
**ARCHAEOLOGICAL FIELDWALKING AND
EARTHWORK SURVEY:
PROPOSED ABLE HUMBER PORTS FACILITY
EAST HALTON
NORTH LINCOLNSHIRE
(EHPF 09)**

**Work undertaken for
ABLE UK LTD**

March 2010

Report compiled by
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**ARCHAEOLOGICAL
PROJECT
SERVICES**



CONTENTS

List of Figures

List of Plates

1.	SUMMARY	1
2.	INTRODUCTION	1
2.1	DEFINITION OF AN EVALUATION	1
2.2	PLANNING BACKGROUND	1
2.3	TOPOGRAPHY AND GEOLOGY	1
2.4	ARCHAEOLOGICAL SETTING	2
3.	AIMS	2
4.	METHODS	2
5.	RESULTS	3
6.	DISCUSSION	4
7.	CONCLUSIONS	4
8.	ACKNOWLEDGEMENTS	5
9.	PERSONNEL	5
10.	BIBLIOGRAPHY	5
11.	ABBREVIATIONS	5

Appendices

1	Project design for archaeological fieldwalking and earthwork survey
2	Fieldwalking finds summary
3	Glossary
4	The Archive

List of Figures

Figure 1 General location plan

Figure 2 Site location plan

Figure 3 Results of the fieldwalking

Figure 4 Field C: Earthwork survey

Figure 5 Field D: Earthwork survey

1. SUMMARY

A programme of archaeological fieldwalking and earthwork survey was undertaken within the Phase 1 and 2 Area of the proposed Able Humber Ports Facility at East Halton, North Lincolnshire. The fieldwalking was designed to map the extent of known archaeological sites and record any unknown sites. An earthwork survey was carried out on two areas of ridge and furrow.

The area is archaeologically sensitive, with evidence of later prehistoric and Roman remains, perhaps parts of field systems associated with settlement, identified. Previous geophysical survey indicated a number of possible ditched enclosures and other features on the site. These were confirmed during a subsequent evaluation that identified Late Iron Age and Roman features.

Fieldwalking identified a background scatter of Neolithic and Bronze Age flints suggestive of transient activity rather than actual settlement. A single Iron Age pot sherd was recovered from the vicinity of an enclosure that was the focus for a concentration of Roman pottery. A further concentration of Roman pot was focussed on a second enclosure in the eastern part of the survey area.

The medieval and post-medieval finds are thought to derive from manuring scatters, with larger quantities of this material found in proximity to the village. Some post-medieval finds were possibly introduced along trackways.

The earthwork survey successfully plotted the ridge and furrow of the medieval field system in one field with only vestigial traces apparent in a second surveyed area. No other earthwork features were

apparent.

2. INTRODUCTION

2.1 Definition of an Evaluation

An archaeological evaluation is defined as 'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present Field Evaluation defines their character and extent, quality and preservation, and it enables an assessment of their worth in a local, regional, national or international context as appropriate' (IFA 1999).

2.2 Planning Background

Archaeological Project Services was commissioned by Able UK Ltd to undertake a programme of fieldwalking and earthwork survey within Phase 1 and 2 Area in advance of the construction of new port and storage facilities at East Halton, North Lincolnshire, as detailed in planning application PA/2009/0600. The work was undertaken between the 4th and 12th March 2010 in accordance with a specification prepared by Archaeological Project Services (Appendix 1) and approved by the Sites and Monuments Officer, North Lincolnshire Council.

2.3 Topography and Geology

East Halton is located 26km east of Scunthorpe and 15km northwest of Grimsby in North Lincolnshire (Fig. 1).

The Phase 1/2 site lies 1km to the east of the village adjacent to the existing oil terminal centred on National Grid Reference TA 150 200 (Fig. 2). The site

lies on the south bank of the Humber estuary at heights between 5m and 10m OD on gently undulating land within a broad downward trend from northwest to southeast.

Local soils are of the Holderness Association, typically fine loamy stagnogley soils (Hodge *et al.* 1984, 204). These soils are developed upon a drift geology of glacial till that in turn seals a solid geology of Burnham Chalk (BGS 1991). Localised areas of sand observed on the surface of the field suggest some drift cover derived from tidal flat and beach deposits.

2.4 Archaeological Setting

The principal archaeological resources currently identified within the development area have been summarised in the archaeological desk-based assessment report (AC Archaeology 2007) and the Project Environmental Impact Statement.

The development area contains a wide range of dated and undated archaeological resources. This includes extensive later prehistoric and Romano-British settlements identified from geophysical survey and excavation (including the Chase Hill Farm site, just to the south of the Phase 1 and 2 Area), remains of medieval cultivation and multi-period palaeo-environmental potential. Several possible enclosures have been identified from aerial photographs or geophysical survey but cannot currently be dated.

Within the Phase 1 and 2 Area two undated enclosures have been identified from aerial photography and geophysical survey. These, along with other linear and curvilinear features of possible prehistoric or Roman date, were the principal targets of archaeological trial trenching. Three

areas of domestic occupation spanning the Late Iron Age to the 3rd and 4th centuries AD were identified (Malone 2010, 6).

3. AIMS

The aim of the fieldwalking was to gather information to confirm the presence, extent and date of known archaeological sites and to locate any hitherto unknown sites. This was in order to allow the archaeological curator to be able to formulate a policy for the management of the archaeological resources present on the site.

The earthwork survey aimed to provide a record of the surviving ridge and furrow which may be damaged by the works.

4. METHODS

Fieldwalking was undertaken by walking a single transect within a 10m box aligned to the National Grid (Fig. 3). Surface artefacts from each transect were collected, bagged and assigned a unique reference number which was plotted using a Thales differential Global Positioning System (GPS) with each find related to the National Grid. Two fields, A and B (Fig. 2), were subject to fieldwalking. Details of each field or sector of fieldwalking were described on pro-forma recording sheets. These include comments on ground conditions, visibility, soil nature and colour, and limiting factors such as weather and lighting. A discard policy was operated throughout the fieldwalking so that no recent or late post-medieval finds were collected. The finds are summarised in Appendix 2 and the finds distribution is shown on Figure 3.

The earthwork survey was undertaken using GPS. A base receiver was established over a temporary survey station which

logged satellite data while a roving receiver was used to record points of detail. This was processed using N4ce (version 1.11) software to produce CAD drawings. Two fields were surveyed (C and D) and the results are shown on Figures 4 and 5.

5. RESULTS

Fieldwalking (Appendix 2 and Fig. 3)

Field A

A young cereal crop was evident across the field and provided up to 90% visibility. Transects within each 10m box were walked in a broad northwest-southeast pattern.

Finds were generally sparse across the field with the exception of a broad band of late post-medieval material in the centre of the field, perhaps marking a former boundary, and along the southeastern edge. None of this material was collected.

The earliest material collected from this field comprises four sherds of Roman pottery spread across the field. A few more sherds of medieval pottery were also recovered with no clustering apparent.

Field B

This field was also under a young crop, though more advanced than Field A, providing about 60-70% visibility. Furthermore, rain had caused a slight silt covering visible over the soil. Transects within each box were walked in east-west, north-south and southwest-northeast alignments depending on the crop planting.

Prehistoric flint flakes and tools were retrieved from across the field and date to the Neolithic and Bronze Age. These finds were largely collected from the central area of the field, though the overall pattern suggests they are too dispersed to represent

a cluster.

A single Late Iron Age sherd (No 44) was collected from near the more westerly enclosures previously identified. It is within this area that one of two clusters of Roman finds are apparent. These comprise a small number of *c.* 2nd century greywares which accord well with the results of the evaluation (Trenches 2, 3 and 4).

