using a Nikon 93756 binocular microscope with associated *Schott KL-1500 LCD* cold light source. The matrix composition was described on a 1-5 plus mark (+) tally system, according to Hubbard & Clapham's scale of abundance (1992).

Identification

Seed identification was confirmed by comparison with the Dickson botanical reference collection. Plant nomenclature follows Stace (1997).

Mollusc identification was achieved using Evans (1972) and the Dickson laboratory shell reference collection.

Results

Results are presented in Tables 1 & 2, below.

The sample contained no charcoal, although a combination of burrowing molluscs, robust types of uncarbonised seeds, invertebrate remains and modern roots were noted. Collectively, these remains are strongly indicative of an organic soil containing materials of fairly recent, mixed origin. As such, they are likely to post-date the prehistoric construction or subsequent medieval occupation of the SAM earthworks by a considerable time.

Interserve WB 5834	
Context	106
Sample	1
Sample type	GBA
Tubs processed	1
Retent vol (l)	0.20g
Charcoal	-
Bone	-
Mollusc	0.02g
Worked Stone	0.15g (flint)
Industrial Waste	-

Table 1: Retent Sorting Results

Interserve WB 5834	**Context**	**106**
	Sample	**1**
Flot Composition (1-5 '+' abundance scale)	**Total flot volume**	**5ml**
Charcoal		-
Seed		++
Mollusc/shell		++
Bud scale		+
Roots/modern		+++
Insect/invertebrate		+
Insect/invertebrate eggs		+++
Total Charcoal (Flot+Retent)		
Charcoal >4mm		0ml
Charcoal <4mm		0ml
%ID (>4mm)		-
%ID (>2mm)		-
AMS option Y / N (charcoal/nutshell/cereal)		N
Seeds (uncarbonised)	**Common Name**	
cf Caryophyllaceae fgmt.	*cf* pink family	+
Lamium sp	dead-nettle	+
cf Rubus sp fgmt.	*cf* bramble fgmt.	+
Sambucus nigra	elder	+
Urtica dioica	common nettle	+++
Other (uncarbonised)		
Indet. bud scale fgmt		+
Mollusc		
Carychium minimum/tridentatum	short/long toothed herald snail	++
Cochlicopa sp	slippery snails	+
Pupillidae	moss snails	+

Table 2: Flot Sorting Results

Recommendations

This sample is of minimal bioarchaeological potential and no further work is recommended.

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APPENDIX 4 – WRITTEN SCHEME OF INVESTIGATION

Site Location: **Route of the A169 from Cross Dyke south of Fox and Rabbit Farm to Blue Bank above the village of Sleights.**

NGR: SE 8465 8767 – NZ 8672 0586

Proposal: Electricity cable trench

Planning ref: N/A

Prepared for: Interserve Industrial Services by York Archaeological Trust

Date : 6 February 2015

Status of WSI: Submission to client and English Heritage

1 SUMMARY

1.1 Excavation of an electricity cable trench is required from c.500 m south of the Fox and Rabbit on the Thornton-Le-Dale road, running northwards along the A169 to Blue Bank above the village of Sleights (Figure 1). The works will involve the machine-excavation of a trench 0.60m wide and up to 1.2m deep. Spaced at intervals of c.0.5km along the c.18km route are 39 numbered joint bays, to be excavated by machine to 8m X 2m X 1.2m deep. Spaced at intervals of c.0.5km along the route are 43 number fibre pits, to be excavated by machine to 0.90m X 0.90m X 0.80m deep. The route crosses two linear earthworks which are Scheduled Ancient Monuments (SAMs) and passes very close to a further two SAMs (see **Section 3 DESIGNATIONS & CONSTRAINTS**).

1.2 The following archaeological condition has been imposed:

a watching brief to monitor and record any archaeological remains encountered during works on or immediately adjacent to all four of the SAMs referenced in this Written Scheme of Investigation is to be maintained

any joint bays or fibre pits currently positioned on or immediately adjacent to any of the SAMs is to be relocated.

1.3 This Written Scheme of Investigation (WSI) has been prepared in response to a Brief supplied by Dr Keith Emerick, Regional, English Heritage Inspector of Ancient Monuments for the Yorkshire Region. The work will be carried out in accordance with the stipulations of that Brief and the specifications of this WSI.

Graham Lee, Senior Archaeological Conservation Officer for the North York Moors National Park Authority, has been approached for his recommendations regarding the archaeological monitoring of groundworks away from the sites of the four SAMs, which it is anticipated will be carried out under the same specification, detailed below in sections **5**, **6** and **7**.

2 SITE LOCATION & DESCRIPTION

2.1 The cable trench commences at NGR SE 8465 8767 immediately south of the Cross Dykes SAM on the Thornton-le-Dale – Fox & Rabbit Farm road. It runs northwards, joining the A169 and following that road to the top of Blue Bank at NGR NZ 8672

0586, over a total distance of c.21 kms. The majority of the route follows the grassed verge of the road, with some sections running under the carriageway itself.

3 DESIGNATIONS & CONSTRAINTS

3.1 A rapid assessment of the cable trench route identified 11 Scheduled Ancient Monuments (SAMs) within c.100m of the proposed route. Of these 4 SAMs have been identified as actually or potentially impacted by the proposed works (Whyman, 2014). Two SAMs will be crossed and thus directly affected by the proposed works, and a further two SAMs are located immediately adjacent to them and may potentially be affected. These four SAMs are listed and briefly described here, and the full Scheduled Listing is provided as Appendix 1.

3.2 Scheduled Monument Consent is being sought for all four SAMs following consultation with Dr Emerick. This will allow for potential variations in the cable route should these become necessary and affect the SAMs not directly impacted by the route specified in the scheme submitted prior to the commencement of construction works.

3.2 At **SE 8465 8767** the proposed works will affect the Cross Dykes monument, **SAM reference 1021170**. This is a double banked-and-ditched prehistoric feature aligned east-west that is cut by the modern road. To the east of the road the monument has been disturbed but substantial remains of the bank and ditch survive in the woodland. To the west, the monument is very well preserved, although a recent dump of soil has been deposited by the edge of the road and partially obscures the profile of the bank and ditch. The works pass along the verge at this point and the profile of the bank and ditch may be revealed.

On map C1039594-A1P sheet 1-000 (see Figure 2 accompanying this document), Joint Bay #1 is located over the monument. It is **RECOMMENDED** that this Joint Bay be re-located a minimum of 20 m to the north or south of its current position.

3.3 At **SE 8522 9218** the proposed works will affect the East Toft Dyke, **SAM reference 1021100**. This is a single banked-and ditched prehistoric feature aligned north-west – south-east that is cut by the modern road. To the east of the road the monument is observable as a low earthwork heading south-eastwards; to the west its continuation towards the north-west is discernible from the air as a cropmark. The proposed works pass from the carriageway to the grassed verge at the point where the road cuts through the monument, and the profile of the ditch of the Dyke may be revealed here.

THs (?Trial hole) 23 and 24 are currently sited exactly on the line of the monument. It is **RECOMMENDED** that they be re-located c.10 m or more to the south or north.

3.4 At **SE 8525 9370** the proposed works may affect the Horcum Dyke monument, **SAM reference 1020117**. This is a banked-and ditched prehistoric feature to the west of the modern road. The A169 runs parallel to the course of the dyke along a north-south alignment at this point. The monument survives as a bank and ditch, with a modern footpath running along the top of the bank. The Scheduled portion ends just

as the A169 turns west into the Saltergate Bank (see Figure 4), but some traces of the dyke may survive on the ground for a few tens of metres beyond this point. The road passes within c.5m of the monument and the line of the cable trench is currently sited on the grassed verge, which at points is relatively narrow and steeply sloped before widening out. Although the dyke may not be affected by the trench itself, associated machine activity may threaten it. If for operational reasons the route of the cable is moved further west then the SAM may be directly affected.

Joint Bays #13 and #14 may be far enough away to remain as currently positioned but Fibre Pit #14 may need to be re-located.

3.5 At **SE 8491 9408** the proposed works may affect the Gallows Dyke monument complex, **SAM reference 1019750**. This complex comprises a substantial banked-and-ditched prehistoric monument and a group of three Bronze Age round barrows. All these features are well-preserved and are located immediately west of the hair-pin formed by the A169 as it negotiates Saltergate Bank. Other traces of possible associated earthworks are present in this immediate area and although not Scheduled may form part of the same complex. The works are located in the carriageway at this point but associated machine activity may impact upon these environs of the SAM, particularly during the excavation of Joint Bay #15 and Fibre Pit #15.

If for operational reasons the cable route is moved to the west then these SAMs may be directly affected and further consultation required regarding the extent of groundworks and mitigation measures required.

4 ARCHAEOLOGICAL INTEREST

4.1 The clearance of the ancient woodlands across the North York Moors has left a moorland landscape unsuitable for agriculture but, because of this, rich in surviving prehistoric archaeology. The North York Moors contain the largest concentration of SAMs in the UK, including a wide range of Prehistoric (Neolithic, Bronze and Iron Age) barrow, ring ditch and rock-art sites. Many of the barrows, including those at Gallows Dyke, have been excavated by antiquarian and later researchers, but these investigations were usually targeted on the contents of the barrow and rarely investigated techniques of construction, date or relationship with other monuments and the wider landscape.

