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**ARCHAEOLOGICAL WATCHING BRIEF
OF WATERMAIN REPLACEMENT
DONINGTON-QUADRING
LINCOLNSHIRE
(DQW01)**



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ARCHAEOLOGICAL
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SERVICES

Conservation
Services

14 JUN 2002

Highways & Planning
Directorate



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**ARCHAEOLOGICAL WATCHING BRIEF
OF WATERMAIN REPLACEMENT
DONINGTON-QUADRING
LINCOLNSHIRE
(DQW01)**

**Work Undertaken For
Anglian Water Services Ltd**

May 2002

Report Compiled by
Rachael V. Hall BA(Hons) PIFA

National Grid Reference: TF219 342-TF230 342 and
TF233 347-TF245-352
LCNCC Accession No:2001.424

ARCHAEOLOGICAL PROJECT SERVICES



APS Report No. 93/02

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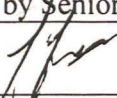
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1. SUMMARY

An archaeological watching brief was undertaken in conjunction with groundworks associated with the construction of a watermain in the Donington-Quadrang area.

Two areas of the pipeline had been highlighted to be monitored, a length along Cross Gate from the junction with A152 Quadrang Road to Church End Farm, where Saxon and medieval remains had previously been found, and along Wykes Road, which has evidence of saltmaking nearby.

The watching brief identified natural silt, overlain by subsoil and layers associated with the present road. No artefacts were retrieved.

2. INTRODUCTION

2.1 Definition of a Watching Brief

An archaeological watching brief is defined as:

"... a formal program of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits maybe disturbed or destroyed." (IFA 1999).

2.2 Planning Background

Anglian Water Services Ltd consulted the Lincolnshire County Archaeology Section about the implications of a proposed watermain. The county Archaeology Section advised that sections of the route were archaeologically sensitive and recommended that a watching brief be undertaken in these areas.

Archaeological Project Services (APS) was commissioned by Anglian Water to undertake an archaeological watching brief during groundworks associated with the laying of a watermain in the Donington-Quadrang area, Lincolnshire.

The watching brief was carried out by Archaeological Project Services between 16th November 2001 and 25th February 2002, in accordance with a specification designed by APS (Appendix 1) and approved by the Historic Built Environment Officer for Lincolnshire.

2.3 Topography and Geology

The watermain lies between Donington and Quadrang, approximately 13km north of Spalding and 13km southwest of Boston, in South Holland District, Lincolnshire (Fig 1).

Two stretches of the watermain were marked for monitoring. A length along Cross Gate from the junction with the A152 Quadrang Road to Church End Farm TF219 342- TF230 342, area A (Fig 3). A length along Wykes Road TF233 347- TF245 352, area B, was also monitored (Fig 4). Within area B the key area, between the two former seabanks, now Wood Lane and Rushy Drove had been completed prior to notification. Saltern mounds were observed directly to the north of Wykes Lane in the unmonitored stretch.

The two areas monitored are on flat level ground at 3-4mOD. Local soils are the Agney Association calcareous alluvial gleys developed in reclaimed marine alluvium (Hodge *et al.* 1984, 87).

2.4 Archaeological Setting

Earlier archaeological work at Church End revealed evidence of Saxon and medieval settlement centred around the church. A large number of medieval artefacts were

found clustered around the church during the Fenland Survey, indicating the shrunken medieval village area (Hayes and Lane 1992).

The east end of the Area B, along Wykes Road terminates at a Late Saxon Sea Bank on the west side of Bicker Haven. The pipeline extended through another possible bank at Wood Lane, but no trace of a bank was identified. At the eastern end of Wykes Lane there is evidence for medieval salt production in the form of saltern mounds.

3. AIMS

The aim of the archaeological investigations as detailed in the specification (Appendix 1), was to ensure that any archaeological features exposed during the groundworks should be recorded and, if present, to determine their date, function and origin.

4. METHODS

The construction of the watermain in the monitored areas was carried out by thrust boring. Access pits 0.60m wide x 1.5m long x c.0.70m deep were excavated by machine at intervals of approximately 100m.