A second slight cluster (Nos 105, 106, 107 and 109) is located at the eastern end of Field B in the vicinity of a second enclosure (Trench 12). The pottery from this vicinity is largely 2nd to 3rd century date.

Three fragments of slag have been identified as being of possible Roman date. Two were found close to the easterly enclosure.

Medieval pottery is found across the field (shown in green on Fig. 3) and is more numerous towards the western edge of the fieldwalked area and East Halton. Locally produced pottery is abundant with regional imports from north of the Humber and a single import from the continent.

Post-medieval and later finds show a similar pattern of distribution to the medieval material. Concentrations of this material were noted alongside field tracks suggesting they were imported as hard surfacing material.

Earthwork Survey (Figs. 4 and 5)

Field C

Earthworks were generally slight across the whole field and were much reduced in the northeast corner, across the centre of the field and around the field boundaries (Fig. 4).

The earthworks comprise ridge and furrow

with no other features present. The ridge and furrow was aligned north to south. The distance between the ridges was generally between 7.5m and 7.95m and individual selions extended up to a maximum of 160m. Heights of individual ridges vary and measured in the region of approximately 0.5m.

The relative heights of the ridge and furrow compared to other areas of ridge and furrow in the immediate environs suggest that this field has been subject to ploughing on occasion.

Field D

Earthworks were slight to non-existent within this field with only a small area in the central north part of the field visible (Fig. 5), largely as differential colour of the grass. The ridges rarely exceeded 0.2m in height and were generally in the region of 0.12m high. A single width of 7.66m was recorded.

The ridge and furrow was aligned northwest-southeast. The maximum recorded length for a selion was 64m.

6. DISCUSSION

A thin scatter of Neolithic and Bronze Age flints were recorded from the survey area. It is likely they represent transient activity with settlement of the period located elsewhere.

A single Late Iron Age sherd was retrieved, according well with finds of this material recovered from the evaluation. However, as only one sherd was found it is probable that modern ploughing is not affecting deposits of the period.

Similarly, Roman finds are concentrated on the two previously evaluated enclosures. There is insufficient material to

suggest that the sites extend much beyond the enclosures that were recognised in the geophysical survey.

Medieval and later material appears largely to be derived from manuring scatters. The apparent concentration of material at the western end of Field B may indicate midden mounds given their proximity to the modern village. The earthwork survey suggests that the fieldwalked areas lay within the open fields of the medieval village.

7. CONCLUSIONS

Archaeological fieldwalking and earthwork survey were undertaken within the Phase 1/2 area of the proposed Able Humber Port Facility, East Halton, as the site was known to contain archaeological sites of Iron Age to Roman and medieval date.

The fieldwalking produced material comparable to that retrieved during the previous evaluation of the site. Concentrations of Roman pottery match the known location of the enclosures. Moreover, further material evidencing a Neolithic and Bronze Age presence at the site was recovered. Material of medieval and later date indicate the extent of the former fields of East Halton as they were likely derived from manuring scatters.

The earthwork survey successfully recorded one area of ridge and furrow of the medieval field system. A second surveyed area recorded only faint traces of ridge and furrow. These are part of a much wider scheme of medieval agricultural earthworks visible in the environs of East Halton.

8. ACKNOWLEDGEMENTS

Archaeological Project Services wishes to acknowledge the assistance of Mr Peter Cox of AC Archaeology who commissioned this investigation on behalf of Able UK Ltd. The work was coordinated by Gary Taylor who edited this report along with Tom Lane. Dave Start kindly allowed access to the library maintained by Heritage Lincolnshire.

9. PERSONNEL

Project Coordinator: Gary Taylor
Site Staff: Alex Beeby, Denise Buckley,
Paul Cope-Faulkner, Tom Lane
Surveying: Andrew Failes, Dale Trimble
Earthwork Surveying: Andrew Failes
Finds Processing: Denise Buckley
Photographic reproduction: Sue Unsworth
Illustration: Paul Cope-Faulkner, Dale
Trimble
Report Compilation: Paul Cope-Faulkner

10. BIBLIOGRAPHY

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IFA, 1999 *Standard and Guidance for Archaeological Field Evaluations*

Malone, SJ, 2010 *Archaeological Evaluation: Proposed Able Humber Ports Facility, East Halton, North Lincolnshire*,

