


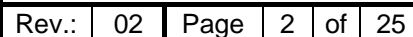
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Marine Archaeological Reporting Plan (MARP) **KINCARDINE OFFSHORE WINDFARM PROJECT**

Document Category


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Name / signature:	Name / signature:	Name / signature:	Name / signature:

[Redacted]



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1. Introduction

In April 2016 Kincardine Offshore Windfarm Limited (KOWL) submitted applications for consent to construct and operate the Kincardine Offshore Windfarm known hereafter as the 'Project'.

The Project is considered a commercial demonstrator site, which will utilise floating foundation technology, and will be one of the world's first array of floating wind turbines. It has been included within the Survey, Deploy and Monitoring scheme for offshore renewable systems (similar to wave and tidal devices).

The Project is located south-east of Aberdeen approximately 8nm (15km) from the Scottish coastline and provides suitable water depth for a floating offshore wind demonstrator development (approximately 60-80m) (Figure 1-1).

The project is split into the following areas:

- The Development Area – the wind farm area including the Wind Turbine Generators (WTG) and inter-array cables.
- The Offshore Export Cable Corridor – the area within which the proposed export cables will be laid, from the perimeter of the Development Area to the onshore area at Mean High Water Spring (MHWS).
- The Onshore Area – the onshore area above Mean High Water Spring (MHWS), including the underground cables connecting to the onshore substation at Redmoss.

In March 2017 consent under Section 36 and Section 36A of the Electricity Act 1989, and the associated Marine Licence under the Marine (Scotland) Act 2010 were awarded by the Scottish Government.

A Marine Archaeology Reporting Protocol ("MARP") and Protocol for Archaeological discovery (PAD) has been prepared to enable the Conditions of the Section 36 Consent and the relevant Marine Licence conditions to be discharged. Both of these have been prepared within this document.

This report contains the following sections:

- Scope of the MARP and PAD;
- MARP; and,
- PAD.

Table 1.1 sets out the consent conditions which this Archaeology and WSI and PAD provides information required to discharge.

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Table 1-1 Consent Condition

Consent Document	Condition Reference	Condition description	Reference to relevant Section of this MARP and PAD
Section 36	27	The Company must, no later than 6 months or at such a time as agreed with the Scottish Ministers, prior to the Commencement of the Development, submit a Marine Archaeology Reporting Protocol ("MARP") 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.	Addressed within this MARP. See Appendices for details and reporting protocols

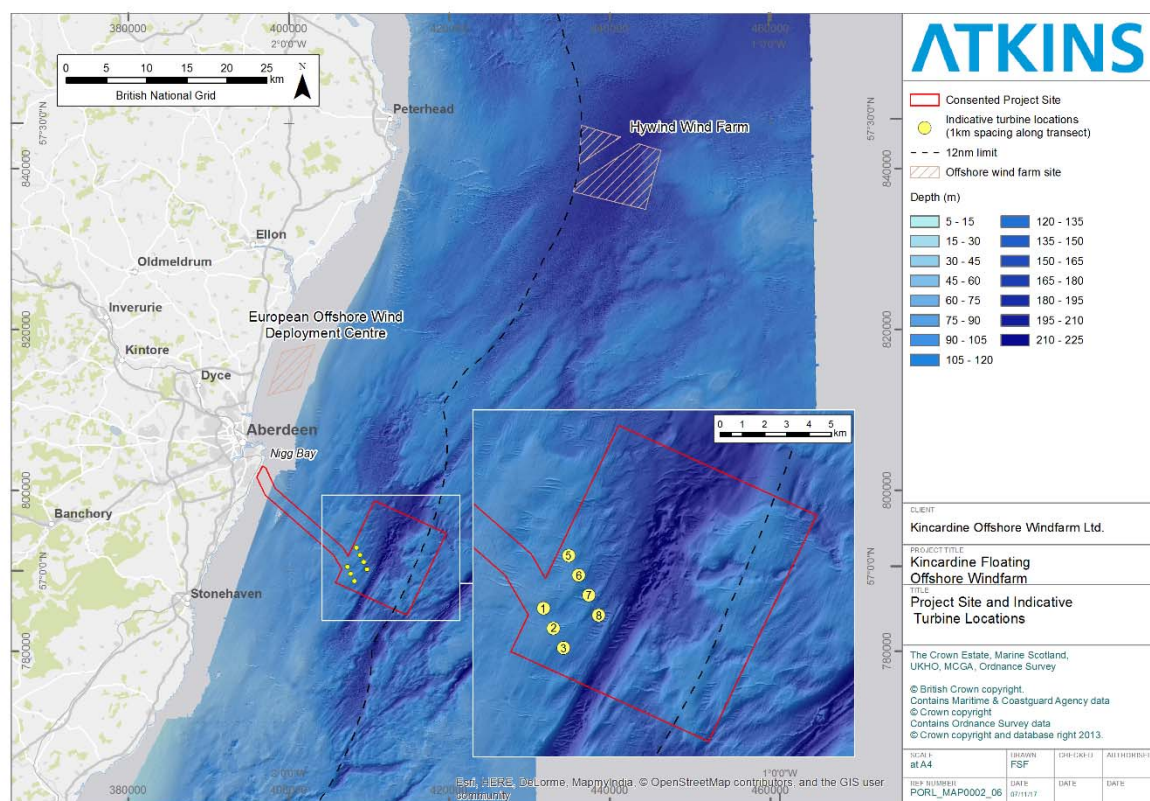


Figure 1-1 Project site and indicative turbine locations

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2. KOWL Commitments

In addition to condition 27 noted above, condition 7 of the Section 36 Consent states “*The Development must be undertaken in accordance with the Application, the Environmental Statement (as supplemented or amended by the further environmental information submitted by the Company on 22nd September 2016) and any other documentation lodged in support of the Application*”.

The ES sets out a number of KOWL commitments in relation to the heritage and archaeological resource. These commitments were made to ensure that the development followed appropriate practice in relation to its interaction with archaeological interests. These commitments can be found within the Original ES documents.

