

**NEW WIND TURBINE, LAND AT CHAPEL FARM, MOULTON CHAPEL,
SOUTH HOLLAND, LINCOLNSHIRE**

**SPECIFICATION FOR A SCHEME OF ARCHAEOLOGICAL
MONITORING AND RECORDING**

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Prepared for
Icon Consulting

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Non-Technical Summary

A scheme of archaeological monitoring and recording is to take place during the construction of a new wind turbine on land at Chapel Farm, near the hamlet of Moulton Chapel in the South Holland district of Lincolnshire. If exposed, any archaeological deposits or remains will be assessed and recorded.

The site lies within the Moulton Fen, in an area where a number of Romano-British occupation sites, many associated with salt manufacture, have been recorded. Two of these sites, to the west of the proposed turbine site, are Scheduled Ancient Monuments.

The area was drained and reclaimed during the Middle Ages, with the coastline being pushed northwards by a series of sea banks; Moulton parish is recorded as having arable land by the time of the Domesday Survey in AD 1086.

This document describes the archaeological methodology that will be adopted as part of the scheme in order to satisfy a planning condition, and the reporting and archive procedures that will follow.

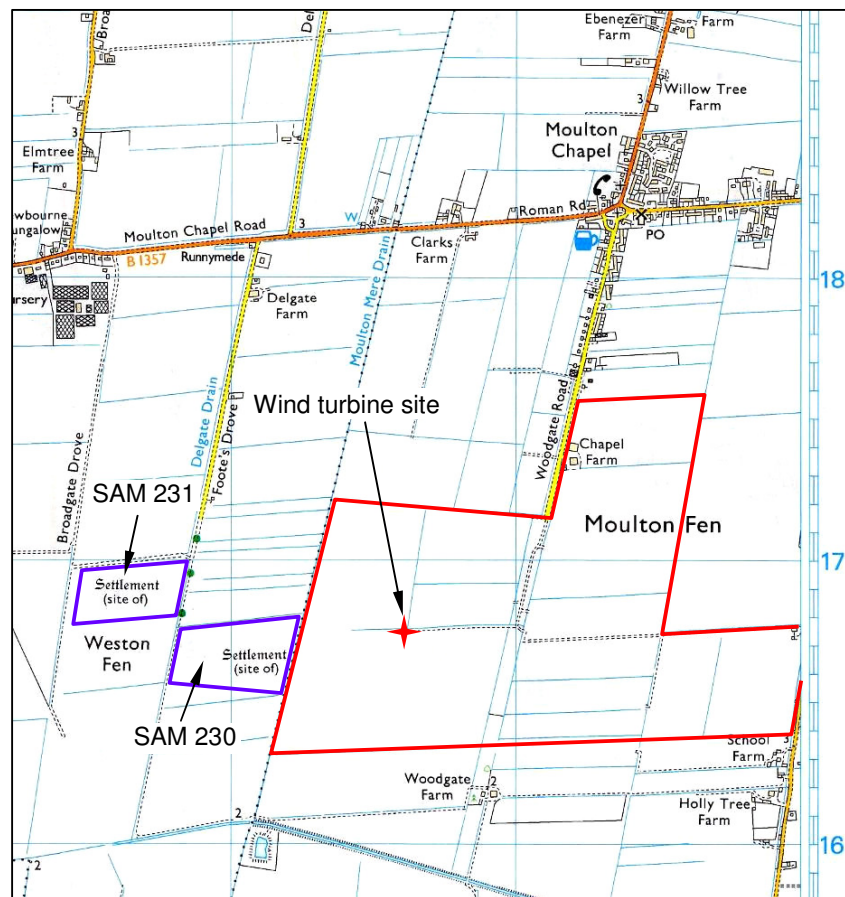


Figure 1: Location plan of Chapel Farm at scale 1:25,000. The area of Chapel Farm is outlined in red, and the proposed wind turbine site is marked with a red star. Scheduled Ancient Monuments in the vicinity of the site are marked in purple. OS mapping © Crown copyright. All rights reserved. PCAS licence no. 100049278.