unpublished APS report **6/10**

11. ABBREVIATIONS

APS Archaeological Project Services

BGS British Geological Survey

IFA Institute of Field Archaeologists



Figure 1 - General location plan

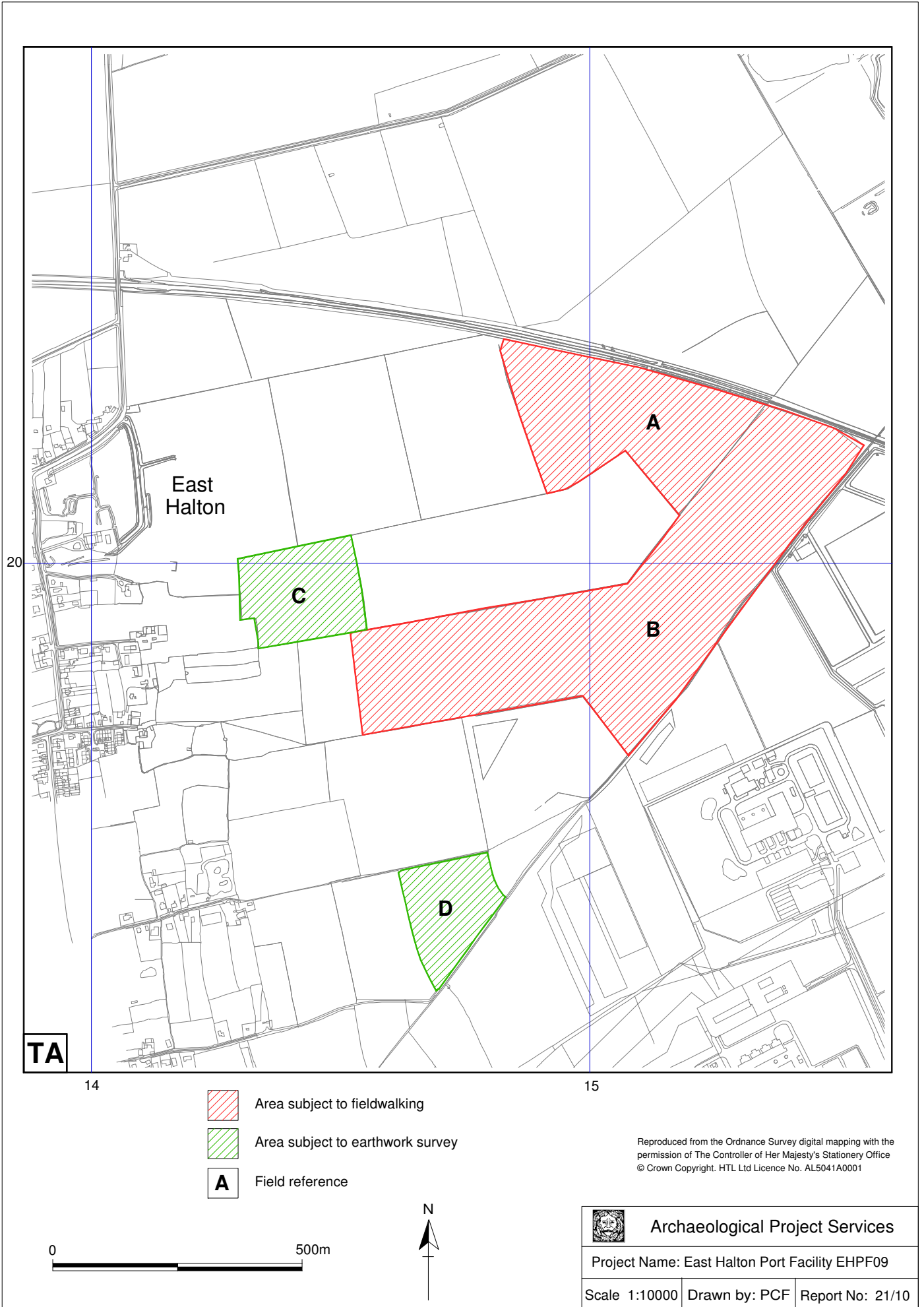


Figure 2 - Site location plan

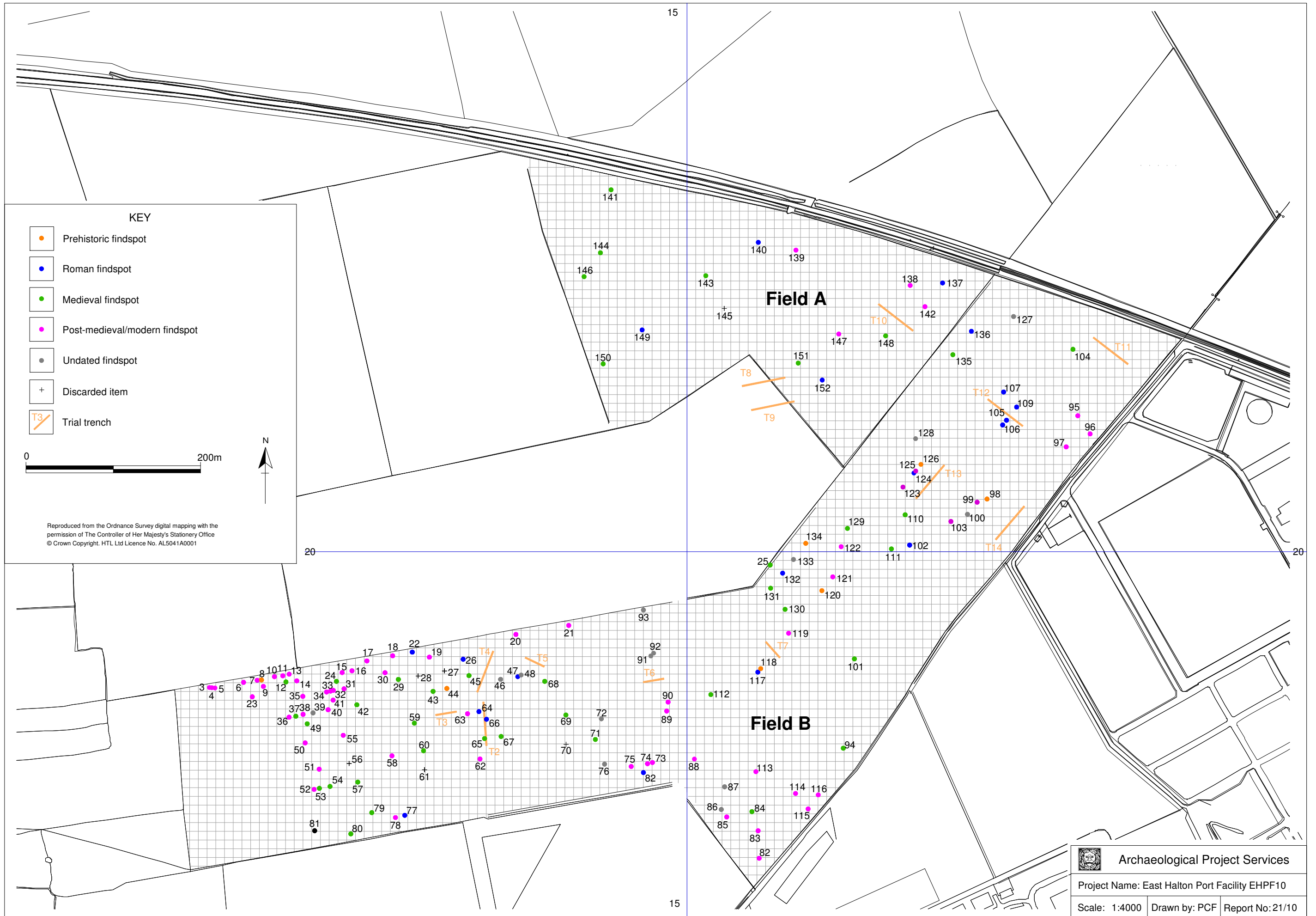


Figure 3 - Results of the fieldwalking

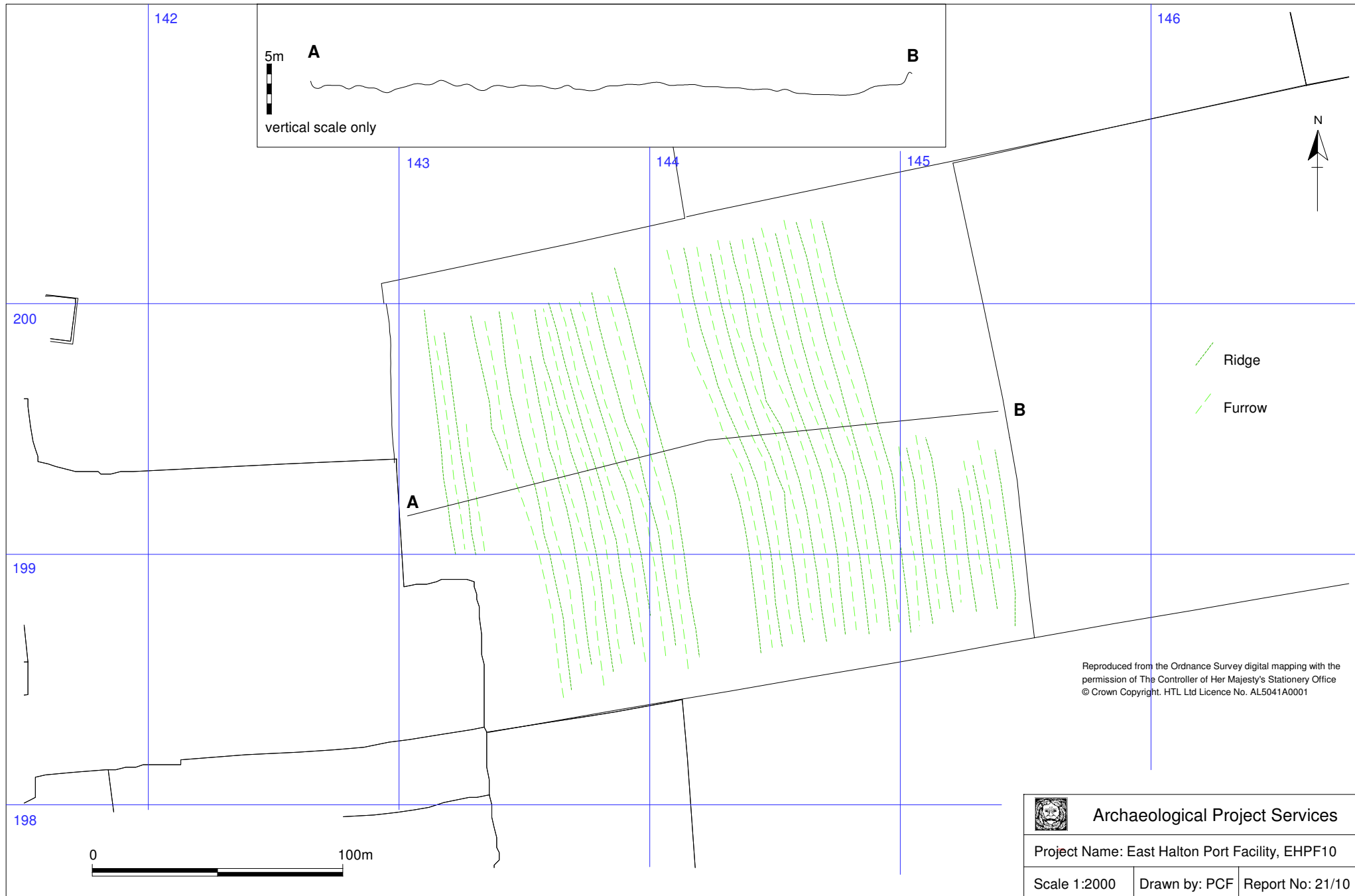


Figure 4 - Field C: Earthwork survey

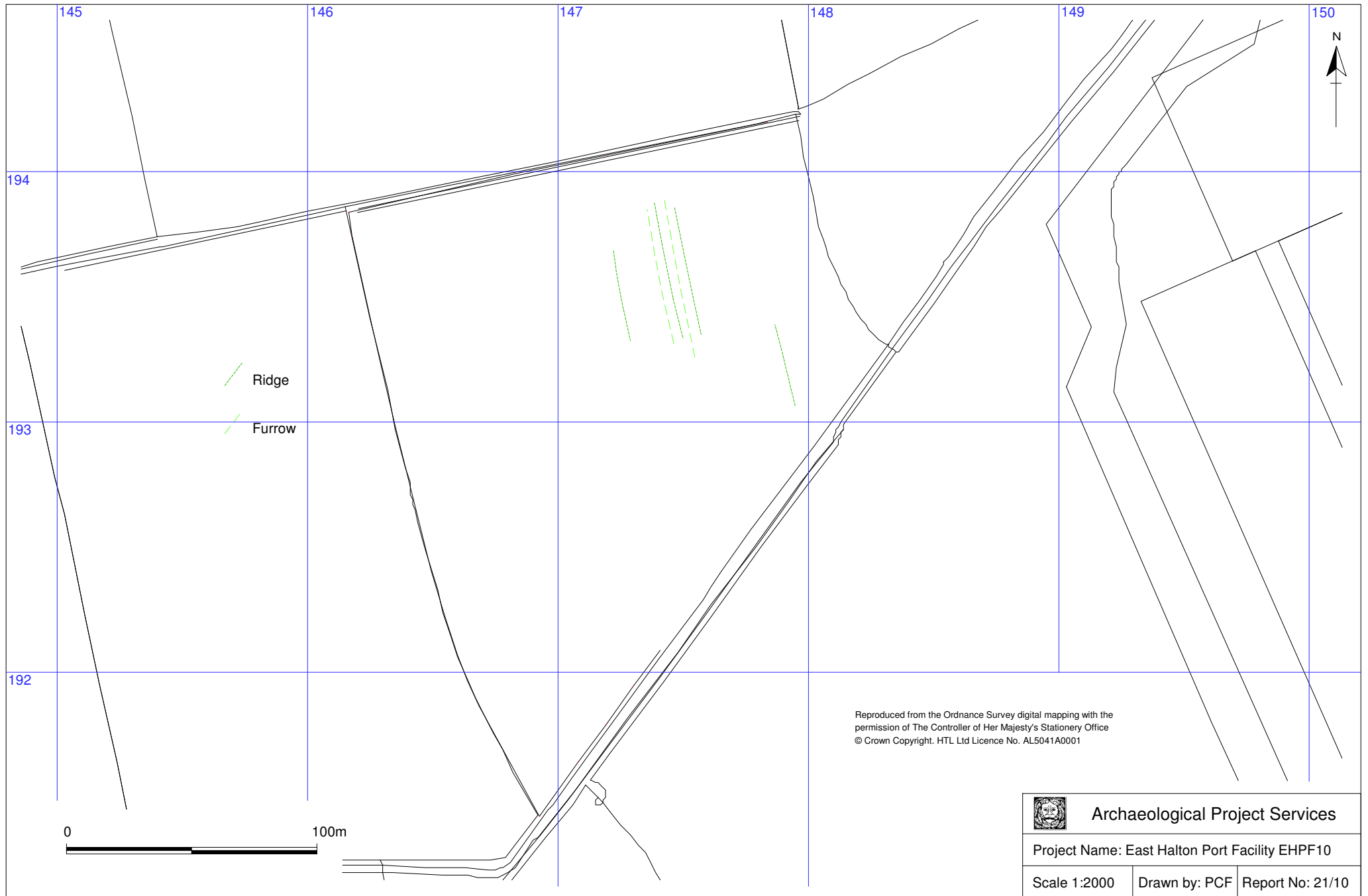


Figure 5 - Field D: Earthwork survey

Appendix 1

PROPOSED ABLE HUMBER PORTS FACILITY, EAST HALTON, NORTH LINCOLNSHIRE - PROJECT DESIGN FOR ARCHAEOLOGICAL FIELDWALKING AND EARTHWORK SURVEY

1 SUMMARY

- 1.1 This document comprises a project design for the further archaeological field evaluation of the Phase 1 and 2 areas of proposed new port and storage facilities at East Halton, North Lincolnshire.*
- 1.2 The area is archaeologically sensitive, with evidence of later prehistoric and Roman remains, perhaps parts of field systems associated with settlement, identified. Geophysical survey indicates a number of possible ditched enclosures and other features on the site. Recent trial trench investigation indicated the enclosures were of Iron Age-Roman date.*
- 1.3 A further programme of archaeological investigation and recording is required at the site. Fieldwalking will investigate and characterise the extent of artefact scatters associated with features identified by geophysical survey and trial trenching. Additionally, two areas of ridge and furrow agricultural earthworks of probable medieval date will be surveyed.*
- 1.4 On completion of the fieldwork a report will be prepared detailing the findings of the investigation. The report will consist of a text describing the nature and date of the artefact scatters located, and the results of the earthwork survey, and will be supported by illustrations and photographs.*

