

Belmont Transmitter Station

Excavation of cable trench: archaeological works

NGR 521800 383700

NETWORK ARCHAEOLOGY LTD

for

ARQIVA LTD

Report no. 551

Date of Issue: December 2008



DOCUMENT CONTROL

Client	Arqiva Ltd				
Project	Belmont Transmitter Station				
Project code	BTS 16				
Document title	Excavation of cable trench: archaeological works				
Report no.	551				
Document ref.	BTS 16 Report v1.0.doc				
Distribution	Michael Smith, Arqiva Ltd Maggs Steward, Arqiva Ltd Jan Allen, Lincolnshire Historic Environment Record				
Document Comprises	Doc. Control sheet	Table of contents	List of figures and plates	Text	Figures and plates
	1	1	1	9	6

Version	Status	Author	Reviewer	Approver	Date
0.1	Draft Internal	Patrick Daniel	Richard Moore		11 Dec 08
1.0	Issue	Patrick Daniel	Rachel Savage	Chris Taylor	12 Dec 08

CONTENTS

<i>List of figures and plates</i>	<i>ii</i>
Non-Technical Summary	iii
1 Introduction	1
1.1 The Development	1
1.2 Legislation, Regulations and Guidance	1
1.3 Aims	1
1.4 Limitations	2
1.5 Field Records	2
1.6 Artefacts and Sample Processing	2
1.7 Archive and Archive Deposition	2
1.8 Location and Topography	3
1.9 Geology, Soils and Landuse	3
1.10 Archaeological Background	3
2 Results	5
3 Conclusions	6
4 Acknowledgements	7
5 Statement of Indemnity	7
6 Bibliography	8

LIST OF FIGURES

Figure 1: Plan showing site location and position of cable trench

Figure 2: Plan showing Lincolnshire Historic Environment Records (HER) in the vicinity of Belmont Transmitter Station

Figure 3: Soil profile sections 1-3

LIST OF PLATES

Plate 1: The development site, camera facing north-east

Plate 2: The cable trench, camera facing west

Plate 3: The cable trench, camera facing north

Plate 4: Soil profile 1

Plate 5: Context 104

NON-TECHNICAL SUMMARY

Monitoring of the excavation of a trench for a power cable at Belmont Transmitter Station, South Willingham, Lincolnshire, was undertaken during two days in November 2008.

Belmont Transmitter Station is situated within an area of considerable archaeological interest. There are several scheduled round barrows nearby and the Caistor 'High Street', from which the station is accessed, follows the line of a Roman road. An Iron Age gold coin was found to the north west of the site, close to an area where the remains of a rural Romano-British settlement have also been identified. The remains of this settlement, which was occupied in the third and fourth centuries AD, are presumed to extend into the field within which Belmont Transmitter Station is located.

Monitoring of the work, however, revealed only modern topsoil overlying natural geological layers. No archaeological features were encountered, and no artefacts were recovered from the course of the cable trench.

1 INTRODUCTION

This report presents the results of archaeological monitoring, carried out in fulfilment of a scheme of archaeological works, undertaken during the excavation of a trench for a power cable at Belmont Transmitter Station, South Willingham, Lincolnshire (Figure 1).

1.1 The Development

The development took place within the fenced perimeter of the station, in an area to the north of the transmitter antenna. A trench measuring 0.40m wide, up to 0.90m deep and 65m in length was excavated by a Kubota Mini-digger fitted with a toothless ditching bucket (Plates 2 and 3). The trench was dug to contain a power cable to supplying electricity to temporary site cabins.

The archaeological works took place on the 24th and 25th of November 2008, and was carried out by an experienced archaeological Project Officer.

1.2 Legislation, Regulations and Guidance

A planning application (planning app. ref. N/164/02625/08) was submitted to Lincolnshire County Council on August 29th 2008. Permission for the development was subsequently granted, subject to a number of specified conditions. Condition 4 required that no groundworks 'shall be carried out until a scheme specifying the methods of recording or preserving any archaeological deposits which may be affected by the above works... has been submitted to the local authority'. This condition was imposed because the site is of archaeological importance, and in accordance with Policy BE4 of the Lincolnshire Structure Plan 2006.