4.2 The dyke features, such as the SAMs detailed in section **3**, are often associated with topographic features including spurs of higher ground. These dykes may delineate different prehistoric landscape designations or usage and sometimes appear to separate barrow complexes from the rest of the landscape. The dykes are essentially undated but many incorporate early Bronze Age barrows and therefore post-date them. Several were re-used and extended in the early Medieval period to define different land uses, perhaps demonstrating a degree of persistence for the earlier landscape blocks they defined.

4.3 This brief summary is derived from Chapter 6 of *The Archaeology of Yorkshire,* edited by T. Manby et al (2003). The work of Don Spratt amongst many others is cited there as providing more in-depth analysis and synthesis of the region's archaeology. The full Scheduling designation for the four SAMs detailed in section **3** is providing in Appendix 1.

5. GROUNDWORKS TO BE MONITORED

5.1 This work will comprise a **continuous** watching brief during all works which affect the four SAMs detailed in section **3** in accordance with the brief specified by English Heritage and the conditions of the Scheduled Monument Consent. The watching brief methodology is detailed in sections **6** and **7**.

5.2 The ground works to be observed comprise:

- the machine or hand excavation of a 0.60m wide, 1.2m deep cable trench
- any associated machine movement and soil disturbance

when the observing archaeologist determines that these activities directly affect any of the four SAMs detailed in section **3**.

5.3 Any joint bays or fibre pits identified in the current proposed works as directly affecting any of the 4 SAMs identified in section **3** should be relocated to avoid disturbance. If this is not possible then the excavation and associated works of these elements must be observed under the watching brief.

5.4 If during the proposed works the route of the cable trench or the location of a joint bay or fibre pit is changed the archaeologist should be informed immediately. If the new route or location and their associated works directly affect any of the four SAMs detailed in section **3** then the archaeologist shall inform English Heritage. If the new route or location is agreed then these works shall be included in the watching brief.

5.5 Consultation with the North York Moors National Park Authority (NYMNPA)'s Senior Archaeological Conservation Officer, Mr Graham Lee, has identified further locations as being, or potentially being, archaeologically sensitive. These are :

a) cropmark indications of a ditched field system of Iron Age or Romano-British date extending c.150 m to either side of 'Cross Dyke'

b) the site of a demolished building of post-medieval date (NYMNPA Historic Environment Record [HER] #19281) very close to the line of the cable and the position of Joint Bay #5

c) the stretch of 'Horcum Dyke' between SAM # 1020117 and SAM # 1019750 ('Gallows Dyke & three barrows') which is *not* Scheduled (HER #6106), and therefore not subject to the requirement for SMC

d) a linear earthwork (HER #6927) cut through by the carriageway of the A169, and by the line of the cable, at a point c.50 m north-east of Saltergate Bridge, and potentially impacted by THs 36 and 37

Additionally, Mr Lee notes

e) that there may along the road verge be examples of 'road furniture' – for example mile-posts, boundary stones and guide posts – which are not listed within the HER but which should be respected by all groundwork operations and vehicular movements

f) that the 8.0 m x 2.0 m extents of the Joint Bays represent opportunities for archaeological observation along the route of the cable-trench which have not previously been available, as was noted in section 7 of the *Rapid Assessment* document prepared by YAT on behalf of Interserve, dated 05 September 2014. Of the 39 Joint Bays along the route, nine (9) are currently

sited on the actual carriageway of the A169, and archaeological monitoring is therefore unlikely to be required.

YAT considers these to be legitimate observations and requests in response to groundworks
undertaken within a National Park which is notably rich in archaeological remains, and
recommends further consultation and discussion with Mr Lee, particularly regarding the
number and location of Joint Bays to be archaeologically monitored.

a)-d) and f) could be met using the Watching Brief provisions of the WSI, presented in Section
7, below, at the specified locations, whilst examination of the A169 verge in liaison with Mr
Lee would allow the locations of any features such as those referred to in e) to be established.

6 DELAYS TO THE DEVELOPMENT SCHEDULE

6.1 All earth-moving machinery must be operated at an appropriate speed to allow the archaeologist to recognise, record and retrieve any archaeological deposits and material.

6.2 It is not intended that the archaeological monitoring should unduly delay site works. However, the archaeologist on site should be given the opportunity to observe, clean, assess and, where appropriate hand excavate, sample and record any exposed features and finds. In order to fulfil the requirements of this WSI, it may be necessary to halt the earth-moving activity to enable the archaeology to be recorded properly.

6.3 Plant or excavators shall not be operated in the immediate vicinity of archaeological remains until the remains have been recorded and the archaeologist on site has given explicit permission for operations to recommence at that location.

7 RECORDING METHODOLOGY

7.1 If a base plan of intervention areas is available, the areas being monitored will be determined using this information. If a plan is not available, or the watching brief work involves monitoring of long linear works, interventions which are not mapped, or large open areas, the location of the monitoring will be determined using a hand-held GPS, which will provide accuracy to c.2m.

7.2 Unique context numbers will only be assigned if artefacts are retrieved, or stratigraphic relationships between archaeological deposits are discernable. In archaeologically 'sterile' areas, soil layers will be described, but no context numbers will be assigned. Where assigned, each context will be described in full on a pro forma context record sheet in accordance with the accepted context record conventions.

7.3 Archaeological deposits will be planned at a basic scale of 1:50, with individual features requiring greater detail being planned at a scale of 1:20. Larger scales will be utilised as appropriate. Cross-sections of features will be drawn to a basic scale

of 1:10 or 1:20 depending on the size of the feature. All drawings will be related to Ordnance Datum. Where it aids interpretation, structural remains will also be recorded in elevation. All drawings will be drawn on inert materials. All drawings will adhere to accepted drawing conventions

7.4 Photographs of archaeological deposits and features will be taken. This will include general views of entire features and of details such as sections as considered necessary. The photographic register will comprise 35mm format black and white prints. Digital photography and/or 35mm colour slides may be used in addition, but will not form the primary site archive. All site photography will adhere to accepted photographic record guidelines.

7.5 Areas which are inaccessible (e.g. for health and safety reasons) will be recorded as thoroughly as possible within the site constraints. In these instances, recording may be entirely photographic, with sketch drawings only.

7.6 All finds will be collected and handled following the guidance set out in the IfA guidance for archaeological materials. Unstratified material will not be kept unless it is of exceptional intrinsic interest. Material discarded as a consequence of this policy will be described and quantified in the field. Finds of particular interest or fragility will be retrieved as Small Finds, and located on plans. Other finds, finds within the topsoil, and dense/discrete deposits of finds will be collected as Bulk Finds, from discrete contexts, bagged by material type. Any dense/discrete deposits will have their limits defined on the appropriate plan.

7.7 All artefacts and ecofacts will be appropriately packaged and stored under optimum conditions, as detailed in the RESCUE/UKIC publication *First Aid for Finds,* and recording systems must be compatible with the recipient museum. All finds that fall within the purview of the Treasure Act (1996) will be reported to HM Coroner according to the procedures outlined in the Act, after discussion with the client and the local authority.

7.8 A soil sampling programme will be undertaken for the recovery and identification of charred and waterlogged remains where suitable deposits are identified. The collection and processing of environmental samples will be undertaken in accordance with English Heritage guidelines (English Heritage 2002). Environmental and soil specialists will be consulted if required. Soil samples of approximately 30 litres for flotation (or 100% of the features if less than this volume) will be removed from selected contexts, using a combination of the judgement and systematic methodologies.

- **Judgement sampling** will involve the removal of samples from secure contexts which appear to present either good conditions for preservation (e.g. burning or waterlogging) or which are significant in terms of archaeological interpretation or stratigraphy. (Given the nature of an archaeological watching brief, it is anticipated that the implementation of a systematic sampling methodology will not be possible).

7.9 Industrial activity is not expected at any of the sites specified in this WSI. If identified, industrial samples and process residues will also be collected. Separate samples (c. 10ml) will be collected for micro-slags (hammer-scale and spherical droplets) (English Heritage 2001).

7.10 Other samples will be taken, as appropriate, in consultation with York Archaeological Trust specialists and the English Heritage Regional Science Advisor, as appropriate (e.g. dendrochronology, soil micromorphology, monolith samples,

C14, etc.). Samples will be taken for scientific dating where necessary for the development of subsequent mitigation strategies. Material removed from site will be stored in appropriate controlled environments.

7.11 In the event of human remains being discovered during the evaluation these will be left *in-situ*, covered and protected, in the first instance. The removal of human remains will only take place in compliance with environmental health regulations and following discussions with, and with the approval of, the Ministry of Justice. If human remains are identified, the Ministry of Justice and curator will be informed immediately. An osteoarchaeologist will be available to give advice on site.