3. Scope of MARP and PAD

This Archaeological MARP and PAD has been prepared based on COWRIE & Wessex Archaeology (2007), The Crown Estate (2014) and The Crown Estate & Wessex Archaeology (2010) guidelines for:

- Desk-based assessments;
- Geotechnical surveys;
- Geophysical surveys; and,
- Historic environment and setting appraisals.

This MARP establishes the mitigation procedures that must be followed in order to seek to avoid damage to cultural heritage assets and targets of archaeological potential for the lifespan of the Project. These assets and targets were identified during the Environmental Impact Assessment (EIA) for the Development.

This PAD is based on the Offshore Renewables Protocol for Archaeological Discoveries (ORPAD) which was developed for The Crown Estate by Wessex Archaeology, and has been in effect since 2010. The Protocol was revised and reissued in 2014 (The Crown Estate, 2014). This PAD sets out the protocols and procedures that must be followed in the event of any unexpected archaeological discoveries whilst undertaking work related to the Project.

The main objectives of this Archaeological MARP and PAD, following the Model Clauses for Archaeological Written Schemes of Investigation (The Crown Estate & Wessex Archaeology 2014), are to:

- Set out the respective responsibilities of KOWL, 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 Marine Scotland Licensing and Operation Team (MS-LOT) and Historic Environment Scotland (HES);
- Establish mitigation procedures to seek to avoid damage to cultural heritage assets and targets of archaeological potential;
- Propose measures for mitigating effects upon archaeological material that may be encountered during the Project;

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- Ensure that, in the event that unexpected archaeological discoveries are made, archaeological advice is sought and the discovery is subject to archaeological input, review, recording and sampling; and
- Establish the reporting, publication, conservation and archiving requirements for the archaeological works undertaken during the course of the Project.

The primary mitigation strategy for the protection of archaeological and cultural heritage assets and targets in situ is through avoidance, by implementing site-specific Archaeological Exclusion Zones (AEZs).

KOWL is responsible for the implementation of its obligations under this Archaeological MARP and PAD as well as contractually obliging other parties to implement theirs.

4. Archaeological Written Scheme of Investigation

4.1. Introduction

The MARP sets out the procedures that KOWL and its contractors will follow in order to protect cultural heritage assets and identified areas of interest during the duration of the project, including construction, operation and maintenance (O&M) and decommissioning. Initial desk based assessment was undertaken during the EIA process (2016) for both the export cable route and development areas to identify potential known sea bed targets and via a geophysical survey of the cable route and development site in 2017.

As part of the desk based assessment undertaken as part of the Original ES 30 wreck sites (Figure 4-1) were identified during the desktop study. These were identified using CANMORE (an online mapping service), a database run by the Royal Commission on the Ancient and Historic Monuments of Scotland (RCAHMS). Available information on Historic Marine Planning Areas (Historic MPAs) from Historic Environment Scotland (HES) was also considered as part of this assessment.

None of the registered wrecks are protected under the following;

- The Protection of Wrecks Act 1973; or
- The Protection of Military Remains Act 1986.

In total 11 identified ship and aviation wreck sites, and unknown wrecks sites were identified in the cable route and development areas alone. There were four the ships located in or within a 500m buffer of the development area and five within the cable route and two aviation wrecks (one in the development area and one in the cable route).

All identified wrecks were targeted as part of the geophysical survey as a precaution until the completion of the survey to precisely identify the location of each potential target. A review of the geophysical survey data of the cable route and the development site allowed a number of the wrecks to be identified, with only the SS Creemuir being identified as being located within the area of interest. Therefore, the Project will assign an AEZ to the wreck due to the location and size of the wreck within the centre of the development site. All other surveyed wrecks were located outside the Project construction areas and therefore not assigned AEZs.

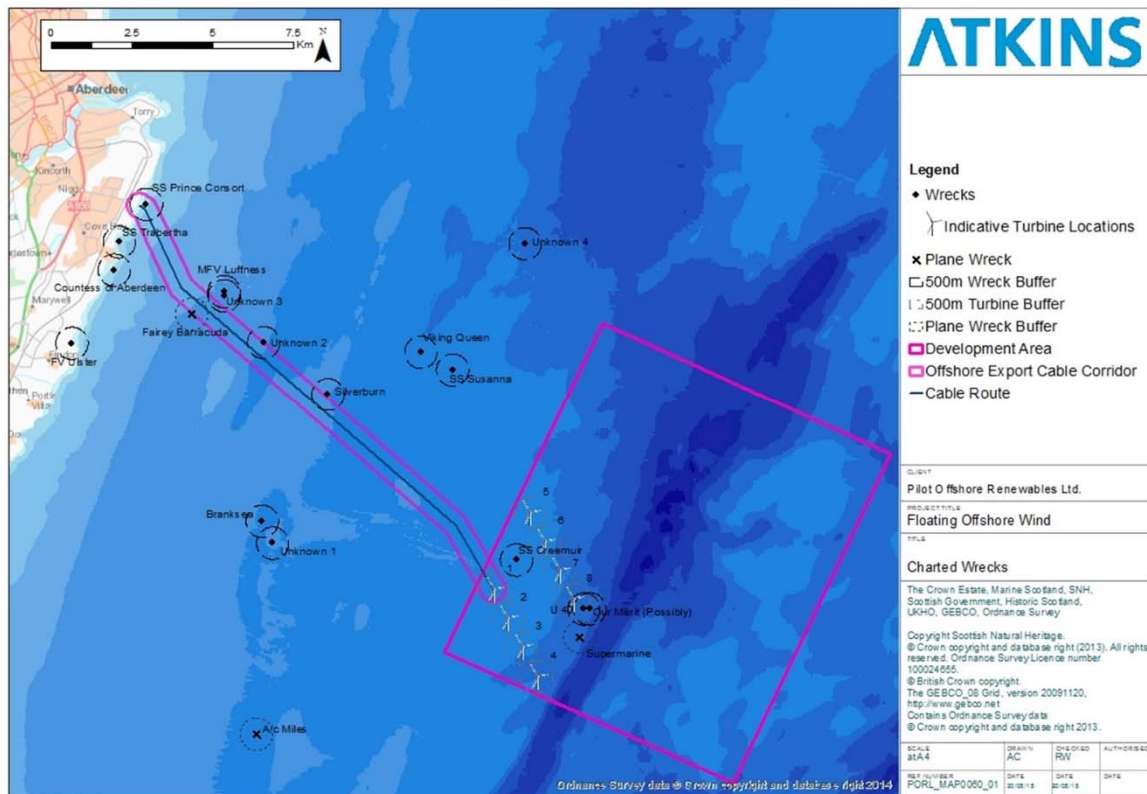


Figure 4-1 Locations of identified ship and aviation wrecks with the Project site (Original ES 2016)