1.0 Introduction

Pre-Construct Archaeological Services Ltd (PCAS) was commissioned by Icon Consulting to prepare a specification for a scheme of archaeological monitoring and recording during groundworks for the construction of a new wind turbine on land at Chapel Farm, near the hamlet of Moulton Chapel in the South Holland district of Lincolnshire. The works are expected to commence in late February, 2014.

As the site lies within an area where a number of Romano-British domestic and industrial sites have been recorded, including two that are now protected by scheduling, the Historic Environment Officer for South Holland has recommended that a scheme of archaeological monitoring and recording should be carried out during development groundworks.

This document is a specification (written scheme of investigation) for a programme of archaeological monitoring and recording. It follows current best practice and appropriate national guidance including:

- NPPF, National Planning Policy Framework, 2012;
- IFA Code of Conduct (2008 as revised);
- IFA Standards and Guidance for Archaeological Watching Briefs (2008);
- Management of Research Projects in the Historic Environment (MoRPHE ver. 1.1, 2009)
- Lincolnshire Archaeological Handbook (Lincolnshire County Council, 2012).

2.0 Site Location and Description (fig. 1)

The hamlet of Moulton Chapel is situated in the civil parish of Moulton in Moulton Fen, near the southern border of the district of South Holland in Lincolnshire; it lies approximately 9km north-east of the town of Crowland and 4km to the east of the canalised course of the River Welland.

The proposed development site is located approximately 1.5km to the south of Moulton Chapel and 2km to the east of the village of Cowbit. It is currently intensively farmed agricultural land, with an in situ access track for agricultural vehicles (Seren Energy, 2010). The area of land where the turbine is to be sited lies approximately half-way between Chapel Farm and Woodgate Farm, on the east side of the Moulton Mere Drain, which forms the Moulton parish boundary.

3.0 Topography and Geology

The site lies within level, artificially drained land within the former flood plain of the River Welland. It has an average height of 3m above Ordnance Datum sea level.

The drift geology across the Moulton Fen is Terrington Beds younger marine alluvium, consisting of sandy silt, sand and clay salt marsh, tidal creek and river deposits; the underlying solid geology is Ancholme Group Oxford Clay (BGS, 1992).

4.0 Planning Background

Full planning permission was granted in May 2012 for the construction of a wind turbine 74m in height to blade tip, with ancillary works/structures and a temporary anemometry mast (planning application number H13/1558/07).

In accordance with policy HE12.3 of PPS 5, which states that 'where the loss of the whole or a material part of a heritage asset's significance is justified, local planning authorities should require the developer to record and advance understanding of the significance of the heritage asset before it is lost', planning permission was granted subject to conditions. Condition 12 requires a written scheme of archaeological investigation to be submitted to and approved by the Local Planning Authority prior to the commencement of groundworks, and Condition 13 requires the applicant to notify the Lincolnshire County Council Historic Environment Department of the intention to commence groundworks with at least 14 days' notice. After the completion of development groundworks, Condition 14 requires a copy of the final report to be submitted to the Local Planning Authority and the HER within three months, and the site archive to be deposited with a suitable receiving museum, in accordance with the guidelines published in the Lincolnshire Archaeological Handbook.

5.0 Archaeological and Historical Background

The English Heritage Inspector of Ancient Monuments advised that the proposed development lies in an area of high archaeological potential, with scheduled monuments at Lower Delgate Farm and Moulton West Fen, and that as well as the Grade II Listed Snake Hall, the setting of the Grade II* Listed chapel of St. James at Moulton Chapel will also be materially affected (Glyn Coppack, planning comment, 2007).