- If **disarticulated** remains are encountered, these will be identified and quantified on site. If trenches are being immediately backfilled, the remains will be left in the ground. If the excavations will remain open for any length of time, disarticulated remains will be removed and boxed, for immediate reburial by the Church.
- If **articulated** remains are encountered, these will be excavated in accordance with recognised guidelines (see 6.12) and retained for assessment.
- Any grave goods or coffin furniture will be retained for further assessment.

7.12 Where a licence is issued, all human skeletal remains must be properly removed in accordance with the terms of that licence. Where a licence is not issued, the treatment of human remains will be in accordance with the requirements of Civil Law, IfA Technical Paper 13 (1993) and English Heritage guidance (2005).

8 REPORT & ARCHIVE PREPARATION

8.1 Upon completion of the groundworks, a report will be prepared to include the following:

a) A non-technical summary of the results of the work.

b) An introduction which will include the planning reference number, grid reference and dates when the fieldwork took place.

c) An account of the methodology and results of the operation, describing structural data, associated finds and environmental data.

d) A selection of photographs and drawings, including an overall plan of the site accurately identifying the areas monitored.

e) Specialist artefact and environmental reports as necessary.

f) Details of archive location and destination (with accession number, where known), together with a catalogue of what is contained in that archive.

g) A copy of the key OASIS form details

h) Copies of the Brief and WSI

i) Additional photographic images may be supplied on a CDROM appended to the report

8.2 Copies of the report will be submitted to the commissioning body and the HER/SMR (also in PDF format).

8.3 The requirements for archive preparation and deposition will be addressed and undertaken in a manner agreed with the recipient museum. In this instance York

Museums Trust is recommended; the Museums Trust makes a single archiving charge of £200.00 per 0.017m^3 box of material.

8.4 Provision for the publication of results, as outlined in the Brief, will be made.

8.5 The owner of the Intellectual Property Rights (IPR) in the information and documentation arising from the work, would grant a licence to the County Council and the museum accepting the archive to use such documentation for their statutory functions and provide copies to third parties as an incidental to such functions. Under the Environmental Information Regulations (EIR), such documentation is required to be made available to enquirers if it meets the test of public interest. Any information disclosure issues would be resolved between the client and the archaeological contractor before completion of the work. EIR requirements do not affect IPR.

9 HEALTH AND SAFETY

9.1 Health and safety issues will take priority over archaeological matters and all archaeologists will comply with relevant Health and Safety Legislation.

9.2 A Risk Assessment will be prepared prior to the start of site works.

10 TIMETABLE & STAFFING

10.1 The timetable will be determined by the client following finalisation of the programme of works, anticipated to take place from April 2015.

10.2 Specialist staff available for this work are as follows:

- Human Remains – Ruth Whyte, Dickson Laboratory
- Palaeoenvironemtal remains – Dr Jennifer Miller and Sharon Carson, Dickson Laboratory
- Head of Curatorial Services - Christine McDonnell
- Finds Researcher - Nicky Rogers
- Medieval Pottery Researcher - Anne Jenner
- Finds Officers – Nienke Van Noort and Rachel Cubitt
- Conservation –Ian Panter

11 MONITORING OF ARCHAEOLOGICAL FIELDWORK

11.1 As a minimum requirement, Keith Emerick, English Heritage Region Monument Inspector, will be given a minimum of one week's notice of work commencing on site, and will be afforded the opportunity to visit the site during and prior to completion of the on-site works so that the general stratigraphy of the site can be assessed. York Archaeological Trust will notify English Heritage of any discoveries of archaeological significance so that site visits can be made, as necessary. Any changes to this agreed WSI will only be made in consultation with English Heritage.

12 Copyright

12.1 York Archaeological Trust retain the copyright on this document. It has been prepared expressly for the named client, and may not be passed to third parties for use or for the purpose of gathering quotations.

13 KEY REFERENCES

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See also the **HELM** website for a full list of English Heritage Guidance documents.

http://www.helm.org.uk/server/show/nav.19701

APPENDIX 1

Full Schedule information for SAM #s 1021170,

(**Source**: http://list.english-heritage.org.uk/advancedsearch.aspx)

Cross Dykes, SAM 1021170

List entry Summary

This monument is scheduled under the Ancient Monuments and Archaeological Areas Act 1979 as amended as it appears to the Secretary of State to be of national importance. This entry is a copy, the original is held by the Department for Culture, Media and Sport.

Name: Cross dyke centred 480m south of Fox and Rabbit Farm

List entry Number: 1021170

Location

The monument may lie within the boundary of more than one authority.

County	District	District Type	Parish
North Yorkshire	Ryedale	District Authority	Lockton
North Yorkshire	Ryedale	District Authority	Thornton-le-Dale

National Park: NORTH YORK MOORS

Grade: Not applicable to this List entry.

Date first scheduled: 09-Nov-1967

Date of most recent amendment: 22-Dec-2003

Legacy System Information

The contents of this record have been generated from a legacy data system.

Legacy System: RSM

UID: 35902

Asset Groupings

This list entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information.

List entry Description

Summary of Monument

Legacy Record - This information may be included in the List Entry Details.

Reasons for Designation

Cross dykes are substantial linear earthworks typically between 0.2km and 1km long and comprising one or more ditches arranged beside and parallel to one or more banks. They generally occur in upland situations, running across ridges and spurs. They are recognised as earthworks or as cropmarks on aerial photographs, or as combinations of both. The evidence of excavation and analogy with associated

monuments demonstrates that their construction spans the millennium from the Middle Bronze Age, although they may have been re-used later. Current information favours the view that they were used as territorial boundary markers, probably demarcating land allotment within communities, although they may also have been used as trackways, cattle droveways or defensive earthworks. Cross dykes are one of the few monument types which illustrate how land was divided up in the prehistoric period. They are of considerable importance for any analysis of settlement and land use in the Bronze Age. Very few have survived to the present day and hence all well- preserved examples are considered to be of national importance.

Prehistoric rock art is found on natural rock outcrops in many areas of upland Britain. It is especially common in the north of England in Northumberland, Durham and North and West Yorkshire. The most common form of decoration is the `cup and ring' marking, where expanses of small cup-like hollows are pecked into the surface of the rock. These cups may be surrounded by one or more `rings'. Single pecked lines extending from the cup through the rings may also exist, providing the design with a `tail'. Pecked lines or grooves can also exist in isolation from cup and ring decoration. Other shapes and patterns also occur, but are less frequent. Carvings may occur singly, in small groups, or may cover extensive areas of rock surface. They date to the Late Neolithic and Bronze Age periods (2800-c.500 BC) and provide one of our most important insights into prehistoric `art'. The exact meaning of the designs remains unknown, but they may be interpreted as sacred or religious symbols. Frequently they are found close to contemporary burial monuments and the symbols are also found on portable stones placed directly next to burials or incorporated into burial mounds. Around 800 examples of prehistoric rock art have been recorded in England. This is unlikely to be a realistic reflection of the number carved in prehistory. Many will have been overgrown or destroyed in activities such as quarrying.

Despite limited disturbance the cross dyke centred 480m south of Fox and Rabbit Farm has survived well. Important environmental evidence which can be used to date the cross dyke and determine contemporary land use will be preserved within the lowest ditch fills. Evidence for earlier land use will be preserved in the old ground surface beneath the banks.

The cross dyke belongs to a network of prehistoric boundaries, dividing the area to the south of the scarp edge of the Tabular Hills, between Newton Dale in the west and Stain Dale in the east. It is thought to represent a system of territorial land division which was constructed to augment natural divisions of the landscape by river valleys and watersheds and it is one of many such groups found on the Tabular Hills. Networks such as these offer important scope for the study of land use for social, ritual and agricultural purposes during the prehistoric period.

Lime kilns are structures which were built in order to produce lime by burning chalk or limestone with a fuel, such as wood, peat or coal. The earliest lime kilns are Roman in date, but most surviving examples which have been identified are 18th or 19th century and date from a time when agricultural intensification generated the need for large quantities of lime for spreading on cultivated fields. Clamp kilns are generally found in rural locations where they were constructed for single or intermittant use and had no permanent superstructure. The kiln was formed of an

excavated bowl or pit, within which was placed a base of kindling and a mound of alternating layers of limestone and fuel. The sides may have been built up slightly with earth and/or rough stone walling, and the load was covered with sods of earth. A flue was incorporated into the base of the mound and when ready, the whole mass was set alight and left to burn itself out over a period of days. The kiln was then dismantled and the lime removed.

These lime kilns are important because they have been constructed within the banks of a cross dyke, and this demonstrates the diversity of form which it is thought rural clamp kilns had.

History

Legacy Record - This information may be included in the List Entry Details.

Details

The monument includes the earthwork and buried remains of a cross dyke which is situated on the southern slopes of the Tabular Hills. It occupies a prominent position running across the ridge between Newton Dale in the west and Thornton Dale in the east. Also included is a cup-marked stone which is incorporated into the cross dyke, two lime kilns which are constructed within the cross dyke and a segment of a post-medieval boundary which adjoins the eastern end of the cross dyke. The monument is divided into three areas of protection by the A169 and the Whitby to Thornton Dale road, which cross it from north east to south west and from north to south respectively.