2 INTRODUCTION

- 2.1 This document comprises a project design for the archaeological field evaluation by earthwork survey and fieldwalking of the Phase 1 and 2 areas of proposed new port and storage facilities for Able UK Ltd at East Halton, North Lincolnshire.
- 2.2 The document contains the following parts:
- 2.2.1 Overview
 - 2.2.2 The archaeological and natural setting
 - 2.2.3 Stages of work and methodologies to be used
 - 2.2.4 List of specialists
 - 2.2.5 Programme of works and staffing structure of the project

3 SITE LOCATION

- 3.1 East Halton is located 26km east of Scunthorpe and 15km northwest of Grimsby in North Lincolnshire. The Phase I/II site lies to the east of the village adjacent to the existing oil terminal centred on National Grid Reference TA 150 200.

4 PLANNING BACKGROUND

- 4.1 A planning application (PA/2009/0600) has been submitted to North Lincolnshire Council by Able UK Ltd for construction of new port and storage facilities near East Halton, covering some 380 hectares in total. Desk-based assessment (AC Archaeology 2007) and geophysical survey of the Phase 1 and 2 development areas were completed and the results of the geophysical survey tested by archaeological trial trenching. This established that the enclosures identified by geophysics were Iron Age-Roman in date. Further evaluation by fieldwalking is required to

examine the extents and natures of artefact scatters associated with the enclosures. In addition, two areas of medieval ridge and furrow agricultural earthworks have been designated for topographic recording. These works are required as part of a broader framework agreement between Able UK Ltd and North Lincolnshire Archaeology Office (AC Archaeology 2010).