The scheme of archaeological works was produced by Network Archaeology Limited (NAL 2008) in fulfilment of this condition.

1.3 Aims

The objectives of the scheme of archaeological works were to:

- establish the presence or absence, extent, condition, character, quality and date of any archaeological remains;
- locate, recover, identify, and conserve where appropriate any archaeological artefacts;
- locate, sample, interpret and record archaeological deposits;
- determine the palaeo-environmental and palaeo-economic potential of any archaeological remains;
- assess the overall archaeological significance of any archaeological remains;
- produce and submit a suitable archive to Lincolnshire Museum;
- produce a report that addresses the above;
- provide information for accession to the County Historic Environment Record (HER);

- publish significant results in an appropriate journal, if appropriate.

1.4 Limitations

Visibility of archaeological remains is always a significant factor during archaeological monitoring. Visibility is dependent on many factors including machine type, depth of trench, weather and geology.

In this instance, the trench was relatively deep in relation to its narrow width. This, in conjunction with the strong raking winter sunlight, meant that conditions were less than ideal for discerning subtle changes in coloration in the deposits revealed by the excavation of the trench.

1.5 Field Records

1.5.1 Project Code

The project code for the Belmont Transmitter Station cable excavation is BTS 16.

1.5.2 Written Records

Network Archaeology Ltd use a system of *pro forma* record sheets for on-site recording. This system is in a format acceptable to the IFA. Single context recording is used for all archaeological deposits and any significant natural deposits located during surface inspection.

A total of eight context numbers were issued during the work.

1.5.3 Drawn Records

Drawn records took the form of three 1:10 scale section drawings of the soil profiles revealed in the sides of the trench (Figs 3-5).

1.5.4 Photographic Records

A photographic record was maintained in colour print, black and white and digital formats.

1.5.5 Survey

The cable trench and any observed detail within it were located using a combination of a site layout plan provided by Arqiva Ltd and a handheld Garmin eTrex GPS unit.

1.6 Artefacts and Sample Processing

No artefacts were retrieved, and no samples have been processed.

1.7 Archive and Archive Deposition

The project archive has been prepared in accordance with the guidelines outlined in Management of Research Projects in the Historic Environment (English Heritage, 2006, p.31) and to established professional standards (IFA, 2008). It is currently housed at the Lincolnshire

office of Network Archaeology Ltd. Lincolnshire Historic Environment Record will receive the document archive.

1.8 Location and Topography

Belmont transmitter is situated 500m to the north of Belmont House, halfway between the villages of South Willingham and Donington on Bain, in the civil parish of South Willingham, Lincolnshire. The guyed mast became the tallest structure in Britain, at 385.7m high, when it was built in 1959, and, with its associated building compound, occupies a high point of the Lincolnshire Wolds, with a ground level of 125m above Ordnance Datum (Fig. 1).

1.9 Geology, Soils and Landuse

The solid geology is Cretaceous Tealby limestone, overlain by boulder clay with glaciofluvial sand and gravel (British Geological Survey, 1980). The topsoil is a coarse loamy soil of the Arrow series (Soil Survey of England and Wales, 1983). Arable agriculture predominates in the surrounding area. The cable trench was dug through a grassy area of waste ground containing traces of bonfires and much modern debris (Plate 1).

1.10 Archaeological Background

Belmont Transmitter Station is located close to the western edge of the Lincolnshire Wolds, and overlooks the valley of the River Bain to the east. The surrounding land is considered to be rich in archaeological potential (Allen and Masters, 2003, p.5); known sites nearby are shown in Figure 2.