4.2. Consultation

Consultation was undertaken with MS-LOT and also with HES as part of the MARP process to ensure that the appropriate actions and reporting processes are carried out as part of the KOWL consent discharge requirements.

4.3. Proposed Development and Cable Route

The MARP covers the Development site which includes up to seven offshore wind turbine generators and their associated mooring systems, interarray cables and associated infrastructure. The export cable route (Cable Route) consists of two 33kV cables buried to a target depth of between 3 and 1.5m below seabed, with a route length of approximately 15km back to landfall at Downies Farm, south of Aberdeen where directional drilling will be employed to complete the connection to landfall.

4.4. Known Archaeological and Cultural Heritage Assets and Targets

Following the completion of the detailed geophysical survey of both the Development Area and the Cable Route they were split for reporting purposes.

4.5. Development Area

The geophysical report (Horizon Geosciences UU_KIN_022 _ Survey Report Vol 2) identified three wrecks within the Cable Route (Table 4-1).

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Table 4-1 Shipwrecks in Development Area (Horizon Geosciences UU_KIN_022 _ Survey Report Vol 1)

Shipwrecks – Export cable Route						
ID	Easting (m)	Northing (m)	Dimensions L x W x H (m)	Distance (m) and Bearing (°) from site centre location	Minimum Water Depth (m)	Orientation (°)
WK04	559 100	6 327 710	80.0 x 27 x 8.8	1418 and 333	39.2	050/230
Spheroid: WGS84, Datum: WGS84, UTM Zone: 30N, CM: 003° W						

The above locations have been compare to the following desk assessment locations (Original ES) and correlated to the Development Area geophysical survey data (Table 4-2):

Table 4-2 Shipwrecks in Development Area compared to desktop review undertaken in Original ES.

ID - Geophysics	Desktop	Information	At risk from cable installation/ justification
WK04	SS Creemuir	Sunk by aircraft 1942	No – over 1km from WTG locations

The SS Creemuir is located within the Development Area, but the locations of the wind turbine generators (WTGs) are over 1km from the wreck location and therefore not at risk from the project infrastructure.

4.6. Cable Route

The geophysical report (Horizon Geosciences UU_KIN_022 _ Survey Report Vol 2) identified three wrecks within the cable route (Table 4-3).

Table 4-3 Shipwrecks in Export cable route (Horizon Geosciences UU_KIN_022 _ Survey Report Vol 2)

Shipwrecks – Export cable Route							
ID	Easting (m)	Northing (m)	Dimensions L x W x H (m)	DCC (m)	KP	Minimum Water Depth (m)	Orientation (°)
WK01	559 100	6 327 710	40.7 x 7.5 x 5.3	-542	3.599	39.2	050/230

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WK02	559 506	6 327 515	27.8 x 9.7 x 2.8	-699	4.051	44.9	157/337
WK03	562 764	6 324 511	38.0 x 5.5 x 3.7	-472	8.476	54.3	010/190
Spheroid: WGS84, Datum: WGS84, UTM Zone: 30N, CM: 003° W							

Note: DCC = Measured from the centre of the export cable route. Negative (-) sign indicates that the observed contacts are on the port (left) side of the cable route and the positive (+) sign indicates that the observed contacts are on the starboard (right) side of the cable route in order of increasing KP. KP = from start of cable route (from shore).

The above locations have been compared to the following desk assessment locations (Original ES) and correlated to the Cable Route geophysical survey data (Table 4-4):

Table 4-4 Shipwrecks in Export cable compared to desktop review undertaken in Original ES.

ID - Geophysics	Desktop	Information	At risk from cable installation/ justification
WK01	Unknown object	None	No – distance from cable route
WK02	MFV Luffness	British fishing trawler sunk 1935	No – distance from cable route
WK03	SS Silverburn	Coal transporter – sunk by gun fire 1914	No – distance from cable route

The distance from the cable route to the three identified wrecks (over 500 m) would mean that no impact should be expected from the project construction works and therefore are not a risk.

4.7. Archaeological Exclusion Zones (AEZs)


AEZs would provide the main means by which KOWL would control and preserve in situ sites or deposits of potential or known archaeological interest within the Cable Route and Development area. Currently the project has not established any AEZs across the Project as no wrecks have been identified that would be potentially impacted by Project activities.

i Location and Extent of AEZs

AEZs are required for all known sites of high, medium and uncertain potential where the location of the archaeological asset or target is known, or where the asset or target has at one time been identified by geophysical survey. AEZs would be assessed depending on the extent of the site or wreckage, and would be based on their archaeological potential. Sites of high potential would be assigned a 100m AEZ and sites of medium potential would be assigned 50 m AEZs.

ii Monitoring of AEZs

Where any future AEZs are identified, periodic monitoring will be undertaken by the Client Rep and ECoW to ensure their efficacy. If deemed necessary, these may be monitoring through regular

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discussions between the appropriate vessel crew members and the ECoW. No activities associated with the Project will be undertaken within an AEZ that are established.

If deemed necessary, an Archaeological Clerk of Works would visit the construction teams if any new archaeological features are identified within either the Cable Route or Development area. Following discussions with the ECoW, the Project Team, Construction Team, the ACoW would then assess whether or not to establish an AEZ.