5 SOILS AND TOPOGRAPHY

- 5.1 The Phase 1 and 2 area lies on the south bank of the Humber estuary on the glacial tills of the Middle Marsh at between c. 5m and 10m O.D. Soils are mapped as fine loamy stagnogley soils of the Holderness Association (Hodge *et al.* 1984, 204) developed on the chalky till which overlies a solid geology of Burnham Chalk.

6 ARCHAEOLOGICAL OVERVIEW

- 6.1 The principal archaeological resources currently identified within the development area have been summarised in the Archaeological desk-based assessment report (AC Archaeology 2007) and the Project Environmental Impact Statement.
- 6.2 The development area contains a wide range of dated and undated archaeological resources. This includes extensive later prehistoric and Romano-British settlements identified from geophysical survey and excavation (including the Chase Hill Farm site, just to the south of the Phase 1 and 2 area), remains of Medieval cultivation and multi-period palaeo-environmental potential. Several possible enclosures have been identified from aerial photographs or geophysical survey that cannot currently be dated.
- 6.3 Within the Phase 1 and 2 area two such undated enclosures have been identified from aerial photography and geophysical survey. These, along with other linear and curvilinear features of possible prehistoric or Roman date, are the principal targets of the proposed evaluation trenching.
- 6.4 Recent investigation identified the enclosures in the Phase 1 and 2 area. One of the enclosures ranged in date from the early-mid Iron Age to the later Iron Age/early Roman period, while the second was later, occupied from the late Iron Age-early Roman period until the 3rd-4th century AD (Malone forthcoming).

7 AIMS AND OBJECTIVES

- 7.1 The aims of the work will be to make a record of earthworks and to gather sufficient information for the archaeological curator to be able to formulate a policy for the management of the archaeological resources present on the site.
- 7.2 The objectives of the work will be to:
- 7.2.1 Identify the extents of artefact scatters around known sites and locate any hitherto unknown archaeological sites
 - 7.2.2 Provide information about general background scatters of artefacts and to quantitatively recover archaeological artefacts from ploughsoil
 - 7.2.3 Provide finds distribution and density data
 - 7.2.4 To identify and date artefacts
 - 7.2.5 Determine the spatial relationship between archaeological sites signified by artefact scatters and those identified by other methods such as excavation and geophysical survey.
 - 7.2.6 Establish the way in which the archaeological sites denoted by artefact scatters fit into the pattern of occupation and land-use in the surrounding landscape.

8 LIAISON WITH THE ARCHAEOLOGICAL CURATOR

- 8.1 Close contact will be maintained with the archaeological curator throughout the investigation to ensure that the scheme of works fulfils their requirements.

9 EARTHWORK SURVEY

9.1 Reasoning for this technique

9.1.1 Earthwork survey provides a record of man-made topographic features, their form, condition and relative chronology.

9.1.2 Two areas of ridge and furrow agricultural earthworks have been designated for earthwork survey – Areas C and D on the attached plan (AC Archaeology 2010, fig 2b). Both are located towards the southern end of the proposed ports facility, one at the eastern end of Scrub Lane and the other to the east of Lease Lane.

9.2 General Considerations

9.2.1 All work will be undertaken following statutory Health and Safety requirements in operation at the time of the investigation.

9.2.2 The work will be undertaken according to the relevant codes of practice issued by the Institute for Archaeologists (IfA). *Archaeological Project Services* is an IfA Registered Archaeological Organisation (No. 21), managed by a member (MifA) of the institute.

9.3 Methodology

9.3.1 Earthwork survey will be carried out in accordance with guidelines published in *Understanding the Archaeology of Landscapes* (English Heritage 2007).

9.3.2 The survey will be undertaken using a survey grade digital GPS instrument. Field boundaries will be recorded as control points and the crests of ridges and bases of furrows will be surveyed. The tops, bases and breaks of slopes of any other earthworks identified will also be surveyed. Natural topography will also be recorded, where appropriate.

9.3.3 Where necessary, sketch plans showing earthworks as hachured features will be made to clarify chronological and spatial relationships, though the primary survey method will remain by dGPS.

9.3.4 Notes describing the general nature of the earthworks, and more detailed descriptions of any features other than ridge and furrow, will be compiled.

9.3.5 A photographic record consisting of black and white prints (reproduced as contact sheets) and colour images (slides and digital) be compiled. The photographic record will consist of:

- general site views from different viewpoints and under varying light conditions if possible.
- specific features other than ridge and furrow, if encountered
- groups of earthwork features where their association indicates functional or chronological relationships.

10 FIELDWALKING SURVEY

10.3 Reasoning for this technique

10.3.1 Fieldwalking survey is a non-invasive method of identifying the locations, extents and dates of buried and degraded or destroyed archaeological sites from the artefacts derived from them and brought to the surface of the ground by agriculture.

10.4 General Considerations

10.4.1 Fieldwalking will be undertaken on all fields in a suitable condition within the designated study area, which is located south of the railtrack in the Phase 1 and 2 area, as shown on the enclosed plan (AC Archaeology 2010, fig 2b).

10.2.2 The provisions of the *Treasure Act*, 1996 will be complied with.

10.5 Methodology

10.5.1 Fieldwalking will be carried out on 10m boxes based on the national grid. The survey grid will be established using a survey-grade dGPS.

10.3.2 One transect will be walked per box.

10.3.3 Surface artefacts from each 10m-long transect will be collected, bagged and assigned a unique reference number, identifying the particular transect.

10.3.4 Details of each field or sector of fieldwalking will be described on pro-forma recording sheets. This will include comments on ground conditions, visibility, soil nature and colour, and limiting factors such as weather and lighting.

10 **ANALYSIS AND REPORTING**

10.5 Stage 1

10.5.1 All finds recovered during the investigation will be examined and, where appropriate, washed, marked, bagged and labelled according to their individual survey code. Any finds requiring specialist treatment and conservation will be sent to the Conservation Laboratory at Lincoln.

10.5.2 Survey data will be downloaded and processed.

10.6 Stage 2

10.6.1 Finds will be sent to specialists for identification and dating.

10.6.2 The finds data will be correlated with the survey results to determine significant concentrations or associations.

10.7 Stage 3

10.7.1 On completion of stage 2, a report detailing the findings of the investigation will be prepared. This will consist of:

- A non-technical summary of the results of the investigation.
- A description of the archaeological setting of the site.
- Description of the topography and geology of the investigation area.
- Description of the methodologies used during the investigation and discussion of their effectiveness in the light of the results.
- A text describing the findings of the investigation.
- Plans showing the survey area and artefact distributions.
- Interpretation of the results and their context within the surrounding landscape.

- Specialist reports on the finds from the site.
- Appropriate photographs of the site and specific archaeological features or groups of features.
- A consideration of the significance of the remains found, in local, regional, national and international terms, using recognised evaluation criteria.

11 **ARCHIVE**

11.1 The documentation, finds, photographs and other records and materials generated during the investigation will be sorted and ordered into the format specified by North Lincolnshire Museums Service. This sorting will be undertaken according to the guidelines and conditions stipulated by the museum (*Guidelines for deposition of Archaeological Archive with North Lincolnshire Museum*, 2008), and appropriate national guidelines, for long-term storage and curation. It is estimated that the archive will be deposited within 6 months of completion of the project. A North Lincolnshire Museum site code will be obtained prior to the commencement of the investigation. An archive deposition request form will be completed and copied to the North Lincolnshire Sites and Monuments Record Office.

12 **REPORT DEPOSITION**

12.1 Copies of the investigation report will be sent to: the client; North Lincolnshire Council Planning Department; and the North Lincolnshire Sites and Monuments Record and the Regional Science Advisor (in suitable format). An electronic copy of the report (in PDF format) will be provided to the NLSMR and EH Regional Science Advisor.

