MORAY EAST
OFFSHORE WINDFARM

Marine Archaeological Reporting Protocol (MARP) and Written Scheme of Investigation (WSI)

Telford, Stevenson and MacColl Offshore Wind Farms and Associated Offshore Transmission Infrastructure

September 2019

Moray Offshore Windfarm (East) Limited

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List of Abbreviations

The following terms and abbreviations are used in this document:

Abbreviation	Description
AC	Alternating Current
AEZ	Archaeological Exclusion Zone
CI*f*A	Chartered Institute for Archaeologists
ECoW	Ecological/Environmental Clerk of Works
ES	Environmental Statement
HER	Historic Environment Record
HES	Historic Environment Scotland
ISA	Inner Study Area
JCCC	Joint Casualty and Compassionate Centre
JNAPC	Joint Nautical Archaeology Policy Committee
MARP	Marine Archaeological reporting Protocol
MLWS	Mean Low Water Springs
MLWS	Mean Low Water Springs
MOD	Ministry of Defence
MS-LOT	Marine Scotland Licensing and Operation Team
NRHE	National Record of the Historic Environment at Historic Environment Scotland.
OfTI	Offshore Transmission Infrastructure
OnTI	Onshore Transmission Infrastructure
ORPAD	Offshore Renewables Protocol for Archaeological Discoveries
OSA	Outer Study Area
OSP	Offshore Substation Platform
OWF	Offshore Wind Farm
PAD	Protocol for Archaeological Discovery
RCAHMS	Royal Commission on the Ancient and Historical Monuments of Scotland
ROV	Remotely Operated Vehicle
RoW	Receiver of Wreck
SSSI	Site of Special Scientific Interest
TI	Transmission Infrastructure
UKHO	United Kingdom Hydrographic Office
UXO	Unexploded Ordnance
WSI	Written Scheme of Investigation
WTG	Wind Turbine Generator

Definitions

The following definitions have been used throughout this document with respect to the company, the consented wind farms and how these definitions have changed since submission of the Moray East Environmental Statement (ES) in 2012 and the Moray East Modified Transmission Infrastructure ES in 2014.

- **Moray Offshore Windfarm (East) Limited** (formerly known as Moray Offshore Renewables Limited and hereinafter referred to as Moray East) - the legal entity submitting this Marine Archaeology Reporting Protocol and Written Scheme of Investigation;
- **Moray East Offshore Wind Farm** - the wind farm to be developed in the Moray East site (also referred to as the Wind Farm);
- **The Moray East site** - the area in which the Moray East Offshore Wind Farm will be located. Section 36 Consents and associated Marine Licences to develop and operate up to three generating stations on the Moray East site were granted in March 2014. At that time the Moray East site was known as the "Eastern Development Area" and was made up of three sites known as the Telford, Stevenson and MacColl Offshore Wind Farm sites. The Section 36 Consents and Marine Licences were subsequently varied in March 2018;
- **Telford, Stevenson and MacColl wind farms** – these names refer to the three consented offshore wind farm sites located within the Moray East site;
- **Transmission Infrastructure (TI)** - includes both offshore and onshore electricity transmission infrastructure for the consented Telford, Stevenson and MacColl wind farms. Includes connection to the national electricity transmission system near New Deer in Aberdeenshire encompassing AC offshore substation platforms (OSPs), AC OSP interconnector cables, AC export cables offshore to landfall point at Inverboyndie continuing onshore to the AC collector station (onshore substation) and the additional regional Transmission Operator substation near New Deer. A Marine Licence for the offshore TI was granted in September 2014 and a further Marine Licence for two additional distributed OSPs was granted in September 2017. The onshore TI was awarded Planning Permission in Principle in September 2014 by Aberdeenshire Council and Planning Permission in Principle under Section 42 in June 2015;
- **Offshore Transmission Infrastructure (OfTI)** – the offshore elements of the transmission infrastructure, comprising AC OSPs, AC OSP inter-connector cables and AC export cables offshore to landfall (for the avoidance of doubts some elements of the OfTI will be installed in the Moray East site);
- **Moray East ES 2012** – The ES for the Telford, Stevenson and MacColl wind farms and Associated Transmission Infrastructure, submitted August 2012;
- **Moray East Modified TI ES 2014** – the ES for the TI works in respect to the Telford, Stevenson and MacColl wind farms, submitted June 2014;
- **The Development** – the Moray East Offshore Wind Farm and Offshore Transmission Infrastructure (OfTI);
- **Design Envelope** - the range of design parameters used to inform the assessment of impacts;
- **OfTI Corridor** – the export cable route corridor, i.e. the OfTI area as assessed in the Moray East Modified TI ES 2014 excluding the Moray East site.
- **OfTI 2018 Archaeology Study Area –** the OfTI geophysical and geotechnical survey area which was focus of an archaeological assessment by Wessex Archaeology during 2018 (Technical Report included as Appendix 3 to this report).

- **OfTI 2019 Archaeology Study Area** – the OfTI geophysical and geotechnical survey area which was focus of an archaeological assessment by Wessex Archaeology during 2019 (Technical Reports included as Appendices 4 and 5 to this report).
- **Moray East Offshore Wind Farm Consents** – are comprised of the following:

  Section 36 Consents:

  - Section 36 consent for the Telford Offshore Wind Farm (as varied) – consent under section 36 of the Electricity Act 1989 for the construction and operation of the Telford Offshore Wind Farm assigned to Moray East on 19 June 2018.
  - Section 36 consent for the Stevenson Offshore Wind Farm (as varied) – consent under section 36 of the Electricity Act 1989 for the construction and operation of the Stevenson Offshore Wind Farm assigned to Moray East on 19 June 2018.
  - Section 36 consent for the MacColl Offshore Wind Farm (as varied) – consent under section 36 of the Electricity Act 1989 for the construction and operation of the MacColl Offshore Wind Farm assigned to Moray East on 19 June 2018.

  Marine Licences

  - Marine Licence for the Telford Offshore Wind Farm (as varied) – Licence Number: 04629/19/0 – consent under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009, Part 4 marine licensing for marine renewables construction works and deposits of substances or objects in the Scottish Marine Area and the United Kingdom Marine Licensing Area transferred to Moray East on 19 July 2018.
  - Marine Licence for the Stevenson Offshore Wind Farm (as varied) – Licence Number: 04627/19/0 – consent under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009, Part 4 marine licensing for marine renewables construction works and deposits of substances or objects in the Scottish Marine Area and the United Kingdom Marine Licensing Area transferred to Moray East on 19 July 2018.
  - Marine Licence for the MacColl Offshore Wind Farm (as varied) – Licence Number: 04628/19/0 (as varied) - consent under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009, Part 4 marine licensing for marine renewables construction works and deposits of substances or objects in the Scottish Marine Area and the United Kingdom Marine Licensing Area transferred to Moray East on 19 July 2018.
- **OfTI Licences** – are comprised of the following:
  - Marine Licence for the Offshore Transmission infrastructure – Licence Number 05340/19/0 – consent under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009, Part 4 marine licensing for marine renewables construction works and deposits of substances or objects in the Scottish Marine Area and the United Kingdom Marine Licensing Area (referred to as the "OfTI Marine Licence")
  - Marine Licence for two additional distributed OSPs – Licence Number 06347/19/0 – consent under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009, Part 4 marine licensing for marine renewables construction, operation and maintenance works and the deposit of substances or objects in the Scottish Marine Area and the United Kingdom Marine Licensing Area (referred to as the "OSP Marine Licence")

Executive Summary

Royal HaskoningDHV has been commissioned by Moray Offshore Windfarm (East) Ltd (Moray East) to prepare a Marine Archaeological Reporting Protocol (MARP) and Written Scheme of Investigation (WSI) for the offshore elements of the Moray East Offshore Wind Farm (comprised of the Stevenson, MacColl and Telford sites, also referred to as the Wind Farm) and associated Offshore Transmission Infrastructure (OfTI) (collectively referred to as the Development).

This document provides an overview of the archaeology and cultural heritage baseline environment as set out in the Environmental Statement (ES) submitted to the Scottish Minsters to accompany the Section 36 and Marine Licence applications for the Moray East Offshore Wind Farm (Moray East ES 2012) and an ES prepared for the modified OfTI cable corridor (Moray East Modified TI ES 2014). It further provides a summarised account of the impact assessment presented, including a review of potential impacts and an outline of the proposed mitigation strategy which has been designed to avoid, reduce or offset impact upon the offshore archaeological and cultural heritage resource arising as a result of the proposed development. A draft Protocol for Archaeological Discoveries (PAD) was previously submitted alongside the Moray East ES 2012, this document takes into consideration the draft PAD as well as information gathered from more recent studies.

The WSI as presented in this document adheres to methodologies set out in the Model Clauses for Archaeological Written Schemes of Investigation: Offshore Renewables Projects (The Crown Estate, 2010). The respective responsibilities of Moray East, their Contractors, the Environmental Clerk of Works (ECoW), the Client Representative and the Archaeological Consultant prior to and during the Project are outlined and the commitment of the project to undertake elements of archaeological work (where relevant and necessary) in a manner consistent with the Model Clauses is underlined, with reference made to key project-specific elements where appropriate.

Specific reference is made to the implementation of Archaeological Exclusion Zones (AEZs) which form the principal means used to preserve in situ any features or deposits of potential or known archaeological interest as outlined in the ESs. The general methodology underpinning the application of the mitigation procedures, and the commitment to the application of this mitigation, as set out in this document, will remain relevant throughout the project lifespan. Any additional recommendations arising as a result of further archaeological assessments undertaken as part of the pre-construction phase will be reported on separately.

The implementation of a MARP (also known as a Protocol for Archaeological Discoveries, PAD) is required in accordance with the Wind Farm Section 36 consent conditions (condition 35 for the Telford and MacColl Wind Farms and condition 36 for Stevenson Wind Farm) and the OfTI Marine Licence conditions (conditions 3.2.2.16 of the OfTI and OSP Marine Licences). To this end, the project will adhere to the Offshore Renewables Protocol for Archaeological Discoveries (ORPAD) (The Crown Estate, 2014). This MARP and WSI outlines key matters in relation to the implementation of ORPAD and refers the reader to the full Protocol document for additional detail, as appropriate.

1 Introduction

1.1 Project Background

Royal HaskoningDHV has been commissioned by Moray Offshore Windfarm (East) Ltd (Moray East) to prepare a Marine Archaeological Reporting Protocol (MARP) and Written Scheme of Investigation (WSI) for the Moray Offshore Wind Farm and associated Offshore Transmission Infrastructure (OfTI). The MARP as presented in this document will be implemented through the mechanism of the Offshore Renewables Protocol for Archaeological Discoveries (ORPAD) (The Crown Estate, 2014).

This document follows on from two Environmental Statements (ESs) submitted as part of the consenting process (Moray East ES 2012 and Moray East Modified TI ES 2014). An ES was first submitted to the Scottish Minsters as part of the Section 36 and Marine Licence application process in 2012 for the Moray East Offshore Wind Farm (comprising of the Telford, Stevenson and MacColl Offshore Wind Farms) and associated OfTI (Moray East ES 2012). Since the submission of this ES, Moray East received a modified grid connection at New Deer, Aberdeenshire and the proposed cable route area has been altered with the landfall location at Inverboyndie. A further ES was therefore prepared regarding the modified transmission infrastructure (TI) (Moray East Modified TI ES 2014).

Moray East was granted consent for the construction of up to 1,116 MW within the Moray East site under Section 36 of the Electricity Act 1989 from the Scottish Ministers on 19th March 2014. A Marine Licence for the Modified TI was awarded on the 25th September 2014 and a further Marine Licence for two additional distributed Offshore Substation Platforms (OSPs) (OSP Marine Licence) was awarded on the 14th September 2017. This document has been prepared to meet the requirements of the Section 36 Consents and the Marine Licences conditions as described under Section 1.2.1).

