MARINE ARCHAEOLOGY REPORTING PROTOCOL

KINCARDINE OFFSHORE WINDFARM PROJECT

Prepared	Checked	Reviewed	Approved	ECoW Approved
Apr 19, 2019	Apr 19, 2019	Apr 19, 2019	Apr 19, 2019	Apr 19, 2019
Organisation: KOWL	Organisation: KOWL	Organisation: KOWL	Organisation: KOWL	Organisation: KOWL
Name / Signature: Redacted Redacted	Name / Signature: Redacted Redacted	Name / Signature: Redacted Redacted	Name / Signature: Redacted Redacted	Name / Signature: Redacted Redacted

Revision History

Date	Rev. Status	Purpose of Issue*	Remarks	Initials
08-12-2017	00	DRAFT FOR COMMENT	First Issue	Red
12-01-2018	02	Issue for MS LOT	Updated with HES comments	Red
17-04-2018	C1	For Information	Issued for information	Red
19-04-2019	C2	External Review	Issued for External Review	R

*Purpose of Issue: for information, for review, for approval

Detailed Change Log

Date	Rev. Status	References	Description of changes	Initials
08-01-2018	V2	Section 5.9	Minor comment (Archiving, instead of Arching)	Red
08-01-2018	V2	Section 5.9	Add in OASIS reporting	Red
08-01-2018	V2	Appendix E	Protocol for reporting finds added in App E.	Red
17-04-2018	C1	Header	Logo change and new document number	Red
17-04-2018	C1	Page 16	Update of contact details	Red
19-04-2019	C2	Throughout document	Updated formatting of document.	R
19-04-2019	C2	Section 1 and 2.	Updated project information and introduction.	R
19-04-2019	C2	Appendix F	Added Appendix F.	R

Table of Contents

ACRONYMS, ABBREVIATIONS and DEFINITIONS

ACoW	Archaeological Clerk of Works
AEZ	Archaeological Exclusion Zone
CIfA	Chartered Institute for Archaeologists
ECoW	Environmental Clerk of Works
EIA	Environmental Impact Assessment
ES	Environmental Statement
HDD	Horizontal Directional Drilling
HER	Historic Environment Records
HES	Historic Environment Scotland
Historic MPAs	Historic Marine Protected Areas
KOWL	Kincardine Offshore Wind Limited
MARP	Marine Archaeology Reporting Protocol
MHWS	Mean High Water Spring
MS-LOT	Marine Scotland Licence and Operations Team
MW	Mega-Watts
OfTW	Offshore Transmission Works
PAD	Protocol for Archaeological Discovery
RCAHMS	Royal Commission on the Ancient and Historic Monuments of Scotland
RoW	Receiver of Wreck
TEZ	Temporary Exclusion Zone
WSI	Written Scheme of Investigation
WTG	Wind Turbine Generator

1.0 INTRODUCTION

1.1. Purpose of the Document

This document has been created to satisfy Condition 27 of the Section 36 Consent issued by Marine Scotland Licensing Operations Team (MS-LOT) to Kincardine Offshore Wind Ltd (KOWL) for the Kincardine Offshore Windfarm (the Project).

Condition 27 requires the production of a Marine Archaeology Reporting Protocol (MARP). The overall aim of the MARP is to outline and define the approach KOWL, its survey contractors and advisors will take with respect to archaeological discoveries during the Project, required under the consent conditions.

1.2. Scope of the Document

The MARP establishes the prevention and control 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.

Within the MARP a Protocol for Archaeological Discovery (PAD) has been included. The 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.

This document will:

- 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 prevention and control 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;
- 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.

1.3. Approach to Amending and updating this MARP

The nature of the construction process proposed for the Project means that updates to this document may be required as the project progresses.

Where the need for an update or amendment to this document is identified following approval from Marine Scotland Licensing Operations Team (MS-LOT), either through a consultation response, or due to practicalities arising as the project progresses, KOWL will communicate the suggested update/amendment to MS-LOT prior to editing the approved document.

1.4. Compliance

Compliance with the consent conditions are documented in the commitments register and where applicable throughout the MARP.

2.0 PROJECT OVERVIEW

2.1. Summary

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, in a location that provides suitable water depth for a floating offshore wind demonstrator development (approximately 60-80m).

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 MHWS including the underground cables connecting to the onshore substation at Redmoss.