13 **PUBLICATION**

- 13.1 Details of the investigation will be input to the Online Access to the Index of Archaeological Investigations (OASIS).
- 14.2 Notes or articles describing the results of the investigation will also be submitted for publication in the appropriate national journals: *Medieval Archaeology* for medieval and later remains, and *Britannia* for discoveries of Roman date.

14 **CURATORIAL MONITORING**

- 14.1 Curatorial responsibility for the archaeological work undertaken on the site lies with the North Lincolnshire Site and Monuments Record Office. They will be given written notice of the commencement of the project to enable them to make monitoring arrangements.
- 14.2 If appropriate, the English Heritage Regional Scientific Advisor will be invited to monitor and advise at the site.

15 **VARIATIONS TO THE PROPOSED SCHEME OF WORKS**

- 15.1 Variations to the scheme of works will only be made following written confirmation from the archaeological curator, the client and their consultant.
- 15.2 Should the archaeological curator require any additional investigation beyond the scope of the brief for works, or this project design, then the cost and duration of those supplementary examinations will be negotiated between the client and the contractor.

16 **STAFF TO BE USED DURING THE PROJECT**

16.1 The work will be directed by Tom Lane MIfA, Senior Archaeologist, Archaeological Project Services. The on-site works will be supervised by an Archaeological Supervisor with experience

and knowledge of archaeological fieldwalking and earthwork surveys of this type. Archaeological survey and fieldwalking will be carried out by Archaeological Technicians, experienced in projects of this type. Site staff will be from: M Peachey, A Failes, C Moulis (site supervisors); B Garland, B Hamilton, E Kendall, R Kendall, B Leadbetter, J Smith (site assistants).

- 16.2 The following organisations/persons will, in principle and if necessary, be used as subcontractors to provide the relevant specialist work and reports in respect of any objects or material recovered during the investigation that require their expert knowledge and input. Engagement of any particular specialist subcontractor is also dependent on their availability and ability to meet programming requirements.

<u>Task</u>	<u>Body to be undertaking the work</u>
Conservation	Conservation Laboratory, City and County Museum, Lincoln.
Pottery Analysis	Prehistoric: D Trimble, APS in consultation with Dr D Knight Later prehistoric and Roman: A Beeby, APS, in consultation with B Precious, independent specialist Post-Roman: Dr A Boyle, APS
Other Artefacts	J Cowgill, independent specialist/G Taylor, APS
Animal Remains Analysis	P Cope-Faulkner, APS/J Wood independent specialist

17 PROGRAMME OF WORKS AND STAFFING LEVELS

- 17.1 Fieldwork is expected to be undertaken by appropriately experienced staff, including supervisors and assistants, and to take about 7 days.
- 17.2 Post-excavation analysis and report production will take about 7 days. A project officer or supervisor will undertake most of the analysis, with assistance from the finds supervisor, CAD illustrator and specialists.

18 INSURANCES

- 18.1 Archaeological Project Services, as part of the Heritage Trust of Lincolnshire, maintains Employers Liability insurance to £10,000,000. Additionally, the company maintains Public and Products Liability insurances, each with indemnity of £5,000,000. Copies of insurance documentation are enclosed.

19 COPYRIGHT

- 19.1 Archaeological Project Services shall retain full copyright of any commissioned reports under the *Copyright, Designs and Patents Act 1988* with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Design.
- 19.2 Licence will also be given to the archaeological curators to use the documentary archive for educational, public and research purposes.
- 19.3 In the case of non-satisfactory settlement of account then copyright will remain fully and exclusively with Archaeological Project Services. In these circumstances it will be an infringement under the *Copyright, Designs and Patents Act 1988* for the client to pass any report, partial report, or copy of same, to any third party. Reports submitted in good faith by Archaeological Project Services to any Planning Authority or archaeological curator will be removed from said Planning Authority and/or archaeological curator. The Planning Authority and/or archaeological curator will be notified by Archaeological Project Services that the use of any such information previously supplied constitutes an infringement under the *Copyright, Designs and Patents Act 1988* and may result in legal action.

- 19.4 The author of any report or specialist contribution to a report shall retain intellectual copyright of their work and may make use of their work for educational or research purposes or for further publication.

20 **REFERENCES**

AC Archaeology, 2007 *Able Humber Ports Facility, East Halton, North Lincolnshire, Archaeology and Cultural Heritage Desk Based Assessment*. Unpublished report no. **0107/1/3**

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IFA, 2001 *Standard and Guidance for Archaeological Field Evaluation*. (and subsequent revisions). Institute of Field Archaeologists

Malone, S, forthcoming *Archaeological Evaluation Proposed Able Humber Ports Facility, East Halton, North Lincolnshire*, unpublished APS report

Appendix 2

FIELDWALKING FINDS SUMMARY

Plot No.	Material	Comments	Pottery Fabric	Pottery Code	Weight (g)	Date	Period
1	slag	iron smithing slag; discarded			19	19th-20th	Early Modern
2	slag	iron smithing slag; discarded			22	19th-20th	Early Modern
3	slag	iron smithing slag; discarded			6	19th-20th	Early Modern
4	slag	iron smithing slag; discarded			28	18th-20th	Early Modern
5	Pottery	Discarded	Black-glazed wares	BL	4	17th-18th	Early Modern
6	Glass	bottle; discarded			21	19th	Early Modern
7	slag	iron smithing slag; discarded			21	18th-20th	Early Modern
8	Stone	flint core fragment exhibiting blade removal			40	Neolithic	Prehistoric
9	Clay pipe	stem, bore 7/64"; discarded			9	17th	Post Med
10	Clay pipe	stem, bore 6/64"; discarded			7	17th	Post Med
11	Clay pipe	stem, bore 7/64"; discarded			5	17th	Post Med
12	Pottery	ID?	Humberware	HUM	13	13th-14th	Medieval
12	Pottery	Stacking Scar	Humberware	HUM	19	13th-14th	Medieval
13	Pottery	ABR	Midlands Yellow ware	MY	4	L16th-17th	Post Med
14	slag	iron smithing slag; discarded			10	19th-20th	Early Modern
15	Pottery	Yorks Product; Hard Red Fab; discarded	Unidentified slipware	SLIP	36	L18th-19th	Early Modern
16	slag	vitrified hearth lining			31		Early Modern
17	Pottery	Discarded	Pearlware	PEARL	1	ML18th-L19th	Early Modern
18	Pottery	ABR; discarded	Unidentified slipware	SLIP	23	18th	Early Modern
19	Pottery	Flake; discarded	Glazed Red Earthenware	GRE	15	17-M18th	Post Med
20	slag	vitrified hearth lining	slag		81		Early Modern
21	Glass	bottle; discarded			13	19th-20th	Early Modern
22	CBM	Abraded Base; Tegula			184	Roman	Roman
23	Pottery	Discarded	Modern whiteware	WHITE	1	19th-20th	Early Modern
24	Pottery	Flake	Humberware	HUM	1	13th-14th	Medieval
24	CBM	Flatroofer; Abraded			7	13th-15th	Medieval
25	Pottery	Oval Handle	Humberware	HUM	29	13th	Medieval
26	Pottery	Rim to girth; Hadrianic-early Antonine; c.f. Swan 2002 fig 10 126; Rhenish influence; military?; V. coarse sand with hard rounded (Oolitic?) Fe and grog/clay pells	Grey Ware	GREY	14	E2-ML2C	Roman
27	Stone	ironstone, natural; discarded			33		
28	cinder	Discarded			11		
29	Pottery		Humberware	HUM	1	13th-14th	Medieval
30	Pottery	Discarded	19th-century Buff ware	NCBW	32	19th-E20th	Early Modern
31	Pottery	Discarded	Black-glazed wares	BL	1	L16th-17th	Post Med
32	Pottery	V ABR; Misfired Glaze; discarded	Glazed Red Earthenware	GRE	24	17th?	Post Med
33	Pottery	V ABR; discarded	Black-glazed wares	BL	3	18th-19th	Early Modern
33	Pottery	ABR; discarded	Nottingham stoneware	NOTS	43	M18th-19th	Early Modern
34	Pottery	Discarded	Brown glazed earthenware	BERTH	8	17th-18th	Post Med
35	Pottery	Yorks Product; V ABR; Hard Red Fab; discarded	Unidentified slipware	SLIP	29	L18th-19th	Early Modern