The cross dyke runs for about 1.68km in an approximate east to west direction, turning to the north west for the last 200m at the western end before terminating at the top of the steep slope into Cross Dale, a tributary valley of Newton Dale. At its eastern end the cross dyke ends at the top of the steepest part of the slope into Thornton Dale. The cross dyke has a ditch which is flanked by two parallel banks constructed of earth and stone and the earthworks have an overall maximum width of 13m. The ditch is 1.5m-2m deep, measured from the tops of the banks, but where it crosses the highest part of the ridge towards the western end it is reduced to 1m. For most of their length the banks stand 0.5m-0.8m high, although in places, particularly in the western section, the northern bank has been partly levelled or reduced by ploughing and is no more than 0.3m high. In the penultimate field at the western end and at the eastern end of the eastern section the cross dyke has largely been levelled by ploughing and is not visible as an earthwork. Part of the south western bank and the northern bank, however, survive at the western end and at the eastern end respectively where they are used as modern field boundaries. In both these places, the ditch will survive as a sub-soil feature. A cup-marked stone was recorded in 1982, incorporated into one of the banks towards the western end of the cross dyke but since that time it has become buried with soil and vegetation and is no longer visible.

The cross dyke has been disturbed by post-medieval limestone quarrying on the west side of the A169, where the earthworks have been breached for 10m, and in the eastern part of the central section, where the northern bank and the northern part of the ditch have been quarried for a 50m length. There are also three modern

breaches caused by field access, two in the central section and one in the eastern section, and a further modern disturbance breaching the dyke at the western end of the eastern section.

The two lime kilns are situated within the post-medieval quarries in the western and central sections of the cross dyke. They were constructed in the 18th or 19th century and are of a type known as a clamp kiln. The western lime kiln is visible as a horseshoe-shaped mound of earth and stone rubble which incorporates the northern bank of the cross dyke as its southern side. The mound measures 8m across and stands up to 2m high. It opens to the west onto the breach through the cross dyke and has a hollow in the centre which is now distorted by the roots of a mature tree. The lime kiln in the central section of the cross dyke is also constructed within the northern bank. It is visible as a steep-sided oval-shaped hollow, which is open to the south and surrounded to the north, east and west by a mound standing up to 1.2m high. The mound measures 12m across from east to west and has fragments of burnt stonework visible in the centre of the northern face. The hollow is about 2.5m deep, measured from the top of the mound.

The post-medieval boundary segment runs from north to south and is 80m long; the southern end of the segment is at the southern terminal of the boundary. It has a bank of earth and stone with a ditch on its western side which together measure 5m in width. The segment adjoins the eastern end of the cross dyke; the northern edge of the cross dyke forms the southern terminal of the ditch and the bank continues for 3m to the south across the end of the northern bank of the cross dyke, projecting for 2m beyond the eastern terminal of the cross dyke. The boundary to which this segment belongs continues to the north beyond this monument and it marks the division between the modern parishes of Lockton and Thornton Dale.

All fence posts along modern boundaries and the ruined boundary walls crossing and running along the monument are excluded from the scheduling, although the ground beneath all these features is included.

MAP EXTRACT The site of the monument is shown on the attached map extract.

Selected Sources

Books and journals

Spratt, D A, Linear Earthworks of the Tabular Hills: North East Yorkshire, (1989), 29

Spratt, D A, Linear Earthworks of the Tabular Hills: North East Yorkshire, (1989), 29-32

Spratt, D A, Linear Earthworks of the Tabular Hills: North East Yorkshire, (1989), 29-3

Rutter, J G, 'Transactions of the Scarborough and District Archaeological Soc' in A Survey Of Linear Earthworks And Associated Enclosures In NE, , Vol. 3, (1974), 17-18

Other

Title: 1st Edition 6" Ordnance Survey sheet 75 Source Date: 1854 Author: Publisher: Surveyor:

National Grid Reference: SE 83878 87887, SE 84385 87750, SE 84928 87641

East Toft Dyke, SAM 1021100

List entry Summary

This monument is scheduled under the Ancient Monuments and Archaeological Areas Act 1979 as amended as it appears to the Secretary of State to be of national importance. This entry is a copy, the original is held by the Department for Culture, Media and Sport.

Name: East Toft Dike: a cross dyke 720m south and 680m south west of Little Marfit Head

List entry Number: 1021100

Location

The monument may lie within the boundary of more than one authority.

County	District	District Type	Parish
North Yorkshire	Ryedale	District Authority	Lockton

National Park: NORTH YORK MOORS

Grade: Not applicable to this List entry.

Date first scheduled: 23-Jul-1963

Date of most recent amendment: 11-Aug-2003

Legacy System Information

The contents of this record have been generated from a legacy data system.

Legacy System: RSM

UID: 35456

Asset Groupings

This list entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information.

List entry Description

Summary of Monument

Legacy Record - This information may be included in the List Entry Details.

Reasons for Designation

Cross dykes are substantial linear earthworks typically between 0.2km and 1km long and comprising one or more ditches arranged beside and parallel to one or more banks. They generally occur in upland situations, running across ridges and spurs. They are recognised as earthworks or as cropmarks on aerial photographs, or as combinations of both. The evidence of excavation and analogy with associated monuments demonstrates that their construction spans the millennium from the Middle Bronze Age, although they may have been re-used later. Current information favours the view that they were used as territorial boundary markers, probably demarcating land allotment within communities, although they may also have been used as trackways, cattle droveways or defensive earthworks. Cross dykes are one of the few monument types which illustrate how land was divided up

in the prehistoric period. They are of considerable importance for any analysis of settlement and land use in the Bronze Age. Very few have survived to the present day and hence all well- preserved examples are considered to be of national importance.

Despite being part-levelled by ploughing the East Toft Dike has surviving earthworks and other surviving archaeological deposits. Important environmental evidence which can be used to date the cross dyke and determine contemporary land use will be preserved within the lowest ditch fills in both the earthwork and plough-levelled sections. Evidence for earlier land use will be preserved in the old ground surface beneath the surviving length of bank. The cross dyke belongs to a network of prehistoric boundaries, dividing the area to the south of the scarp edge of the Tabular Hills, between Newton Dale in the west and Stain Dale in the east. It is thought to represent a system of territorial land division which was constructed to augment natural divisions of the landscape by river valleys and watersheds and it is one of many such groups found on the Tabular Hills. Networks such as these offer important scope for the study of land use for social, ritual and agricultural purposes during the prehistoric period.

History

Legacy Record - This information may be included in the List Entry Details.

Details

The monument includes the earthwork and buried remains of a cross dyke which is situated on the central plateau of the Tabular Hills. It occupies a prominent ridge-top position between Black Dale and Black Griff. The monument is divided into two separate areas of protection by the A169 Whitby to Pickering road. The cross dyke runs for 580m in an approximate north west to south east direction, turning to the south west and south respectively into the valley heads at the west and east ends. To the east of the road it has a ditch with a bank of earth and stone on its southern side. The ditch is up to 0.8m deep, measured from the top of the bank which stands up to 0.6m high. The earthworks have an overall maximum width of 7m. The cross dyke has been levelled for the last 10m before the road. The last 48m of the ditch at the eastern end, after the cross dyke has made a sharp turn towards the south, has been deepened and widened by its use as a vehicle track. To the west of the road, the cross dyke has been levelled by ploughing, but the ditch survives as a buried feature which is clearly visible as a soil mark on aerial photographs. At the western end of this section, the line of the ditch is visible as a very shallow linear depression, and the bank survives as a slight earthwork beneath a modern field boundary. The monument forms part of a network of prehistoric boundaries which is surrounded by many other prehistoric monument, including burials and field systems.

All fence posts along modern field boundaries crossing the monuments are excluded from the scheduling, although the ground beneath them is included.

MAP EXTRACT The site of the monument is shown on the attached map extract.

Selected Sources

Books and journals

Spratt, D A, Linear Earthworks of the Tabular Hills: North East Yorkshire, (1989), 38-41

National Grid Reference: SE 84997 92276, SE 85265 92156

Horcum Dyke, SAM 1020117

List entry Summary

This monument is scheduled under the Ancient Monuments and Archaeological Areas Act 1979 as amended as it appears to the Secretary of State to be of national importance. This entry is a copy, the original is held by the Department for Culture, Media and Sport.

Name: Prehistoric dyke known as Horcum Dike

List entry Number: 1020117

Location

The monument may lie within the boundary of more than one authority.

County	District	District Type	Parish
North Yorkshire	Ryedale	District Authority	Lockton

National Park: NORTH YORK MOORS

Grade: Not applicable to this List entry.

Date first scheduled: 20-Jul-2001

Date of most recent amendment: Not applicable to this List entry.

Legacy System Information

The contents of this record have been generated from a legacy data system.

Legacy System: RSM

UID: 34814

Asset Groupings

This list entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information.

List entry Description

Summary of Monument

Legacy Record - This information may be included in the List Entry Details.