The Lincolnshire Historic Environment Record includes 16 records of Romano-British activity, chiefly associated with settlement, agriculture and salt manufacture, within 1km of the proposed turbine site. A Roman settlement and saltern site has been recorded in the field directly to the west of the field in which the proposed turbine is to be situated: the saltern debris formed a recognisable mound in the field, and baked clay floors, indicating structures, were found along with domestic material including 1st to early 3rd-century pottery. This site is now a Scheduled Ancient Monument (HER ref. 20009; SAM 230). In the field to the north-west of SAM 230 is a second Roman settlement site, also featuring a mound of fired clay and ash, associated with a complex of large, irregular enclosures formed by natural and artificial drainage channels. Domestic refuse was sparser, including quern fragments and a small amount of late 1st and 2nd-century pottery. This site is also scheduled (HER ref. 20010; SAM 231). Two further saltern sites, each featuring a saltern mound with scatters of fired clay debris from salt-making vessels (briquetage), are recorded on land to the west and north-west of Woodgate Farm (HER refs. 20358, 20360), while Roman briquetage, with structural remains and late 1st to early 2nd-century pottery, has been ploughed up in fields further to the west (HER ref. 20333).

A compact group of small enclosures, some rectilinear in shape, on land to the west of Woodgate Road opposite Chapel Farm was identified from aerial photography in 1952, recording a wide network of straight drainage ditches, with irregular drainage to the west and south; these were interpreted as Roman fields. Archaeological monitoring during works on the Moulton Chapel to Whaplode water mains identified two Roman ditches to the north-west of the cropmark site and a number of other ditches, including a driveway, apparently forming the enclosures of a stock management system, further to the south (HER ref. 22117). Several groups of small ditched enclosures on both sides of a fossil river bed at Woodgate Farm represent a large but dispersed settlement, with scatters of early 2nd-century to 4th-century pottery: archaeological monitoring of the Moulton Chapel to Whaplode water main works encountered several pits, field boundary ditches and gullies, with two settlement

enclosure ditches, along the Moulton Mere drain and the South Holland main drain to the east of SAM 230. The saltern site 20358, directly to the west, is likely to be associated with this settlement (HER ref. 22115). Further cropmarks which may represent traces of Roman agriculture have also been recorded from aerial photographs in Moulton Fen, to the east of Woodgate Farm (HER ref. 22123).

Further remains of settlement and/or salt manufacture, in the form of two enclosed areas with a layer of charcoal and fired clay fragments, have been recorded to the south-west of the two SAMs, and cropmarks to the south of this site have also been interpreted as Roman salt-making and/or settlement remains (HER refs. 22105, 20334). A scatter of mid-2nd to early 3rd-century pottery, with a small quantity of saltern debris, has been found in an area centred on TF 286 167, very close to and potentially extending across the proposed turbine site, while a further scatter of late 2nd to early 3rd-century pottery and briquetage, within the western side of the field in which the turbine is to be situated, may represent another saltern site (HER refs. 20359, 20361). Two further pottery scatters, each with a quern fragment, were found to the south-west of Woodgate Farm and on land directly to the west of Chapel Farm (HER refs. 20362, 22116), and a third was found on land to the north-west of Chapel Farm (HER ref. 20364).

The area of the Moulton Fen where the proposed development site lies was initially reclaimed from the coastal marsh during the medieval period: the British Geological Survey map of the area records that the New Fen Dyke, running through Moulton Chapel hamlet, was constructed in 1186-9, and the Asgar Dyke, passing to the south of Woodgate Farm, in 1205 (BGS, 1992). Domesday Book records only arable land in Moulton parish, suggesting that the land was already too far from the coast for salt manufacture to be practicable or for salt-marsh grazing to be present by 1086 (Williams and Martin, 2003, pp. 914, 951). A band of medieval saltern sites some 3.5km to the north of Moulton village, including one at Moulton Seas End, marks the retreating coastline of the 13th to 14th century (BGS, 1992).

Snake Hall, located at no. 228, Eaugate Road, Moulton approximately 1.5km to the east of the proposed turbine site, is a Grade II Listed farmhouse, built c. 1794, of two storeys in red brick with a hipped slate roof (listing ref. 11/97). The Grade II* Listed chapel of St. James, on the south side of Roman Road in the centre of the hamlet of Moulton Chapel, approximately 1.6km to the north-east of the site, was built in 1722 as a chapel of ease; it is of red brick with limestone ashlar dressings and a slate roof, and consists of an octagonal nave with a polygonal chancel and a later vestry (listing ref. 11/113).