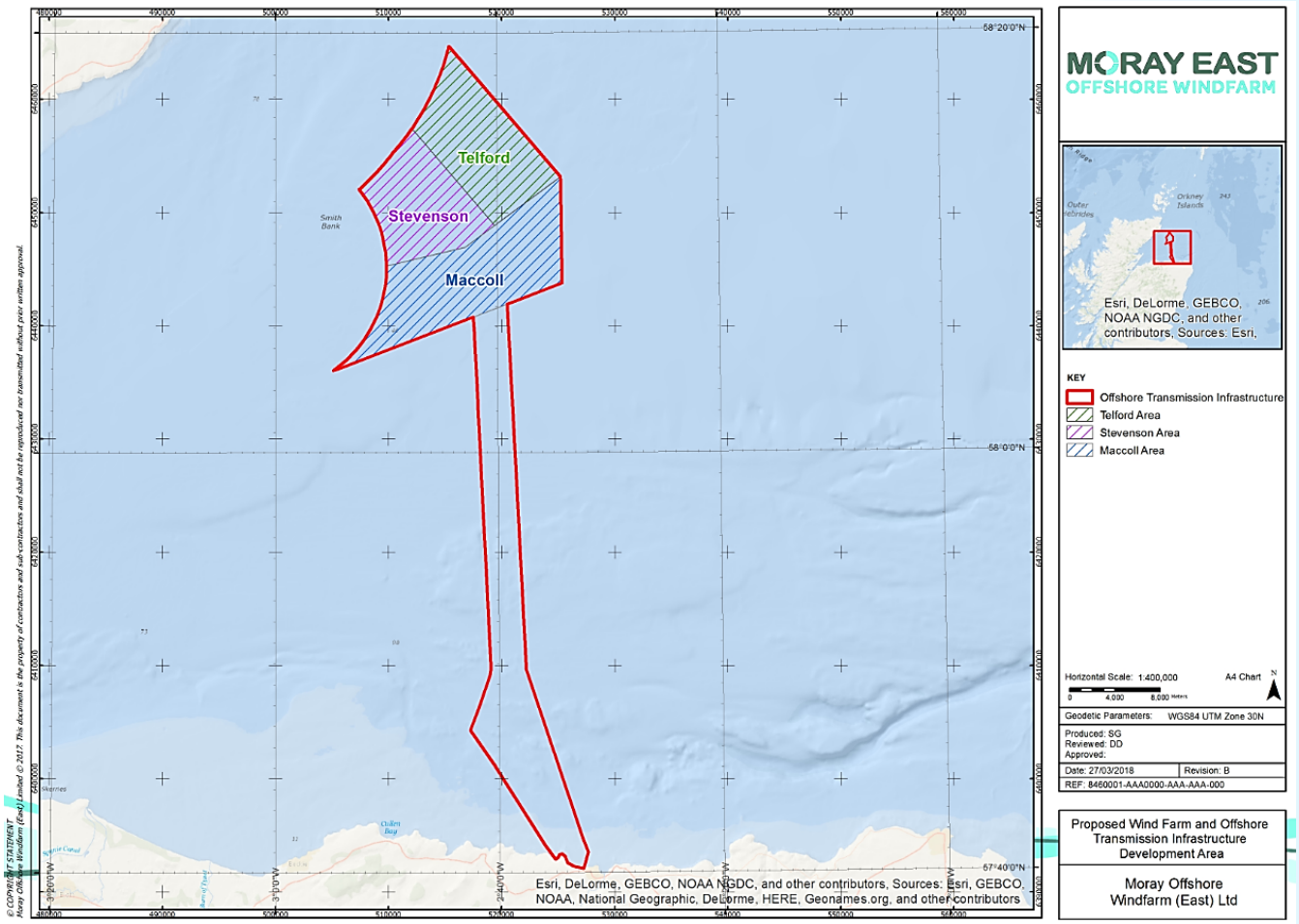

Figure 1-1: Moray East site (Stevenson, Telford and MacColl offshore wind farms and OfTI).

1.2 Legal Context

1.2.1 Consent Conditions

The relevant consent conditions for this document are outlined in Table 1-1.

Table 1-1: Consent Conditions

Consent Document	Condition Reference	Condition Text
Section 36 consents for Telford, Stevenson and MacColl Offshore Wind Farms (OWFs) as varied	Condition 35 (Telford OWF) Condition 36 (Stevenson OWF) Condition 35 (MacColl OWF)	The Company must, no later than 6 months prior to the Commencement of the Development, submit a Reporting Protocol which sets out what the Company must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Development, in writing, to the Scottish Ministers for their written approval. Such approval may be given only following consultation by the Scottish Ministers with any such advisors as may be required at the discretion of the Scottish Ministers. The Reporting Protocol must be implemented in full, at all times, by the Company. **Reason**: to ensure any discovery of archaeological interest is properly and correctly reported.
Marine Licences	3.2.2.16 (OfTI Marine Licence 05340/14/0)	The Licensee must, no later than 6 months prior to the Commencement of the Works, submit a Marine Archaeological Reporting Protocol (MARP) which sets out what the Licensee must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Works, in writing, to the Licensing Authority for their written approval. Such approval may be given only following consultation by the Licensing Authority with Historic Scotland and any such other advisors as may be required at the discretion of the Licensing Authority. The MARP must be implemented in full, at all times, by the Licensee.
	3.2.2.16 (OSP Marine Licence 06347/17/1)	The Licensee must, no later than 6 months prior to the Commencement of the Works, submit a MARP to the Licensing Authority for their written approval, which sets out what the Licensee must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Works, in writing. Such approval may be given only following consultation by the Licensing Authority with Historic Scotland and any such other advisors as may be required at the discretion of the Licensing Authority. The MARP must be implemented in full, at all times, by the Licensee. Reason: To mitigate the effects of the activity on the Site, in accordance with s.29(3)(c) of the 2010 Act and s.71 (3)(c) of the 2009 Act.

In order to provide consistency, for the purposes of this document, the Reporting Protocol specified in the Section 36 consents and the MARP referred to in the OfTI and OSP Marine Licences are collectively referred to as the MARP, which will be adhered to through the application of ORPAD (The Crown Estate, 2014).

1.2.2 Standards and Guidance

This document has been prepared in a manner consistent with the following guidelines:

- *Model Clauses for Archaeological Written Schemes of Investigation: Offshore Renewables Projects* (included as Appendix 1) (The Crown Estate, 2010);

- *Code for Practice for Seabed Development* (Joint Nautical Archaeology Policy Committee (JNAPC), 2006);
- *Historic Environment Guidance for the Offshore Renewable Energy Sector* (COWRIE, 2007); and
- *Protocol for Archaeological Discoveries: Offshore Renewables Projects* (The Crown Estate, 2014).

1.3 Scope

This document has been prepared to meet the consent conditions for the offshore elements of the Moray East Offshore Wind Farm and associated TI (i.e. the Development). It includes consideration of archaeology and cultural heritage offshore, up to the Mean Low Water Springs (MLWS). Archaeological and cultural heritage considerations with respect to onshore and intertidal works are considered as part of the onshore planning consent and are not within the scope of this document. A separate WSI is being prepared for the onshore development to MLWS and includes a consideration of intertidal heritage assets.

This document comprises a project-specific WSI and a MARP and has been prepared to set out the mitigation procedures that seek to avoid, reduce or off-set impact upon known and potential archaeology and cultural heritage assets as a result of the project in order to safeguard the archaeological and historic environment resource.

As part of these mitigation procedures, the implementation of a MARP achieved through the application of ORPAD is proposed (The Crown Estate, 2014). OPRAD provides a means for mitigating effects upon currently unknown archaeological material that may be encountered as a result of the offshore elements of the Project. ORPAD will be implemented at all stages of the development process where archaeological information may be obtained, spanning the lifespan of the Project (pre-construction, construction, operation and decommissioning). This document sets out the protocols and procedures that must be followed in the event of encountering unexpected archaeological discoveries throughout the duration of the Development.

In addition, in relation to the mitigation measures proposed, this WSI sets out the respective responsibilities of Moray East, their Contractors, the ECoW, the Client Representative and the Archaeological Consultant prior to and during the Project, and formal lines of communication between these parties and the Marine Scotland Licensing and Operation Team (MS-LOT) and Historic Environment Scotland (HES).

1.4 Structure and References

Table 1-2: Document Structure

Document Structure Overview	
Section	**Details**
1: Introduction	This section sets out information relating to the project background, legal context and underlines the scope of the document.
2: Archaeological Background	This section underlines the archaeological assessment undertaken to date at the time this WSI was compiled. It includes a summary of the baseline environment as presented in the Environmental Statements and the archaeological assessment of geophysical and geotechnical data within the OfTI 2018 Archaeology Study Area and OfTI 2019 Archaeology Study Area (Appendices 3-5), where relevant.

Document Structure Overview	
Section	**Details**
3: Summary of Impact Assessment	This section summarises the Impact Assessment as presented in each of the ES chapters (Moray East, 2012 and 2014) and includes an overview of potential impacts and proposed mitigation tailored to avoid, reduce or off-set impact upon the cultural heritage resource as a result of the development.
4: Written Scheme of Investigation	In demonstrating adherence to industry good practice, the WSI has been compiled in accordance with Model Clauses for Archaeological Written Schemes of Investigation (Offshore Renewables Projects) (The Crown Estate, 2010). This section outlines the roles, responsibilities and communications relevant to the project and makes reference to the methodologies set out in the model clauses, with key elements discussed in a manner that is specific to the project.
5: Marine Archaeological Reporting Protocol	The project consent conditions set out a requirement for a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the project. In accordance with this requirement, the project will adhere to ORPAD (The Crown Estate, 2014). This section outlines key matters in relation to the implementation of ORPAD and refers the reader to the full Protocol document.
6: References	This section provides an exhaustive list of all documents referred to throughout the document.

2 Archaeological Background

To date, two ESs have been prepared and submitted to the Scottish Minsters as part of the Marine Licence application process (Moray East ES 2012 and Moray East Modified TI ES 2014). The Moray East ES 2012 included a summary of the baseline environment for archaeology and visual receptors (Volume 2, Chapter 5, Section 5.5), a summary of effects and mitigation with respect to archaeology and visual receptors in relation to the consented offshore wind farms (Volume 3, Chapter 8, Section 8.5) and the transmission infrastructure (Volume 4, Chapter 11, Section 11.5) (since superseded following the modification of the OfTI), with the overall assessment underpinned by an archaeological technical report prepared by Headland Archaeology Ltd (Volume 11, Technical Appendix 5.5 A). Due to an alteration of the landfall and grid connection location, a further ES was submitted in 2014 regarding the Modified TI (Moray East Modified TI ES 2014). Due to this modification, the baseline environment with respect to the historic environment within the OfTI Corridor as outlined in the Moray East ES 2012 is no longer considered relevant and is not summarised below. Reference is confined to the Modified TI, with the baseline environment summary based on the Moray East Modified TI ES 2014 and the subsequent archaeological assessment of geophysical and geotechnical survey data, the results of which are appended to this document (Appendices 3-5).

The archaeological technical report (Moray East ES 2012 - Volume 11, Technical Appendix 5.5 A) included an assessment of various source material with the purpose of locating all known cultural heritage assets within the constraints area and within the general location of the proposed wind farms and to identify the archaeological potential of the area. Sources included:

- Databases of designated cultural heritage assets maintained by Historic Scotland;
- Maritime records held by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS);
- UK Hydrographic Office Wrecks and Obstructions Database (SeaZone);
- National Library (for historic charts and maps only);
- Ministry of Defence (military remains only);
- Receiver of Wreck (ROW);
- Relevant SEA reports and Coastal Survey Assessment reports;
- National Record of the Historic Environment at Historic Environment Scotland. (NRHE);
- Vertical and oblique aerial photographs held by (RCAHMS);
- Aberdeenshire Council's Historic Environment Record (HER);
- Plans held by the National Archives of Scotland;
- Other readily available published sources and grey literature; and
- Marine geophysical and geotechnical survey data.

Cultural heritage assets within the Wind Farm Study Areas, as presented in the Moray East ES 2012, were divided into their respective Inner and Outer Study Areas (ISA and OSAs). These study areas were defined as follows:

- The Inner Study Area (ISA) (the previously proposed Telford, Stevenson and MacColl Wind Farms); and
- The Outer Study Area (OSA) (a 1km buffer around the previously proposed Telford, Stevenson and MacColl Wind Farms).

Cultural heritage assets within the OfTI, as presented in the Moray East Modified TI ES 2014, were assessed within an Archaeological Study Area (ASA), defined as follows:

- The OfTI, inclusive of the three consented wind farm areas (Telford, Stevenson and MacColl) in relation to the OSPs.

As part of the Moray East Modified TI ES 2014, it was further outlined that following consultation with HES, the assessment of geophysical and geotechnical data would be reviewed pre-construction in order to precisely define mitigation strategies for unknown cultural heritage receptors identified in the OfTI. To this end, Wessex Archaeology Ltd were commissioned by Moray East to undertake an archaeological assessment of available geophysical and geotechnical survey data acquired within the OfTI 2018 Archaeology Study Area (see Figure 2-1). Data were available for all geophysical sensors (sidescan sonar, magnetometer, multibeam bathymetry echosounder and sub-bottom profiler data) and included survey data acquired in 2014 for the OfTI alongside additional nearshore data acquired in 2017 (see Figure 2-1). Geotechnical data subject to archaeological review included geotechnical core logs for the OfTI acquired in 2014 and nearshore areas acquired in 2017. The full complement of data was subject to archaeological assessment in line with the methodology for 'Archaeological Interpretation of Further Geophysical Data' as set out in the model clauses (Appendix 1, Section 5.7) and the 'Archaeological Review of Geotechnical Logs' as set out in the model clauses (Appendix 2, Section 6.3). The results of the assessment were reported on in a manner consistent with the model clauses on reporting and are appended to this document (Appendix 3).

Due to a later revision of the proposed export cable routing within the OfTI (towards the landfall), additional geophysical and geotechnical survey data were acquired and archaeologically assessed by Wessex Archaeology Ltd (see the OfTI 2019 Archaeology Study Area in Figure 2-1). The assessed geophysical data comprised sidescan sonar, magnetometer and multibeam bathymetry echosounder datasets acquired by Bibby HydroMap between 3 August and 15 September 2018. Geotechnical data subject to archaeological review included geotechnical core logs for the OfTI acquired in 2014 and 2018. As above, the full complement of data was subject to archaeological assessment in line with the methodology for 'Archaeological Interpretation of Further Geophysical Data' as set out in the model clauses (Appendix 1, Section 5.7) and the 'Archaeological Review of Geotechnical Logs' as set out in the model clauses (Appendix 2, Section 6.3). The results of the assessment were reported on in a manner consistent with the model clauses on reporting and are appended to this document (Appendices 4 and 5).

The results of the assessment relevant to the offshore environment as presented in each ES and any supporting documents (Appendices 3-5) are summarised in the following sections.