2.2. Turbine Locations

The project originally consisted of 8 locations. This has been reduced to 6 locations and hence the designations have now changed as follows;

Table 2-1 Turbine Designation

Location designation Pre-2019	New location designation post 2019
KIN-01	KIN-01
KIN-02	KIN-02
KIN-03	KIN-03
KIN-04	n/a
KIN-05	n/a
KIN-06	KIN-04
KIN-07	KIN-05
KIN-08	KIN-06

The position of the locations 'KIN-01' through to 'KIN-06' together with the key project boundaries are detailed in Appendix F – Field layout in drawing KOWL-DR-0001-015.

This drawing is a controlled document and shall form the approved source for all coordinates in both UTM and Latitude/Longitude positions.

It must be stressed that the locations are the centre of the turbine and not the centre of the substructure.

2.3. Principal Components

The maximum generation capacity of the windfarm is capped at 50MW, the main difference between the various stages of the applications have been the number, size and power rating of the turbines, together with the substructure type.

The Project will now consist of the following offshore components:

- 1 x 2MW WTG (currently in operation)
- 5 x 9.5MW WTGs (to be installed 2020)
- 5 x 33kv inter-array cables (to be installed 2020)
- 2 x export cables (one currently installed)
- All turbine substructures are the semi-submersible Windfloat™ design.

2.4. Installed components

The onshore sub-station has been completed.

The first deployment was a 2MW WTG and associated substructure, anchors and mooring lines in 2018 on location 'KIN-01'. One export cable was also installed, through a Horizontal Directional Drilling (HDD) hole from landfall to circa 20m water depth and then along the export cable corridor to 'KIN-01' location.

A condition in the existing marine licence requires Third Party Certification or Verification (or suitable alternative as agreed, in writing, with the Licensing Authority) for all WTGs, mooring systems and WTG substructures prior to the commencement of the works.

2.5. Project Design Life

The design life for the windfarm is 25 years.

2.6. Construction Programme Overview

The construction of the project is anticipated to occur in two 'Tranches' in-line with the Programme outlined in the document ''Construction Programme'', KOWL-REP-0004-001.

One Tranche has been completed and the Construction Programme for the second tranche will be provided to Scottish Ministers prior to commencement of the construction as a requirement of the consent conditions.

3.0 CONSENT CONDITIONS

Table 3-1 Consent Conditions relevant to the MARP

Consent Document	Condition Wording	Where addressed in this document
Section 36Consent	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.	This document sets out the MARP for approval by the Scottish Ministers.

4.0 ARCHAEOLOGICAL WRITTEN SCHEME OF INVESTIGATION

4.1. Introduction

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 followed by a geophysical survey of the cable route and development site in 2017.

As part of the desk-based assessment undertaken for the Original ES, 30 wreck sites were identified. These were identified using CANMORE (an online mapping service) and 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.

All identified wrecks were targeted as part of the geophysical survey, following completion of the survey the precise location of each potential target was identified. 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 located within the area of interest. All other surveyed wrecks were located outside the Project construction areas and therefore not assigned Archaeological Exclusion Zones (AEZs).

4.2. Consultation

Consultation was undertaken with MS-LOT and 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. Known Archaeological and Cultural Assets and Targets

The geophysical report identified one wreck within the development area, shown in table below.

Table 4-1 Wrecks identified in the development area from geophysical survey

Wrecks identified in development area						
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 identified wreck was then cross referenced with the original desk-based survey locations to obtain further information.

Table 4-2 Wrecks identified in development area from desk-based study

ID	Desktop ID	Information	At risk from infrastructure
WK04	SS Creemuir	Sunk by aircraft 1942	No – located over 1km from WTG locations

The geophysical report identified three wrecks within the cable route, shown in table below.

Table 4-3 Wrecks identified in export cable corridor from geophysical survey

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
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).

These wrecks were then cross referenced with the original desk-based survey locations to obtain further information.

Table 4-4 Wrecks identified in export cable corridor from desk-based study

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

The distance of over 500m from the three identified wrecks to the cable route means that no impact should be expected from the project construction works and therefore is not a risk.

4.4. Archaeological Exclusion Zones (AEZs)

The primary 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).

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.

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.

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 monitored through regular 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.

5.0 PROTOCOL FOR ARCHAEOLOGICAL DISCOVERIES (PAD)

5.1. Introduction

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 protection 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 finds

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);
- 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 CIfA Technical Paper 13 Excavation and post-excavation treatment of cremated and inhumed remains; and

- 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 – Protocol for Reporting Finds of Archaeological Interest.

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), 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 Written Scheme of investigation (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:

- 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 Management 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 or 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. 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.

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 or will arrange 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 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:

Catrin Fowden (KOWL ECoW)
Email: cfowden@w3gmarine.co.uk
Tel: 07738884122

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.