6.0 Archaeological Requirement (fig. 2)

A programme of archaeological monitoring and recording is required on all groundworks. The first phase of groundworks will consist of modifications to the existing access track to allow it to carry the construction vehicles that will be used in the installation of the turbine: the surface soil will be removed to a depth of 0.30m and a width of 4m, with additional widening at bends where necessary, before laying and compacting a new track surface. The foundation pit for the turbine is expected to be circular, approximately 15m wide x 2m deep; the adjacent crane pad is expected to measure 30m x 35m and will be made of compacted stone (Seren Energy, 2010). Topsoil stripping in the area of the crane pad is also anticipated.

The purpose of the monitoring scheme should be to gather sufficient information to establish the presence or absence, extent, depth, condition, character, quality and date of any archaeological deposits and to create a permanent record. Environmental evidence should be taken into account as appropriate; the position of the site on low-lying, reclaimed land suggests that palaeoenvironmental conditions may be favourable, with the potential for waterlogged organic deposits to survive.

The site should not be treated in isolation, and reference should be made to relevant historical sources and previous archaeological work in the area when interpreting the results.

An online record of the project data shall be initiated with the Archaeological Data Service (OASIS database) before fieldwork commences, and completed at the end of the project, including an uploaded digital copy of the report.

7.0 Methodology: Fieldwork and Recording

The scheme of archaeological monitoring and recording will be undertaken during all construction groundworks, with the exception of the excavation of the turbine foundation pit into natural geological deposits once the lowest archaeological horizon has been exposed and recorded. It will comprise the excavation and cleaning of any archaeological features exposed; the recovery of artefactual or ecofactual remains, and detailed recording. These works will be undertaken by a suitably qualified staff member of PCAS (Field Officer or Project Officer). The archaeologist monitoring the groundworks will cause the least possible disruption to the development programme, but at any time may request a pause in groundworks to assess any potential features or deposits and to allow the adequate hand excavation and recording of any features that have been identified. The archaeologist will keep the construction contractors informed of developments and progress. If significant archaeological remains are identified, it may be necessary, in liaison with the Historic Environment Officer for South Holland District Council, to formulate a strategy for the more complete establishment of the character, distribution, extent, condition, dating and further treatment of any such remains.

Unless ground conditions (e.g. concrete or compacted rubble) dictate otherwise, a **toothless** bucket will be used for machine topsoil stripping and for excavating foundation and service trenches.

Where identified, archaeological features will be examined sufficiently to determine their date, character and survival condition and then recorded by measured plan and section drawings at appropriate scales (normally 1:20).

A written record of each significant stratigraphic horizon and archaeological feature will be made on standard PCAS context recording forms. These will be supplemented by a narrative account in the form of a site diary. The archaeologist will pay due attention to the landscape aspect of any exposed remains – both the cultural and the natural landscape – which may require a brief assessment to be made of neighbouring conditions (e.g. visible earthworks in adjacent areas, surface observation, standing buildings, vegetation cover etc).

A digital photographic record, supplemented by colour slide and monochrome film photography as appropriate, will be maintained during the course of the archaeological intervention. Photographs will incorporate an identification board, north arrow and vertical/horizontal scales as appropriate. The photographic record will include:

- specific stages of fieldwork;
- individual features and, where appropriate, their sections;
- groups of features, where relationships are important.

If human remains are encountered, they will be left *in situ* where possible, and only disturbed if their continued presence will severely hinder the development processes, or if there are sound academic/scientific justifications for removal. If appropriate, a Ministry of Justice Exhumation Licence will be requested and the local Environmental Health Officer advised. All reasonable requests of interested parties concerning the methods of removal, reinterment or

disposal of the remains and associated items will be complied with, and attempts will be made at all times not to cause offence to interested parties.

All artefacts will be treated in accordance with UKIC guidelines, *First Aid for Finds* (Watkinson & Neale 1998). All finds will be bagged and labelled according to the individual deposit from which they were recovered, ready for later cleaning, marking and analysis.

