

IMMINGHAM EASTERN RO-RO TERMINAL



Environmental Statement: Volume 3

Appendix 15.3: Draft Written Scheme of Investigation (WSI)

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Immingham Eastern Ro-Ro Terminal Port of Immingham, North East Lincolnshire

Draft Marine Archaeological Written Schemes of Investigation

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Immingham Eastern Ro-Ro Terminal, Port of Immingham, North East Lincolnshire

Draft Marine Archaeological Written Schemes of Investigation

1 INTRODUCTION

1.1 Project and planning background

- 1.1.1 Wessex Archaeology has been commissioned by Associated British Ports (ABP) ('the Client'), to produce a draft Written Schemes of Investigation (WSI) for the proposed marine works relating to Immingham Eastern Ro-Ro Terminal (IERRT), Port of Immingham, North East Lincolnshire. The site is centred on NGR 520892 416180 (TA 20892 16180).
- 1.1.2 The marine proposed works comprise the installation of a jetty, floating pontoons, finger piers and linkspans, capital dredging and the disposal of dredge material.
- 1.1.3 This draft WSI is prepared in support of Chapter 15: Cultural Heritage and Marine Archaeology of the Environmental Statement (ES; Doc. Ref. no.8.2.15) for the proposed IERRT project.

1.2 Development description

Marine infrastructure

- 2.1.1 The proposed marine works will consist of the creation of:
 - An open piled approach jetty;
 - The linkspan between the approach jetty and the floating pontoons;
 - Two floating pontoons with an overall depth up to 9.35 m;
 - Two 264 m finger piers;
 - A short linkspan between the two pontoons; and
 - The possible inclusion of vessel impact protection structure adjacent to the approach jetty.

Capital dredge

- 1.2.1 The proposed development will require a capital dredge of the new berthing area. The maximum spatial extent of the dredge is currently estimated at being approximately 70,000 m². The berthing area will be dredged to a maximum of 9 m below Chart Datum (CD). The area beneath the floating pontoons will be dredged to 6 m below CD.
- 1.2.2 It is estimated that about 190,000 m³ of material in total will be removed. This is likely to constitute approximately 40,000 m³ of boulder clay, alongside 150,000 m³ of sand/silt (alluvium) *in situ*.



Disposal of dredge material

1.2.3 If ABP is unable to identify a beneficial use for the dredged material it is currently estimated that about 40,000 m³ of boulder clay, alongside 150,000 m³ of sand/silt (alluvium) *in situ* is likely to require disposal in the estuary. It is envisaged that the disposal sites HU056 (Holme Channel) and HU060 (Clay Huts) will be used to dispose of material.

1.3 Construction programme

1.3.1 Construction works are proposed to start in early 2024 and be largely complete by mid-2025, if completed in a single construction programme. If construction is undertaken in a sequenced construction programme, works would be completed in late 2026.

1.4 Scope of document

- 1.4.1 This WSI sets out the aims of the marine investigation, and the methodologies and standards that will be employed by the Client and Retained Archaeologist to implement the mitigation strategy set out in the Environmental Statement (ES) (Doc. Ref. no. 8). In format and content, it conforms to current best practice and to the guidance outlined in *Management of Research Projects in the Historic Environment* (MoRPHE, Historic England 2015c), the Joint Nautical Archaeology Policy Committee *Code of Practice for Development* (JNAPC 2006) and the relevant guidance from the Chartered Institute for Archaeologists (CIfA) (CIfA 2014a-h), as applicable.
- 1.4.2 This document will be submitted with the ES (Doc. Ref. no. 8), for approval by the Secretary of State, prior to the commencement of any investigative work.
- 1.4.3 The WSI will come into effect when it has been agreed with the Archaeological Curators and following consent, however, to ensure best practice any activities undertaken prior to consent should strive to be undertaken in line with the WSI.

2 THE ARCHAEOLOGICAL ASSESSMENT AREAS

2.1 Co-ordinate system

2.1.1 For all aspects of this report, positions are reported in the British National Grid (BNG) coordinate system, with heights calculated as distance above Ordnance Datum (Newlyn), as defined by OSGM15 and OSTN15.