Reasons for Designation

Cross dykes are substantial linear earthworks typically between 0.2km and 1km long and comprising one or more ditches arranged beside and parallel to one or more banks. They generally occur in upland situations, running across ridges and spurs. They are recognised as earthworks or as cropmarks on aerial photographs, or as combinations of both. The evidence of excavation and analogy with associated monuments demonstrates that their construction spans the millennium from the Middle Bronze Age, although they may have been re-used later. Current information favours the view that they were used as territorial boundary markers, probably demarcating land allotment within communities, although they may also have been used as trackways, cattle droveways or defensive earthworks. Cross dykes are one of the few monument types which illustrate how land was divided up

in the prehistoric period. They are of considerable importance for any analysis of settlement and land use in the Bronze Age. Very few have survived to the present day and hence all well- preserved examples are considered to be of national importance.

Although partly disturbed and reduced by agricultural activity, Horcum Dike remains identifiable and significant information about its original form and function will be preserved.

History

Legacy Record - This information may be included in the List Entry Details.

Details

The monument includes the earthwork and buried remains of part of a prehistoric dyke known as Horcum Dike. It is located on the eastern side of the Hole of Horcum overlooking Levisham Moor to the west. It lies on the southern edge of the sandstone, predominantly heather covered moor characteristic of the North York Moors. Today the moor is little used but archaeological evidence indicates that this has not always been the case. Both the prehistoric and medieval periods saw intensive use of the land for agricultural, industrial and ritual purposes. Remains of these activities survive today. In the early prehistoric period the area was predominantly covered with trees which were slowly cleared as human activity intensified. The cleared land was divided by substantial dykes into discrete territories. The dyke extends north to south for a total length of 1.5km from near to Saltergate Brow to the head of Black Griff. The northern 550m survives as an earthwork but the remainder has been reduced by agricultural activity and now survives as buried remains which are clearly visible on aerial photographs. The earthwork remains include a bank with a flanking ditch on the west side. The bank measures up to 4m in width and is 1m high and the ditch measures up to 2m wide and is 0.5m deep. At the northern end the dyke originally extended further north, however, its course has been obscured by later tracks, hollow ways and recent erosion and the full extent and nature of any remains are not yet clear. The dyke probably also originally extended further south but later landuse has obscured its course here. All fences posts are excluded from the scheduling, although the ground beneath these features is included.

MAP EXTRACT The site of the monument is shown on the attached map extract. It includes a 2 metre boundary around the archaeological features, considered to be essential for the monument's support and preservation.

Selected Sources

Books and journals

Spratt, D A, Linear Earthworks of the Tabular Hills: North East Yorkshire, (1989)

Other

(1995)
Vyner, B, (2000)

National Grid Reference: SE 84841 93020

Gallows Dyke monument complex, SAM 1019750

List entry Summary

This monument is scheduled under the Ancient Monuments and Archaeological Areas Act 1979 as amended as it appears to the Secretary of State to be of national importance. This entry is a copy, the original is held by the Department for Culture, Media and Sport.

Name: Cross ridge dyke known as Gallows Dike and three round barrows 330m south west of Glebe Farm

List entry Number: 1019750

Location

The monument may lie within the boundary of more than one authority.

County	District	District Type	Parish
North Yorkshire	Ryedale	District Authority	Levisham
North Yorkshire	Ryedale	District Authority	Lockton

National Park: NORTH YORK MOORS

Grade: Not applicable to this List entry.

Date first scheduled: 28-Aug-1962

Date of most recent amendment: 25-Jun-2001

Legacy System Information

The contents of this record have been generated from a legacy data system.

Legacy System: RSM

UID: 34807

Asset Groupings

This list entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information.

List entry Description

Summary of Monument

Legacy Record - This information may be included in the List Entry Details.

Reasons for Designation

Cross dykes are substantial linear earthworks typically between 0.2km and 1km long and comprising one or more ditches arranged beside and parallel to one or more banks. They generally occur in upland situations, running across ridges and spurs. They are recognised as earthworks or as cropmarks on aerial photographs, or as combinations of both. The evidence of excavation and analogy with associated monuments demonstrates that their construction spans the millennium from the Middle Bronze Age, although they may have been re-used later. Current information favours the view that they were used as territorial boundary markers, probably demarcating land allotment within communities, although they may also have been used as trackways, cattle droveways or defensive earthworks. Cross

dykes are one of the few monument types which illustrate how land was divided up in the prehistoric period. They are of considerable importance for any analysis of settlement and land use in the Bronze Age. Very few have survived to the present day and hence all well- preserved examples are considered to be of national importance.

Round barrows are funerary monuments dating from the Late Neolithic period to the Late Bronze Age, with most examples belonging to the period 2400-1500 BC. They were constructed as earthen mounds, sometimes ditched, which covered single or multiple burials. They occur either in isolation or grouped as cemeteries and often acted as a focus of burials in later periods. Often superficially similar, although differing widely in size, they exhibit regional variations in form and a diversity of burial practices. There are over 10,000 surviving examples recorded nationally (many more have already been destroyed), occurring across most of Britain, including the Wessex area where it is often possible to classify them more closely, for example as bowl or bell barrows. Often occupying prominent locations, they are a major historic element in the modern landscape and their considerable variation in form and longevity as a monument type provide important information on the diversity of beliefs and social organisations amongst early prehistoric communities. They are particularly representative of their period and a substantial proportion of surviving examples are considered worthy of protection. Hollow ways are route ways which over a period of many years have worn a substantial corridor out of the surrounding land. They sometimes start off or are managed by deliberate cutting and recutting. Hollow ways can date from all periods and in some cases can be in use for thousands of years. As a result they can illustrate patterns of communication over many years and are an important element in understanding how the land was used at particular times. The Gallows Dike survives well and significant evidence of its date and construction will be preserved. The barrows also survive well and will provide important information about their original form, the burials placed within them and their relationship with other monuments in the area. Evidence of earlier land use will also survive beneath the barrow mounds. Taken together the monument preserves important information about the use and development of this part of Levisham Moor.

History

Legacy Record - This information may be included in the List Entry Details.

Details

The monument includes a cross ridge dyke, three adjacent round barrows and the ground between these features in which archaeological remains such as further burials and boundary features may survive. It is located on the north eastern tip of Levisham Moor overlooking a narrow saddle of land which separates the moor from the hills to the east. Levisham Moor lies on the southern edge of the sandstone, predominantly heather covered moor characteristic of the North York Moors. The moor occupies the northern part of a block of land defined by the deep valleys of Newton Dale to the west, Horcum Slack to the east, Havern Beck to the north and Levisham Beck to the south. The eastern side of the moor is bisected by smaller valleys known locally as griffs which divide the moor into a series of flat-topped peninsulas with steep slopes on all but their north western sides. The southern part

of the block of land has been enclosed and brought into agricultural use but traces of prehistoric remains in this area are visible on aerial photographs. Today the moor is little used but archaeological evidence indicates that this has not always been the case. Both the prehistoric and medieval periods saw intensive use of the land for agricultural, industrial and ritual purposes. Remains of these activities survive today. In the early prehistoric period the moor was predominantly covered with trees which were slowly cleared as human activity intensified. The cleared land was divided by substantial dykes into discrete areas which appear to have been used in different ways. The higher areas to the north were used for pastoralism whilst the southern areas were used for arable farming. Some of the dykes also acted as territorial boundaries. Gallows dyke extends for 160m across a narrow peninsula at the north eastern corner of the moor. The central part of the dyke crosses generally level ground but at either end the ground slopes down and the dyke terminates at the top of the steeply sloping moor edge to the north and south. The dyke includes a single ditch with flanking banks. The ditch is 3m wide and the current base is up to 2.3m below the top of the banks. The eastern bank is more substantial than the western and stands up to 1.25m above the surrounding ground and is up to 4m wide. The ditches at other dykes elsewhere on the moor were constructed by digging a series of pits which were joined together and it is thought that this technique was used here. There are at least two substantial hollow ways crossing the dyke which provided access to and from the moor. These routeways are of some antiquity although it is not yet known if their earliest use is contemporary with the construction of the dyke. At either end of the dyke there is a post-medieval boundary stone which marks a later estate boundary. The round barrows lie 40m to the east of the dyke, in a line extending north to south. Each of the barrows has a steep sided earth and stone mound. They each measure up to 12m in diameter and are 1.5m high. The mounds are very close together so there is no significant gap between the mounds and therefore it is unlikely that they were surrounded by ditches. Each of the mounds has a slight hollow on the top which is the result of investigations in the past. Although the barrows were constructed primarily for burials, it is believed that barrows located in prominent positions such as these also served as boundary markers defining territories. The use of the dyke as a territorial marker continues today as the parish boundary extends along the length of the dyke. All fence and gate posts and the stone information plinth are excluded from the scheduling, although the ground beneath these features is included.

MAP EXTRACT The site of the monument is shown on the attached map extract. It includes a 3 metre boundary around the archaeological features, considered to be essential for the monument's support and preservation.