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:

Redacted
Receiver of Wreck
Bay 1/05
Spring Place
105 Commercial Road
SOUTHAMPTON
SO15 1EG
Telephone: Redacted
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 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.

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).

Process

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 these mitigation measures the residual magnitude of effect for all the impacts discussed above can be considered low unless already stated as negligible.

Appendix B – Location of wrecks identified and Sidescan Imagery

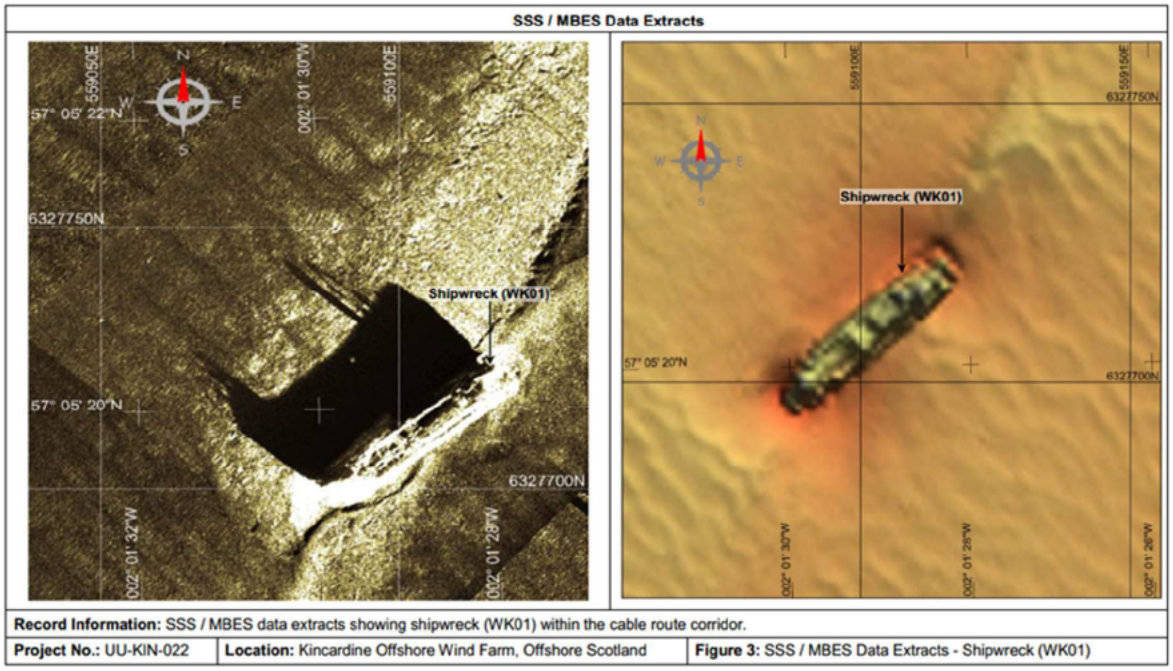


Figure 1 Wreck 01: Unknown.