The depth and thickness of each deposit was measured from the ground surface. Each deposit revealed was allocated a unique reference number (context number) with an individual written description. A list of all contexts with interpretations appears as Appendix 2. Sections were drawn at a scale of 1:10. A photographic record was also compiled. Recording of deposits encountered during the watching brief was undertaken according to standard Archaeological Project Services' practise.

Records of the deposits recognised during the investigations were examined. A stratigraphic matrix of all identified deposits was produced.

5. RESULTS

Phasing was based on the nature of the deposits and recognisable relationships between them.

Three phases were assigned:

- Phase 1: Natural deposits
- Phase 2: Undated deposits
- Phase 3: Modern deposits

5.1 Natural Deposits

The earliest deposit encountered in Area A was a natural layer of mid-yellowish brown sandy silt (011) and (014), which in Section 6 occurred at only 0.28m beneath the present ground surface.

In Area B a light yellow sand and silt natural layer (003) and (008) was identified at 0.16m beneath the present ground surface.

5.2 Undated Deposits

Sealing the natural silt (011) in section 6, Area A was subsoil layer (010), consisting of light-mid yellowish brown silt and sand This layer was 0.40m thick.

5.3 Modern Deposits

In Area A, a hardstand layer of greyish red brick rubble (013) sealed by a tarmac road surface (012) was recorded. A layer of dark brown silt topsoil (009) was recorded in section 5 sealing subsoil layer (010).

A hardstand layer consisting of red brick rubble and burnt silt (005) and (006) was identified in Area B. This was sealed by a 0.10m thick layer of dark brown sandy silt (004) and (007), interpreted as topsoil.

6. DISCUSSION

Natural deposits of silt and sand were encountered in both areas monitored.

These are undated alluvial deposits. In this area of the fens, the dating of natural deposits is difficult to determine.

An undated subsoil was recorded in Area A, this was sealed by silt topsoil and represents natural stratigraphy.

In both Areas A and B material associated with modern road construction were identified.

However, no archaeological features were encountered and no artefacts retrieved.

7. CONCLUSION

Archaeological investigations were undertaken during the Donington-Quadrang water pipeline construction as the route passed through the Saxon and medieval settlement of Church End near to medieval salterns.

No archaeological features or deposits were encountered and no artefacts were recovered.

8. ACKNOWLEDGEMENTS

Archaeological Project Services would like to acknowledge the assistance of Anglian Water Services Ltd who commissioned the fieldwork and post-excavation analysis. The work was co-ordinated by Gary Taylor, and this report was edited by Gary Taylor and Tom Lane.

9. BIBLIOGRAPHY

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Hayes, P.P. and Lane, T.W., 1992 *The Fenland Project. Lincolnshire Survey, The South-West Fens* EAA 55

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IFA, 1999 *Standard and Guidance for Archaeological Watching Briefs*