Selected Sources

Books and journals

Atkins, C, An Archaeological Survey of the Levisham Estate, (1991)

Atkins, C, An Archaeological Survey of the Levisham Estate, (1991), 5-12

Atkins, C, An Archaeological Survey of the Levisham Estate, (1991), 5-12

Spratt, D A, Prehistoric and Roman Archaeology of North East Yorkshire, (1994), 111-121

Vyner, B E, 'CBA Research Report 101: Moorland Monuments' in The Brides Of Place: Cross-Ridge Boundaries Reviewed, , Vol. CBA 101, (1995), 16-31

Other
Vyner, B, (2000)

National Grid Reference: SE 84877 94071

PLATES

Plate 1 General view of trench at SAM 1021170, Cross Dyke, facing south.

Plate 2 General view of trench at SAM 1021100, East Toft Dyke, facing south.

Plate 3 Section 2, East Toft Dyke, facing west, 0.5m scale units.

Plate 4 Section 3, East Toft Dyke, facing west, 0.5m scale units.

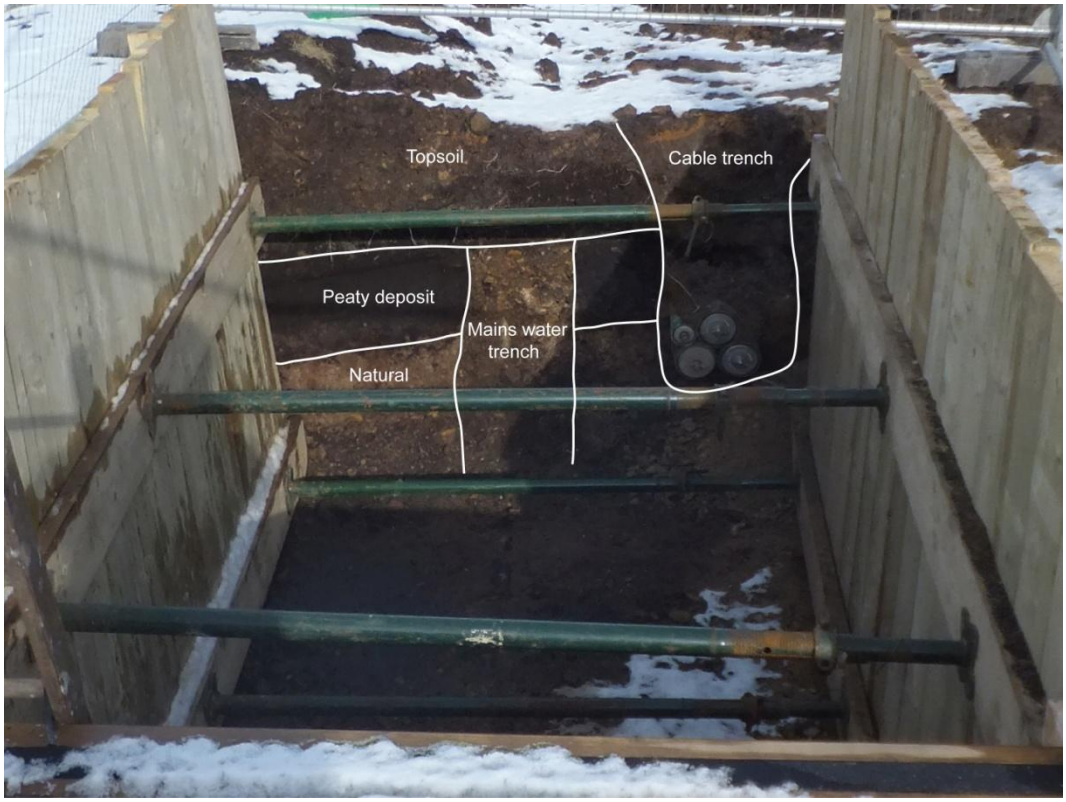

Plate 5 Joint bay 14, facing north.

Plate 6 Joint bay 15, facing west.