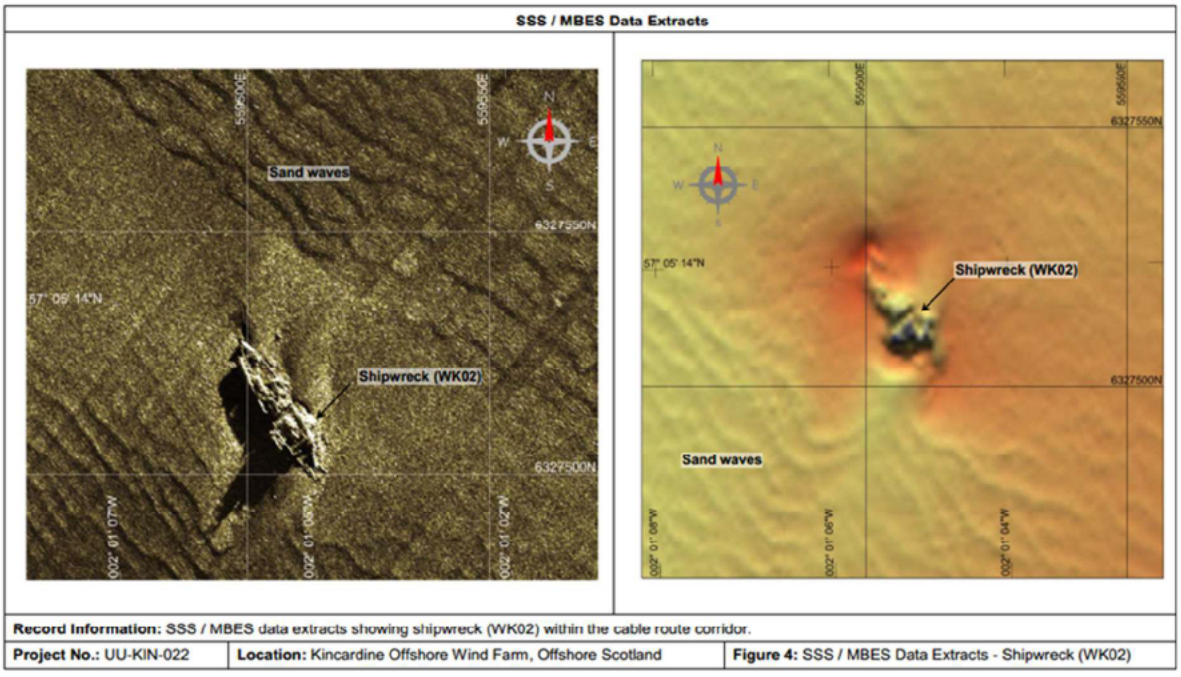


Figure 2 Wreck 02: MFV Luffness (fishing vessel) 1935

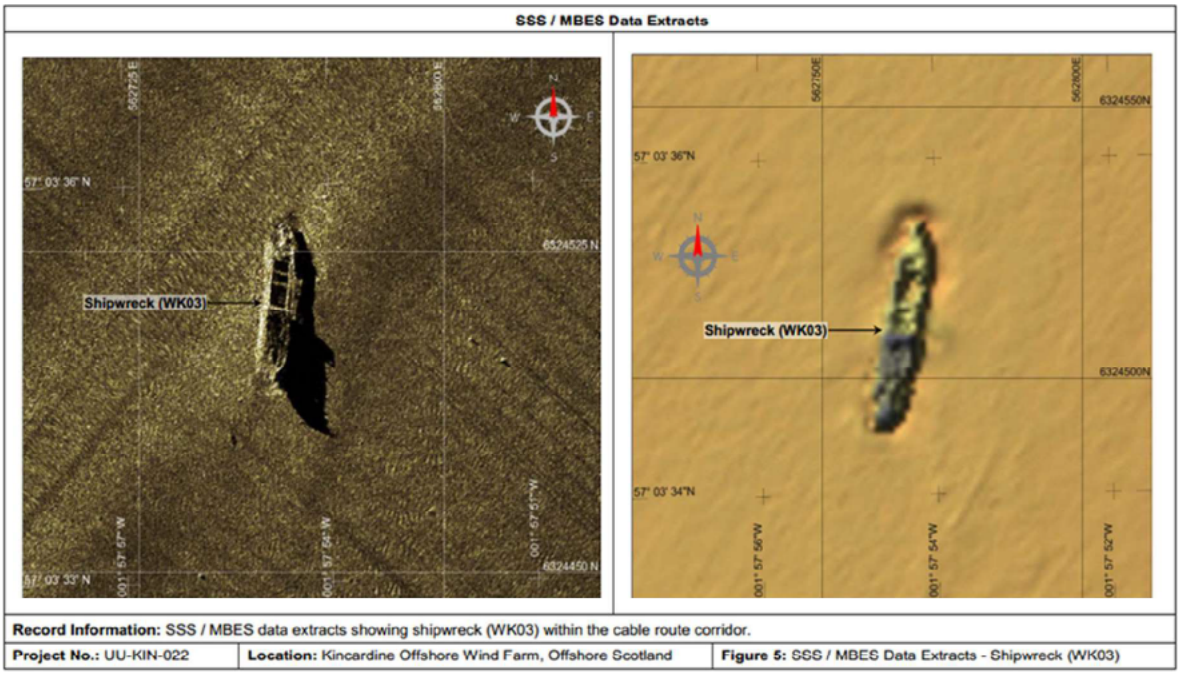