10. ABBREVIATIONS

APS Archaeological Project Services
OD Ordnance Datum

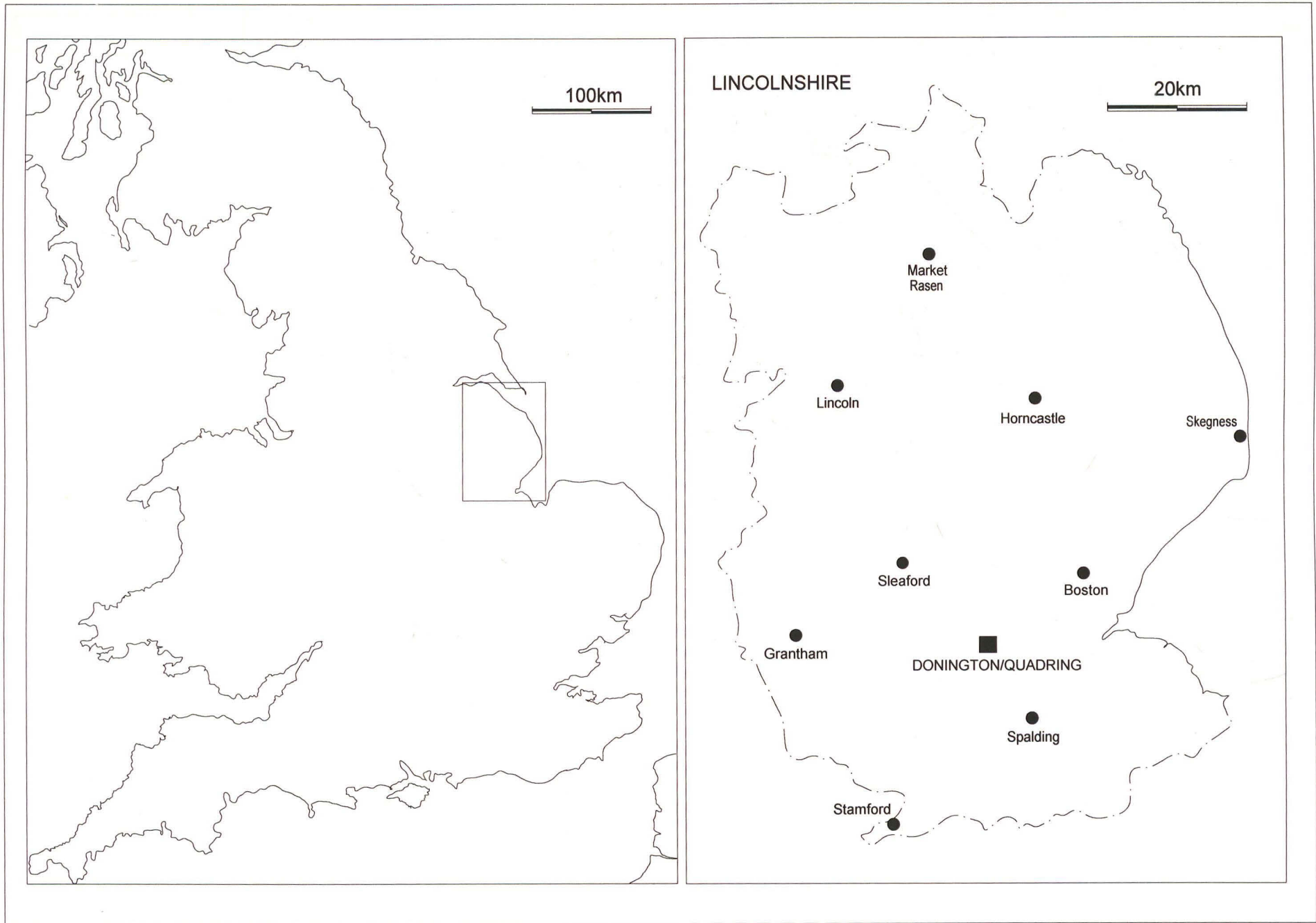


Figure 1: General Location Plan

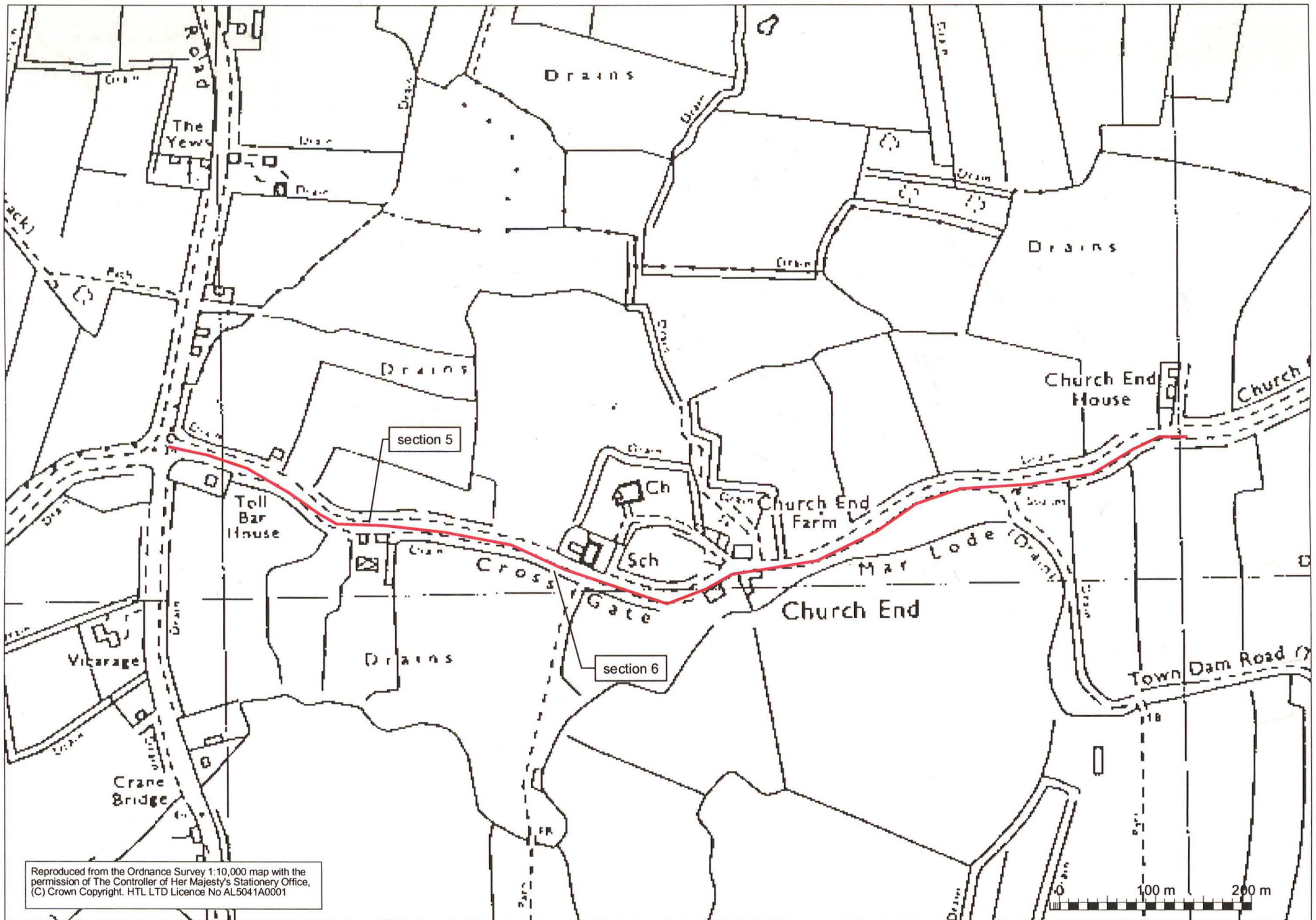


Figure 3 - Monitored Area A

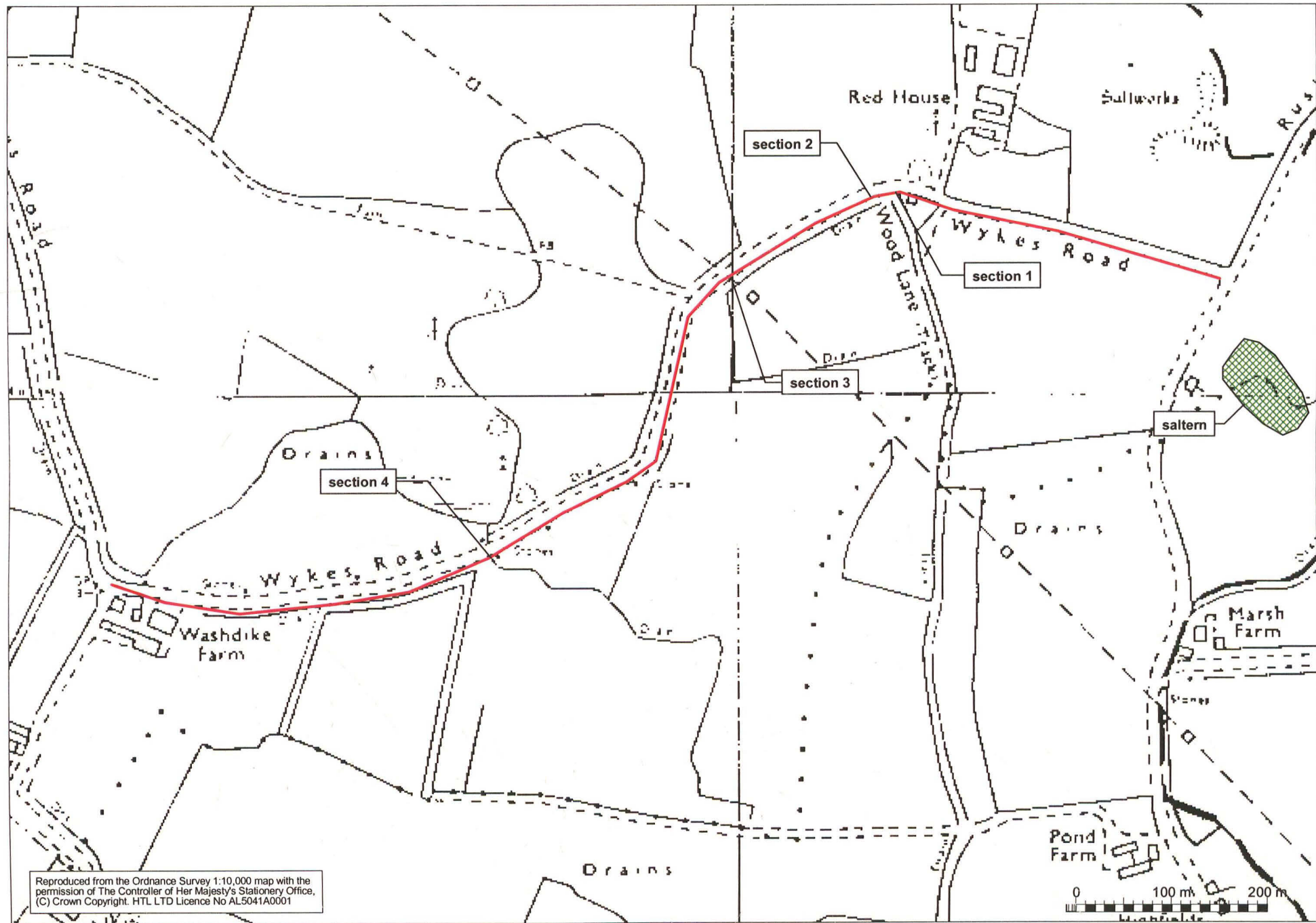
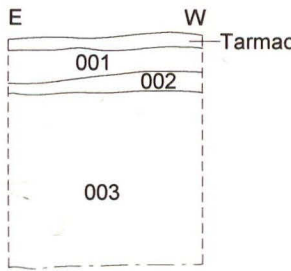