KOWL will issue a final compliance report at the end of construction of the development, which will include a section on archaeology with specific emphasis on any identified AEZs if applicable. The report would include any recommendations regarding implementing new AEZs and the potential extent/removal of such identified areas. These decisions must be made by KOWL in consultation with MS-LOT and HES.

5. Protocol for Archaeological Discoveries (PAD)

5.1. Scope

This PAD sets out best practice in the reporting of finds of archaeological interest during the Project. The principles that are set out here are intended to address mitigation measures for any archaeological and cultural heritage assets and targets that have not been identified to date. This PAD applies to development, construction and installation activities, where an archaeologist is not present on site.

5.2. Types of Fields



Finds are considered here to mean all forms of artefact that can be found on the seabed. To be an artefact, the item must have been made, modified, used or transported by people; i.e. their presence on the seabed is 'artificial' or 'cultural' rather than 'natural'. For legal purposes, finds from the seabed fall into three categories. Wreck has a specific legal definition broadly encompassing materials that come to be on the seabed as a direct result of once being aboard or part of a vessel or aircraft.

Statutory law relating to wreck is set out principally in the Merchant Shipping Act 1995, applicable to territorial waters out to twelve nautical miles. As of 1 November 2013, section 1 of the Protection of Wrecks Act 1973 has been repealed in Scotland. Sites previously designated under this legislation have been designated as Historic MPAs under the Marine (Scotland) Act 2010, or de-designated altogether. Material can also be covered under the Protection of Military Remains Act 1986. This Act, administered by the Ministry of Defence, refers to ships that have been specifically designated, but all aircraft that crashed while in military service are automatically protected. The third category of finds are referred to as 'non-wreck'. 'Non-wreck' includes things such as prehistoric flint artefacts that were lost on land that has since been inundated by rising sea level, or artefacts that have been eroded from sites on the shore. We would defer to HES should these items be discovered.

5.3. Potentially Significant Materials

It is possible that during construction a range of archaeological and palaeo-environmental materials may be recovered:

- Palaeo-environmental materials: includes waterlogged organics from deposits of peat and large wooden timbers from the remains of trees from submerged forests. The importance of such deposits and materials for palaeo-environmental study is well recognised (English Heritage 2002, 2007);

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- Seabed Prehistory materials: including lithic artefacts (e.g. flint tools). This is particularly pertinent in light of recent work undertaken on submerged landscapes like the prehistoric site of Doggerland (Gaffney et al 2009).
- Shipwreck material: from the wooden boats of the Neolithic to the steel and iron vessels of the modern period, including material associated with ships, such as pottery fragments, cargo, animal remains, and so forth;
- Aircraft material: from the early 20th century to the modern period, including aluminium and other material;
- Human bone: in the event of discovery of any human remains (articulated or disarticulated, cremated or unburnt), a Ministry of Justice Licence will be obtained by the Archaeological Consultant
- Prior to any further disturbance (including where remains are to be left in situ). Should human remains require removal, all excavation and post-excavation will be in accordance with the Archaeological Consultant's protocols and undertaken in-line with current guidance documents (e.g. McKinley 2013) and the standards set out in ClfA Technical Paper 13 Excavation and post-excavation treatment of cremated and inhumed remains.
- Appropriate specialist guidance will be undertaken if required. The final deposition of human remains subsequent to the appropriate level of osteological analysis and other specialist sampling/examinations will follow the requirements set out in the Ministry of Justice Licence.

5.4. Circumstances of Discovery

This PAD addresses finds of archaeological or cultural heritage interest made in the following circumstances:

- Discoveries on the seabed during seabed inspections, seabed clearance or scheme installation: for example, an anomaly (such as possible wreck or a cultural heritage feature identified during any stage of the Project) has been encountered on the seabed. A find of archaeological interest is recovered to the deck of a works vessel: for example wreck or objects recovered to the deck caught in equipment such as grapnels, anchors, or ploughs.

5.5. Roles and Responsibilities

A flow chart detailing the roles and responsibilities within the PAD process is presented in Appendix E.

Client Representative

For the Project, KOWL will identify a Client Representative to act as a first point of contact for Project staff, including all contractors. Included in their responsibilities will be to liaise with the ECoW in respect of the implementation of the PAD during the course of the Project.

The Client Representative will be issued with the preliminary record sheets and the flow chart (see Appendices D & E: Preliminary Record sheets and flow chart), setting out the actions to be taken when they are told about a discovery either on the seabed or on the deck of the vessel.

Ecological Clerk of Works (ECoW)

The ECoW is the representative from KOWL who will be responsible for liaison with the Client Representative. The ECoW will be familiar with the requirements set out in the Archaeological WSI and PAD.

Archaeological Clerk of Works (if required by KOWL)

The Archaeological Consultant will be the initial point of contact for the ECoW. They shall:

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- Brief the Client Representative on the nature of archaeological finds and features and appropriate measures for interim conservation and safe storage;
- Advise on the identification of finds and features of interest and, if possible, the character of their seabed locations;
- Advise on material conservation of any recovered finds;
- Agree appropriate actions to be taken; and,
- Where appropriate, pass on all details and records associated with any discoveries to MS-LOT and HES.

Relevant Authorities

MS-LOT, acting on behalf of Scottish Ministers, is responsible for discharging KOWL 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 that the ACoW and KOWL consider it necessary, 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; and
- Advise on proposals to further evaluate any finds.

5.6. Lines of Communication

Contractors will report any discoveries to KOWL's Client Representative. The Client Representative informs the ECoW and the Consents and Environment Manage Team. The ECoW has a wide-ranging role across the Project in relation to the implementation of mitigation and monitoring compliance with the consent. In the event of an archaeological discovery, the ECoW will liaise with the ACoW and KOWL to provide them with the details of the reported discovery. The ACoW will assess the nature of the appropriate action to be taken, and whether to contact HES and MS-LOT.