Figure 3 Wreck 03: SS Silverburn (coal transporter) 1914

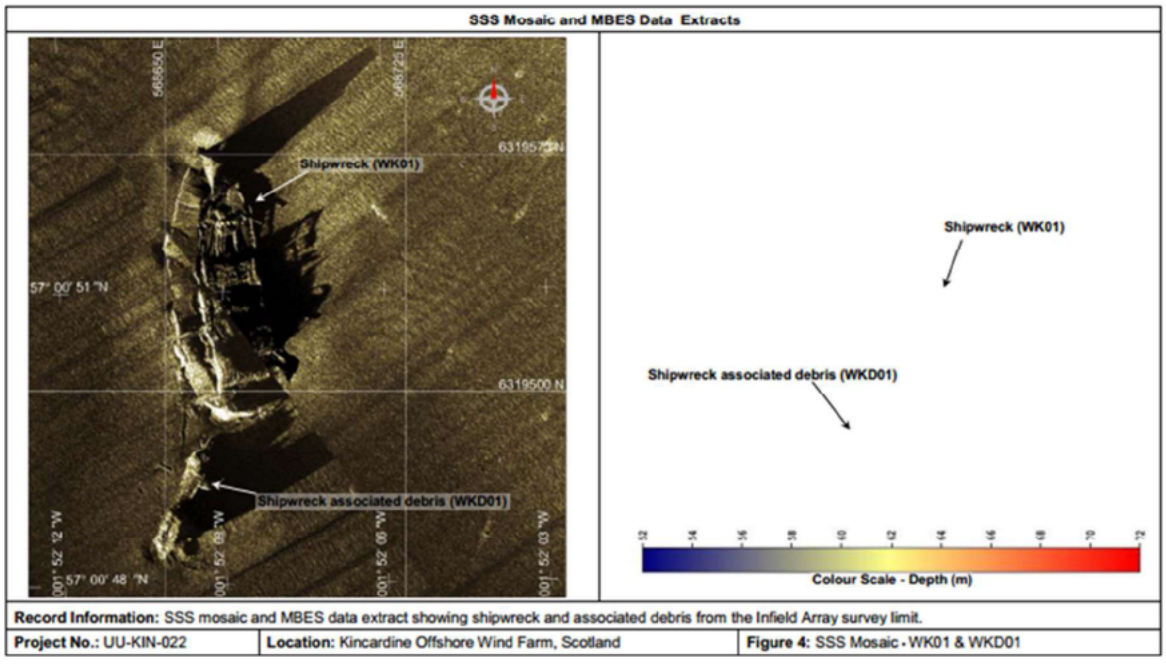
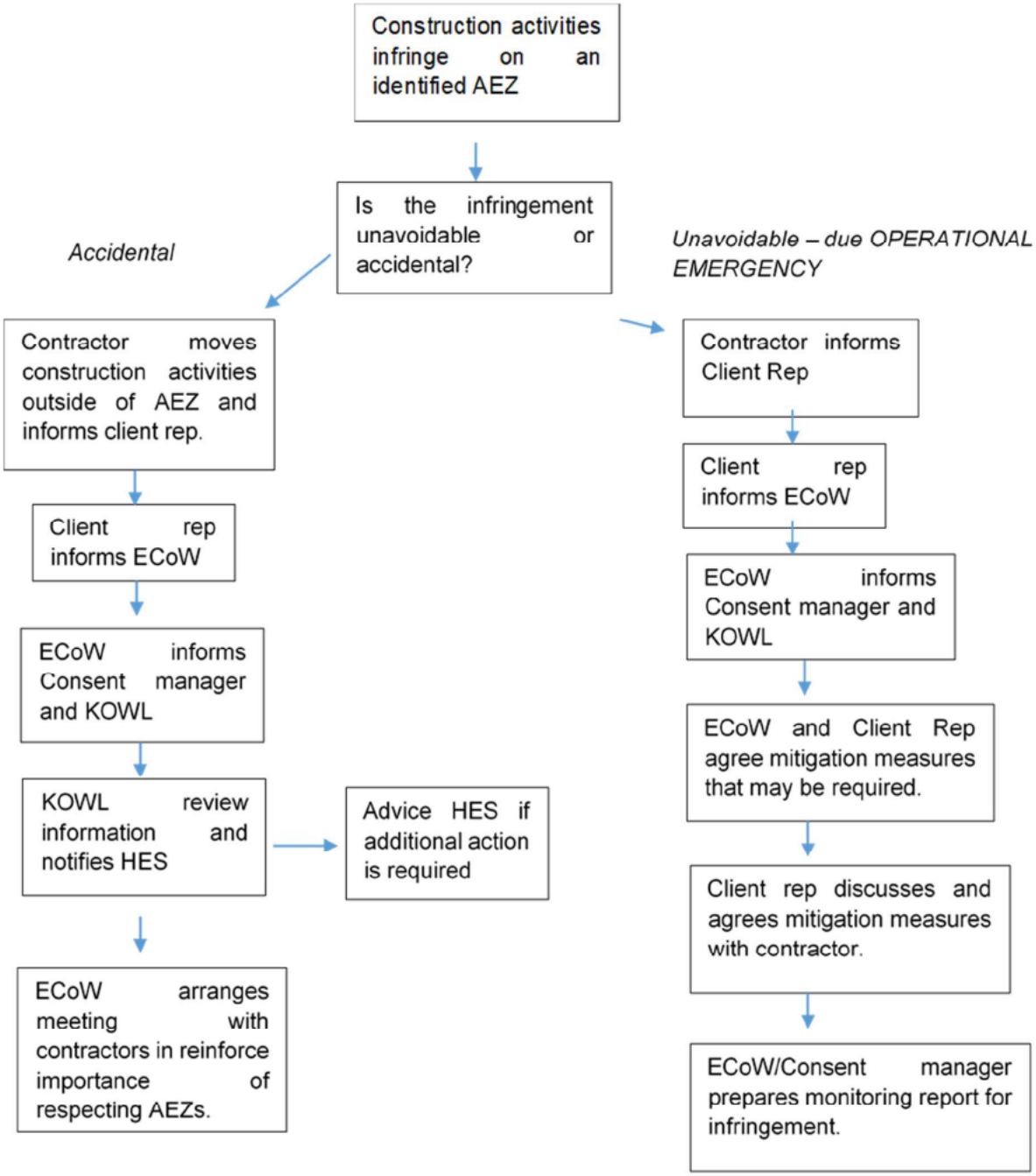