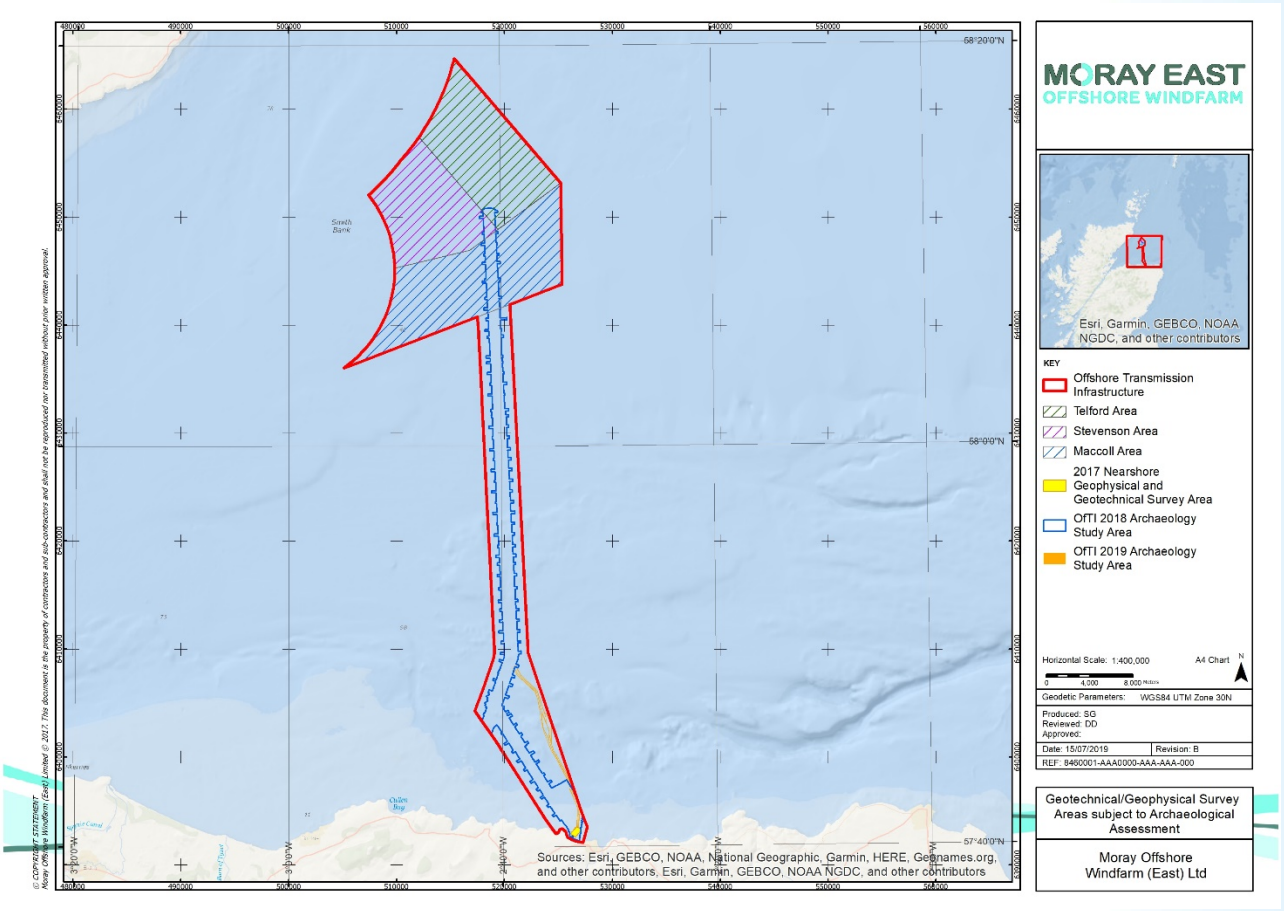

Figure 2-1 Geophysical survey area

2.1 The Wind Farm

The following section outlines the baseline conditions relevant to archaeological and cultural heritage within the Moray East site (where the Moray East Wind Farm will be located and part of the OfTI) as presented in the Moray East ES 2012 and relevant results from archaeology analysis the OfTI 2018 Archaeology Study Area.

There are no designated archaeological or cultural heritage assets or targets within the Wind Farm Study Areas. The following archaeological / cultural heritage assets and targets were identified within the Wind Farm Study Areas (Moray East ES 2012):

- Six recorded wreck sites, comprising:
    - Four within the ISA (HW1001, HW1002, HW1003 and HW1004); and
    - Two within the OSA (HW1005 and HW1006).
- Two recorded obstructions, comprising:
    - One within the ISA (HW1014); and
    - One within the OSA (HW1015).
- 20 geophysical anomalies of archaeological potential, comprising:
    - Three anomalies of high archaeological potential (HW157, 158 and 159); and
    - 17 anomalies of medium archaeological potential (HW36, 44, 52, 61, 71, 72, 73, 74, 75, 76, 77, 78, 80, 100, 102, 108, and 117).

The northern most section of the 2018 archaeology study area extended into the Moray East site. The following additional targets of archaeology potential were also identified as being within the Moray East site during the recent archaeology assessment of geophysical and geotechnical survey data (Appendix 3):

- Ten geophysical anomalies classified as A2 (Uncertain origin of *potential archaeological potential*) (WA 7000- 7009); and
- Three simple cut and fill P2 classified paelolandscape features (WA 7125, 7126 & 7127).

Seabed features within the Moray East site from the 2012 ES and 2018 survey are shown in Figure 2-2 below.

Of the recorded wrecks within the Wind Farm Study Areas, four are considered to be 'Live' with known locations, shown in bold type above (HW1001, HW1002, HW1004 and HW1005). HW1003 is recorded as a 'Dead' wreck. A review of the original record for this charted site indicates that it is better regarded as a recorded loss location rather than relating to tangible remains on the seafloor. On this basis, it is not considered to represent part of the known archaeological and cultural heritage resource, but rather as an indication on the potential for currently uncharted wreck remains to exist within the proposed development area.

With respect to the potential for submerged prehistoric archaeology to be present, the Moray East ES 2012 concluded that the organic bands present in the stratigraphic record, presented as laminae within a clay layer between 19.2-33m and an intercalated clay and sand layer between 33-40m, are potentially significant in terms of palaeoenvironmental and palaeoclimate data for possible Quaternary inter-stadial events. However, the absence of organic sediments such as peats within later sediments indicates that there is no potential for palaeoenvironmental data relating to the Holocene, although the presence of residual, scattered flints and lithic artefacts within the marine sediments remains a possibility.

From the 2018 geophysical survey data analysis, of the ten geophysical anomalies seven (WA 7000-7002 and WA 7004-7007) are recorded as 'dark reflectors' and three (WA 7003, 7008, and 7009) are recorded as 'debris' (Appendix 3, Annex 1). A total of 19 of 91 vibrocore logs were taken from within the Moray East site, of which 17 were classified as low priority and two (VC-28 and VC 28A) were classified as medium priority. Three paeleolandscape features were identified within the Moray East Site, WA 7125 and 7127 were wholly within the Moray East site, whilst 7126 overlapped with the OfTI Corridor.

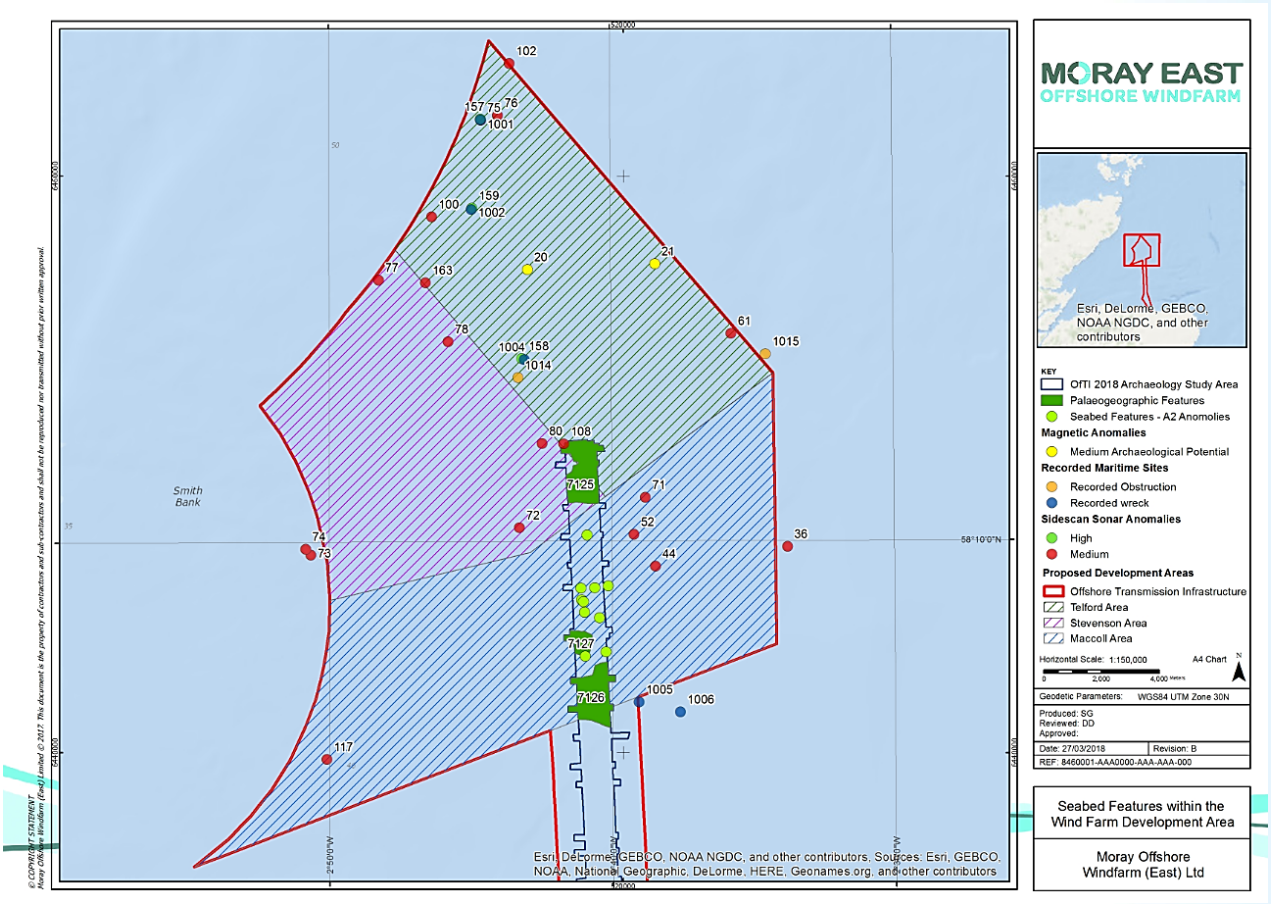

Figure 2-2: Recorded Maritime Sites and Anomalies within the Moray East Site.

2.2 The OfTI Corridor

The following section outlines the baseline conditions relevant to archaeological and cultural heritage based on the OfTI Corridor as presented in the Moray East Modified TI ES 2014 and subsequent archaeological assessment of geophysical and geotechnical survey data (Appendices 3-5).

There are no designated archaeological or cultural heritage assets or targets within the OfTI Corridor. The following archaeological / cultural heritage assets and targets were identified within the Modified TI corridor:

- Three archaeological anomalies (classified as A1 anomalies by Wessex Archaeology – anomalies of anthropogenic origin of archaeological interest);
- 150 anomalies of uncertain origin of possible archaeological interest (classified as A2 anomalies by Wessex Archaeology – anomalies of uncertain origin of possible archaeological interest); and
- 19 palaeogeographic features.

The Moray East Modified TI ES 2014 documented a further nine maritime sites within the OfTI Corridor (WA 2000-2008). These records were detailed as being based upon UKHO and NRHE records with substantial positional uncertainties. The location of three such records lie within the OfTI 2018 Archaeological Study Area subject to archaeological assessment (WA 2002, WA 2006 and WA 2008). An interrogation of the original documentation for these sites has indicated that they represent records of loss rather than tangible remains on the seafloor. These records have been assigned as recorded losses ('U3'). A review of the documentation for the remaining six maritime sites (WA 2000-1, 2003-5 and 2007)

also indicates that these records represent records of loss rather than charted wreck remains. As such, these records are also considered to be recorded losses and do not, except by chance, relate to tangible remains on the seafloor. In conclusion, WA 2000 – 2008 are not regarded as known archaeological / cultural heritage assets within the Modified TI corridor. Although considered to represent a recorded loss, it should be noted that WA 2008 relates to an unconfirmed report of an aircraft loss off Whitehills on 14th June 1943. If located, as this aircraft it likely to have crashed whilst in military service, its remains would be afforded statutory protection under the Protection of Military Remains Act 1986 (Figure 2-3a-d). It is possible that this record relates to the aircraft engine identified as anomaly WA 7118 (see Section 4.4.1.2 below).