Watersheds and the upper edges of scarp slopes were favoured locations for barrows in the Late Neolithic and Early Bronze Age. A collection of barrows is present in the area, probably associated with a trackway following the watershed, and a territorial boundary may be envisaged. A belt of barrows extends northwards from the transmitter station, with four scheduled barrows within one mile of the site. Unscheduled cropmarks, interpreted as possible additional barrows, are also located nearby.

Spot finds of prehistoric items in the area include a gold coin, a flint axe, arrowhead and a copper adze or axe head. A further fifteen finds of struck or modified flint were found during a programme of fieldwalking nearby (Allen and Masters, 2003, p.12) ranging in date from the Mesolithic to the Bronze Age. All these finds, along with cropmarks of prehistoric ditches and enclosures nearby, suggest considerable activity within the prehistoric landscape.

The modern B1255, from which the transmitter station is accessed, follows the course of a Roman road that linked the Roman settlements of Caistor and Horncastle. As Palmer-Brown states (2003, p.4) the presence of this routeway may have encouraged many smaller settlements to spring up alongside it. One such settlement was detected around 300m to the north of the transmitter station during works associated with an oil drilling platform (Allen and Masters, 2003; Palmer-Brown, 2003). This contained field boundaries, a small rectilinear enclosure and a possible stone-built building. Finds of flue tile were also recovered, possibly indicating a building with a hypocaust central heating system nearby. These remains were dated to the third and fourth centuries AD. This site may explain the presence of a Romano British pottery scatter in the adjacent field. Significantly, this settlement seems to extend southwards into the field in which the transmitter station stands.

The nearby villages of South Willingham, Benniworth and Biscathorpe were all in existence by the time of the Domesday survey in 1086 (Cameron, 1998), the latter two place-names attesting to Danish influence in the area before this time. The remains of a deserted medieval village are preserved around 1km to the north-east of the site, at Biscathorpe; traces of ridge and furrow can also be found at many villages in the area. No medieval pottery was recovered during the fieldwalking programme in advance of the oil platform, prompting the interpretation that the area may have been used for pasture at this time (Allen and Masters, 2003, p.12).

Significant post-medieval and modern remains nearby include quarrying adjacent to Biscathorpe village; the course of the dismantled Lincoln to Louth railway; Belmont House, a Grade II listed building; the current road and field boundary network and a Royal Observers Corps lookout dug into the top of the round barrow nearest to the transmitter station (SM 27875).

2 RESULTS

No archaeological remains were identified during the excavation of the cable trench, nor were any artefacts recovered. The depositional sequence exposed during the digging of the cable trench is summarised below:

Depth below ground surface	Context No.	Description	Interpretation
0-25cm	100	Friable-loose dark brown silty sand	Modern topsoil
25-30cm	101	Friable greyish brown silty sand with abundant small gravel and flint inclusions	Modern gravel/ made ground at base of topsoil sequence intermittently visible
15-70cm	102, 105	Friable greyish brown sandy silt with frequent angular piece of flint and pebbles	Loam-enriched horizon separating topsoil from subsoil
25-70cm	107	Sticky pinkish brown gritty sandy clay with abundant angular flint inclusions	Pocket of flinty marl within subsoil
35-90cm	103, 106	Friable-loose orangey brown sandy silt with frequent angular flints and pebbles	Glaciofluvial subsoil
65cm+	104	Mixed brown, grey and yellow sandy gritty clayish silt with frequent angular flints and pebbles, oxidation concretions and patches of sticky red clay	Localised geological irregularity

The topsoil (100) contained much modern material, congruent with the land use which amounted to an area of waste ground used for dumping rubbish. The gravel (101) viewed in places at the bottom of the topsoil sequence may have resulted from the construction of the adjacent access road. The topsoil overlay a deposit which was paler in colour (102=105), interpreted as an interface between the topsoil and the subsoil. At the eastern end of the trench the subsoil (103=106), which is presumed to be glaciofluvial in origin, was overlain by a patch of stony and flinty clay (107), also thought to be geological.