2.2 Archaeological assessment areas

- 2.2.1 The marine study area for the assessment is the area over which potential direct and indirect effects of the IERRT project have been predicted to occur on marine heritage receptors during the construction and operational periods.
- 2.2.2 The marine study area therefore comprises the proposed development area of the IERRT project below Mean High Water Springs (MHWS). This encompasses all direct impacts from construction and dredging. A further 500 m buffer zone beyond the area of the proposed development has been included in order to capture relevant proximate heritage receptors in the assessment that could be affected indirectly. This area is known as the Archaeological Study Area (ASA).



2.2.3 The assessment of the harbour setting, including designated terrestrial heritage receptors, considered a wider area, comprising a 5 km buffer zone beyond the area of the proposed development was considered in a separate report (Wessex Archaeology 2022a).

3 AIMS AND OBJECTIVES

3.1 Aims

3.1.1 The aim of the WSI is to put in place the archaeological mitigation set out in the ES (Doc. Ref. no. 8.2.15).

3.2 Objectives

- 3.2.1 The objectives of this WSI are as follows:
 - to fulfil the requirements of the Development Consent Order in respect of archaeological monitoring and mitigation works associated with this project, as outlined in the ES;
 - to provide for the creation, position and extent of Archaeological Exclusion Zones (AEZs) that may be required should circumstances so demand, and to establish methods for their monitoring, modification and/ or removal in the future;
 - to ensure that any further geotechnical investigations associated with the project are subject to archaeological input, review, recording and sampling;
 - to propose measures for the mitigation of unexpected archaeological remains encountered during further survey work or construction work associated with the project;
 - to set out methodologies for post-construction monitoring; and
 - to establish the reporting and archiving requirements for the archaeological works undertaken during construction and post-construction monitoring.

3.3 Addressing questions from the Research Agendas

3.3.1 Themes, objectives and areas of research from the regional Research Agenda will inform survey designs and will be addressed in the results of any reports (Table 1).

 Table 1
 Objectives for future research from the Research Agenda

Research Agenda	Objective
East Midlands Heritage	 Palaeolithic 1H Explore the submerged Pleistocene
An Updated Research Agenda	landscapes of Doggerland.
and Strategy for the	 Mesolithic 2I Exploring Doggerland: target submarine
Historic Environment of the	landscapes and the modern coastline
East Midlands (Knight, Vyner	 Modern 9D Investigate use of rivers for transport & power
and Allen 2012).	

4 ROLES, RESPONSIBILITIES AND COMMUNICATION

4.1 Client (ABP)

4.1.1 The Client will be responsible for implementing this WSI and the mitigation measures, such as the Protocol for Archaeological Discoveries (PAD).



- 4.1.2 The Client and/or their representative will commission a suitably qualified and experienced archaeological contractor as Retained Archaeologist (section 4.2).
- 4.1.3 The Client and/or their representative will consult the Retained Archaeologist during the planning stages for any further work.
- 4.1.4 The Client and/or their representative will commission Archaeological Method Statements prior to works being undertaken that may impact the seabed.
- 4.1.5 The Client and/ or their appointed representatives, or any archaeological body they may appoint to manage the implementation of the Marine Archaeological WSI, will seek curatorial advice from the Archaeological Curator(s) (section 4.3) as appropriate.
- 4.1.6 Interaction with the Archaeological Curator(s) will be administered by the Client and/or their appointed representatives with advice where appropriate through the Retained Archaeologist. If a new site of archaeological importance is discovered during works, the Archaeological Curator(s) will be contacted immediately.
- 4.1.7 The Client and/or their appointed representatives will be responsible for administering the obligations of the *Merchant Shipping Act* 1995 with specific regard to reports of wreck and salvage and will ensure that droit reports are dealt with accordingly. The Client and/or their appointed representatives will ensure that recovered material identified as 'wreck' is reported to the Receiver of Wreck within 28 days of discovery. The Client and/or their representative will be responsible for the submission of this report, the legal obligations under the *Merchant Shipping Act* 1995 and all correspondence. If recovered material is held by the Retained Archaeologist, it is essential they are included in all correspondence with the Receiver of Wreck (section 4.3) and are aware of any updates or changes to the reports (commonly known as droits) associated with the material. The Client and/or their appointed representatives will be responsible for ensuring the legal obligations associated with the droits are undertaken.
- 4.1.8 The Client and/or their representative will ensure that the Retained Archaeologist is provided with all relevant project datasets, to ensure that they are in an informed position to advise the Client. This is particularly important between the planning and construction phases, and at any stage if the Retained Archaeologist changes, to ensure consistency.
- 4.1.9 The Client and/ or their appointed representatives will ensure that Contractors make project personnel aware of this Marine Archaeological WSI, any AEZs in force, and a bespoke Protocol for Archaeological Discoveries.
- 4.1.10 The Client will commit to following guidance set out in the Joint Nautical Archaeology Policy Committee (JNAPC) code of practice for seabed development (JNAPC 2006) and *The Assessment and Management of Marine Archaeology in Port and Harbour Development* (Historic England 2016), as applicable.