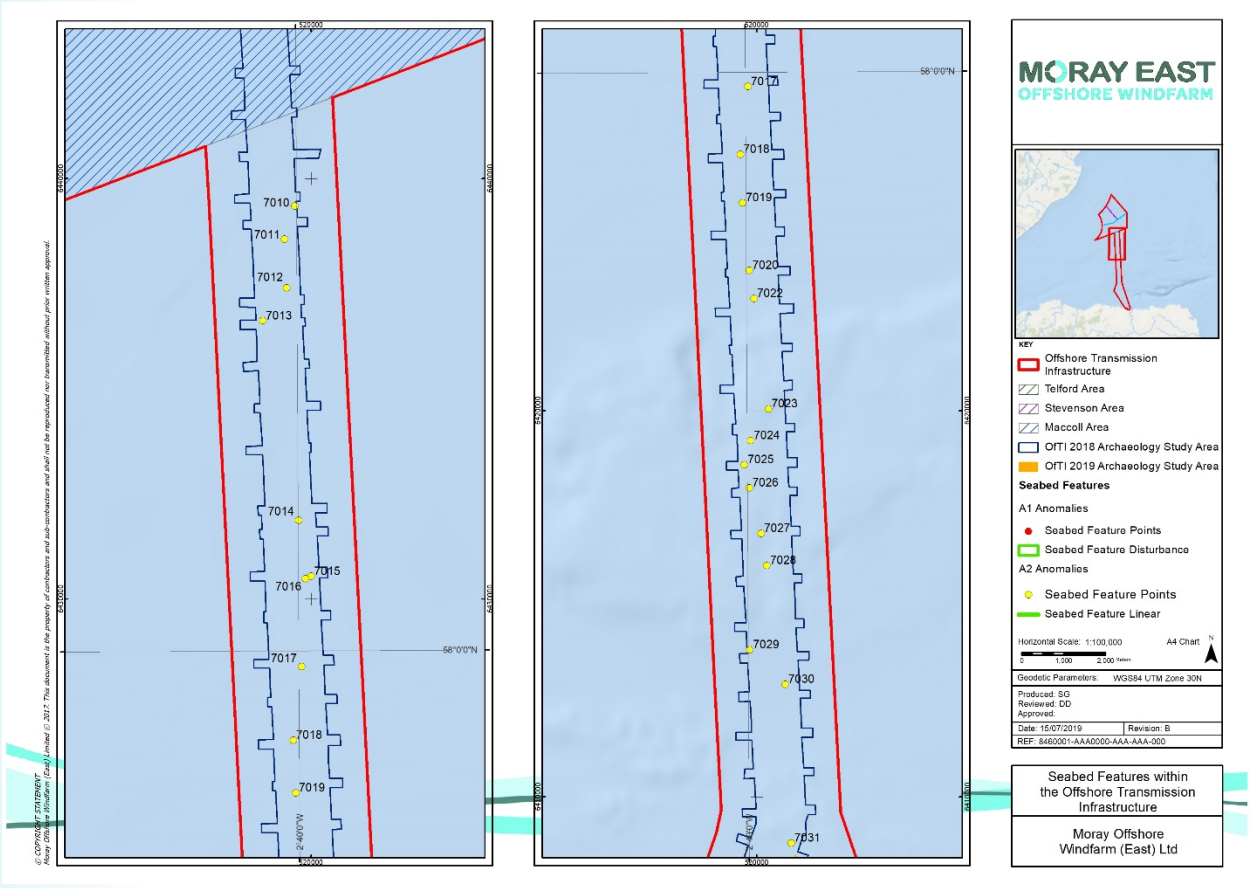

Figure 2-3a: Seabed features within the OfTI

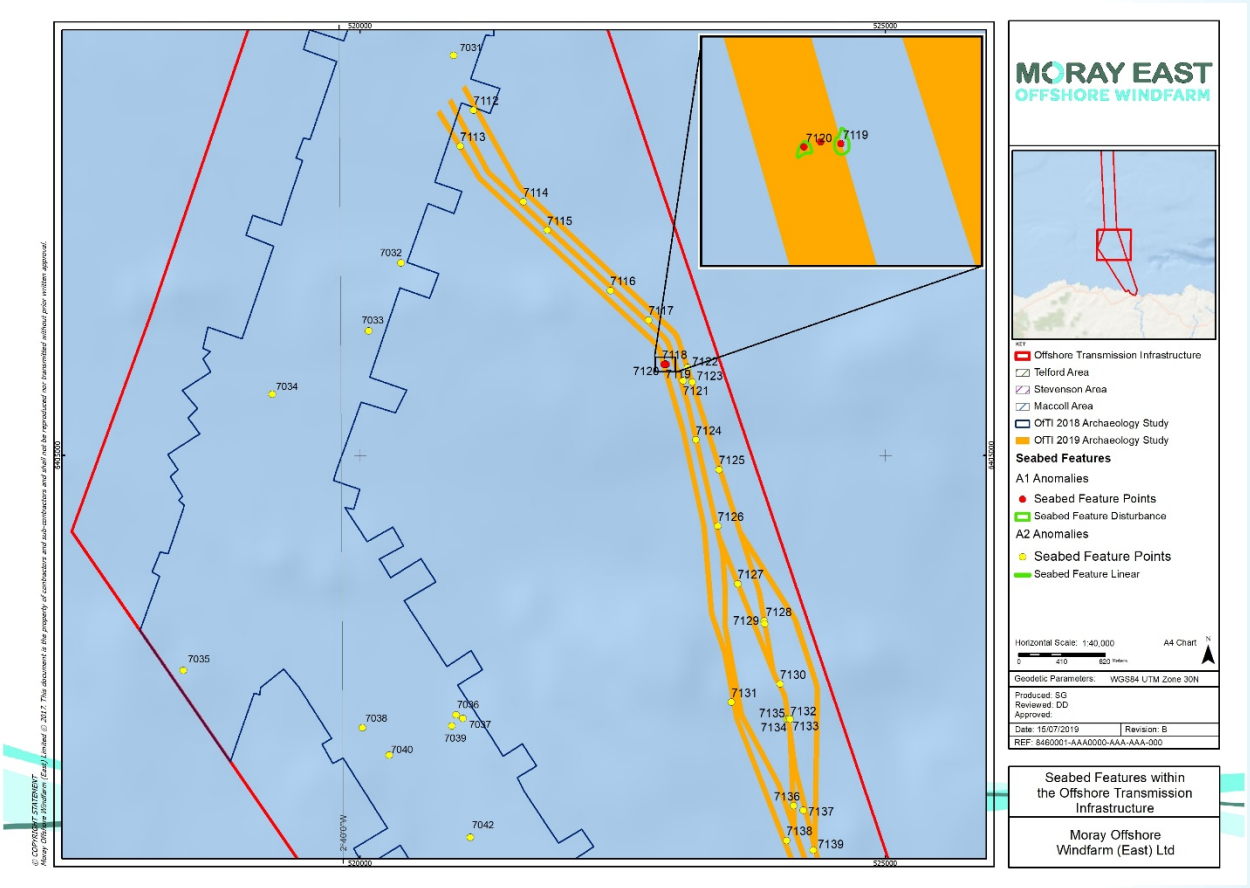

Figure 2-4b: Seabed features within the OfTI

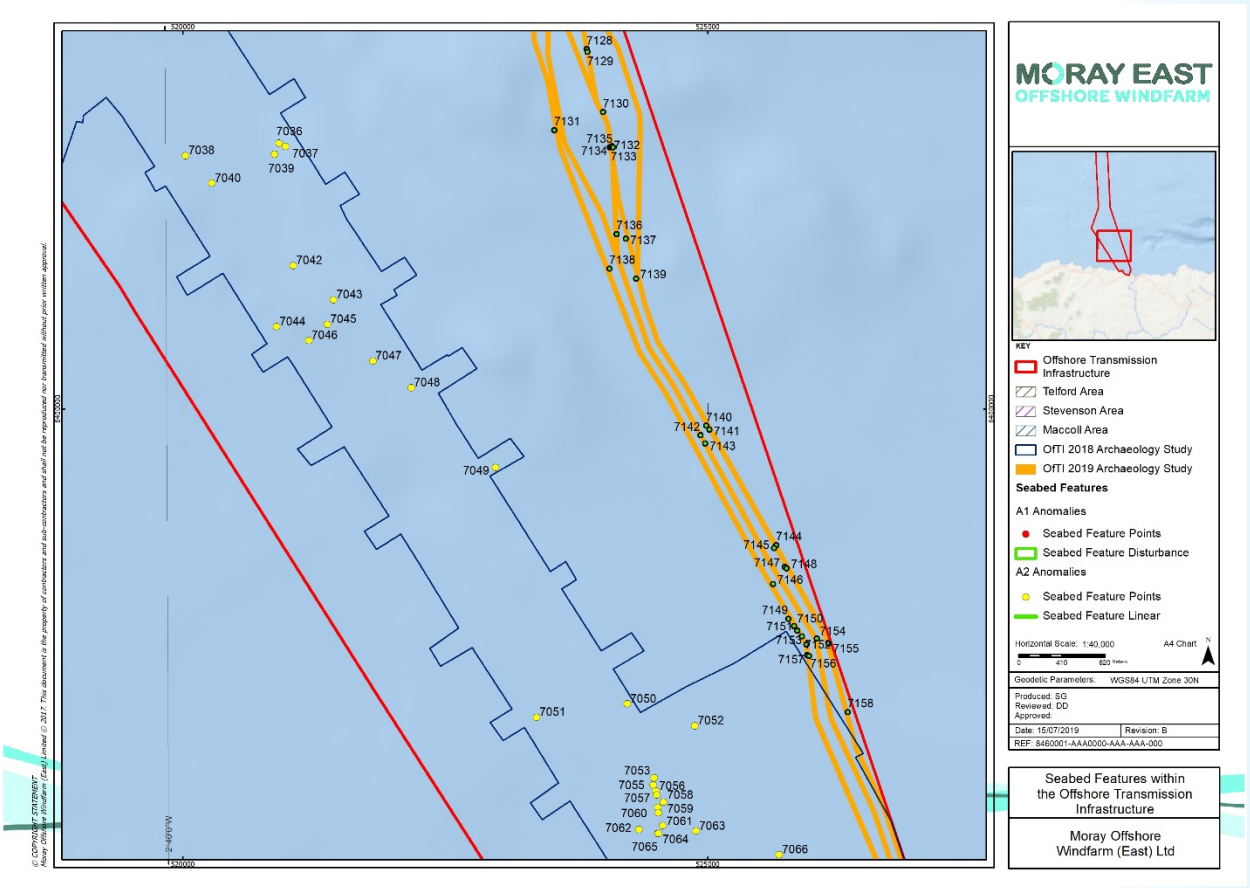

Figure 2-5c: Seabed features within the OfTI

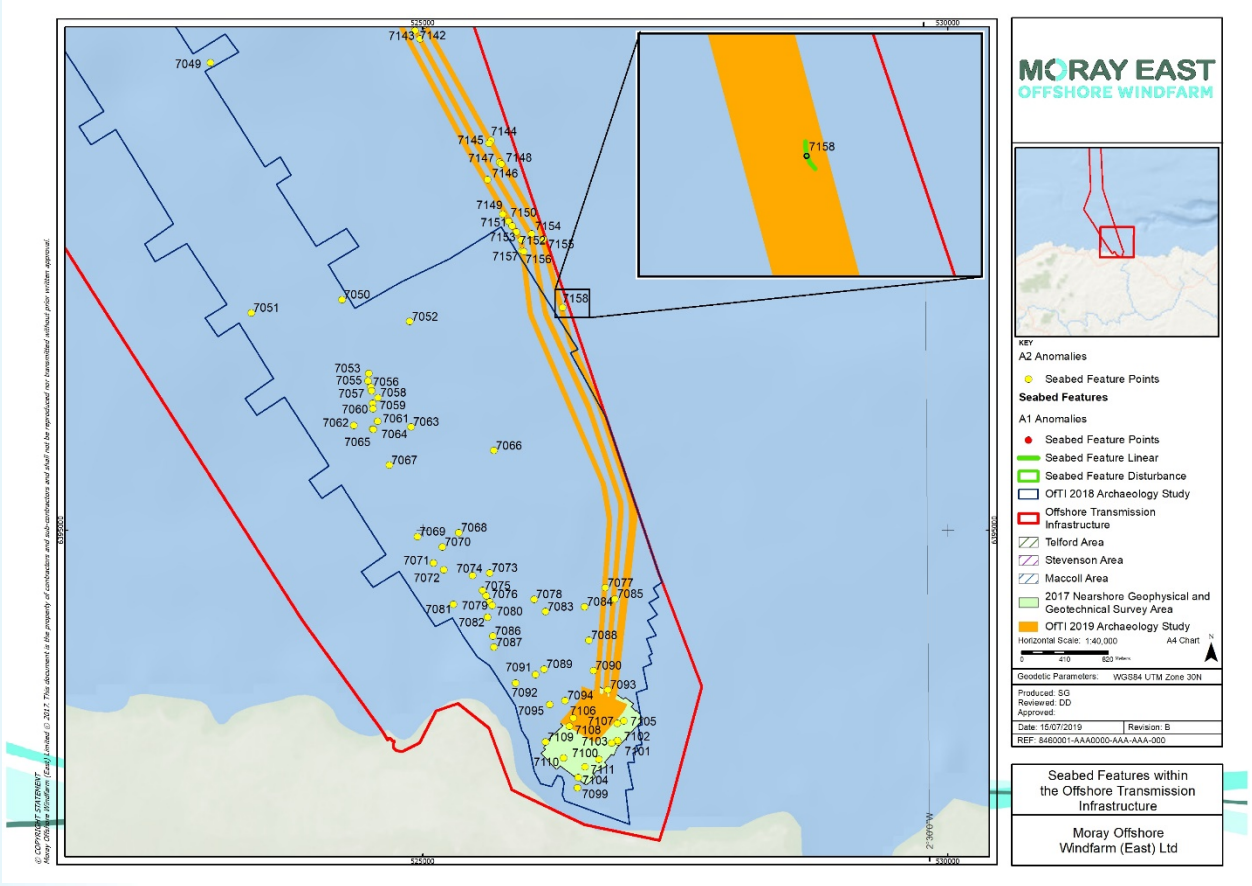

Figure 2-6d: Seabed features within the OfTI

The geoarchaeological assessment of the OfTI Corridor was informed by the results of a geoarchaeological assessment of vibrocores acquired from a survey undertaken in 2014 and a later survey in 2018. A total of 91 vibrocore logs were acquired in 2014 and a further 28 acquired in 2018, each of which were subject to a desk-based archaeological review (referred to as a Stage 1 geoarchaeological assessment). Those cores considered to warrant further investigation through indicating the likely presence of horizons of archaeological interest were identified. As a result, a total of seven vibrocores were taken forward for geoarchaeological recording (referred to as a Stage 2 geoarchaeological assessment) (comprising S4-VC-02, S4-VC-03, S4-VC-07 and S4-VC-08A acquired in the 2018 survey and VC-53, VC-55 and VC-68 acquired in the 2014 survey). The assessment of geophysical data further identified a 19 palaeolandscape features within the Modified TI corridor which have been designated with a P2 archaeological rating (feature of possible archaeological interest) (Figure 2-4).