At the bottom of the trench, an unusual and colourful deposit, 104, was observed (Plate 5). Because of its composition and appearance, this was initially thought to be a burnt layer. Closer analysis, however, revealed an absence of any artefacts or charcoal within the soil matrix. It was not possible to fully investigate this deposit as it lay at the base of the cable trench. Photographs and material recovered from this deposit were examined by James Rackham and Alan Vince, who both concluded that the material was a geological irregularity, explicable in terms of past depositional episodes in the area.

Three soil profiles were recorded (Fig. 3), representational of the depositional sequence revealed in the sides of the cable trench.

3 CONCLUSIONS

The aim of the scheme of works has been successfully carried out, in that the work was able to 'establish the presence or absence, extent, condition, character, quality and date of any archaeological remains': none were present.

The absence of archaeology highlights the previously undeveloped, agrarian nature of the area. The light, free draining soils of the Lincolnshire Wolds would have attracted agricultural activity and settlement from an early period. The local environs appear to have been subdivided for agricultural plots during the Romano-British period, if not earlier. The land crossed by the cable trench may have been contained within open fields at this time, with little subsequent change in landuse until the construction of the transmitter station facilities in the mid twentieth century.

4 ACKNOWLEDGEMENTS

Network Archaeology Ltd would like to thank the following for their contribution to the project:

Arqiva Ltd

Ian Brown

Michael Smith

Maggs Steward

Lincolnshire County Council

Jan Allen

Mark Bennett

Network Archaeology Ltd

Richard Moore Project Manager and Editor

Patrick Daniel Project Officer

Jacqueline Harding and Julian Sleaf GIS Figures

5 STATEMENT OF INDEMNITY

Every effort has been taken in the preparation and submission of this report in order to provide as complete an assessment as possible within the terms of the brief and all statements and opinions are offered in good faith. Network Archaeology Ltd cannot accept responsibility for errors of fact or opinion resulting from data supplied by any third party, or for any loss or other consequences arising from decisions or actions made upon the basis of facts or opinions expressed in this report and any supplementary papers, howsoever such facts and opinions may have been derived, or as a result of unforeseen and undiscovered sites or artefacts.

6 BIBLIOGRAPHY

Allen, M. and Masters, P. 2003. *Archaeological Desk-Based Assessment, Fieldwalking, Field Reconnaissance and detailed Gradiometer Survey: Land at Biscathorpe, Lincolnshire*. Unpublished Report by Pre-Construct Archaeology

British Geological Survey, 1980. *Sheet 103: Louth*

Cameron, K. 1998. *A Dictionary of Lincolnshire Place-Names*

English Heritage, 2006. *Management of Research Projects in the Historic Environment*

