



# Hornsea Project One Land off Horse Shoe Point North East Lincolnshire

Archaeological Watching Brief



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## Summary

Wessex Archaeology was commissioned by Ørsted (formerly DONG Energy) to undertake a watching brief and supervision of the excavation of the archaeological target (WA 70009) in the intertidal zone at the Hornsea Project One landfall, Horseshoe Point, North Coates, Lincolnshire, DN36 5UF. The target, previously identified as a geophysical anomaly of archaeological interest was located at NGR 593374 307529 and described as distinct medium magnetic anomaly, possible piece of buried ferrous debris, possibly associated with another nearby anomaly WA 70008.

The location of the archaeological target (WA 70009) was marked as a central point of a 25 m<sup>2</sup> large area. The area was mechanically excavated in spits to the depth of 1.8 m under the constant supervision of a suitably experienced archaeologist. No archaeological remains, features or deposits were found. The area was subsequently backfilled.

The archive is currently held at the offices of Wessex Archaeology in Sheffield under the project code 110499. In due course, the archive will be deposited with North Lincolnshire Museum under the accession code NKBH.

## Acknowledgements

Wessex Archaeology would like to thank Ørsted (formerly DONG Energy) for commissioning the archaeological evaluation and to Mark Edmond (Hornsea 01 HDD Supply / Inst. PM) for an on-site support.

The fieldwork was directed by Milica Rajic and the report was written by Emma Carter. The project was managed by Richard O'Neill on behalf of Wessex Archaeology.



# Hornsea Project One Land off Horse Shoe Point North East Lincolnshire

## Archaeological Watching Brief

### 1 INTRODUCTION

#### 1.1 Project and planning background

- 1.1.1 Wessex Archaeology was commissioned by Ørsted (formerly DONG Energy; hereafter ‘the Client’) to undertake an archaeological watching brief in advance of, and during, the construction phase of an onshore cable route (hereafter ‘the Scheme’) associated with an offshore windfarm. The onshore cable route runs from Horse Shoe Point in the parish of North Coates (National Grid Reference; NGR 53800, 40210), east of Tetney, in a broadly north-west direction towards the existing Killingholme power station (NGR 51520, 41890), where a new High Voltage Alternating Current substation will be built.
- 1.1.2 In February 2015, Ørsted Wind Power A/S (DE) took full ownership of Hornsea Offshore Wind Farm Project One (“Hornsea Project One”). Hornsea Project One was awarded consent by the Secretary of State on 10 December 2014. The Development Consent Order (DCO) was subsequently amended on 30 April 2015 by the Hornsea One Offshore Wind Farm (Correction) Order 2015 and on the 31 March 2016 by the Hornsea One Offshore Wind Farm (Amendment) Order 2016. The Hornsea Project One DCO (as amended) grants development consent for, and authorises DE to construct, operate and maintain a 1218 Megawatt (MW) offshore wind farm project that will consist of up to 174 wind turbine generators and will be located 120 km off the Yorkshire coast, covering an area of approximately 407 km<sup>2</sup>. The Hornsea Project One DCO also grants four deemed Marine Licences (dMLs) for the marine licensable activities, these being the deposit of substances and articles and the carrying out of works involved in the construction of the generating station and associated development. Although some licence conditions are relevant only to one of the dMLs, a number are relevant to both.
- 1.1.3 Onshore landfall works commenced in April 2017 and were completed in September 2017. Offshore export cable installation works at the landfall will commence on 1st April 2018.
- 1.1.4 Previous archaeological investigations undertaken to inform an Environmental Statement (RPS 2013a-d) for the Scheme have included a desk-based assessment, aerial photographic survey, geophysical survey (Bunn 2011, in RPS 2013c), fieldwalking (Carter and Johnson 2012, in RPS 2013d), three phases of trial trenching (RPS 2013d, Wessex Archaeology 2015) and archaeological investigations of seven Set Piece Excavation areas and six Strip, Map and Record areas.
- 1.1.5 The archaeological mitigation includes the monitoring and the excavation of Targeted Watching Brief areas during the construction phase. Work was undertaken in line with a Written Scheme of Investigation (WSI, RHDHV 2016), approved by the Heritage Steering Group (HSG). The HSG includes the Archaeological Advisors for Lincolnshire County Council, North East Lincolnshire Council and North Lincolnshire Council.
- 1.1.6 The watching brief was undertaken in accordance with a method statement (RHDHV 2018) and a risk assessment and method statement (RAMS, Wessex 2018) which detailed the