5.7. Discoveries on the seabed and on the deck of works vessels

The following presents the actions to be taken in the event of an archaeological discovery during the course of the Project. The preliminary record sheets and flow chart illustrating the actions to be followed are presented in Appendices D& E: Preliminary Record sheets and flow chart. The PAD is designed so that an archaeologist does not need to be present during all works. The PAD sets out appropriate actions to be taken if an unexpected archaeological discovery is made, see the PAD flow chart (Appendix E).

i Preliminary Actions by KOWL or its Contractors

If an archaeological object is discovered on the deck of a vessel or retrieved from equipment, or an anomaly or structure has been encountered on the seabed, the Contractor shall inform the Client Representative. The Client Representative will examine any archaeological material and will arrange or sub-sea gear to be examined to see if any archaeological material is recovered with it, as soon as practicable after it has been discovered.

ii Initial Actions by the Client Representative

In the event of archaeological material being encountered, the Contractor will temporarily cease activities in the vicinity, if it is safe to do so. Where it is possible to identify the position from which the

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find originated, the Client Representative will implement a Temporary Exclusion Zone (TEZ) within which construction activities must temporarily cease until the advice of the ACoW has been obtained.

The Client Representative will record the occurrence as soon as possible in the site records together with the time and exact vessel position. Where possible, the report entry should include a close approximation of the original position of the anomaly on the seabed. The Contractor, will ensure that the area shall be marked on navigational software, site drawings and survey charts/software. The Client Representative will notify the Consent and Environmental Manager who will mark the TEZ on navigational software and inform other vessels/teams in the area where the discovery has been made. The Client Representative will also be responsible for compiling a Preliminary Record of the occurrence both for discoveries on the seabed and on the deck of the vessel.

The Client Representative will inform the ECoW of the occurrence as soon as possible and pass on all available information, including a copy of the Preliminary Record and copies of any digital photographs, drawings or other relevant records made. If any finds have been recovered, the Client Representative shall arrange for them to be immersed in seawater in a suitable clean container, which should be covered. Any rust, concretion or marine growth should not be removed. Furthermore, the Client Representative will make any finds available to the ACoW as necessary.

iii Initial Actions by the ECoW and Client Representative

Once informed of a find by the Client Representative, the ECoW will confirm with the Client Representative that all the details set out in the Preliminary Record are comprehensive and correct.

The ECoW should be contacted as follows:

Dr Richard Wakefield (KOWL Consent & Environment Manager)
Email: Richard.wakefield@atkinsglobal.com
Tel.: 0141 220 2437/ 07713652480

Nigel Coulshed (KOWL Environmental Clerk of Works)
Email: Nigel.coulshed@nereusenvironmental.co.uk
Tel: 0141 942 0037 / 07732373103

iv Contacting the Relevant Authority

In the event that the ACoW and KOWL consider it necessary, HES and MS-LOT will be informed by the ACoW for further advice. All available information relating to the circumstances of the occurrence, including a copy of the Preliminary Record and copies of any photographs, drawings or other records that have been made will be passed on to HES and MS-LOT.

v Establishing new AEZs

If new finds of archaeological importance come to light during the course of the Project they may be subject to the implementation by KOWL of a new AEZ based on their archaeological potential. This decision will be taken by KOWL and the ACoW in consultation with MS-LOT and HES for any marine construction activities within the Wind Farm and OfTW area.

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vi Alternating AEZs

If archaeological material is discovered during the course of the Project, then AEZs may be altered (enlarged, reduced, moved or removed) as a result. These discoveries might include material recovered during the course of construction works on the Project. Any alteration will be defined by KOWL in consultation with MS-LOT and HES and will be communicated via the ECoW or Client Representative to key Contractors and staff working on the Project. Should an encroachment of an AEZ be unavoidable then further archaeological investigation will be undertaken in order to enable micro-siting within the AEZ to avoid any cultural heritage assets and targets.

5.8. Finds recovered within the UK twelve nautical mile limit

Any recovered finds will be made available for inspection by the ACoW, MS-LOT and HES, coordinated by the Client Representative. Once the find has been reported through the PAD, if deemed to be wreck, KOWL will report the find to the Receiver of Wreck in accordance with Section 236(1) of the Merchant Shipping Act 1995.

This is a legal requirement. The Archaeological Consultant will forward the necessary paperwork to the ECoW for signature, and the ECoW will return the signed form to the Receiver of Wreck (RoW), Alison Kentuck.

The Receiver of Wreck can be contacted as follows:

Alison Kentuck
Receiver of Wreck
Bay 1/05
Spring Place
105 Commercial Road
SOUTHAMPTON
SO15 1EG
Telephone: 020 3817 2575
Email: row@mcga.gov.uk

5.9. Reporting and Archiving

Reporting activities will include the results of archaeological assessment of serendipitous discoveries during the Project, and the effectiveness and/or implementation of new AEZs. A PAD finds report will be produced for each discovery of archaeological interest. If a final archaeological report is deemed necessary by KOWL after appropriate consultation it will address the following themes: maritime sites and finds; and palaeo-environmental and submerged prehistoric archaeology.

Archaeological reports produced as a result of the implementation of the PAD will be sent for review to MS-LOT and HES prior to finalisation. KOWL will be responsible for ensuring that copies of any archaeological assessment are issued to HES. The final report will be delivered to MS-LOT and HES for consultation in a timely manner upon completion of the works. Any samples, finds or objects of cultural heritage interest that may be recovered during the works will be handled and stored in the appropriate manner under the guidance of the curators and staff from the receiving institution.

All subsequent decisions regarding the handling, transport and storage of retained finds will be agreed with the relevant authority and the relevant staff from the allocated receiving institution. Depending on

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outcomes, each element of work may give rise to one or more reports, the provision of which will be the responsibility of KOWL.

KOWL will commit to utilising the OASIS reporting system for all new archaeological discoveries to the local Historic Environment Records (HERs) and respective national heritage bodies. This will utilise the HERs reporting to allow the information to be shared on the Grey Literature Library on the Archaeology Service (ADS) website (<https://oasis.ac.uk/pages/wiki/Main>).