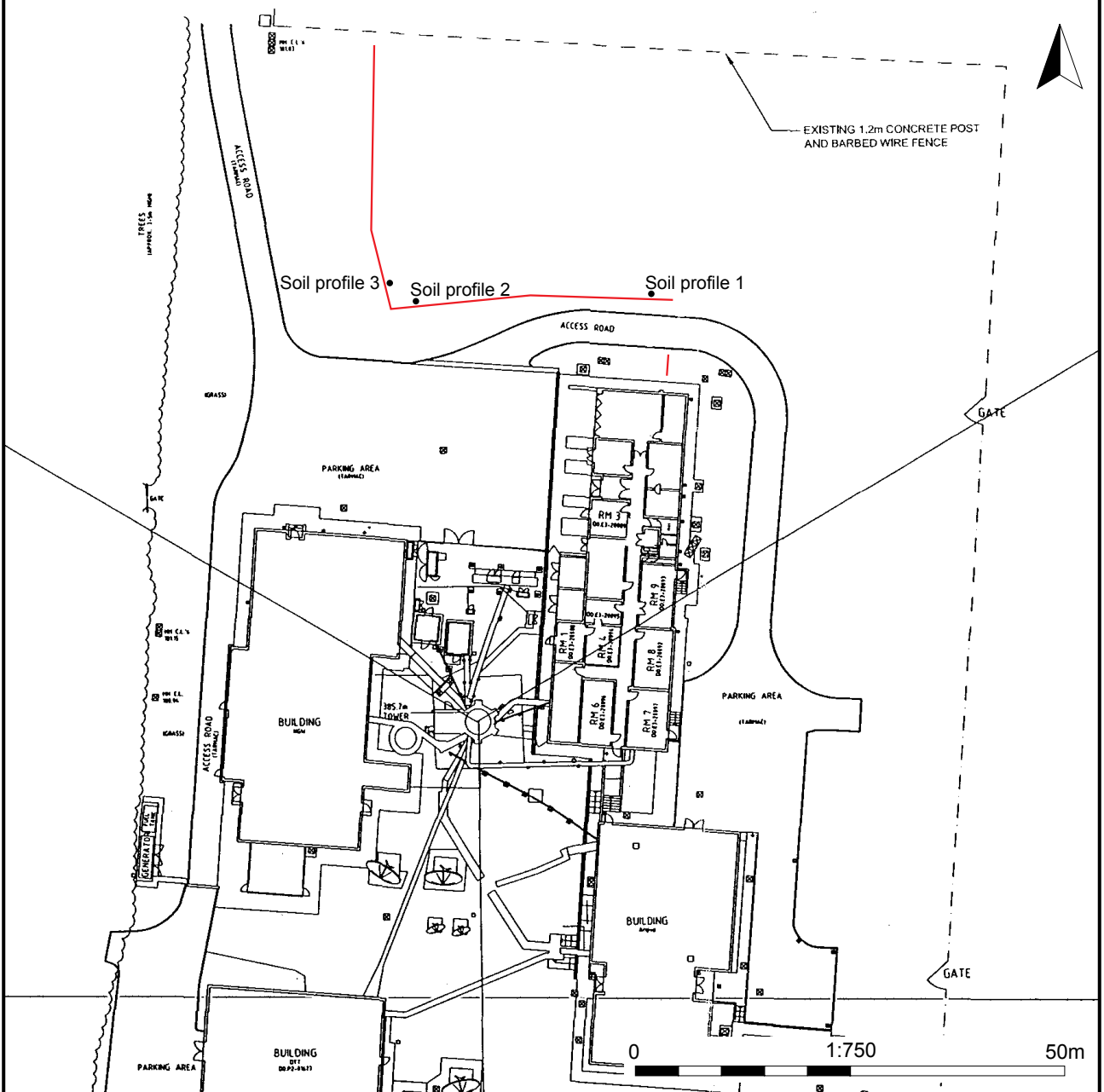
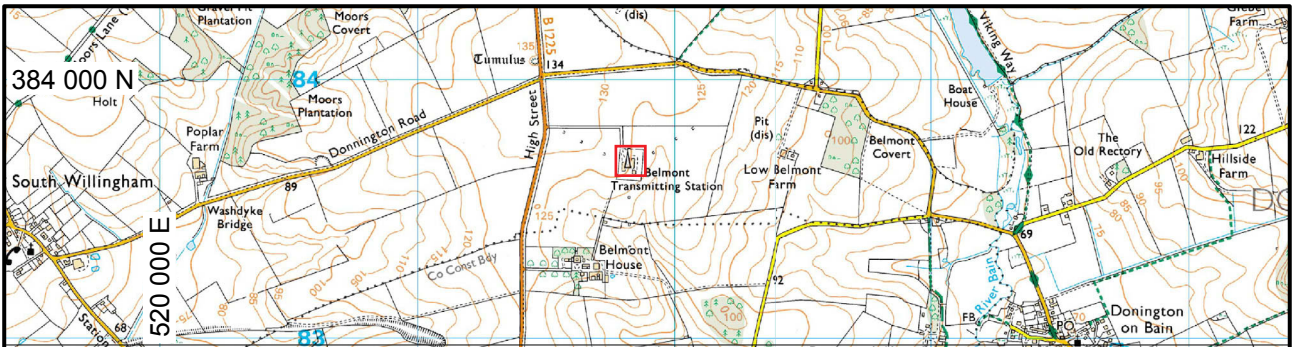
Institute of Field Archaeologists. 2008. *Draft Stand and Guidance for the creation, preparation and transfer and deposition of archaeological archives*.

www.archaeologists.net/modules/icontent/inPages/docs/codes/watch2.pdf. Accessed 28th November 2008.