Based on the Stage 1 and Stage 2 geoarchaeological assessments undertaken to date, three stratigraphic units were identified as being present within 2.5m of the seabed along the OfTI Corridor. The lowermost deposits comprise glacial till deposited during the last ice age (Devensian) which has low geoarchaeological potential. These glacial deposits are overlain by soft minerogenic sediments interpreted to have been deposited in a marine or glacimarine environment shortly after ice sheets retreated from the Moray Firth. These deposits have been correlated to Unit 7 of BGS Outer Moray Firth stratigraphy and also have low geoarchaeological potential. The uppermost sediments recovered in vibrocores comprise seabed sediments deposited under recent hydrodynamic regimes. These deposits also have low geoarchaeological potential. Based on the low geoarchaeological potential of the stratigraphic sequences encountered, no recommendations were made for further geoarchaeological assessment (Stage 3 geoarchaeological works, sampling and assessment).

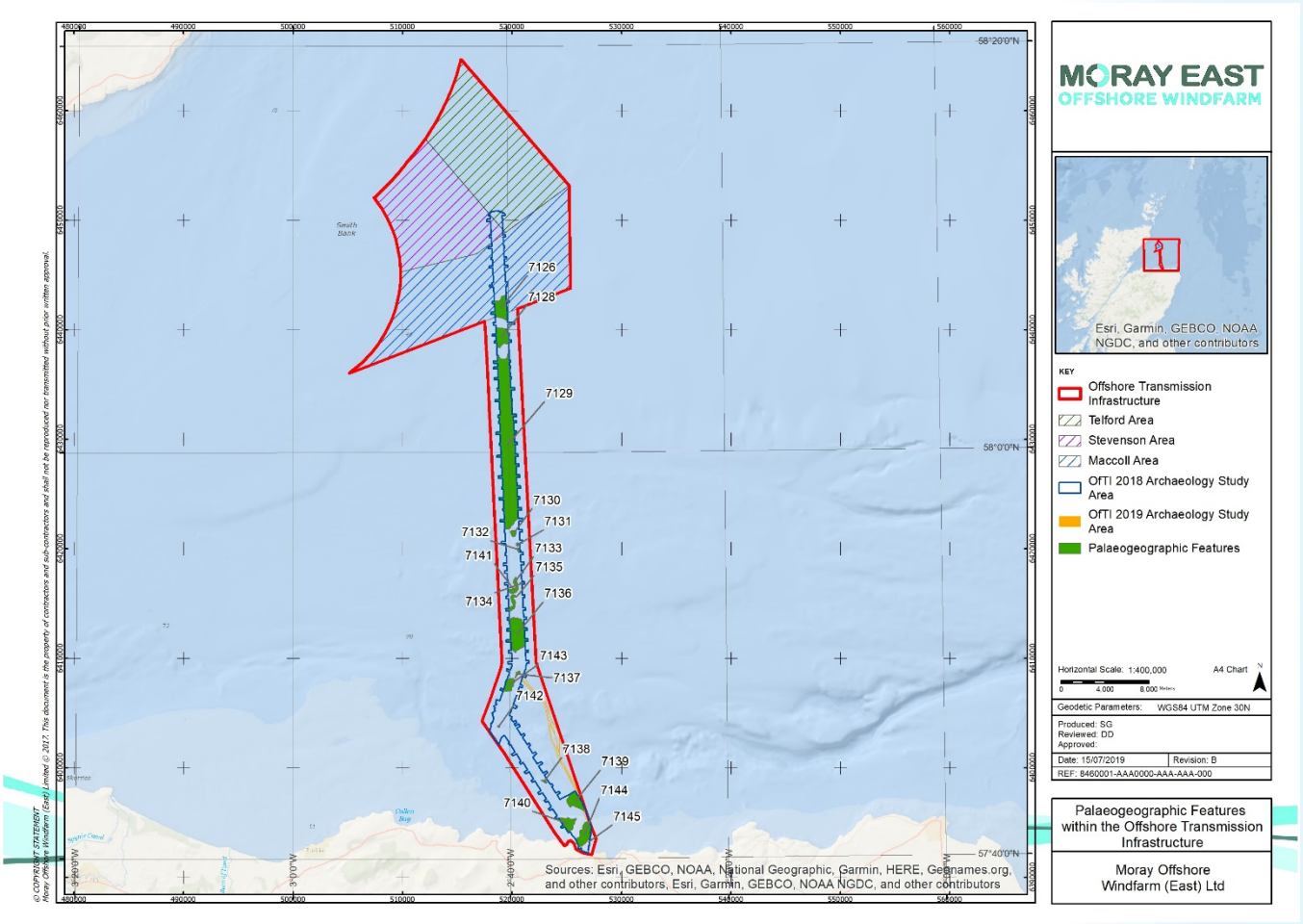

Figure 2-7 Paleogeographic features within the OfTI Corridor

3 Summary of Impact Assessment

The ES Chapters describe and assess the likely significant effects of the proposed project upon both onshore and offshore archaeological and cultural heritage assets. These effects, as outlined in each chapter, are summarised in relation to the Moray East Offshore Wind Farm (Moray East ES 2012- Volume 3, Chapter 8, Section 8.5) and the OfTI (Moray East Modified TI ES 2014 - Chapter 5.4, Section 5.4.2) in the following sections.

3.1 Potential Impacts

3.1.1 The Wind Farm

The potential effects arising as a result of the Wind Farm elements of the project upon archaeology and the cultural heritage resource can be summarised as follows:

- Likely significant direct effects on archaeological sites and features (for example: damage to or burial of marine sites and features as a result of the proposed works).

Although assessed as potential impacts, the Moray East ES 2012 outlined that no significant indirect effects were identified from changes to seabed processes or to the setting of cultural heritage assets (e.g. where the visibility of wind turbines either causes loss of cultural significance or affects the degree to which significance may be appreciated).

3.1.2 The OfTI Corridor

The potential effects arising as a result of the OfTI elements of the project upon archaeology and the cultural heritage resource can be summarised as follows:

- Potential direct effects on archaeological sites and features arising as a result of:
    - Groundworks associated with OSP installation;
    - Burial of offshore export cables; and
    - Seabed contact by construction and / or inspection, maintenance and repair vessels.

Although assessed as potential impacts, the Moray East Modified TI ES 2014 outlined that no significant indirect effects were identified from changes to seabed processes or to the setting of cultural heritage assets as a result of the OfTI elements of the project.

3.2 Proposed Mitigation

3.2.1 The Wind Farm

The following mitigation strategies were proposed in relation to archaeology and cultural heritage in Volume 3, Chapter 8 (Section 8.5) (Moray East ES 2012).

The implementation of Archaeological Exclusion Zones (AEZs) around archaeology and cultural heritage assets that may be subject to direct impact as a result of the Wind Farm will serve to preserve *in situ,* any features or deposits of known or potential cultural heritage interest, thereby reducing post-mitigation effects. AEZs are defined as an area where activities that would disturb the seabed are prohibited. In order to mitigate against the discovery of previously unrecorded cultural heritage assets a protocol for unexpected archaeological discoveries will also be implemented.

Table 3-1: Wind Farm Impact Assessment Summary

Receptor	Pre-Mitigation Effect	Mitigation	Post-Mitigation Effect
Construction			
Recorded Sites such as Known Wrecks	Major	AEZs	Negligible
Sites of Medium or High Potential Identified in the Geophysical Survey Data	Moderate to Major	AEZs	Negligible
Unrecorded Offshore Cultural Heritage Assets	Unknown	Implementation of WSI and PAD	Negligible
Sites Affected through Changes in Sedimentary Regime	Negligible	None	Negligible
Operation			
Setting of Designated Onshore Receptors	Negligible	None	Negligible
Sites Affected through Changes in Sedimentary Regime	Negligible	None	Negligible
Decommissioning			
Effects arising from the decommissioning of the three proposed wind farm sites are considered to be analogous to, and of no greater significance than, those arising during construction.			

Ten A2 classified anomalies were identified within the Moray East site area of the 2018 OfTI archaeological study area. Key mitigation measures specific to the Moray East site, as informed by the updated archaeological assessment of geophysical survey data (Appendix 3), can be summarised as follows:

- Avoidance of ten A2 anomalies (uncertain origin of possible archaeological interest) by means of micrositing the scheme design (see Section 4.4.1.1 below);
- Production of a scheme-specific WSI; and
- The implementation of a reporting protocol for finds of archaeological interest.

3.2.2 The OfTI Corridor

Mitigation measures as outlined in the Moray East Modified ES 2014 were designed to mitigate the effect of the construction, operation and decommissioning phases upon known Cultural Heritage Receptors, and to establish the presence of, and appropriate mitigation for, unknown assets. Amongst the mitigation measures set out in the Moray East Modified ES 2014, it was recommended that geophysical and geotechnical datasets being acquired for the OfTI were subject to archaeological assessment, enhancing the WSI, with the OfTI design, and mitigation measures reported on pre-construction. This archaeological assessment of geophysical and geotechnical survey data has been completed, the results of which have been used to inform this document and are appended (Appendices 3-5) and any recommendations therein are included within the proposed mitigation as summarised in this document.

As with the approach for the Moray East site, key mitigation measures that will be implemented within the OfTI Corridor can be summarised as follows:

- Implementation of AEZs around A1 anomalies (anomalies of archaeological interest) (see Section 4.4.1.2 below);

- Avoidance of A2 anomalies (uncertain origin of possible archaeological interest) by means of micrositing the scheme design (see Section 4.4.1.2 below);
- Production of a scheme-specific WSI; and
- The implementation of a reporting protocol for finds of archaeological interest.

3.2.2.1 Archaeological Exclusion Zones

The preferred method of mitigation is avoidance. AEZs placed around all discrete archaeological sites or more extensive areas identified within an EIA prohibit development related activities within their extents and have been widely applied in offshore contexts to sites and anomalies with known or potential archaeological significance. As the marine historic environment in Scottish and UK waters is still largely unknown and poorly documented, it is often not possible to fully assess the extent or importance of an archaeological site. In many instances, therefore, to assist developers with planning a scheme layout, the implementation of buffers around sites may be more appropriate.

It is proposed that all AEZs will be marked on the scheme masterplans, including contract documents. The final design of the Wind Farm infrastructure and OfTI Corridor will take account of these buffers, which may evolve as the project progresses subject to scheme design and survey requirements. If effects cannot be avoided measures to reduce, remedy or offset disturbance will be set out in a WSI agreed with MS-LOT and HES as outlined below.

3.2.2.2 Written Scheme of Investigation

The Moray East Modified ES 2014 states that following completion of geophysical and geotechnical assessment, a WSI will be prepared in consultation with Aberdeenshire Council and Historic Scotland. The WSI will be compliant with existing archaeological guidance and should apply to all construction, operation and decommissioning activities with potential to have an effect upon cultural heritage receptors. It should be incorporated into the final environmental management plan for the OfTI. The WSI will set out:

- When, how, why and by whom archaeological mitigation measures are to be implemented (including AEZs and micrositing allowances); and
- Provide for the appointment of a retained archaeologist (see Section 4.1.3 below) to carry out and / or coordinate archaeological mitigation activities and to monitor compliance with the WSI during construction.

Section 4 of this document has been prepared to fulfil this requirement as set out in the ES.

3.2.2.3 Protocol for archaeological discoveries

All construction, operation and decommissioning activities will be subject to a scheme-specific protocol document for dealing with archaeological discoveries. This will be compliant with existing archaeological guidance (specifically The Crown Estate/Wessex Archaeology, 2010b) and incorporated into the WSI. Compliance with the protocol will be monitored by the retained archaeologist during construction and installation.

4 Written Scheme of Investigation

This document adheres to methodologies set out in the *Model Clauses for Archaeological Written Schemes of Investigation: Offshore Renewables Projects* (The Crown Estate, 2010) (see Appendix 1 below).