5.10. Health and Safety

Health and Safety considerations are of paramount importance. Safe working practices will override archaeological considerations at all times.

All work will be carried out in accordance with the Health and Safety at Work Act 1974 and the Management of Health and Safety Regulations 1999, and all other applicable Health and Safety legislation, regulations and codes of practice applicable at the time.

The Risk Assessment will be read, understood and signed by all staff going to the Site before fieldwork commences.

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6. Appendix A – ES and SEIS Commitments

The following commitments were made as part of the EIA consenting process (contained within Chapter 12 of the Original ES 2016).

Mitigation

This impact assessment has been based on a desktop study only at this stage. A geophysical survey of the Development Area and Offshore Export Cable Corridor is planned to aid the detailed design stage. During this survey, the identified wreck sites should also be surveyed to determine exact locations of wrecks. Once these have been determined, the locations can be taken into consideration when final routes for the export cables, and the location of the turbine anchors and inter-array cables are determined.

If an unknown wreck/archaeological feature is identified during these detailed geophysical survey, then the Crown Estate protocol for new discoveries (2014) will be implemented to ensure correct recording and reporting procedures are maintained.

The cable route will also be assessed by magnetic anomaly survey (once the cable route has been defined by sidescan and sub-bottom profiling) to ensure the area is clear of unexploded ordinance. This will also identify any buried metallic objects which will significantly reduce the risk of damage to unknown sites.

Due to the active nature of the seabed, it is not deemed necessary to mitigate further for any suspended sediment plumes that may be created during the installation process through the use of for example, silt curtains. The wrecks sites in the area will be periodically buried and exposed, and due to the temporary nature and small scale of this project, the changes to SSC will not be significant over baseline conditions.

As a result of the mitigation measures that can be put in place, the residual magnitude of effect for all the impacts discussed above can be considered low unless already stated as negligible