aims, methodologies and standards to be employed. The method statements were approved by Historic England prior to the commencement of fieldwork.

- 1.1.7 The watching brief was carried out at the Hornsea Project One landfall, Horseshoe Point, North Coates, Lincolnshire, DN36 5UF on 1 April 2018. The monitored works covered an area of 25 m<sup>2</sup>, centred on NGR 593374 307529 (the 'Site') (Fig. 1).

## **1.2 Scope of the report**

- 1.2.1 The purpose of this report is to provide the results of the watching brief, to interpret the results within their local or regional context (or otherwise), and to assess their potential to address the aims outlined in the WSI, thereby making available information about the archaeological resource (a preservation by record).

## **1.3 Location, topography and geology**

- 1.3.1 The site was located at the Hornsea Project One landfall, Horseshoe Point, North Coates, Lincolnshire Horseshoe Point at NGR 593374 307529.
- 1.3.2 The underlying geology is mapped as sand and gravel tidal flat deposits (British Geological Survey online viewer).

## **2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

### **2.1 Introduction**

- 2.1.1 Geophysical anomalies WA70008 and WA70009 were first identified by Wessex Archaeology in the archaeological assessment of geophysical data undertaken as part of works required to inform the Environmental Statement for the DCO application for Hornsea Project One (SMart Wind 2013a).
- 2.1.2 There are two records of wrecks in the nearshore area which were not seen in the geophysical data at the recorded locations and were classified as A3 by Wessex Archaeology, an historic record of possible archaeological interest with no corresponding geophysical anomaly (SMart Wind 2013a). These relate to the recorded location of the fishing vessel Georgie lost in 1972 (WA70017) and the recorded location of an unidentified vessel (WA70028). The recorded locations are 920 m and 950 m to the south east of WA70008, respectively.
- 2.1.3 The ES recommended an Archaeological Exclusion Zones (AEZ) of 50m radius around the given location of anomaly WA70008 which was classified by Wessex Archaeology as A1 (anthropogenic origin of archaeological interest) (Smart Wind, 2013a).
- 2.1.4 In addition, the clearance of debris WA70009, which is also located within the AEZ and may be related to WA70008, was also proposed.

### **2.2 Previous investigations related to the development**

- 2.2.1 Previous investigations have included a geophysical investigation by Maritime Archaeology Limited MAL (2016) which identified an anomaly of archaeological interest and a review of 12 Archaeological Exclusion Zones (AEZs) undertaken by MAL. The review amended the position of an AEZ relating to geophysical anomaly WA70008 (DONG Energy 2017a). As a result of this amendment, the cable route now partially overlaps the AEZ. Following further investigation and consultation with Historic England, an approach to reducing the size of the AEZ was proposed. The clearance of debris WA70009 was once again recommended.



2.2.2 The available information for debris WA70009 indicates the presence of wood or metal that has previously been described as possibly related to WA70008. This relationship is supported by the magnetometer data which shows a large spread of magnetic anomalies between WA70008 and WA70009, thereby indicating they are part of the same structure or debris field.

2.2.3 This watching brief was designed to investigate and potentially remove the anomaly WA70009.

### **3 AIMS**

#### **3.1 General**

3.1.1 The aims of the watching brief, as stated in the RAMS (Wessex Archaeology 2018) were:

- *to establish a date and origin for the material encountered;*
- *to examine further the archaeological significance of the material and its value for further research; and,*
- *if appropriate, to provide comment on the approach taken to investigating the anomaly during the consenting and pre-construction process and to identify any lessons learned which may inform the processes applied to magnetic only anomalies.*

### **4 METHODS**

#### **4.1 Introduction**

4.1.1 All works were undertaken in accordance with the detailed methodology set out within the RAMS (Wessex Archaeology 2018) and in general compliance with the standards outlined in ClfA guidance (ClfA 2014a-c). The methods employed are summarised below.