Figure 4 Wreck 04: SS Creemuir (steam ship) 1942

Appendix C – Protocol for Infringement of Archaeological Exclusion Zone



Appendix D – Preliminary Record Form

Protocol for Archaeological Discoveries: Offshore Renewables Projects

Preliminary Record Form Page 2 of 2

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: THE CROWN ESTATE

Protocol for Archaeological Discoveries: Offshore Renewables Projects

Preliminary Record Form Page 1 of 2

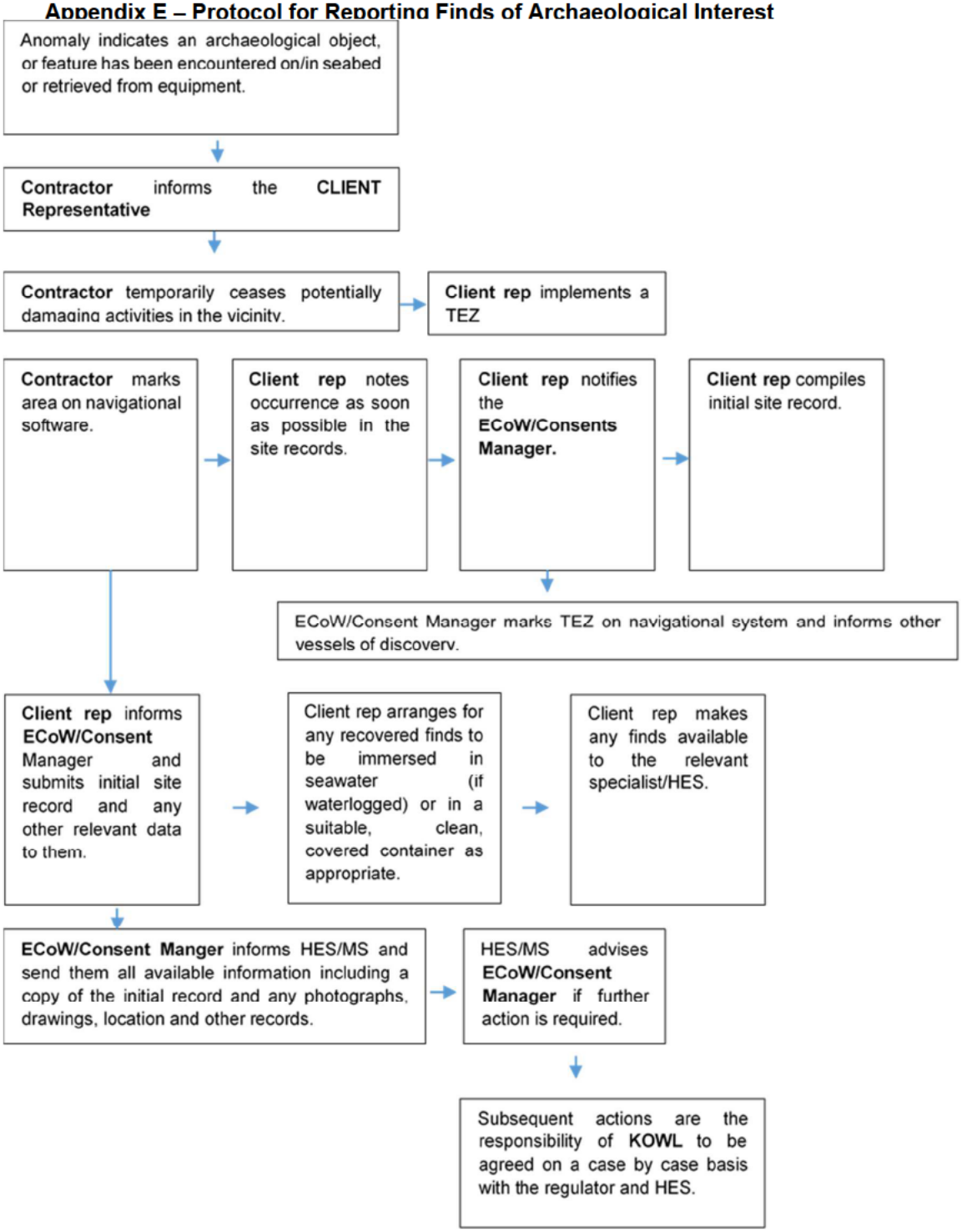
Preliminary Record Form: Discoveries on the Seabed/ on board / in the inter-tidal zone / on land