FIGURES

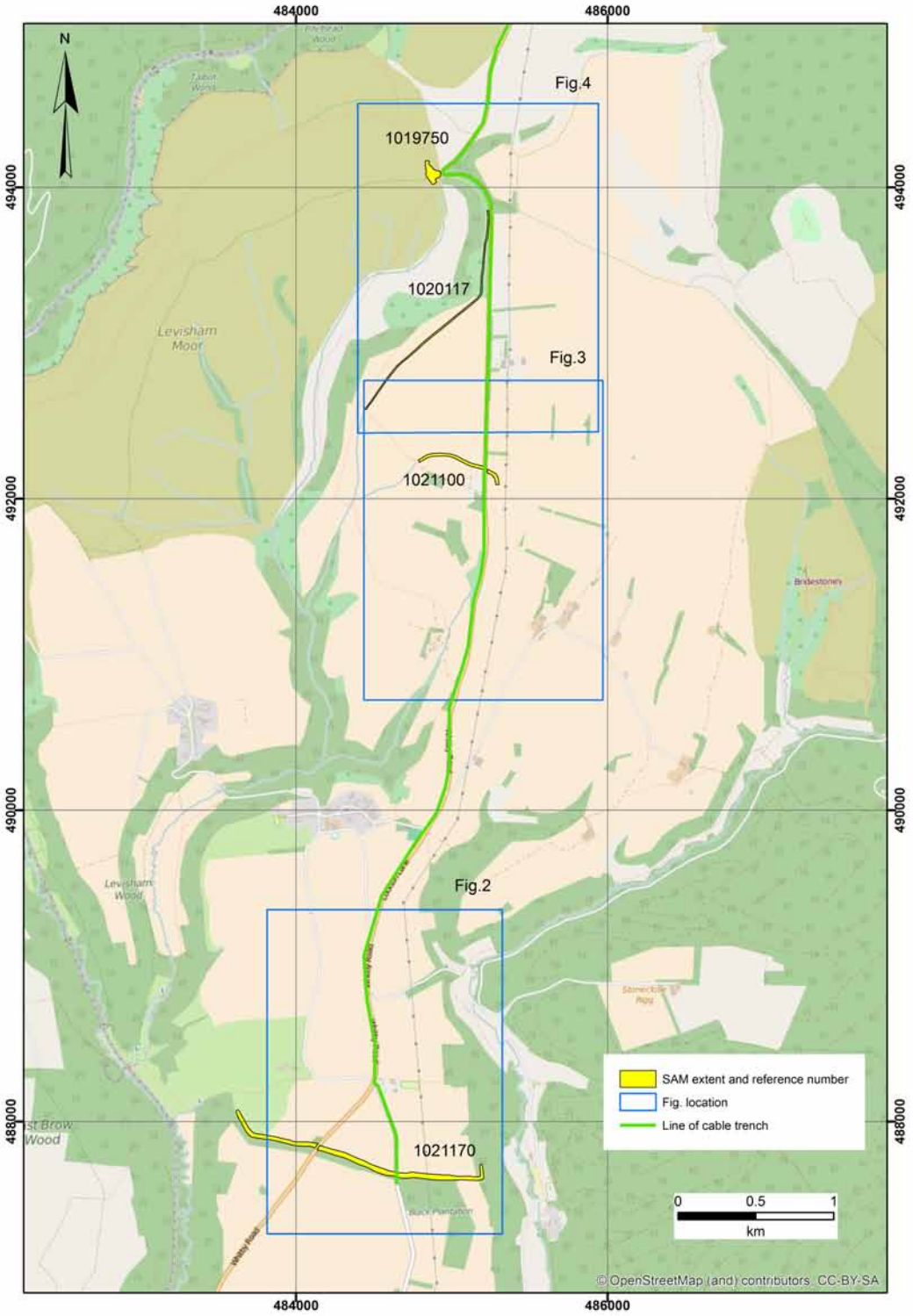

Figure 1 Scheduled Monument and works locations

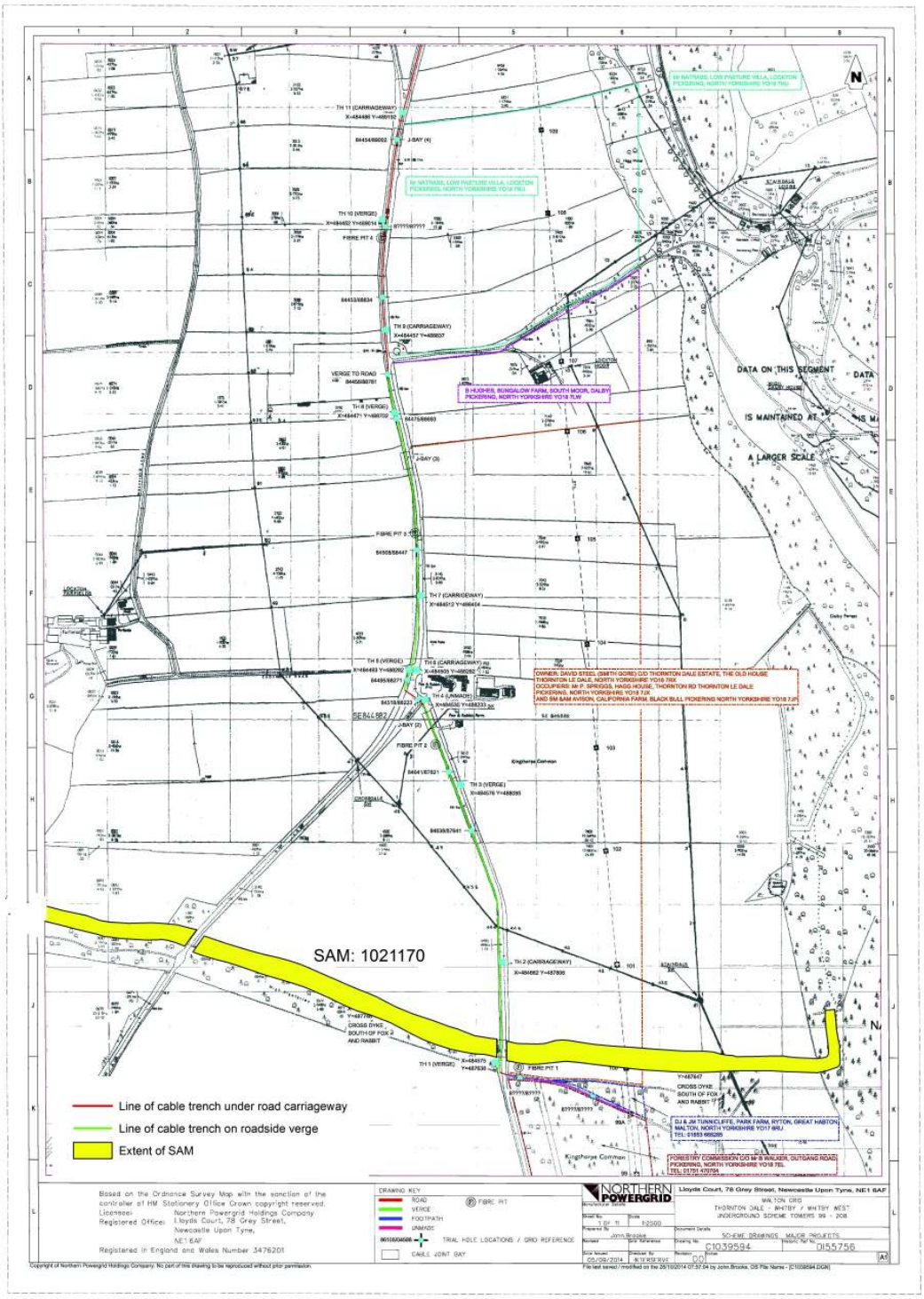

Fig. 2 SAM 1021170, Cross Dykes momument

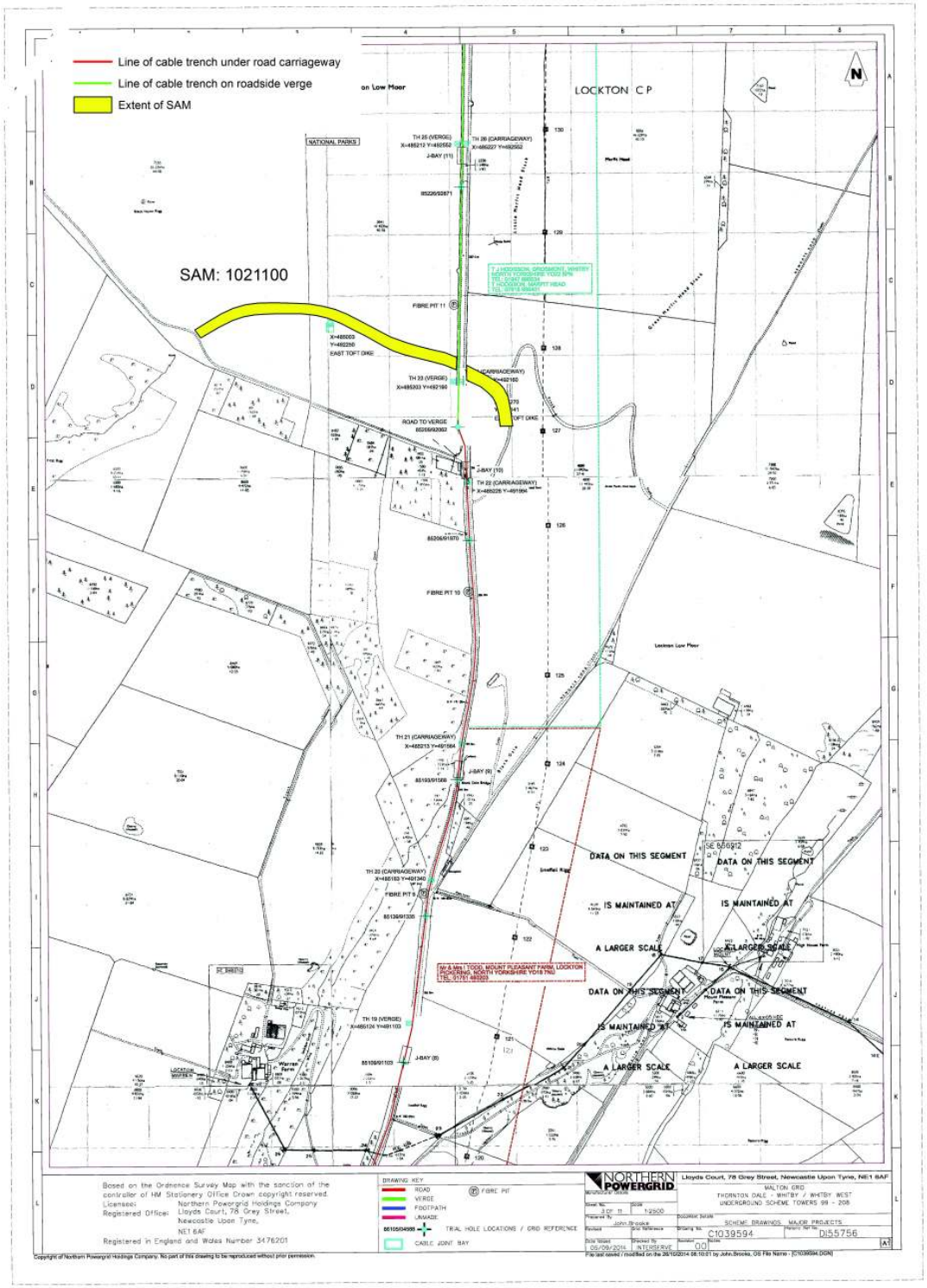

Fig. 3 SAM 1021100, East Toft Dyke