Palmer-Brown, C. 2003. *Field No. 6217 Near Biscathorpe, Lincolnshire*. Unpublished Archaeological Field Evaluation Report by Pre-Construct Archaeology.

Soil Survey of England and Wales, 1983. *Soil Map of England and Wales: Sheet 4*

Figures



Key

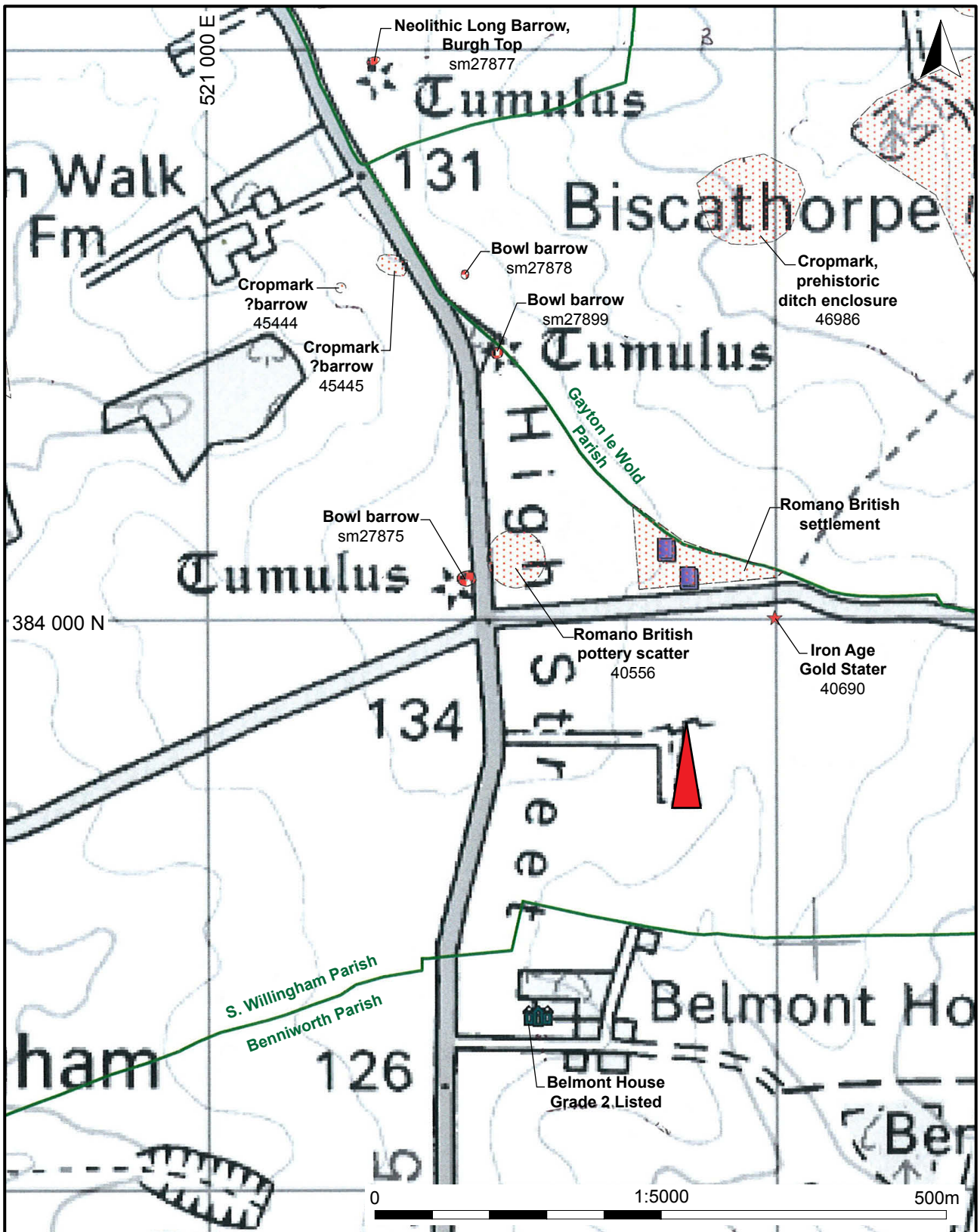
— Cable trench route (as excavated)