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):

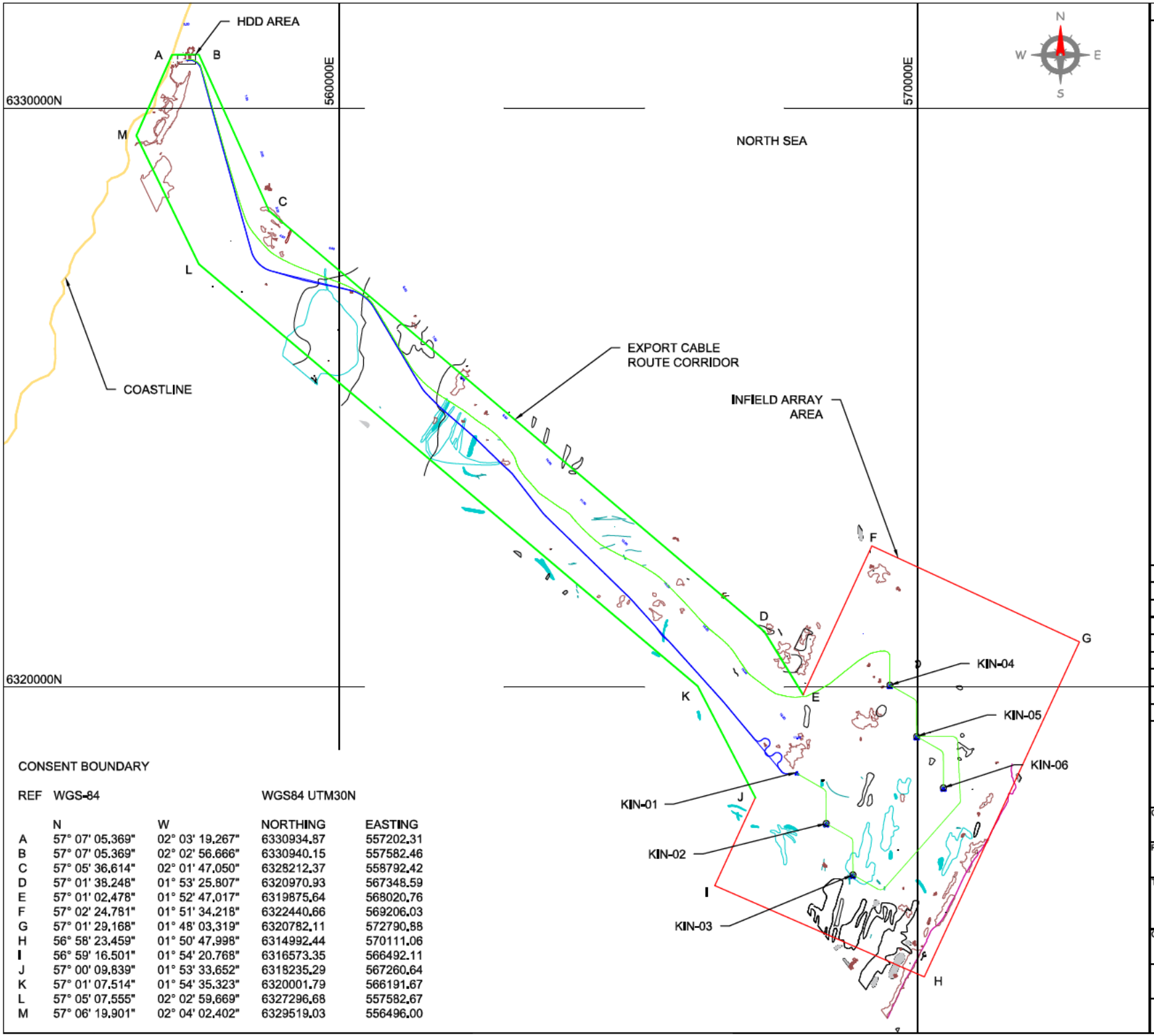
Time at which discovery was encountered:
Vessel position at time when anomaly was encountered:
a) Latitude
b) Longitude
c) Datum (if different from WGS84)
Original position of the anomaly on the seabed, if known:
Notes on likely accuracy of original position stated above:
a) How accurate is the position?
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