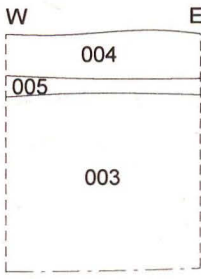


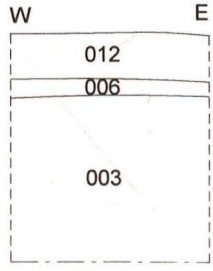
Figure 4 Monitored Area B



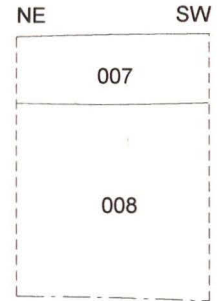
Section 1



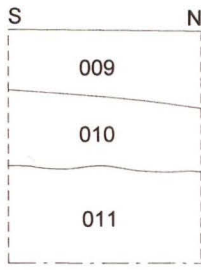
Section 2



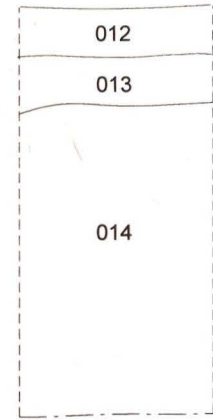
Section 3



Section 4



Section 5



Section 6




	Archaeological Project Services	
Project Name: Donington-Quadrant		DQW01
Scale: 1:20	Drawn by: RVH	Report No: /02

Figure 4 - Sections 1-6



Plate 1 General view,
taken along Wykes
Road (Area B), looking
west



Plate 2 Section 5,
looking north

Appendix 1

Specification for Archaeological Watching Brief Donington-Quadring Watermain, Lincolnshire