4.2 Retained Archaeologist

4.2.1 The Retained Archaeologist will oversee archaeological mitigation to provide consistency throughout the project, as required, and will implement the WSI.



- 4.2.2 The Retained Archaeologist will produce Archaeological Method Statements for works, as appropriate.
- 4.2.3 The Retained Archaeologist will act as the first contact for any unexpected The archaeological discoveries. Retained Archaeologist will cover administration of the reporting of discoveries made by the Client and/or their representative and will provide immediate actions, including recording, handling and storage, and introduction of measures to prevent or reduce damage if the presence of a significant archaeological site is suspected. The Retained Archaeologist will ensure any unexpected discoveries of archaeological material are assessed, as per the protocol (see section 9.8), and reported to the relevant curators and stakeholders. Recovered material identified as 'wreck' must be reported to the Receiver of Wreck by the Retained Archaeologist within 28 days of discovery. The Client and/or their representative will be involved with the submission of this report and all following correspondence.

4.3 Other key stakeholders

Archaeological Curator: Historic England

4.3.1 Historic England is a specialist advisor to the Marine Management Organisation for the English area of the UK territorial sea. They are the Archaeological Curators for the marine section of the works.

Receiver of Wreck

- 4.3.2 Material identified as 'wreck' that has either been recovered within UK territorial waters or brought into UK territorial waters must be reported to the Receiver of Wreck under the *Merchant Shipping Act* 1995. The Receiver of Wreck is located within the Maritime Coastguard Agency and works with other government departments and heritage organisations.
- 4.3.3 Wreck material is reported to the Receiver of Wreck via their website: https://www.gov.uk/report-wreck-material
- 4.3.4 The Receiver of Wreck's contact details are as follows:
 - Receiver of Wreck, Maritime & Coastguard Agency, Spring Place, 105
 Commercial Road, Southampton, SO15 1EG. Tel: 0203 817 2575. Email: row@mcga.gov.uk
- 4.3.5 Further details about how to manage discoveries of wreck material can be found in Section 10.6.

Ministry of Defence

4.3.6 Under the *Protection of Military Remains Act* 1986, any aircraft that crashed while in military service are automatically protected. Therefore, based on the precautionary principal, all finds or sites of aircraft should be reported to the Joint Casualty and Compassionate Centre (JCCC) of the Ministry of Defence (MoD), unless it can be proven without a doubt that the aircraft material is non-military. In any case, all finds of aircraft material should also be reported to the Receiver of Wreck.



4.3.7 Further details about how to manage discoveries of aircraft material, including restrictions, licensing, and guidance can be found in Sections 9.8 and 10.5.