4.1 Roles, Responsibilities and Communication

4.1.1 Client Representative

Moray East will identify a Client Representative to act as a first point of contact for Project staff. It will be the responsibility of the Client Representative to liaise with the Environmental Clerk of Works (ECoW) in respect of the implementation of mitigation measures with respect to archaeology and cultural heritage. Overall responsibility for the implementation of this WSI lies with Moray East who will ensure that its agents and contractors are contractually bound to adhere to the terms of the WSI and to implement the PAD (Section 5 below). The key contact for the historic environment at Moray East is:

- Peter Moore (OFTO Development Manager)
- Moray East Offshore Wind Farm, 5th Floor, Atria One, 144 Morrison Street, Edinburgh, EH3 8EX
- E-mail: peter.moore@edpr.com
- Tel: +44 (0)131 556 7602

4.1.2 Environmental Clerk of Works (ECoW)

The ECoW is an independent representative who will be responsible for the liaison with the Archaeological Consultant and the Client Representative. The ECoW will be familiar with the requirements set out in the Archaeological WSI and MARP and will provide oversight that agreed mitigation and reporting protocols are being followed.

4.1.3 Archaeological Consultant/Retained archaeologist

Moray East will retain the services of a suitably qualified and experienced archaeological consultant or retained archaeologist. The archaeological consultant will be the initial point of contact for the ECoW, with responsibilities including ensuring the effective implementation of the MARP. Specific responsibilities include:

- Compiling, reviewing and updating this WSI following consultation with Moray East, the regulators (MS-LOT) and curators (HES);
- Advising Moray East on their responsibilities regarding the implementation of the MARP (Section 5 below);
- Compiling, agreeing and issuing any necessary method statements for archaeological contractors to adhere to, following consultation with the Moray East and the regulators and curators;
- Advising Moray East on the necessary interaction with the regulators, curators and other third parties;
- Supporting Moray East in procuring, monitoring the work of, and liaising with specialist archaeological contractors, where necessary;
- Monitoring the preparation and submission of archaeological reports as appropriate and making them available to the regulators and curators for review and approval; and

- Advising Moray East on any final requirements and arrangements for further assessment, analysis, archive deposition, publication and popular dissemination.

For each package of archaeological works considered necessary, as agreed the regulators and curators, Moray East or their agents will, as required, procure the services of specialist archaeological contractors with the requisite experience and expertise to undertake the necessary works.

4.1.4 Principal Contractor

It will be the responsibility of the principal contractor engaged by Moray East to undertake the following;

- Familiarise themselves with the requirements of this document and make it available to their staff and sub-contractors, explaining the requirements and need for strict adherence;
- Ensure the implementation of and adherence to this document by their staff, including ensuring staff awareness of reporting protocols and making staff available for training through toolbox talks, as necessary;
- Assisting and affording access to the archaeological contractors and ECoW (where appropriate) as advised by Moray East and the archaeological consultant; and
- Inform the archaeological consultant and any archaeological contractors of any environmental or health and safety constraints of which they may be aware that is relevant to the archaeologist's activities on site.

4.1.5 Relevant Authorities

MS-LOT, acting on behalf of Scottish Ministers, is responsible for discharging / ensuring compliance Moray East's consent conditions. HES is the statutory body for archaeology and cultural heritage within Scotland including marine archaeology in waters adjacent to the Scottish coast up to the mean high water mark and out to 200 nautical miles.

In the event of a significant discovery, HES and MS-LOT will be informed of any archaeological or cultural heritage finds, and will as soon as reasonably practicable:

- Liaise with other relevant archaeological authorities;
- Advise on proposals to further evaluate any finds; and
- Advise on proposals to mitigate the effects of work activities upon any finds, if required.

4.2 Archaeological Recording, Reporting, Data Management and Archiving

The approach to archaeological recording, reporting, data management and archiving will be carried out in accordance with the agreed methodologies as specified in the model clauses. The model clauses sets out agreed methodologies for the following elements of archaeological works:

- Archaeological Method Statements;
- Indexing and Recording Systems;
- Data Management;
- Position-Fixing and Levelling;
- Reports;
- Post-Fieldwork Assessment;
- Analysis and Publication; and
- Archiving.

Key points relevant to various elements of archaeological recording, reporting, data management and archiving in relation to the project are discussed below.

4.2.1 Archaeological Method Statements

Any further archaeological works, if necessary, will be subject to an Archaeological Method Statement (Method Statement) that is consistent with this document and in accordance with the agreed methodologies as outlined in the model clauses. Additional archaeological work packages may be required in the event of an unexpected discovery reported through ORPAD or as a result of the incorporation of archaeological objectives into additional planned surveys and will be agreed in consultation with MS-LOT and HES.

4.2.2 Reporting

Following the completion of the construction phase, a report will be prepared so as to demonstrate the effective implementation of the MARP throughout the works. In the event that no discoveries are encountered, a 'nil discoveries' report will be produced outlining the application of the MARP throughout the duration of works. A final report will be prepared following the completion of any decommissioning works.

In the event that additional archaeological assessments are under consideration, each package of archaeological works will be accompanied by a final archaeological written report pursuant to the requirements of those works as outlined in the Method Statement (if necessary), prepared in a manner which summarises the results of the investigations and demonstrates appropriate planning, recording and data management, commitment to archiving and public dissemination of results. Reports will be prepared in a structured format and in accordance with the relevant Standards and Guidance documents produced by the Chartered Institute for Archaeologists (Ci*f*A).

4.2.3 Analysis and Publication

Depending on the nature and / or significance of any discoveries made, findings may be considered to warrant reporting in the form of articles, published in a range of journals and publications. In the event that publication is considered suitable, reporting will be conducted in accordance with recommendations made in post-excavation assessment, analysis and reporting. All publication matters will be discussed and agreed in advance with Moray East, MS-LOT and HES.

4.2.4 Archiving

All reports generated through the project will form part of the project archive. The archive will consist of both documentary and digital records, as appropriate, alongside any archaeological material recovered during the project and reported through the MARP. Project archives will be kept together whenever possible, along with a summary of the contents of the archive.

4.3 Archaeological Samples and Artefacts

There are no planned archaeological investigations associated with the proposed project and as such, the need to handle samples and / or artefacts is not currently anticipated. However, should unexpected discoveries of archaeological materials occur, the project will adhere to the methodologies set out in the model clauses. The model clauses includes agreed methodologies for the following:

- Environmental Sampling Strategies;
- Environmental Samples: Handling, Labelling, Packaging and Storage

- Artefacts: Handling, Labelling, Packaging and Storage;
- Ordnance;
- Human Remains;
- Aircraft,
- Wreck; and
- Materials Conservation and Storage.

Further information regarding samples and finds can be found as part of the 'Guidelines for Identifying Finds of Archaeological Interest and Handling Artefacts', Appendix II of ORPAD.

4.4 Avoiding Archaeological Impacts

AEZs will be the principle means used to preserve *in situ* any features or deposits of potential or known archaeological interest. The implementation, monitoring and modification of AEZs will take place in accordance with the measures specified in model clauses.

AEZs preclude development activities from taking place within their boundaries, thereby avoiding significant impacts to assets contained within. These AEZs will apply to construction works, vessel mooring and any other activities that may disturb the seabed during the installation, operation and maintenance and decommissioning of the Wind Farm and associated OfTI, thus preventing impact upon the known archaeological and cultural heritage resources arising as a result of invasive activities, such as wind turbine generator, offshore sub-station platform and inter-array / export cable installation, and anchoring or deployment of jack–up legs.

The AEZs listed in this document with respect to the Moray East site are based upon recommendations as set out within the existing baseline studies in the Moray East ES 2012. The AEZs listed in this document with respect to the OfTI are based upon recommendations made as part of the archaeological assessment of geophysical / geotechnical survey data across the OfTI (Appendices 3-5 below) which are considered to supersede those measures set out in the ES prepared for the OfTI Corridor (Moray East Modified TI ES 2014).

Moray East will ensure that the locations, extent and conditions applicable to the AEZs are made available to all relevant parties to ensure that all Project staff respect their boundaries. Moray East will retain responsibility for ensuing adherence to the AEZs throughout the project lifespan (pre-construction, construction, operation and decommissioning).

4.4.1 Location and extent of AEZs

4.4.1.1 Wind Farm

Recommendations included as part of the Moray East ES 2012 proposed the establishment of AEZs of 100 m around sites identified as being of high sensitivity (HW 1001, 1002, 1004, 157, 158 and 159) and 50 m around those of medium sensitivity (HW1014, 1015, HW 36, 44, 52, 61, 71, 72, 73, 74, 75, 76, 77, 78, 80, 100, 102, 108 and 117). These AEZs are summarised in Table 4-1.

Table 4-1: Recommended AEZs within the Wind Farm area

ID	Description	AEZ Extent	Position (UTM30N)	
			Easting	Northing
HW 1001	*Carisbrook* (possibly) (Recorded Wreck) and geophysical anomaly of high archaeological potential	100m	515045	6461955
HW 157			515051	6461979

ID	Description	AEZ Extent	Position (UTM30N)	
			Easting	Northing
HW 1002	*Llanishen* (probably) (Recorded Wreck) and geophysical anomaly of high archaeological potential	100m	514733	6458851
HW 159			514760	6458894
HW 1004	Unknown (Recorded Wreck) and geophysical anomaly of high archaeological potential	100m	516574	6453645
HW 158			516486	6453673
HW 1014	Recorded Obstruction	50m	516351	6453014
HW 1015	Recorded Obstruction	50m	524948	6453838
HW 36	Geophysical anomaly of medium archaeological potential	50m	525712	6447161
HW 44	Geophysical anomaly of medium archaeological potential	50m	521132	6446479
HW 52	Geophysical anomaly of medium archaeological potential	50m	520385	6447576
HW 61	Geophysical anomaly of medium archaeological potential	50m	523746	6454553
HW 71	Geophysical anomaly of medium archaeological potential	50m	520780	6448862
HW 72	Geophysical anomaly of medium archaeological potential	50m	516405	6447812
HW 73	Geophysical anomaly of medium archaeological potential	50m	509171	6446862
HW 74	Geophysical anomaly of medium archaeological potential	50m	508986	6447061
HW 75	Geophysical anomaly of medium archaeological potential	50m	515055	6461947
HW 76	Geophysical anomaly of medium archaeological potential	50m	515643	6462110
HW 77	Geophysical anomaly of medium archaeological potential	50m	511513	6456395
HW 78	Geophysical anomaly of medium archaeological potential	50m	513932	6454259
HW 80	Geophysical anomaly of medium archaeological potential	50m	517192	6450734
HW 100	Geophysical anomaly of medium archaeological potential	50m	513357	6458593
HW 102	Geophysical anomaly of medium archaeological potential	50m	516052	6463919
HW 108	Geophysical anomaly of medium archaeological potential	50m	517946	6450716
HW 117	Geophysical anomaly of medium archaeological potential	50m	509730	6439767
HW 163	Geophysical anomaly of medium archaeological potential	50m	513144	6456338
-	Anomaly near WTG ME-J08	15m	521652	6444824

During boulder clearance works, an anomaly of unknown origin (not identified during the archaeological assessment of geophysical survey data) was identified. The anomaly was identified as measuring some 5m in length and 1.5m in width with an apparent convex shape in the side scan sonar imagery. The feature was left in situ and undisturbed. Although the feature is not located within an area in which groundworks are anticipated, to ensure that no construction-related activities impact upon the unidentified feature (e.g. contact by jack-up leg), an AEZ of 15m radius has been implemented around the centrepoint of the anomaly. This AEZ is also summarised in Table 4-1. This feature will be reported through ORPAD. Further details will be provided in the forthcoming Boulder Clearance archaeological report (see Section 4.7).

In addition to the above AEZs, it is recommended that the scheme design is microsited to avoid two magnetic anomalies of medium archaeological potential (HW 20 and 21) each described in the Moray East ES 2012 technical report as 'a strong possible candidate for a wreck or other manmade object'. If avoidance of these anomalies is not possible, it is recommended that these anomalies be subject to additional archaeological assessment to ascertain their nature and archaeological potential. This will be considered on a site-by-site basis in agreement with MS-LOT and HES.

Table 4-2: Anomalies recommended for micrositing within the Wind Farm area

ID	Description	Position (UTM30N)	
		Easting	Northing
HW 20	Magnetic anomaly of medium archaeological potential	516683	6456760
HW 21	Magnetic anomaly of medium archaeological potential	521104	6456967

The locations of two recorded wrecks HW 1005 and HW 1006 are not currently proposed for the establishment an AEZ. Both are located outside the development area (Figure 2-1 above) although HW 1005 is located in close proximity to the point where the OfTI Corridor meets the Wind Farm site. This record, however, equates to WA 2000 which, following the assessment of marine geophysical data within the Modified TI corridor, has been interpreted as a recorded loss location only (see 4.4.1.2 below).

The 10 A2 anomalies identified within the Moray East Site section of the 2018 OfTI archaeological study area subject to archaeological assessment (see Appendices 3 and 6) are not subject to an AEZ. Recommendations outlined in the archaeological assessment of geophysical survey data state that these sites should be avoided instead by means of micrositing the scheme design. Any seabed disturbance / groundworks associated with cable and / or WTG/OSP installation during the construction phase should also avoid A2 anomalies. Additionally, at times when the installation vessel or any support vessels are required to keep their stations, anchoring should take place in areas which also avoid A2 archaeological anomalies. Any predetermined anchor spread plans should take the presence of any archaeological receptors into consideration and be devised to ensure their avoidance.