1 SUMMARY

- 1.1 *A watching brief is required during the construction of a watermain in the area of Donington and Quadring, Lincolnshire.*
- 1.2 *The area is archaeologically sensitive. One length of the route, along Cross Gate from the junction with the A152 Quadring Road to Church End Farm, where Saxon and medieval remains, including evidence of a shrunken medieval settlement, have previously been found. The second area, along Wykes Road, terminates at a Late Saxon sea bank with evidence of salt making alongside.*
- 1.3 *The watching brief will be undertaken during groundworks associated with the development. The archaeological features exposed will be recorded in writing, graphically and photographically.*
- 1.4 *On completion of the fieldwork a report will be prepared detailing the results of the investigation. The report will consist of a narrative supported by illustrations and photographs.*

2 INTRODUCTION

- 2.1 This document comprises a specification for an archaeological watching brief during groundworks connected with construction of a watermain in the Donington-Quadring area. Two sections of the area have been highlighted for archaeological monitoring.
- 2.2 This document contains the following parts:
 - 2.2.1 Overview.
 - 2.2.2 Stages of work and methodologies.
 - 2.2.3 List of specialists.
 - 2.2.4 Programme of works and staffing structure of the project

3 SITE LOCATION

- 3.1 Donington is located 13km north of Spalding in the South Holland district of Lincolnshire, and Quadring is 3km to the southeast. The works are to take place between the two villages in the area

of Church End, between national grid references TF 219 342 - TF 230 342, and near Washdyke Farm between TF 233 347 - TF 245 352 (see plan).

4 PLANNING BACKGROUND

- 4.1 Anglian Water Services Ltd consulted the Lincolnshire County Archaeology Section about the archaeological implications of a proposed watermain. The County Archaeology Section advised that sections of the route were archaeologically sensitive and recommended that a watching brief be undertaken in these areas.

5 SOILS AND TOPOGRAPHY

- 5.1 The two monitoring areas are on flat level land at about 3-4m OD. Local soils are the Agney Association calcareous alluvial gleys developed in reclaimed marine alluvium (Hodge *et al.* 1984, 87).

6 ARCHAEOLOGICAL OVERVIEW

- 6.1 Previous investigations around Church End has shown that this was a Saxon and medieval settlement area, with the medieval village centred around the church. Roman pottery has also been found in this area. A particularly large cluster of medieval artefacts were found around the church, signifying the shrunken village area (Hayes and Lane 1992).
- 6.2 The second area of monitoring, 1km to the northeast of Church End, terminates at its eastern end on a Late Saxon sea bank. There is much evidence of salt-making in this area, with saltern mounds in very close proximity to the eastern end of the watermain route.

7 AIMS AND OBJECTIVES

- 7.1 The aims of the watching brief will be:
- 7.1.1 To record and interpret the archaeological features exposed during the excavation of the foundation trenches and other areas of ground disturbance.
- 7.2 The objectives of the watching brief will be to:
- 7.2.1 Determine the form and function of the archaeological features encountered;
- 7.2.2 Determine the spatial arrangement of the archaeological features encountered;

7.2.3 As far as practicable, recover dating evidence from the archaeological features, and

7.2.4 Establish the sequence of the archaeological remains present on the site.

8 SITE OPERATIONS

8.1 General considerations

8.1.1 All work will be undertaken following statutory Health and Safety requirements in operation at the time of the watching brief.

8.1.2 The work will be undertaken according to the relevant codes of practise issued by the Institute of Field Archaeologists (IFA), under the management of a Member of the institute (MIFA). Archaeological Project Services is IFA registered organisation no. 21.

8.1.3 Any and all artefacts found during the investigation and thought to be 'treasure', as defined by the Treasure Act 1996, will be removed from site to a secure store and promptly reported to the appropriate coroner's office.

8.2 Methodology

8.2.1 The watching brief will be undertaken during the ground works phase of development, and includes the archaeological monitoring of all phases of soil movement. The watermain will be installed by directional drilling between small launch and reception pits.

8.2.2 Stripped areas and trench sections will be observed regularly to identify and record archaeological features that are exposed and to record changes in the geological conditions. The section drawings of the trenches will be recorded at a scale of 1:10. Should features be recorded in plan these will be drawn at a scale of 1:20. Written descriptions detailing the nature of the deposits, features and fills encountered will be compiled on Archaeological Project Services pro-forma record sheets.