THE CROWN ESTATE

Appendix E – Protocol for Reporting Finds of Archaeological Interest



Appendix F – Field layout



LEGEND

PLANNED TURBINE LOCATIONS

REF	WGS-84	
	N	W
KIN-01*	57° 00' 19.095"	01° 52' 52.181"
KIN-02	56° 59' 50.109"	01° 52' 25.710"
KIN-03	56° 59' 21.214"	01° 51' 59.269"
KIN-04	57° 01' 06.828"	01° 51' 18.166"
KIN-05	57° 00' 37.897"	01° 50' 51.666"
KIN-06*	57° 00' 08.931"	01° 50' 25.179"

* CURRENT 2MW TURBINE AT KIN-01 LOCATION WILL BE REMOVED AND REDEPLOYED AT KIN-06 LOCATION

REF	WGS84 UTM30N	
	NORTHINGS	EASTINGS
KIN-01	6318532.87	567955.65
KIN-02	6317645.51	568416.70
KIN-03	6316758.16	568878.75
KIN-04	6320034.94	569517.86
KIN-05	6319147.58	569978.91
KIN-06	6318260.23	570440.96

EXISTING EXPORT CABLE ROUTE
PROPOSED 2ND EXPORT CABLE ROUTE

CONSENT BOUNDARY

REF	WGS-84		WGS84 UTM30N	
	N	W	NORTHING	EASTING
A	57° 07' 05.369"	02° 03' 19.267"	6330934.87	557202.31
B	57° 07' 05.369"	02° 02' 56.666"	6330940.15	557582.46
C	57° 05' 36.614"	02° 01' 47.050"	6328212.37	558792.42
D	57° 01' 38.248"	01° 53' 25.807"	6320970.93	567348.59
E	57° 01' 02.478"	01° 52' 47.017"	6319875.64	568020.76
F	57° 02' 24.781"	01° 51' 34.218"	6322440.66	569206.03
G	57° 01' 29.168"	01° 48' 03.319"	6320782.11	572790.88
H	56° 58' 23.459"	01° 50' 47.998"	6314992.44	570111.06
I	56° 59' 16.501"	01° 54' 20.768"	6316573.35	566492.11
J	57° 00' 09.839"	01° 53' 33.652"	6318235.29	567260.64
K	57° 01' 07.514"	01° 54' 35.323"	6320001.79	566191.67
L	57° 05' 07.555"	02° 02' 59.669"	6327296.68	557582.67
M	57° 06' 19.901"	02° 04' 02.402"	6329519.03	556496.00

REV	DESCRIPTION		DATE
A4	ISSUED FOR COMMENT	Redacted	03/04/2019
A3	ISSUED FOR COMMENT	Redacted	01/04/2019
A2	ISSUED FOR COMMENT	Redacted	29/01/2019
A1	ISSUED FOR COMMENT	Redacted	29/01/2019

KOWL

CLIENT
KINCARDINE OFFSHORE WINDFARM LIMITED

PROJECT
KINCARDINE OFFSHORE WINDFARM PROJECT

TITLE
FIELD LAYOUT CONSENT AND WTG POSITION CHECK

CLIENT DRAWING NUMBER	SHEET	SHEET SIZE
	1 OF 1	A3

SCALE U.N.O.	W3G DRAWING NUMBER	REV
1:60	KOWL-DR-0001-015	A4

KOWL-PL-0004-003 Marine Archaeological Reporting Plan C2

Final Audit Report 2019-04-19

Created:	2019-04-19
By:	Redacted
Status:	Signed
Transaction ID:	CBJCHBCAABAAcHN09t_Inj_qEFeHrdbhOKHXI75gpa6w

"KOWL-PL-0004-003 Marine Archaeological Reporting Plan C2" History

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