36	Pottery	V ABR; discarded	Black-glazed wares	BL	1	16th-17th	Post Med
37	Pottery	V ABR; Burnt; Comm Angular to sub-round Q 0.2-1mm; comm Fe grains up to 1mm; sparse Ca material; sparse flint; sparse Quartzite; Poss Acid Igneous	Medieval local fabrics	MEDLOC	8	?	Early Medieval? Medieval?
38	Pottery		Black-glazed wares	BL	2	16th-17th	Post Med
39	slag	vitrified clay			67		
40	Pottery	ABR; discarded	Pearlware	PEARL	3	ML18th-L19th	Early Modern
41	Glass	bottle; discarded			17	19th	Early Modern
42	Pottery	V ABR; white slipped	North Lincolnshire Light-firing Sandy ware	NLLFSW	2	13th-M15th	Medieval
43	Pottery	Flake	Humberware	HUM	1	13th-14th	Medieval
43	Pottery	Burnt and reoxidised; V ABR	North Lincolnshire Quartz and Chalk-tempered ware	NLQC	3	L11th-E13th	Early Medieval
44	Pottery	BS	Native Type Fabric	NAT	13	LIA	Late Iron Age
45	Pottery	Unusual thick fabric; ID?	Langerwehe/Raeren-type Stoneware	LARA	32	14th-15th	Medieval
46	slag	undiagnostic iron slag			11		
47	Pottery	V ABR	Shell-tempered ware	SHEL	8	Roman	Roman
47	fired clay	vitrified clay			11		
48	Pottery	?ID	Humberware	HUM	23	13th-14th	Medieval
49							
50	Pottery	Flake; discarded	Black-glazed wares	BL	5	17th-18th	Post Med
51	Metal	iron horseshoe fragment: discarded			45	17th-18th	Post Med
52	Pottery	Discarded	Glazed Red Earthenware	GRE	32	17-M18th	Post Med
53	Pottery	V ABR; Oval Handle	North Lincolnshire Humber Type	NLHT	19	13th-14th?	Medieval
54	Pottery	V ABR; ID?		HUM3	14	14th-15th	Medieval
55	Pottery	Discarded	Modern whiteware	WHITE	3	19th-20th	Early Modern
56	cinder	Discarded	cinder		2		
57	Pottery	?ID	North Lincolnshire Humber Type	NLHT	1	13th-14th?	Medieval
58	Pottery		Black-glazed wares	BL	5	19th	Early Modern
59	Pottery	V ABR	North Lincolnshire Light-firing Sandy ware	NLLFSW	6	13th-M15th	Medieval
60	Pottery	ABR	North Lincolnshire Light-firing Sandy ware	NLLFSW	3	13th-M15th	Medieval
61	cinder	Discarded	cinder		2		
62	Pottery	ABR	Late Earthenwares	LERTH	4	16th-18th	Post Med
63	slag	iron smithing slag	slag		52		Early Modern
64	Pottery	BS; FLINT; CALC	Grey Ware with Sandwich Core	GRSAN	4	RO	Roman
65	Pottery	Comm sub round to round Q; 0.1 to 0.5mm; Abun Fe small flecks up to 1mm; Poss clay pells?	Medieval local fabrics	MEDLOC	11	13th-15th	Medieval
66	Pottery	RIM	Roman Shell Tempered Fabric	SHEL	18	1-2C	Roman
67	Pottery	Soot Ex; V ABR	North Lincolnshire Coarse Sandy ware	NLCS	4	L12th-15th	Medieval
68	Pottery	ABR	Humberware	HUM	65	14th-15th	Medieval
69	CBM	Flatroofer; Strike Marks; Burnt?			47	13th-15th	Medieval
70	cinder		coal		10		
71	Pottery	Flake	Nottingham Splashed ware	NSP	3	12th-E13th	Early Medieval

72	slag	slag/vitrified hearth lining	slag		154		
73	Pottery	V ABR	Brown glazed earthenware	BERTH	3	16th-18th	Post Med
74	Pottery	V ABR	Pale Glazed Earthenware	PGE	3	17th-18th	Post Med
75	CBM	Single struck sanded surface otherwise entirely vitrified; Handmade			245	16th-18th	Post Med
76	slag	vitrified hearth lining			395		
77	slag	iron smelting slag	slag		46		?Roman
78	Pottery	Discarded	Nottingham stoneware	NOTS	6	M18th-19th	Early Modern
79	Pottery		North Lincolnshire Humber Type	NLHT	4	13th-14th	Medieval
80	Pottery		Raeren stoneware	RAER	20	M15th-16th	Late Medieval
81	Pottery	V ABR; Poss Burnt; Poss Roman?	Unidentified types	MISC	1	?	?
82	Pottery		Black-glazed wares	BL	14	19th	Early Modern
82	Pottery	V ABR; Yorks?; discarded	Unidentified slipware	SLIP	76	L18th-19th	Early Modern
83	Pottery	Discarded	Unspecified English Stoneware	ENGS	14	19th-20th	Early Modern
84	Pottery	Burnt glaze; ?ID	Humberware	HUM	4	13th-14th	Medieval
85	Pottery	Yorks Product; discarded	Unidentified slipware	SLIP	23	L18th-19th	Early Modern
86	stone?	natural vesicular stone?			185		
87	slag	undiagnostic iron slag	slag		49		
88	Pottery	Flake; discarded	Black-glazed wares	BL	5	17th-18th	Post Med
88	Pottery	Flake; discarded	Late Earthenwares	LERTH	6	16th-18th	Post Med
89	Pottery	Flake; discarded	Pearlware	PEARL	1	ML18th-L19th	Early Modern
90	Pottery	V ABR; discarded	Brown glazed earthenware	BERTH	26	17th-18th	Post Med
91	CBM	vitrified, possibly industrial			22		
92	Stone	well worn on concave surface; an area of wear on convex surface	quern?		329		
92	stone	natural vesicular stone?			53		
93	slag	iron smithing slag	slag		218		
94	CBM	Flatroofer			12	13th-15th?	Medieval
95	Pottery	Flake; discarded	Brown glazed earthenware	BERTH	6	17th-18th	Post Med
96	Pottery	ABR; Yorks?; discarded	Unidentified slipware	SLIP	9	L18th-19th	Early Modern
97	Pottery		Black-glazed wares	BL	4	19th	Early Modern
98	Stone	flint utilized flake with retouch along 1 edge			10	Bronze Age	Prehistoric
99	Pottery	ABR; discarded	Unidentified slipware	SLIP	4	M17th-18th	Post Med
100	slag	iron smelting slag	slag		33		?Roman
101	Pottery	ABR	Humberware	HUM	11	13th-14th	Medieval
102	Pottery	Rim; V abr; blue-grey fab; sparse md Ca; Fe + shale; fine clay pells	Grey Ware	GREY	23	EM3C+	Roman
103	Pottery		Unspecified English Stoneware	ENGS	74	M18th-19th	Early Modern
104	Pottery		Humberware	HUM	3	13th-14th	Medieval
105	Pottery	BS; BLUE-GREY	Grey Ware with Sandwich Core	GRSAN	7	2C+	Roman
106	Pottery	BS; SP CLAY PELLs; SP POLYC CALCITE?	Grey Ware	GREY	4	RO	Roman
107	Pottery	BS; CLAY PELLs AND FE	Grey Ware	GREY	14	RO	Roman
108	Pottery	BS; BLUE-GREY; HARD ROUNDED FE AND POL Q; POSS BWM	Grey Ware	GREY	9	3C+	Roman
109	Pottery	BS; BLUE-GREY; HARD ROUNDED FE AND POL Q; POSS BWM	Grey Ware	GREY	17	3C+	Roman
110	Pottery	V ABR; ?ID	North Lincolnshire Fine Sandy ware	NLFSW	19	L12th-E14th	Medieval