8.2.3 Any finds recovered will be bagged and labelled for later analysis.

8.2.4 Throughout the watching brief a photographic record will be compiled. The photographic record will consist of:

8.2.4.1 the site during work to show specific stages, and the layout of the archaeology within the trench.

8.2.4.2 groups of features where their relationship is important

- 8.2.5 Should human remains be located they will be left *in situ* and only excavated if absolutely necessary. Should removal be required the appropriate Home Office licence will be obtained before the exhumation of the remains. In addition, the Local Environmental Health Department, coroner and the police will be informed, where appropriate.

9 POST-EXCAVATION

9.1 Stage 1

- 9.1.1 On completion of site operations, the records and schedules produced during the watching brief will be checked and ordered to ensure that they form a uniform sequence forming a level II archive. A stratigraphic matrix of the archaeological deposits and features present on the site will be prepared. All photographic material will be catalogued and labelled, the labelling referring to schedules identifying the subject/s photographed.
- 9.1.2 All finds recovered during the field work will be washed, marked and packaged according to the deposit from which they were recovered. Any finds requiring specialist treatment and conservation will be sent to the Conservation Laboratory at the City and County Museum, Lincoln.

9.2 Stage 2

- 9.2.1 Detailed examination of the stratigraphic matrix to enable the determination of the various phases of activity on the site.
- 9.2.2 Finds will be sent to specialists for identification and dating.

9.3 Stage 3

- 9.3.1 On completion of stage 2, a report detailing the findings of the watching brief will be prepared.
- 9.3.2 This will consist of:
- 9.3.2.1 A non-technical summary of the results of the investigation.
- 9.3.2.2 A description of the archaeological setting of the watching brief.
- 9.3.2.3 Description of the topography of the site.

- 9.3.2.4 Description of the methodologies used during the watching brief.
- 9.3.2.5 A text describing the findings of the watching brief.
- 9.3.2.6 A consideration of the local, regional and national context of the watching brief findings.
- 9.3.2.7 Plans of the archaeological features exposed. If a sequence of archaeological deposits is encountered, separate plans for each phase will be produced.
- 9.3.2.8 Sections of the trenches and archaeological features.
- 9.3.2.9 Interpretation of the archaeological features exposed, and their chronology and setting within the surrounding landscape.
- 9.3.2.10 Specialist reports on the finds from the site.
- 9.3.2.11 Appropriate photographs of the site and specific archaeological features.

10 **REPORT DEPOSITION**

- 10.1 Copies of the report will be sent to the client and to the County Council Archaeological Sites and Monuments Record.

11 **ARCHIVE**

- 11.1 The documentation and records generated during the watching brief will be sorted and ordered into the format acceptable to the City and County Museum, Lincoln. This will be undertaken following the requirements of the document titled *Conditions for the Acceptance of Project Archives* for long term storage and curation.

12 **PUBLICATION**

- 12.1 A report of the findings of the watching brief will be presented to the editor of the journal *Lincolnshire History and Archaeology*. If appropriate, notes on the findings will be submitted to the appropriate national journals: *Britannia* for discoveries of Roman date, and *Medieval Archaeology* and the *Journal of the Medieval Settlement Research Group* for findings of medieval or later date.

13 **CURATORIAL RESPONSIBILITY**

- 13.1 Curatorial responsibility for the archaeological work undertaken on the site lies with the Lincolnshire County Council Archaeology Section. They will be given written notice of the commencement of the project.

14 **VARIATIONS AND CONTINGENCIES**

- 14.1 Variations to the proposed scheme of works will only be made following written confirmation of acceptance from the archaeological curator.
- 14.2 In the event of the discovery of any unexpected remains of archaeological importance, or of any changed circumstances, it is the responsibility of the archaeological contractor to inform the archaeological curator (*Lincolnshire Archaeological Handbook 1998, Sections 5.7 and 18*).
- 14.3 Where important archaeological remains are discovered and deemed to merit further investigation additional resources may be required to provide an appropriate level of investigation, recording and analysis.
- 14.4 Any contingency requirement for additional fieldwork or post-excavation analysis outside the scope of the proposed scheme of works will only be activated following full consultation with the archaeological curator and the client.