All finds that qualify as 'treasure' under the 1996 Treasure Act (Treasure Act Code of Practice – 2002 revision) will be treated in accordance with the Act; HM Coroner and the regional Finds Liaison Officer for the Portable Antiquities Scheme will be informed, and the finds will be safely stored.

Any securely stratified archaeological deposits considered suitable for environmental analysis will be sampled in 40ltr quantities, where possible; lesser quantities may be sampled from small but potentially environmentally significant deposits. Sampling techniques and methods will comply with those outlined in *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation* (English Heritage, 2011, 2nd edition).

8.0 Methodology: Post-Fieldwork

Following completion of site works, all archaeological records and finds will be taken to the offices of PCAS prior to processing, dispatch and/or analysis.

Stable finds (e.g. pottery, bone etc) will be washed, marked and packaged at PCAS prior to dispatch. Unstable finds will be dispatched for remedial conservation as a prelude to assessment, and bulk samples will be dispatched for processing.

Prior to archive deposition, a fully illustrated site report will be prepared in accordance with current guidelines. The final report will include the following minimum information:

- A non-technical summary
- Museum accession number, site code and project number
- Planning reference number
- Grid reference, site location, topography and geology
- Archaeological and historical background
- A statement of aims and objectives of the project
- A description and analysis of the fieldwork undertaken
- A geo-referenced location plan at a minimum scale of 1:10,000
- A scaled overall site plan showing the accurately surveyed location of the development site in relation to known and speculated archaeological features (if appropriate)
- Scaled section and plan drawings of all archaeological features encountered within the excavated area.
- Discussion and conclusions, including the importance of the findings in local, regional and national basis and a critical review of the effectiveness of methodology
- Tables summarising features and artefacts with full descriptions and brief interpretation

- Specialist artefact and environmental reports, as necessary, with reference made to appropriate published type-series
- Colour photographs, including general views and appropriate detail
- Acknowledgements
- Bibliography of sources used
- Archive deposition location and agreed deposition date
- A summary of the report's presence and location on the OASIS online database

Copies of the report will be sent to the client, the Lincolnshire Historic Environment Record (HER) and the Historic Environment Officer for South Holland District Council. Copies will also be deposited with The Collection, Lincoln (Lincoln City and County Museum) as part of an ordered and indexed project archive. The data from the project, along with a digital copy of the report, will be uploaded to the Archaeology Data Service OASIS (Online Access to the Index of archaeological investigationS) database for public consultation.

Deposition of the report with the HER, where it will be incorporated into their database for public consultation, and uploading the project data to OASIS will be considered as placing the results of the project in the public domain. However, wider publication of the results will be considered, although the content and place of publication will be dependent on what is found, and be subject to discussion with the archaeological advisor to the planning authority. For example, where a significant discovery is made, consideration will be given to the preparation of a short note for inclusion in a local journal.

Working under the terms of the Copyright, Design and Patents Act 1988, PCAS shall retain full copyright with regard to written, digital and graphic material. However, following project completion, both the commissioning body, the Lincolnshire HER and the Archaeology Data Service may, in the interest of informing and advancing the profession, make responsible use of the data, provided that any material copied or cited in reports is duly acknowledged and all copyright conditions observed.

Following acceptance of the report, a project archive (documentary and material) will be prepared at the offices of PCAS, in accordance with the guidelines contained in *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990) and *Standards in the Museum Care of Archaeological Collections* (Museums and Galleries Commission 1992). The prepared archive will be deposited at The Collection, Lincoln in or before August 2015; a LCNCC archive accession number has been applied for.

9.0 Timetable and Personnel

A full report on the results of the project will be submitted within three months of the completion of the groundworks.

Details of the site team will be provided before site works commence on request. The site team will include an experienced Project Officer as a minimum. CVs will also be provided if requested.

Following the completion of site works, any finds and/or environmental samples (bulk soil samples) will be dispatched for specialist identification/assessment. PCAS have used the services of the following specialists in the past and may use any/all of the following again, depending on suitability, availability etc.