111	Pottery	ABR	Humberware	HUM	3	13th-14th	Medieval
112	Pottery	Comm fine sub round Q 0.1 - 0.2mm incl some milky; Comm tiny Fe grains incl some larger up to 1mm; V ABR; Burnt; ?ID or Humberware	Medieval local fabrics	MEDLOC	14	13th-14th	Medieval
113	CBM	vitrified brick			57		Post Med
114	CBM	ABR			74	17th-18th	Post Med
115	Pottery		Unspecified English Stoneware	ENGS	8	19th-20th	Early Modern
116	slag	iron smithing slag	slag		15		Early Modern
117	Pottery	RIM; BLUE-GREY	Grey Ware	GREY	18	E3C+	Roman
118	stone	flint flake			8	Neolithic/Bronze Age	Prehistoric
119	CBM	V ABR; Handmade			73	18th-20th	Early Modern
120	stone	flint flake with blade scars			10	Neolithic	Prehistoric
121	Clay pipe	spurred bowl base and stem, 5/64"; stamped 'EB' on sides of spur	clay pipe		3	18th century	Early Modern
122	Pottery	Marked Base	Bone china	BONE	4	L18th-19th	Early Modern
123	Pottery	Yorks	Unidentified slipware	SLIP	42	L18th-19th	Early Modern
124	Pottery	BASE; POL FLINT; ABR; BLUE-GREY FAB	Grey Ware	GREY	31	2-3C+	Roman
125	Pottery		Brown stoneware (generic)	BS	34	18th-19th	Early Modern
126	stone	Flint utilized flake, secondary retouch along 1 edge			7	Bronze Age	Prehistoric
127	slag	iron smelting slag	slag		42		?Roman
128	slag	undiagnostic iron slag	slag		42		
129	Pottery	?ID	Humberware	HUM	12	13th-14th	Medieval
130	Pottery		Humberware	HUM	2	13th-14th	Medieval
131	Pottery	Reduced glaze; abundant sub-round to round Q 0.2-0.5mm plus occ larger; Comm Ca Incl; Comm Fe	Medieval local fabrics	MEDLOC	11	14th-15th	Medieval
132	Pottery	BS; BLUE-GREY	Grey Ware with Sandwich Core	GRSAN	1	RO	Roman
133	slag	iron smelting slag	slag		136		
134	stone	flint broken blade flake			2	Neolithic	Prehistoric
135	Pottery	V ABR	Humber Basin fabrics	HUMB	2	14th-15th	Medieval
136	Pottery	BS; BLUE-GREY; POSS LTR?	Grey Ware	GREY	1	RO	Roman
137	Pottery	BS; MOD CLAY PELLE UP TO 2MM; BLUE-GREY?	Grey Ware	GREY	4	RO	Roman
138	CBM	V ABR; Handmade			26	16th-18th?	Post Med
139	Pottery		Glazed Red Earthenware	GRE	16	16th-17th	Post Med
140	Pottery	RIM	Grey Ware	GREY	2	M1-2C+	Roman
141	Pottery	V ABR; Oval Handle	Humberware	HUM	28	13th-14th	Medieval
142	Pottery	Odd form	Unspecified English Stoneware	ENGS	26	M18th-19th	Early Modern
143	Pottery	Fine rounded to sub-round Q 0.1-0.2mm with occ larger up to 0.8mm; Occ Fe; Occ ?Flint; reduced green glaze	Medieval local fabrics	MEDLOC	1	13th-15th	Medieval
144	Pottery	ABR	North Lincolnshire Coarse Sandy ware	NLCS	5	L12th-15th	Medieval
145	Stone	Discarded	natural		8		
146	Pottery	Small Strap; V ABR	Humberware	HUM	20	14th-15th	Medieval
147	Metal	spoon handle	copper alloy		6	19th-20th	Early Modern
148	Pottery	ABR; Typical soft Orange fab leaves orange powder on skin	Beverley Orange ware Fabric 2	BEVO2	25	E13th-M14th	Medieval
149	Pottery	BS	Grey Ware	GREY	12	RO	Roman
150	Pottery		Humberware	HUM	32	13th-14th	Medieval

151	Pottery		Humber Basin fabrics	HUMB	4	14th-15th	Medieval
152	Pottery	OX EX SURFACE;BURNT?; BS; MOD COARSE Q; BLUE-GREY	Grey Ware	GREY	16	2-3C+	Roman

Appendix 3

GLOSSARY

Bronze Age	A period characterised by the introduction of bronze into the country for tools, between 2250 and 800 BC.
Geophysical Survey	Essentially non-invasive methods of examining below the ground surface by measuring deviations in the physical properties and characteristics of the earth. Techniques include magnetometry and resistivity survey.
Headland	Strip of uncultivated land left between areas of ridge and furrow which was used for turning the plough. These strips provided access and often became lanes or roads.
Iron Age	A period characterised by the introduction of Iron into the country for tools, between 800 BC and AD 50.
Manuring Scatter	A distribution of artefacts, usually pottery, created by the spreading of manure and domestic refuse from settlements onto arable fields. Such scatters can provide an indication of the extent and period of arable agriculture in the landscape.
Medieval	The Middle Ages, dating from approximately AD 1066-1500.
Natural	Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity.
Neolithic	The 'New Stone Age' period, part of the prehistoric era, dating from approximately 4500-2250 BC.
Post-medieval	The period following the Middle Ages, dating from approximately AD 1500-1800.
Prehistoric	The period of human history prior to the introduction of writing. In Britain the prehistoric period lasts from the first evidence of human occupation about 500,000 BC, until the Roman invasion in the middle of the 1 st century AD.
Ridge and Furrow	The remains of arable cultivation consisting of raised rounded strips separated by furrows. It is characteristic of open field agriculture.
Romano-British	Pertaining to the period dating from AD 43-410 when the Romans occupied Britain.
Till	A deposit formed after the retreat of a glacier. Also known as boulder clay, this material is generally unsorted and can comprise of rock flour to boulders to rocks of quite substantial size.

Appendix 4

THE ARCHIVE

The archive consists of:

5	Daily record sheets
2	Field record sheets
1	Box of finds

All primary records and finds are currently kept at:

Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincolnshire
NG34 9RW

The ultimate destination of the project archive is:

North Lincolnshire Museum
Oswald Road
Scunthorpe
DN15 7BB

The archive will be deposited in format museum in accordance with *Guidelines for deposition of Archaeological Archive with North Lincolnshire Museum* (2008), prepared by North Lincolnshire Museums Service.

Archaeological Project Services Site Code: EHPF 10

North Lincolnshire Museums Accession No.: EHA0

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the development site but away from the areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is necessarily of a similar character to that revealed during the current investigation.

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