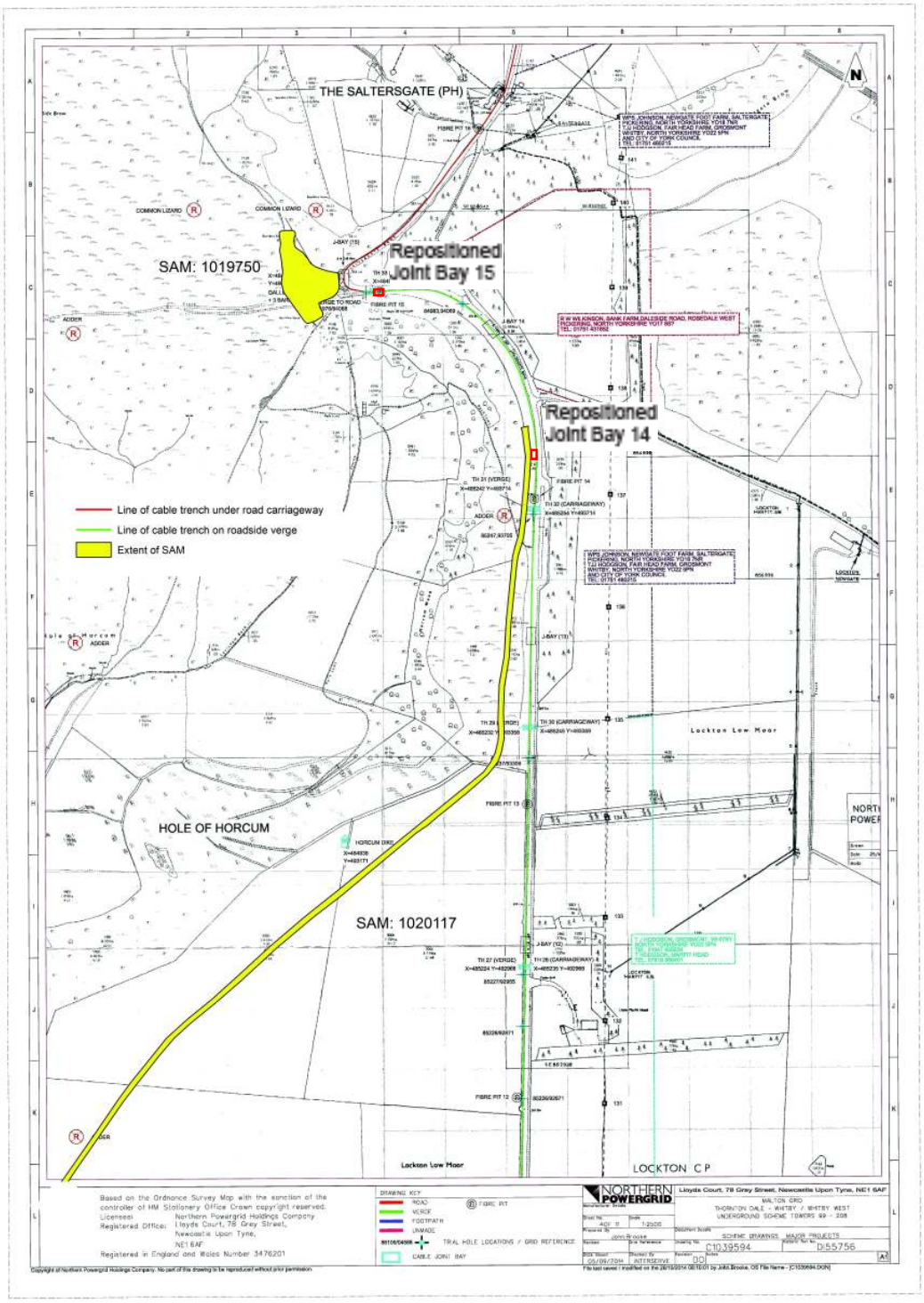

Fig. 4 SAM 1020117, Horcum Dyke and SAM 1019750, Gallows Dyke monument complex

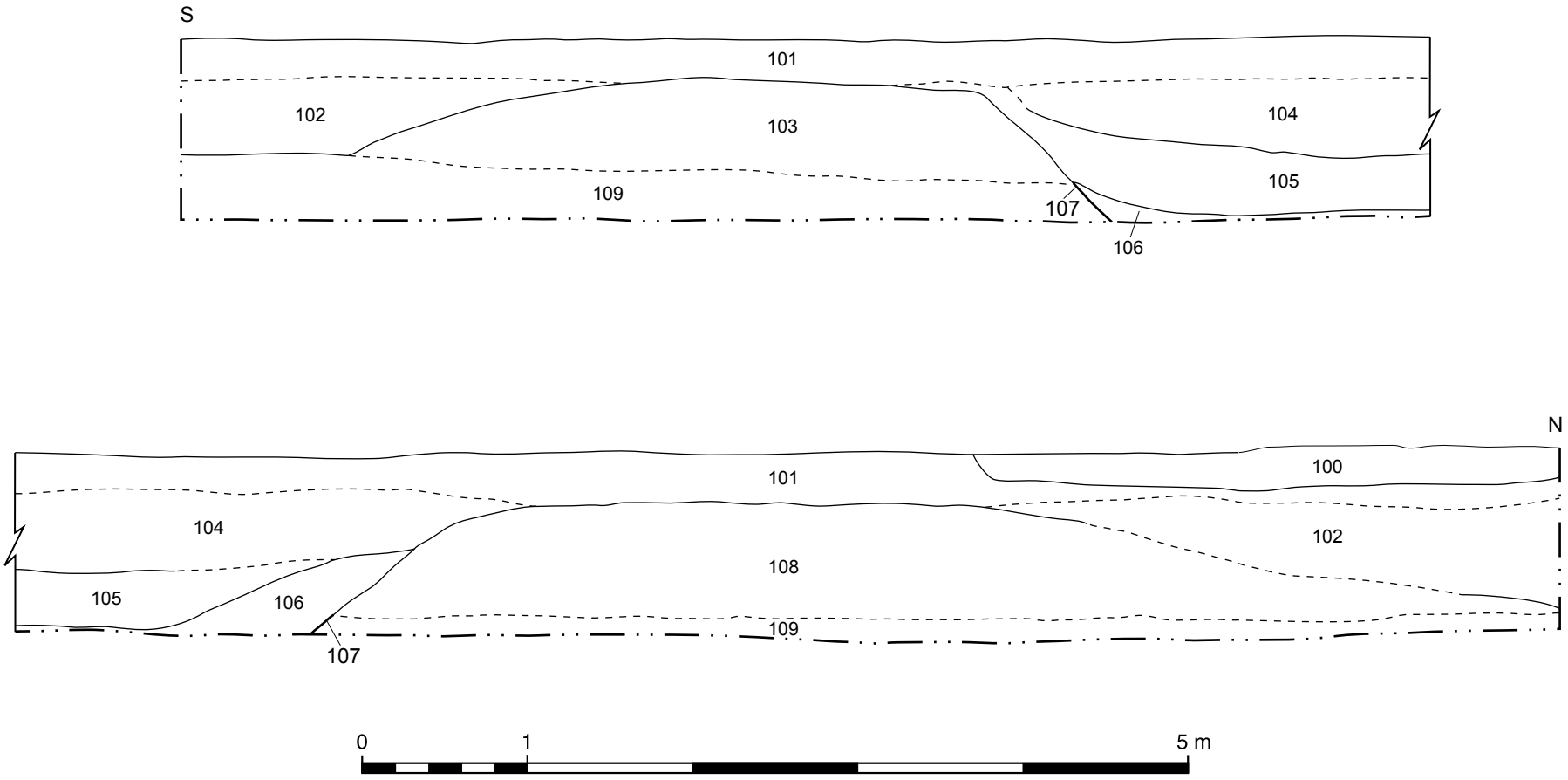

Fig. 5 East facing section through Cross Dyke

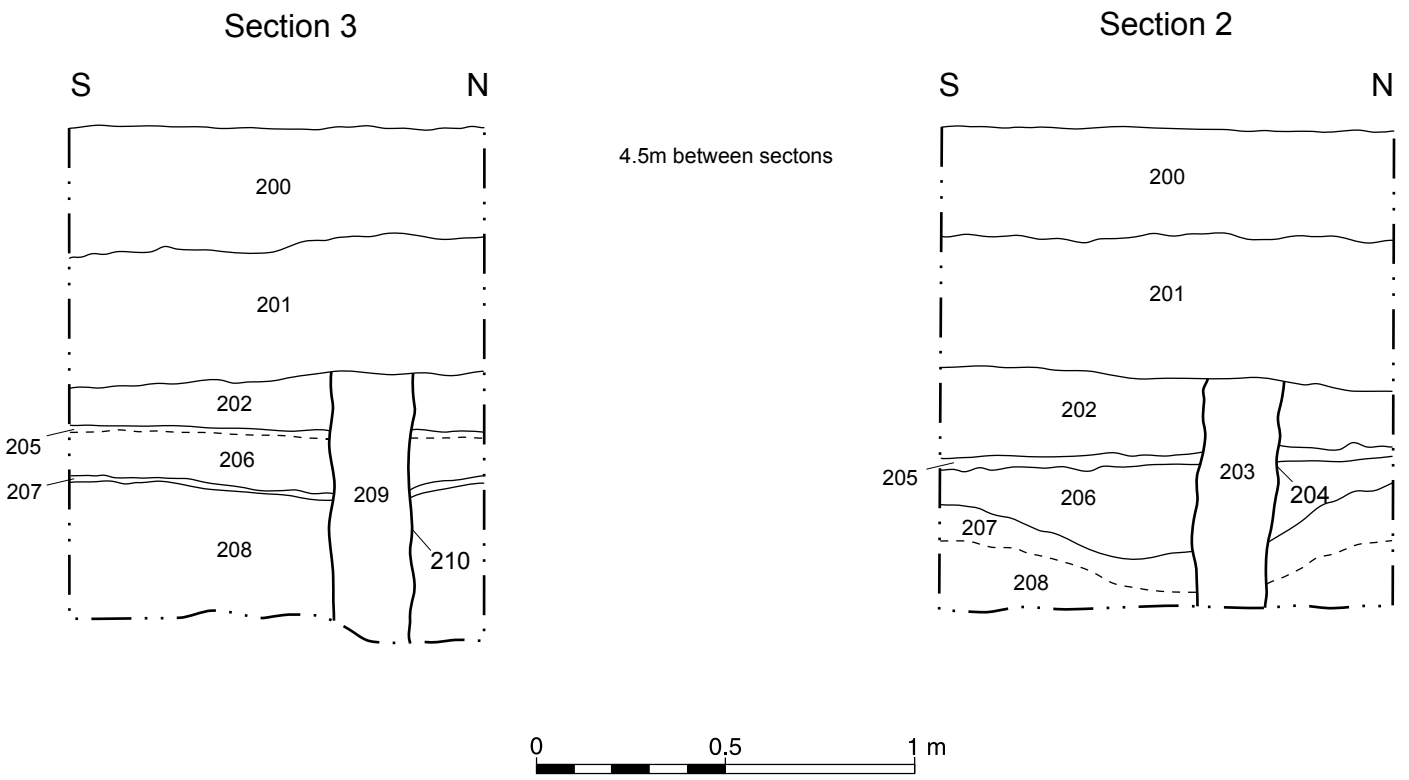

Fig. 6 East facing sections, East Toft Dyke