15 **PROGRAMME OF WORKS AND STAFFING LEVELS**

- 15.1 The watching brief will be integrated with the programme of construction and is dependent on the developers' work programme. It is therefore not possible to specify the person-hours for the archaeological site work.
- 15.2 An archaeological supervisor with experience of watching briefs will undertake the work.
- 15.3 Post-excavation analysis and report production will be undertaken by the archaeological supervisor, or a post-excavation analyst as appropriate, with assistance from a finds supervisor, illustrator and external specialists. It is expected that each fieldwork day (equal to one person-day) will require a post- excavation day (equal to one-and-a-half person-days) for completion of the analysis and report. If the fieldwork lasts longer than about four days then there will be an economy of scale with the post-excavation analysis.

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

- 16.1 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 - Trent & Peak Archaeological Trust Roman - B Precious, Independent Specialist Anglo-Saxon - J Young, Independent Specialist Medieval and later - G Taylor in consultation with H Healey, Independent Archaeologist
Non-pottery Artefacts	J Cowgill, Independent Specialist
Animal Bones	Environmental Archaeology Consultancy
Environmental Analysis	J Rackham, Independent Specialist
Human Remains Analysis	R Gowland, Independent Specialist
17	INSURANCES
17.1	Archaeological Project Services, as part of the Heritage Trust of Lincolnshire, maintains Employers Liability Insurance of £10,000,000, together with Public and Products Liability insurances, each with indemnity of £5,000,000. Copies of insurance documentation can be supplied on request.
18	COPYRIGHT
18.1	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 Specification.
18.2	Licence will also be given to the archaeological curators to use the documentary archive for educational, public and research purposes.
18.3	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.

- 18.4 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.

19 BIBLIOGRAPHY

Hayes, PP, and Lane, TW, 1992 *The Fenland Project Number 5: Lincolnshire Survey, the South-West Fens*, East Anglian Archaeology 55

Hodge, CAH, Burton, RGO, Corbett, WM, Evans, R, and Seale, RS, 1984 *Soils and their use in Eastern England*, Soil Survey of England and Wales 13

Specification: Version 1, 14-11-01

Appendix 2

Context Summary

Context No.	Type	Description	Thickness (m)	Interpretation
001	Deposit	Firm, light yellow stone	0.10	Hardstand
002	Deposit	Firm, red brick and burnt silt	0.05	Hardstand
003	Deposit	Moderately compact, light yellow sand and silt	0.50+	Natural
004	Deposit	Moderately compact, dark brown sandy silt	0.12	Topsoil
005	Deposit	Firm, red brick and burnt silt, same as (002)	0.05	Hardstand
006	Deposit	Firm, red brick and burnt silt, same as (002) and (005)	0.05	Hardstand
007	Deposit	Moderately compact, mid-dark brown silt, occ. brick and tile	0.17	Topsoil
008	Deposit	Moderately compact, light-mid yellowish brown sand and silt	0.50+	Natural
009	Deposit	Moderately compact, dark brown silt	0.40	Topsoil
010	Deposit	Moderately compact, light-mid yellowish brown sand and silt	0.40	Subsoil
011	Deposit	Moderately compact, light-mid yellowish brown sandy silt	0.50+	Natural
012	Deposit	Black tarmac	0.13	Tarmac
013	Deposit	Compact, dark greyish red brick rubble	0.14	Hardstand
014	Deposit	Firm, mid-yellowish brown sandy silt	0.50+	Natural

Abbreviations:

Occ. occasional

Appendix 3

GLOSSARY

Context	An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretations of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, <i>e.g.</i> (004).
Layer	A layer is a term to describe an accumulation of soil or other material that is not contained within a cut.
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.

Appendix 4

THE ARCHIVE

The archive consists of:

14	Context records
1	Scale drawings (sections)
1	Photographic record sheet
1	Stratigraphic matrix

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:

Lincolnshire City and County Museum
12 Friars Lane
Lincoln
LN2 1HQ

The archive will be deposited in accordance with the document titled *Conditions for the Acceptance of Project Archives*, produced by the Lincolnshire City and County Museum.

Lincolnshire City and County Museum Accession Number: 2001.424

Archaeological Project Services Site Code: DQW 01

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 of a similar character to that revealed during the current investigation.

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 Specification.