Where the micrositing to avoid anomalies not subject to AEZs is not possible, it is recommended that anomalies be subject to additional archaeological assessment to ascertain their nature and archaeological potential. This will be considered on a site-by-site basis in agreement with MS-LOT and HES. To date, additional archaeological assessment has been undertaken on a number of A2 anomalies as part of an Unexploded Ordnance (UXO) survey campaign, whereby anomalies were investigated by use of a Remotely Operated Vehicle (ROV). The survey data acquired by the ROV were reviewed by the Archaeological Consultant/Retained Archaeologist. At the time of writing this document, the reporting of the results of the archaeological assessment of UXO ROV survey were forthcoming, and will be reported on separately (with the report issued to HES and MS-LOT). Where results of the survey have the potential to alter the mitigation recommendations outlined in this WSI/MARP, a high-level review is included with reference to recommended revised mitigation measures. To date, no A2 anomalies within the Wind Farm site have been subject to investigation by ROV. As such, the anomalies recommended for micrositing are those outlined above, and as detailed in Appendix 6.

As a result of the archaeological assessment of the UXO survey campaign, a number of items of debris were encountered in close proximity to one another (Target ID MC200), comprising metal framework, metal plates, a chain link and other unidentified debris. The origin of the objects is unknown. Although the possibility remains that the items may represent wreck-related debris, similarly it has not been discounted that they represent items of modern debris. With approval from HES, the items were relocated in an attempt to identify the objects and to fulfil UXO objectives. It is recommended that the 'as left' locations of these items are also avoided by means of micrositing (Appendix 6). Further details will be provided in the forthcoming archaeological assessment of UXO ROV survey data report.

4.4.1.2 OfTI Corridor

Recommendations based on the archaeological assessment of geophysical survey data (see Appendices 3 and 4) propose the establishment of one AEZ within the OfTI Corridor (WA 7118). This AEZ also includes further debris located within the vicinity (WA 7119 and 7120). As no definite objects have been identified at the two potentially associated seabed disturbance (WA 7119 and 7120) locations, situated approximately 10 m to the east and west of WA 7118 respectively, no individual AEZ is recommended for

these features at present. However, due to their potential association with the aircraft engine, they are to retain their A1 discrimination and will be covered by the AEZ applied for 7118.

Table 4-3: Recommended AEZs within the OfTI Corridor

ID	Description	AEZ Extent	Position (UTM30N)	
			Easting	Northing
7118	Debris – identified as an aircraft engine during an ROV survey (Target ID ER_MC266).	25m around centre point	522903	6405871

As all military aircraft are automatically protected under the Protection of Military Remains Act 1986, it should be assumed that the material covered by this AEZ could be of military origin and, consequently, protected under this legislation. Under this act it is an offence to tamper with, damage, move or unearth any items unless authorised by a licence issued by the Ministry of Defence (MOD). If there is a requirement to remove this AEZ in order to recover or relocate any of the material contained within its boundary, it would be necessary to first obtain a licence from the Joint Casualty and Compassionate Centre (JCCC).The Moray East Modified TI ES 2014 originally stated that development exclusion zones were to be placed around WA 2000-2008 pending further clarification on the presence or not of any remains through the assessment of the marine geophysical data. The subsequent assessment of marine geophysical data alongside an interrogation of original source material has indicated that WA 2000 - 2008 relate to records of loss rather than tangible remains on the seafloor. On this basis, these records are not considered as part of the known marine archaeological / cultural heritage resource and are no longer considered as candidates for AEZs.

The 150 A2 anomalies identified within the OfTI survey area subject to archaeological assessment (see Appendices 3 and 4) are not subject to an AEZ. Recommendations outlined in the archaeological assessment of geophysical survey data state that these sites should be avoided instead by means of micrositing the scheme design. During the pre-construction phase, grapnel runs should take place so as to avoid A2 anomalies. The proposed treatment of A2 anomalies is previously discussed in section 4.4.1.1 above.

As outlined in section 4.4.1.1 above, where micrositing to avoid anomalies not subject to AEZs is not possible, it is recommended that anomalies be subject to additional archaeological assessment to ascertain their nature and archaeological potential (to be considered on a site-by-site basis in agreement with MS-LOT and HES). The archaeological assessment of ROV survey data, acquired as part of the UXO survey campaign undertaken for the project, has served to ground truth a number of A2 anomalies previously recommended as being avoided by means of micrositing. To date, 13 A2 anomalies within the OfTI Corridor have been subject to investigation by ROV (7077, 7122-5, 7129-31, 7133-4, 7142, 7150 and 7153). No anomalies were conclusively identified as being of archaeological interest. Seven anomalies are defined as being of possible archaeological interest on the basis that their origin is uncertain, although the possibility that they are items of modern debris has not been discounted. Given the results of the assessment, it is recommended that these 13 anomalies are no longer avoided by means of micrositing the scheme design but are instead reported through ORPAD. The high-level results of this assessment are presented in Appendix 7, which details all anomalies considered to no longer warrant avoidance by means of micrositing. All remaining anomalies should be avoided by means of micrositing and are detailed in Appendix 6.

4.4.1.3 Monitoring of AEZs

The AEZs outlined above must be retained throughout the project lifetime, unless modified by agreement. AEZs can be reduced, enlarged or removed in agreement with HES if further relevant information becomes

available (e.g. as a result of ground-truthing exercises or following the archaeological review of updated geophysical survey data).

Monitoring of AEZs may also be required by the regulator and curator to ensure adherence both during construction and in the future operation of the Wind Farm.

4.5 Marine Geophysical and Geotechnical Investigations

With the exception of the archaeological assessment of geophysical and geotechnical survey data acquired within the OfTI 2019 Archaeology Study Area (the results of which inform this document), no further archaeological assessment of geophysical and / or geotechnical data acquired during the pre-construction phase is currently anticipated.

To date, a total of 119 vibrocore logs have been subject to a Stage 1 geoarchaeological assessment (comprising 91 geotechnical virbrocore logs acquired as part of a survey in 2014 and a further 28 vibrocore logs acquired from a geotechnical survey undertaken in 2018). Of these logs, seven were taken forward for Stage 2 geoarchaeological recording (VC-53, VC-55, VC-68, S4-VC-02, S4-VC-03, S4-VC-07 and S4-VC-08A). The results of the geoarchaeological assessment revealed the presence of three stratigraphic units within the OfTI Corridor, comprising glacial till, overlain by soft minerogenic sediments interpreted to have been deposited in a marine or glacimarine environment shortly after ice sheets retreated from the Moray Firth (correlating to Unit 7 of the Outer Moray Firth stratigraphy), with uppermost sediments consisting of seabed sediments deposited under recent hydrodynamic regimes. Each of the stratigraphic units identified were considered to have low geoarchaeological potential. As such, based on the results of the assessment, the potential and requirement for Stage 3 geoarchaeological works on deposits present within the OfTI Corridor is low and there are no further recommendations.

A full description of the stages of geoarchaeological assessment is provided in Table 2-5, Appendix 3 and Table 1-1, Appendix 5. The full results of the geoarchaeological assessment undertaken to date are provided in Appendices 3 and 5.

4.6 Archaeological Investigations Using Divers and / or ROVs

Moray East has undertaken an archaeological review of ROV survey data acquired as part of a programme of UXO investigation and clearance operations for the Moray East project. UXO investigation commenced in January by Boskalis Hirdes (Boskalis), with clearance and disposal operations continuing through to April 2019 (Marine Licence 06857/19/0). During UXO clearance works AEZs were avoided, as outlined in the UXO Clearance Environmental Report (Moray East, 2018).

The purpose of the UXO campaign was to inspect a list of targets identified as potential UXO within the construction footprints of windfarm and OfTI Corridor, including the WTG and OSP locations, offshore export cables, interconnector cables and inter-array cables based on the geophysical survey data. As such surveys have the potential to serve as ground-truthing exercises which enable the nature and character of currently unidentified geophysical anomalies of potential archaeological interest to be better understood, archaeological support was and is being provided by a suitably qualified archaeologist at Royal HaskoningDHV throughout the duration of the campaign. The results of the archaeological assessment of ROV data will be documented in a report prepared in manner consistent with the model clauses on reporting. The results of such work have the potential to enlarge, reduce, move or remove AEZs. Additional consultation will therefore be undertaken with HES and MS-LOT, as necessary. Throughout the assessment of survey data it became apparent that 13 targets appeared to coincide with A2 anomalies in the OfTI Corridor. High level results of the assessment are provided in Appendix 7, and updated recommendations regarding the mitigation of these anomalies are captured in section 4.4 above.

Archaeological input during diver surveys is not currently anticipated. Should any such surveys be required for non-archaeological purposes, archaeological input should be sought at the planning stage of any such works so that any additional data can enhance upon an understanding of the marine archaeological and cultural heritage resource. Such surveys have the potential to serve as ground-truthing exercises which enable the nature and character of currently unidentified geophysical anomalies to be better understood. Enhanced knowledge can thus further aid upon an understanding of mitigation strategies, enabling assets that may warrant further investigation to be identified or to identify those sites that are no longer of archaeological interest and require no mitigation. As such, the results of such work have the potential to enlarge, reduce, move or remove AEZs.

If the opportunity to incorporate archaeological objectives as part of any further diver / ROV survey arises, Moray East would adhere to standards and guidance as set out in the model clauses. The results of any investigations would be compiled as an archaeological report consistent with the model clauses on reporting.

4.7 Archaeological Support during Boulder Clearance Campaign

A boulder clearance campaign has taken place as part of the pre-construction works of the Moray East Wind Farm. The works followed the mitigation as outlined in this document to ensure that no negative impact took place on both known archaeological receptors and those that were discovered during the boulder clearance works (where/if present). In line with this document, ORPAD was applied in the event of an unexpected discovery. In the first instance, any discoveries were reported to the retained archaeologist (see Section 4.1.3) who co-ordinated the reporting of discoveries to the ORPAD implementation service maintained by Wessex. In the event of a discovery of possible archaeological interest, the Retained Archaeologist further advised Moray East on the application of appropriate mitigation strategies.

Provision was made by the retained archaeologist, in accordance with the ORPAD, for the prompt reporting/recording to HES of archaeological remains encountered or suspected during works if such remains were considered to be at risk as a result of the Moray East Wind Farm. In the event that any finds were encountered considered to constitute a wreck within the meaning of the Merchant Shipping Act (1996), then a report would be made to the Receiver of Wreck. In the event that any finds were encountered considered to constitute treasure within the meaning of the Treasure Act (1996) then a report would be made to the Coroner.

An unidentified anomaly of unknown origin was encountered during boulder clearance works. Although not located within an area in which groundworks will take place, to ensure no construction-related activities will directly impact upon the anomaly, an AEZ was implemented (further information is provided in Section 4.4.1.1).

A final report will be produced following the completion of the boulder clearance campaign to demonstrate the approach to archaeological concerns and to provide information on any unexpected discoveries reported through ORPAD.

4.8 Archaeological Watching Briefs

An archaeological watching brief is a formal programme of archaeological monitoring. Monitoring undertaken as part of the offshore elements of the project is anticipated to take place through the mechanism of the MARP (Section 5 below).

5 Marine Archaeological Reporting Protocol

The Moray East consent conditions set out a requirement for a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the project.

In accordance with this requirement, the project will adhere to the Offshore Renewables Protocol for Archaeological Discoveries (ORPAD) (The Crown Estate, 2014) (Appendix 2). ORPAD came into effect in December 2010 and applies to pre-construction, construction and installation activities in developing offshore renewable energy schemes where an archaeologist is not present on site. The aim of ORPAD is to reduce any adverse effects of the project on the historic environment by enabling people working on the development to report unexpected discoveries of archaeological material in a manner that is both convenient to their everyday work and effective with regard to the requirements of Archaeological Curators.

Activities during which previously unidentified sites or unexpected discoveries of material may be encountered include:

- Pre-construction surveys;
- Seabed clearance, pre-lay grapnel runs (e.g. finds brought to the surface);
- Vessel anchoring (e.g. anchor caught on obstruction);
- Installation of the export cables (e.g. obstruction interactions with plough); and
- Installation of wind turbine foundations (e.g. obstruction interactions with jack-up legs).

ORPAD anticipates discoveries being made by Project Staff, who report to a Site Champion on their vessel or site. The Site Champion is a single person who is responsible for reporting discoveries to a Nominated Contact within the Developer's core team. The Nominated Contact is nominated by the Developer to co-ordinate the implementation of the Protocol. The Nominated Contact will in turn inform the Implementation Service by means of uploading information about discoveries onto a secure web portal. The procedure of uploading discoveries will alert the Implementation Service automatically regarding the presence of new discoveries. The Crown Estate provides for the reporting and assessment of discoveries through the ORPAD Implementation Service, currently maintained by Wessex Archaeology.

The Nominated Contact at Moray East is:

- Peter Moore (OFTO Development Manager)
- Moray East Offshore Wind Farm, 5th Floor, Atria One, 144 Morrison Street, Edinburgh, EH3 8EX
- E-mail: peter.moore@edpr.com
- Tel: +44 (0)131 556 7602

The identity of the Site Champion will be clearly communicated to work teams, via pre-commencement briefings for example.

Moray East will be responsible for ensuring that the relevant staff on all construction vessels, operation and decommissioning vessels will be informed of the Protocol, details of the find types that may be of archaeological interest, and the potential importance of any archaeological material encountered. The ORPAD documentation, including a full description of the methodology and requirements for implementing the protocol, can be found in Appendix 2.