Archaeological Contractors:

- University Of Leicester Archaeological Services (ULAS) – provides a comprehensive service in all areas of post-excavation analysis.
- Durham University Archaeological Services (DUAS) – provides environmental archaeology services.
- York Archaeological Trust (YAT) – identification and assessment of registered special finds; X-Ray analysis and Conservation Services.
- Archaeological Project Services (APS) staff – provides a comprehensive service in most areas of post-excavation analysis.

Other Freelance Specialists:

- Dr. A. Irving – specialising in the identification and assessment of Roman and post-Roman pottery.
- Dr. K. Leahy – specialising in the identification and assessment of post-Roman and early medieval artefacts, particularly metalwork.
- Dr. R. Mackenzie – specialising in the identification and assessment of waste metalworking residues.
- Q. Mould – specialising in the identification and assessment of leather artefacts.
- Sarah Percival – specialising in the identification and assessment of prehistoric pottery and ceramics.
- I. Rowlandson – specialising in the identification and assessment of Iron Age and Roman pottery.
- J Rylatt/Dr. D. Underhill – specialising in the identification and assessment of lithic materials and tools.
- M. Taylor/M. Bamforth – specialising in the identification and assessment of waterlogged wood.
- Dr. R. Tyson – specialising in the identification and assessment of glass.
- J. Wood – specialising in the identification and assessment of animal bone & human remains.
- J. Young – specialising in the identification and assessment of post-Roman pottery, ceramic building material and fired clay.

Following receipt of specialist accounts/archive reports, a fully illustrated and appended text will be prepared and submitted.

10.0 Health and Safety

All work will be carried out in compliance with the Health and Safety at Work Act 1974 and its related regulations and codes of practice.

Employees and sub-contractors of Pre-Construct Archaeological Services Ltd will perform their duties in accordance with company safety policy (revised 2012). Where employees are temporarily engaged at other workplaces, they are to respect relevant local regulations, both statutory and as imposed by other employers within the Health and Safety at Work Act.

In furtherance of the duty of care imposed by the Health & Safety at Work Act, the Employer shall make available to his employees whatever reasonable facilities are required by particular circumstances, e.g. appropriate protective clothing, safety equipment, rest breaks for specialised tasks, etc.

A site risk assessment will be prepared prior to any site works taking place.

11.0 Insurance

Pre-Construct Archaeological Services Ltd has the following insurance cover:

Employers' Liability:	£10,000,000
Public Liability:	£5,000,000
Professional Indemnity:	£1,000,000

12.0 Monitoring Arrangements

Internal monitoring will be the responsibility of Will Munford, Director, PCAS. The South Holland District Council Historic Environment Officer will be informed, with not less than two week's notice, of the start of the monitoring programme. She will be kept informed of any unexpected discoveries and regularly updated on the project's progress, and will be free to visit the site by prior arrangement with the site director.

13.0 Other Factors

Any potential financial outlay which may be activated over and above rudimentary costs (i.e. fieldwork, basic reporting and archive arrangements) has been calculated as provisional sums/contingencies.

14.0 Contacts

Louise Jennings, Historic Environment Officer	(01522) 554 823
Will Munford, Director, PCAS	(01522) 703 800

15.0 References

British Geological Survey (BGS), 1992, *Spalding: Sheet 144, Solid and Drift Edition, 1:50,000 Series*. BGS, Keyworth, Nottingham.

Ordnance Survey, 2011, *Wisbech & Peterborough North, Market Deeping & Crowland: 1:25,000 scale Explorer series no. 235*. The Ordnance Survey, Southampton.

Seren Energy Ltd., 2010, *Additional Planning Information for a Single 800kW Wind Turbine at Woodgate Farm, near Moulton Chapel*. Unpublished document, consulted on South Holland District Council Planning Portal at <http://www.sholland.gov.uk/doitonline/plandev/plansearch.aspx>

Williams, A. and Martin, G. H. (eds.), 2003, *Domesday Book: A Complete Translation*. Penguin Books, London.