#### **4.2 Fieldwork methods**

##### *General*

4.2.1 The exact locations containing anomalies WA 70008 and 70009 were marked and recorded by MATRIXABC using a survey grade GPS and located in relation to the OS grid.

4.2.2 The location of target WA70009 was used as the centre point to design a 5 x 5 m area for investigation.

4.2.3 An LGP mini excavator removed the sand in a series of level spits, under the supervision and guidance of a suitably experienced archaeologist, down to a maximum depth of 1.8 m.

4.2.4 Excavated area was reinstated.

##### *Recording*

4.2.5 All exposed archaeological deposits and features were recorded using Wessex Archaeology's *pro forma* recording system.

4.2.6 A Leica GNSS connected to Leica's SmartNet service was used to survey the location of the intervention. All survey data was tied into the Ordnance Survey National Grid and heights above Ordnance Datum (Newlyn), as defined by OSGM15 and OSTN15, with a three-dimensional accuracy of at least 50 mm.

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- 4.2.7 A full photographic record was made using digital cameras equipped with an image sensor of not less than 10 megapixels. Digital images have been subject to managed quality control and curation processes.

### **4.3 Artefactual and environmental strategies**

- 4.3.1 Appropriate strategies for the recovery, processing and assessment of artefacts and environmental samples were laid out in the RAMS (Wessex Archaeology 2018).

## **5 ARCHAEOLOGICAL RESULTS**

### **5.1 Summary**

- 5.1.1 A single 5 x 5 m trench was excavated down to a depth of 1.8 m through natural sand and gravel tidal deposits. No archaeological artefacts, features or deposits were found.

## **6 CONCLUSIONS AND RECOMMENDATIONS**

- 6.1.1 Even though the watching brief has failed to identify geophysical anomaly WA 70009 there is still potential for below ground archaeological remains to be present. Therefore, non-intrusive works can be undertaken, however any intrusive works would require to be monitored by a suitably experienced archaeologist.

## **7 ARCHIVE STORAGE AND CURATION**

### **7.1 Museum**

- 7.1.1 The archive resulting from the watching brief is currently held at the offices of Wessex Archaeology in Sheffield. North Lincolnshire Museum has agreed in principle to accept the archive on completion of the project.

### **7.2 Preparation of the archive**

- 7.2.1 The archive, which includes paper records and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material by North Lincolnshire Museum, and in general following nationally recommended guidelines (SMA 1995; ClfA 2014c; Brown 2011; ADS 2013).

### **7.3 Security copy**

- 7.3.1 In line with current best practice (eg, Brown 2011), on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

### **7.4 OASIS**

- 7.4.1 An OASIS online record (<http://oasis.ac.uk/pages/wiki/Main>) has been initiated, with key fields and a .pdf version of the final report submitted. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service ArchSearch catalogue.



## **8 COPYRIGHT**

### **8.1 Archive and report copyright**

- 8.1.1 The full copyright of the written/illustrative/digital archive relating to the project will be retained by Wessex Archaeology under the *Copyright, Designs and Patents Act 1988* with all rights reserved. The client will be licenced to use each report for the purposes that it was produced in relation to the project as described in the specification. The museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use conforms to the *Copyright and Related Rights Regulations 2003*. In some instances, certain regional museums may require absolute transfer of copyright, rather than a licence; this should be dealt with on a case-by-case basis.
- 8.1.2 Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied without reference to Wessex Archaeology for the purposes of archaeological research or development control within the planning process.