Training to construction staff, site crews and work teams with regard to the practical application of the protocol in their day to day work can be provided by means of a short 'Toolbox Talk'. Hard copies of the ORPAD document will be made available for use on board the construction vessels.

Provision will be made by Moray East, in accordance with the Protocol, for the prompt reporting / recording to MS-LOT and HES of archaeological remains encountered or suspected during the works. If the find is a wreck within the meaning of the Merchant Shipping Act (1996) then a report will also be made to the Receiver of Wreck. If the find is treasure it will be notified to the Treasure Trove Unit which has delegated authority from the Queen's (and Lord Treasurer's Remembrancer) in relation to such matters.

Following completion of the construction phase, a report will be prepared presenting the results of the ORPAD implementation during activities and submitted to MS-LOT. In the event that no discoveries are made, a nil discoveries report should be compiled in order to demonstrate adherence to the scheme in accordance with the consent conditions detailed in Section 1.2.1 above.

6 References

COWRIE (2007). *Historic Environment Guidance for the Offshore Renewable Energy Sector*. Prepared by Wessex Archaeology

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Moray Offshore Windfarm (East) Limited (2018). UXO Clearance Environmental Report.

Joint Nautical Archaeology Policy Committee and The Crown Estate (2006). *Code of Practice for Seabed Development*. Available at URL: http://www.jnapc.org.uk/jnapc_brochure_may_2006.pdf [accessed 12/12/2017]

The Crown Estate (2010). *Model Clauses for Archaeological Written Schemes of Investigation: Offshore Renewables Projects.* Guidance prepared by Wessex Archaeology and issued by The Crown Estate. Available at URL: http://www.thecrownestate.co.uk/media/5514/model-clauses-for-archaeological-written-schemes-of-investigation.pdf [accessed 12/12/2017]

APPENDIX 1: MODEL CLAUSES FOR ARCHAEOLOGICAL WRITTEN SCHEMES OF INVESTIGATION (OFFSHORE RENEWABLES PROJECTS)

APPENDIX 2: PROTOCOL FOR ARCHAEOLOGICAL DISCOVERIES (OFFSHORE RENEWABLES PROJECTS)

APPENDIX 3: ARCHAEOLOGICAL ASSESSMENT OF GEOPHYSICAL SURVEY DATA: MODIFIED OFTI

APPENDIX 4: ARCHAEOLOGICAL ASSESSMENT OF GEOPHYSICAL SURVEY DATA: MODIFIED OFTI NEARSHORE SURVEY AREA

APPENDIX 5: GEOARCHAEOLOGICAL ASSESSMENT OF GEOTECHNICAL SURVEY DATA: MODIFIED OFTI NEARSHORE SURVEY AREA

APPENDIX 6: ANOMALIES TO BE AVOIDED BY MEANS OF MICROSITING

ID	Description	Discrimination	UTM30N	
			Easting	Northing
HW 20	Magnetic anomaly of medium archaeological potential	Medium Arch Potential	516683	6456760
HW 21	Magnetic anomaly of medium archaeological potential	Medium Arch Potential	521104	6456967
7000	Dark reflector	A2	518754	6447556
7001	Dark reflector	A2	518542	6445710
7002	Dark reflector	A2	519027	6445729
7003	Debris	A2	519498	6445794
7004	Dark reflector	A2	518565	6445306
7005	Dark reflector	A2	518627	6445241
7006	Dark reflector	A2	518667	6444870
7007	Dark reflector	A2	519190	6444688
7008	Debris	A2	519411	6443502
7009	Debris	A2	518690	6443349
7010	Debris field	A2	519609	6439342
7011	Magnetic	A2	519364	6438560
7012	Debris	A2	519410	6437396
7013	Magnetic	A2	518846	6436616
7014	Magnetic	A2	519698	6431866
7015	Dark reflector	A2	519995	6430538
7016	Magnetic	A2	519860	6430476
7017	Magnetic	A2	519766	6428392
7018	Magnetic	A2	519570	6426636
7019	Magnetic	A2	519630	6425382
7020	Magnetic	A2	519798	6423632
7022	Debris field	A2	519921	6422901
7023	Magnetic	A2	520300	6420050
7024	Magnetic	A2	519836	6419230
7025	Magnetic	A2	519676	6418600
7026	Dark reflector	A2	519799	6418004
7027	Dark reflector	A2	520102	6416827
7028	Dark reflector	A2	520256	6415996
7029	Debris	A2	519813	6413811
7030	Magnetic	A2	520730	6412918

ID	Description	Discrimination	UTM30N	
			Easting	Northing
7031	Magnetic	A2	520888	6408808
7032	Debris	A2	520385	6406832
7033	Debris	A2	520077	6406187
7034	Magnetic	A2	519162	6405584
7035	Dark reflector	A2	518314	6402955
7036	Debris	A2	520913	6402531
7037	Dark reflector	A2	520975	6402499
7038	Dark reflector	A2	520022	6402411
7039	Dark reflector	A2	520870	6402426
7040	Debris	A2	520274	6402149
7042	Dark reflector	A2	521048	6401366
7043	Dark reflector	A2	521432	6401040
7044	Debris	A2	520890	6400784
7045	Dark reflector	A2	521373	6400807
7046	Magnetic	A2	521196	6400654
7047	Debris	A2	521805	6400458
7048	Debris	A2	522172	6400203
7049	Dark reflector	A2	522976	6399444
7050	Debris	A2	524229	6397193
7051	Bright reflector	A2	523366	6397067
7052	Dark reflector	A2	524874	6396985
7053	Magnetic	A2	524485	6396492
7055	Debris	A2	524476	6396422
7056	Dark reflector	A2	524504	6396364
7057	Dark reflector	A2	524511	6396327
7058	Debris	A2	524573	6396262
7059	Dark reflector	A2	524520	6396209
7060	Debris	A2	524525	6396157
7061	Bright reflector	A2	524567	6396038
7062	Magnetic	A2	524341	6395999
7063	Dark reflector	A2	524886	6395985
7064	Dark reflector	A2	524521	6395962
7065	Dark reflector	A2	524529	6395961
7066	Debris field	A2	525676	6395759
7067	Magnetic	A2	524680	6395620

ID	Description	Discrimination	UTM30N	
			Easting	Northing
7068	Magnetic	A2	525342	6394978
7069	Magnetic	A2	524948	6394941
7070	Magnetic	A2	525187	6394843
7071	Magnetic	A2	525100	6394690
7072	Magnetic	A2	525198	6394627
7073	Magnetic	A2	525635	6394597
7074	Magnetic	A2	525475	6394573
7075	Magnetic	A2	525567	6394428
7076	Magnetic	A2	525601	6394377
7078	Debris	A2	526059	6394344
7079	Magnetic	A2	525636	6394321
7080	Magnetic	A2	525660	6394289
7081	Magnetic	A2	525290	6394298
7082	Magnetic	A2	525616	6394175
7083	Magnetic	A2	526167	6394229
7084	Dark reflector	A2	526540	6394275
7085	Dark reflector	A2	526829	6394349
7086	Magnetic	A2	525665	6393996
7087	Magnetic	A2	525677	6393889
7088	Magnetic	A2	526582	6393956
7089	Magnetic	A2	526155	6393681
7090	Debris field	A2	526624	6393666
7091	Magnetic	A2	526072	6393631
7092	Dark reflector	A2	525883	6393550
7093	Dark reflector	A2	526761	6393484
7094	Debris	A2	526354	6393382
7095	Magnetic	A2	526208	6393346
7099	Dark reflector	A2	526473	6392552
7100	Dark reflector	A2	526676	6392824
7101	Dark reflector	A2	526859	6392989
7102	Dark reflector	A2	526853	6393003
7103	Dark reflector	A2	526796	6392981
7104	Dark reflector	A2	526478	6392650
7105	Dark reflector	A2	526913	6393190
7106	Dark reflector	A2	526431	6393215

ID	Description	Discrimination	UTM30N	
			Easting	Northing
7107	Dark reflector	A2	526851	6393165
7108	Magnetic	A2	526394	6393140
7109	Magnetic	A2	526167	6392988
7110	Magnetic	A2	526339	6392836
7111	Magnetic	A2	526543	6392754
7112	Magnetic	A2	521079	6408288
7113	Magnetic	A2	520953	6407943
7114	Magnetic	A2	521553	6407416
7115	Magnetic	A2	521777	6407146
7116	Magnetic	A2	522383	6406571
7117	Magnetic	A2	522745	6406290
7121	Seabed Disturbance	A2	523072	6405711
7126	Magnetic	A2	523404	6404329
7127	Magnetic	A2	523595	6403780
7128	Magnetic	A2	523844	6403426
7132	Magnetic	A2	524062	6402493
7135	Magnetic	A2	524092	6402491
7136	Magnetic	A2	524127	6401667
7137	Magnetic	A2	524217	6401623
7138	Debris	A2	524058	6401338
7139	Magnetic	A2	524312	6401244
7140	Magnetic	A2	524982	6399843
7141	Magnetic	A2	525012	6399806
7143	Magnetic	A2	524972	6399674
7144	Magnetic	A2	525649	6398707
7145	Magnetic	A2	525628	6398679
7146	Magnetic	A2	525616	6398336
7147	Magnetic	A2	525730	6398499
7148	Magnetic	A2	525747	6398484
7149	Magnetic	A2	525762	6398005
7151	Magnetic	A2	525849	6397893
7152	Magnetic	A2	525891	6397838
7154	Magnetic	A2	526035	6397818
7155	Debris	A2	526146	6397769
7156	Magnetic	A2	525943	6397658

ID	Description	Discrimination	UTM30N	
			Easting	Northing
7157	Magnetic	A2	525961	6397652
7158	Rope/Chain	A2	526329	6397117
MC200a	Metal framework and debris	N/A – UXO Target	513110	6443237
MC200b	Two metal plates	N/A – UXO Target	513109	6443237
MC200c	Chain link and unknown item	N/A – UXO Target	513113	6443238
MC200d	Metal framework	N/A – UXO Target	513115	6443240

APPENDIX 7: ANOMALIES INVESTIGATED BY ROV

ID	Description	UTM30N		Discrimination	UXO Target	UTM30N (As Found)		Arch Classification	ROV survey results	Action by ROV	UTM30N (As Left)		Proposed Mitigation
		Easting	Northing			Easting	Northing				Easting	Northing	
7077	Magnetic	526738	6394456	A2	MMA_29_7	526742	6394454	Modern	Steel wire rope	Relocated during ROV survey	526750	6394460	None required.
7122	Magnetic	523115	6405838	A2	ER_MC263	523116	6405839	Possible Archaeology - Metal Debris	Metal bar	Relocated during ROV survey	523125	6405839	Report through ORPAD. Review if additional discoveries of potential archaeological interest are encountered within the vicinity of this target.
7123	Magnetic	523160	6405700	A2	ER_MC262	N/A	N/A	Nothing Found	N/A	N/A	N/A	N/A	None required.
7124	Magnetic	523196	6405150	A2	ER_MC257	523193	6405151	Possible Archaeology - Metal Debris	Metal plate	Relocated during ROV survey	523187	6405152	Report through ORPAD. Review if additional discoveries of potential archaeological interest are encountered within the vicinity of this target.
7125	Magnetic	523413	6404867	A2	ER_MC256	523412	6404866	Archaeological - UXO	UXO	N.A - cleared by detonation during the UXO clearance campaign	523412	6404866	Report through ORPAD. Review if additional discoveries of potential archaeological interest are encountered within the vicinity of this target.
7129	Magnetic	523848	6403399	A2	ER_MC248	523847	6403399	Modern	Steel wire rope	Relocated during ROV survey	523838	6403402	None required.
7130	Magnetic	523998	6402826	A2	ER_MC245	523995	6402826	Modern	Tyre	Relocated during ROV survey	524004	6402826	None required.

ID	Description	UTM30N		Discrimination	UXO Target	UTM30N (As Found)		Arch Classification	ROV survey results	Action by ROV	UTM30N (As Left)		Proposed Mitigation
		Easting	Northing			Easting	Northing				Easting	Northing	
7131	Magnetic	523533	6402655	A2	ER_MC242	523532	6402653	Possible Archaeology - Metal Debris	Angle iron	Relocated during ROV survey	523523	6402654	Report through ORPAD. Review if additional discoveries of potential archaeological interest are encountered within the vicinity of this target.
7133	Magnetic	524074	6402492	A2	ER_MC238	524076	6402492	Possible Archaeology - Metal Debris	x2 metal plates	Relocated during ROV survey	524084	6402492	Report through ORPAD. Review if additional discoveries of potential archaeological interest are encountered within the vicinity of this target.
7134	Magnetic	524084	6402503	A2	ER_MC241	524082	6402502	Possible Archaeology - Metal Debris	Metal plate	Relocated during ROV survey	524084	6402492	Report through ORPAD. Review if additional discoveries of potential archaeological interest are encountered within the vicinity of this target.
7142	Magnetic	524925	6399752	A2	ER_MC219	524923	6399751	Possible Archaeology - Metal Debris	I-beam	Relocated during ROV survey	524918	6399747	Report through ORPAD. Review if additional discoveries of potential archaeological interest are encountered within the vicinity of this target.
7150	Magnetic	525817	6397938	A2	ER_MC201	525815	6397939	Modern	Acrow prop	Relocated during ROV survey	525811	6397945	None required.
7153	Magnetic	525936	6397761	A2	ER_MC196	N/A	N/A	Nothing Found	N/A	N/A	N/A	N/A	None required.

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