7. Appendix B – Location of Wrecks identified and Sidescan Imagery

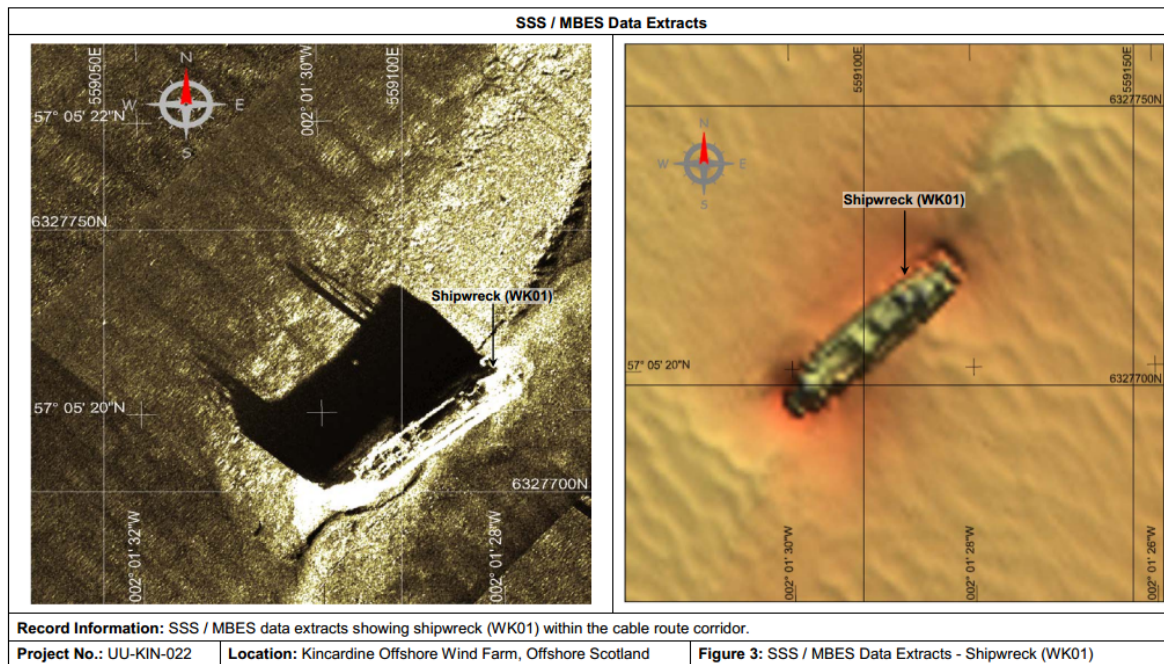


Figure 7-1 Wreck 01 - Unknown

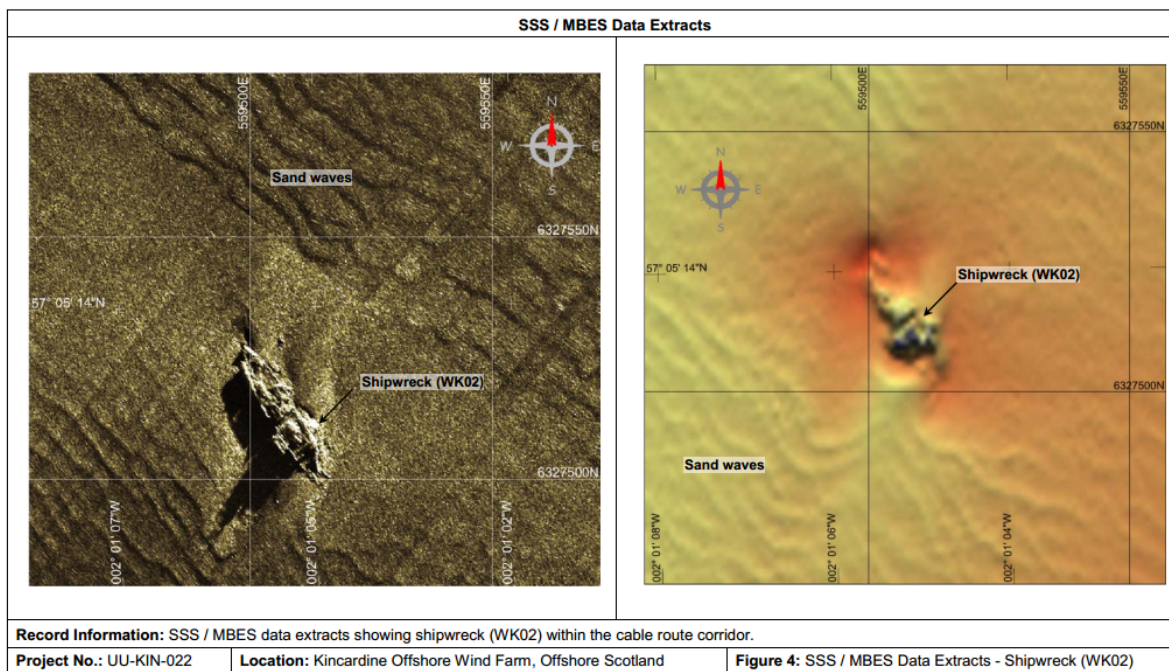


Figure 7-2 Wreck 02 – MFV Luffness (fishing vessel) 1935

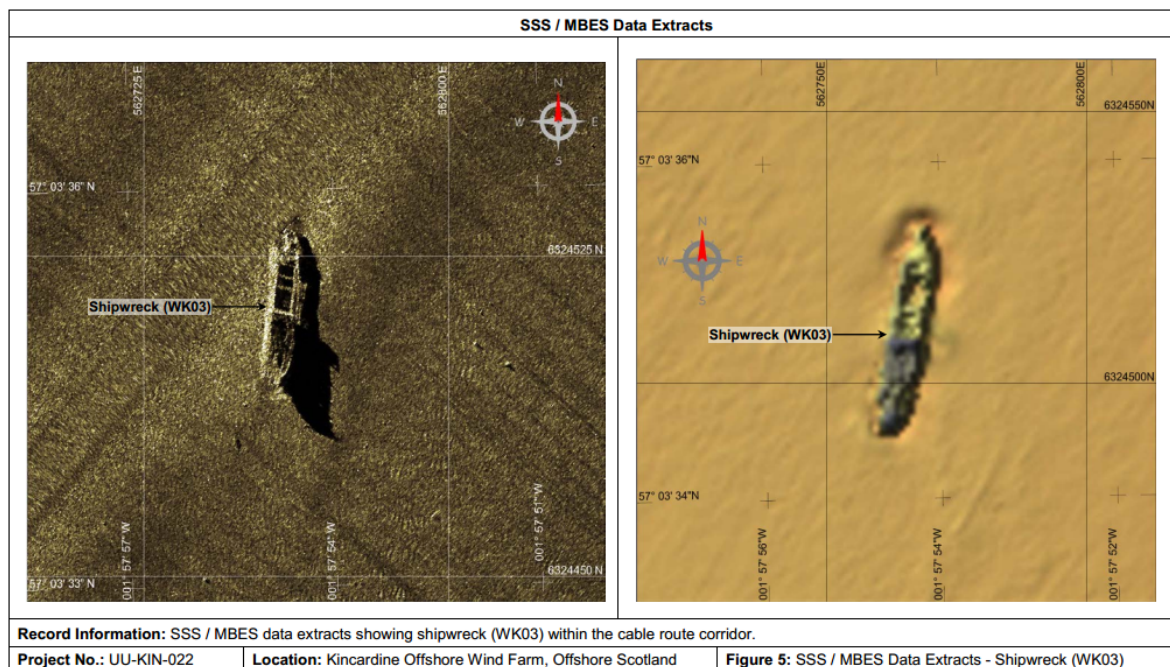


Figure 7-3 Wreck 03 – SS Silverburn (coal transporter) 1914

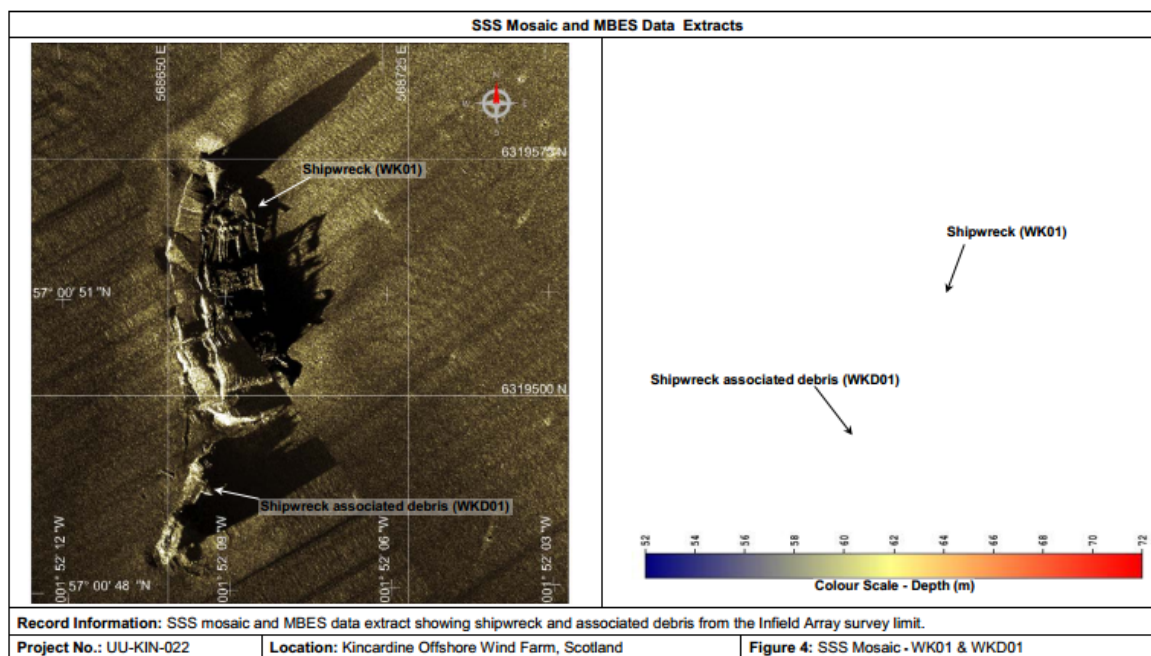
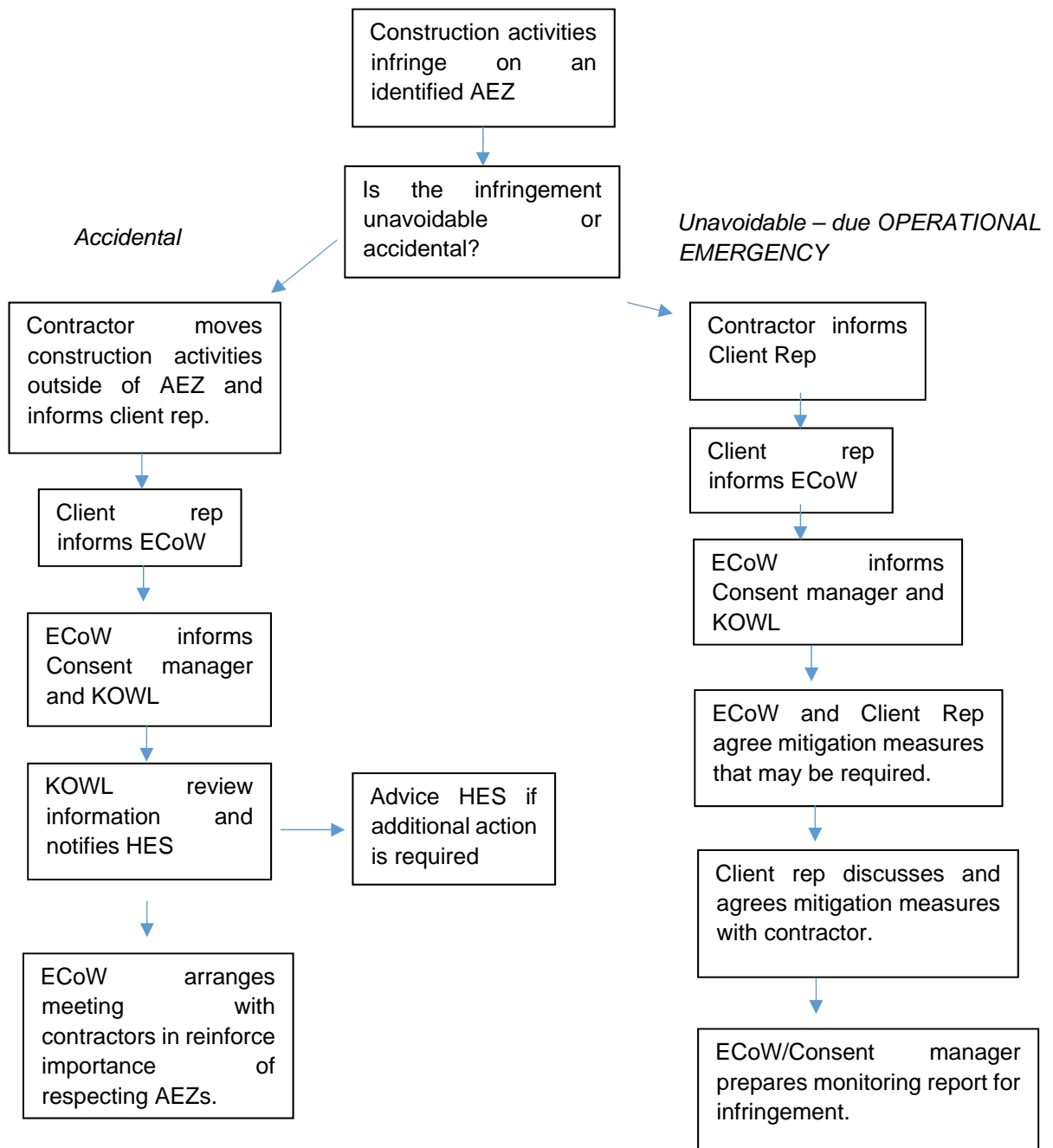


Figure 7-4 Wreck 04 – SS Creemuir (steam ship) 1942

8. Appendix C – Protocol for Infringement of Archaeological Exclusion Zone




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9. Appendix D – Preliminary Record Form

Protocol for Archaeological Discoveries: Offshore Renewables Projects

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Preliminary Record Form: Discoveries on the Seabed/ on board / in the inter-tidal zone / on land

Description of the find/anomaly:
Apparent size/extent of the anomaly:
Details of any find(s) recovered:
Details of photographs, drawings or other records made of the find(s) (e.g. location figure):
Details of treatment or storage of find(s):
Date and time Nominated Contact informed:
General notes:
If discovered on the seabed:
a) Derived from: e.g. Obstacle Avoidance Sonar, Cable Tensiometer?
b) Apparent size/extent of anomaly (length, width, height above seabed)
c) Extent of deviation/route development
Signed: _____ Date: _____ 

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Preliminary Record Form: Discoveries on the Seabed/ on board / in the inter-tidal zone / on land

Company Name:
Vessel/Team Name:
Site/sea area Name:
Date:
Time of compiling information:
Name of compiler (Site Champion):
Name of finder (if different to above):

Time at which discovery was encountered:
Vessel position at time when anomaly was encountered:
a) Latitude
b) Longitude
c) Datum (if different from WGS84)
Original position of the anomaly on the seabed, if known:
Notes on likely accuracy of original position stated above:
a) How accurate is the position?
b) Is the position the original position or has the material been moved by operations?
c) Details of circumstances and activity that lead to the discovery

10. Appendix E – Protocol for Reporting Finds of Archaeological Interest