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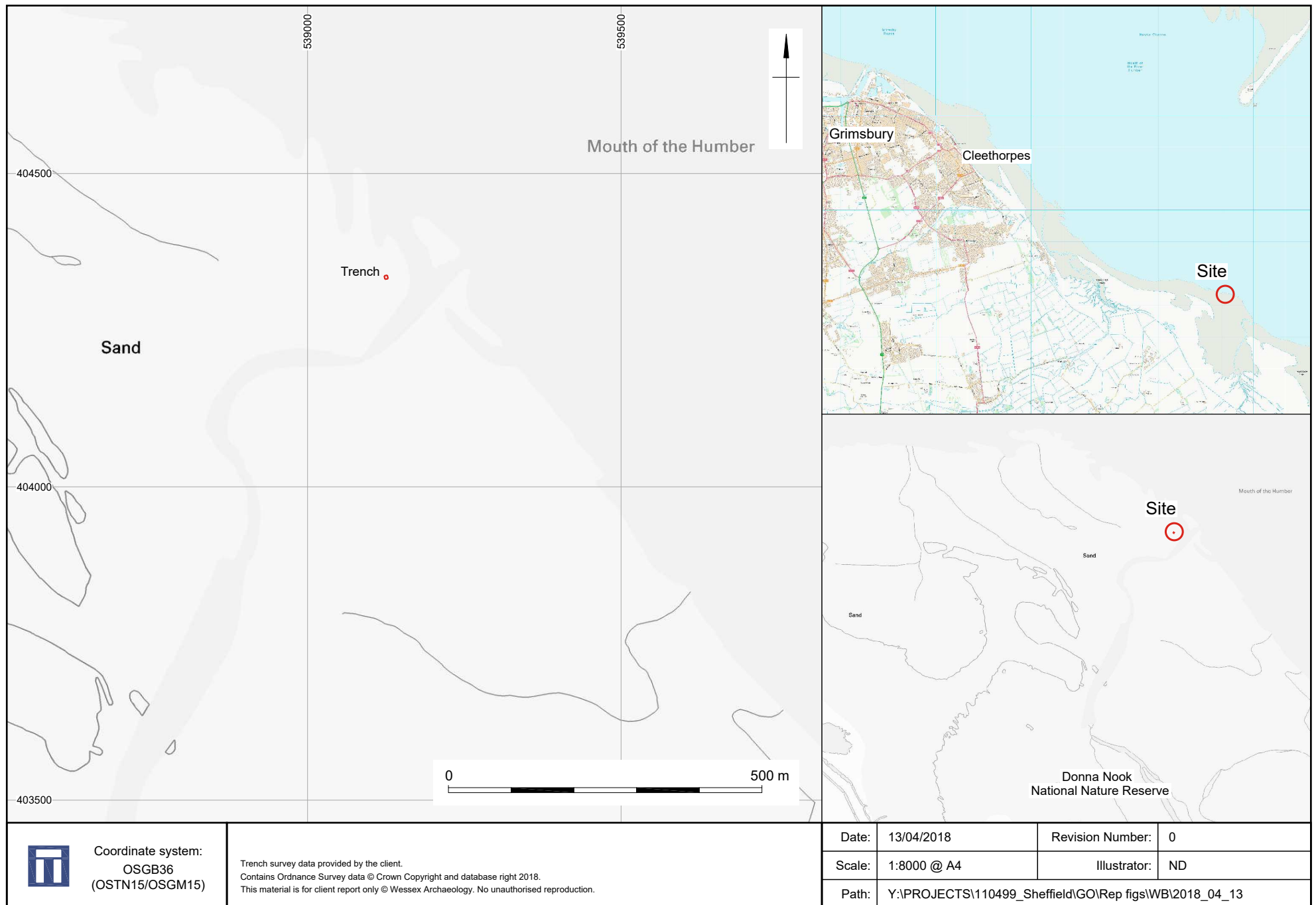
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Site and trench location

Figure 1



Plate 1: View of trench facing north-east



Plate 2: View of trench facing north



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Plate 3: View of partially back filled trench facing north-west



Plate 4: View of backfilled trench facing north-west

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