2.0	01/12/08	Plan of site	JLH	PD	RM
Ver	Date	Description	DM	Chk	App

Belmont Transmitter Station
Figure 1: Plan showing site location and position of cable trench.

Reproduced from the Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings.
Ordnance Survey Licence No.100021059 (2008)





Key



Belmont Transmitter

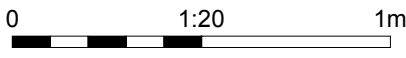
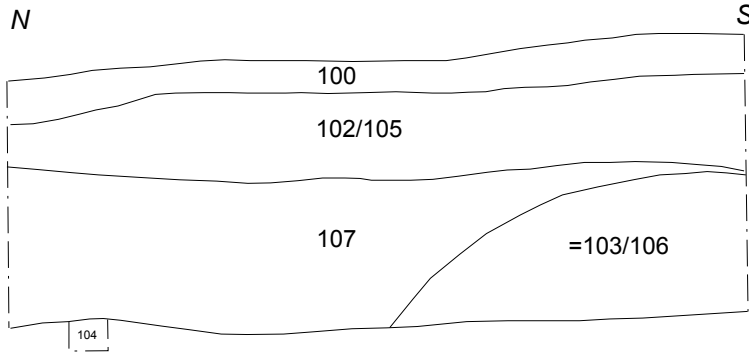
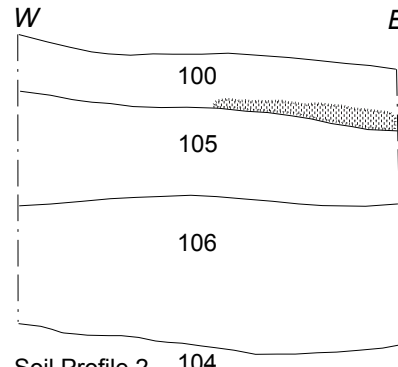
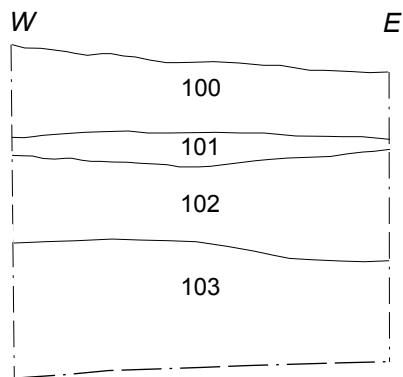
2.0	01/12/08	Surrounding archaeology	JLH	PD	RM
Ver	Date	Description	DM	Chk	App

Belmont Transmitter Station

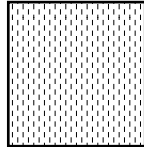
Figure 2: Plan showing Lincolnshire Historic Environment Records (HER) in the vicinity of Belmont Transmitter Station.

Reproduced from the Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings.
 Ordnance Survey Licence No.100021059 (2008)





Key



Ash/cinder

1.0	03/12/08	Sections	JS	PD	RM
Ver	Date	Description	DM	Chk	App

Belmont Transmitter Station
 Figure 3: Soil profile sections 1-3
 Scale 1:20

Plates



Plate 1: The development site, camera facing north-east



Plate 2: The cable trench, camera facing west



Plate 3: The cable trench, camera facing north



Plate 4: Soil profile 1



Plate 5: Context 104