Harbour Master's jurisdiction

- 4.3.8 The *Harbours Act* 1964 enables a harbour authority to amend various statutory powers including the power to raise, remove, destroy and mark wreck to ensure safe navigation within, or in or near the approaches, a harbour. However, removal of wreck may still need to be reported to the Receiver of Wreck in line with the *Merchant Shipping Act* 1995.
- 4.3.9 Harbour authorities may have additional powers under other legislation, for instance Harbour Masters have powers under the *Harbour, Docks and Piers Clauses Act* 1847 where it has been incorporated into local harbour legislation. However, again the Receiver of Wreck should be contacted prior to any recovery or destruction of wreck.
- 4.3.10 ABP are the harbour authority for the Port of Immingham under *The Harbour Directions (Designation of Harbour Authorities) (No. 2) Order* 2015.

4.4 Archaeological Contractor(s)

4.4.1 Archaeological Contractor(s) may be appointed to carry out specific packages of work, for example works beyond the in-house capabilities of the Retained Archaeologist, or additional works, as required. The Archaeological Contractor(s) may be appointed by the Client or their appointed representatives (the Retained Archaeologist or other contractors/ sub-contractors). In these instances, the Archaeological Contractor will ensure that works are specified, planned, undertaken and reported in accordance with this archaeological WSI.

4.5 Client contractors

- 4.5.1 The responsibility for implementing the archaeological WSI rests with the Client and their appointed representatives (including their contractors).
- 4.5.2 All relevant contractors engaged in the construction of the project shall:
 - familiarise themselves with the requirements of the outline offshore archaeological WSI and make them available to all of their staff working on the project (e.g. for Protocol briefings and archaeological input into method statements);
 - communicate with the Retained Archaeologist in the planning stages of any further survey work, to ensure archaeological objectives are included, as appropriate;
 - implement a PAD;
 - obey legal obligations in respect of 'wreck' and 'treasure' under the Merchant Shipping Act 1995 and the Treasure Act 1996, respectively;
 - obey legal obligations in respect of Protection of Military Remains Act 1986.
 - respect constraint maps and AEZs;



- assist and afford access to archaeologists employed by the Client; and
- inform the Retained Archaeologist of any environmental constraint or matter relating to health, safety and welfare of which they are aware that is relevant to the archaeologists' activities.

5 ARCHAEOLOGICAL BASELINE SUMMARY

5.1 Introduction

- 5.1.1 A full assessment of the archaeological baseline is presented and fully illustrated in the marine archaeological technical report (Wessex Archaeology 2022b). A summary is provided below.
- 5.1.2 The themes relevant to marine archaeological baseline as assessed in the technical report were:
 - Seabed prehistory (for example, palaeochannels and other features that contain prehistoric sediment, and derived Palaeolithic artefacts e.g. handaxes);
 - Seabed features, including maritime sites (such as shipwrecks and associated material including cargo, obstructions and fishermen's fasteners) and aviation sites (aircraft crash sites and associated debris);
 - Intertidal heritage receptors; and
 - Historic seascape character.

5.2 Summary of known and potential archaeological receptors

Palaeogeographic Assessment

- 5.2.1 The assessment of geophysical data within the Archaeological Study Area (ASA) defined in the marine archaeological technical report resulted in the identification of a total of 25 features of palaeogeographic interest. These are summarised as follows:
 - a total of 11 features, comprising channel features and deposits of organic material were assigned an P1 archaeological rating;
 - a total of 14 features comprising simple cuts and fills, and other deposits were assigned an P2 archaeological rating.
- 5.2.2 In addition to the individual palaeogeographic features, a layer of potential peat and/or organic sediments was also identified within the study area.
- 5.2.3 Due to the shallow water depths and acoustic blanking experienced within the Sub Bottom Profiler (SBP) data, it was not always possible to trace individual features between survey lines which can lower the confidence of interpretation.



Known intertidal

5.2.4 Seven records of heritage receptors are located within the intertidal zone. These records relate to coastal infrastructure, such as dolphins associated with the 20th century port.

Known maritime

- 5.2.5 There are no designated marine heritage receptors in the ASA.
- 5.2.6 There are two known wreck sites within the ASA. Little is known about either of these.
- 5.2.7 A number of sites relate to port infrastructure and include the jetties and dolphins associated with the 20th century port.
- 5.2.8 There are also a number of anomalies in the area that are as yet unidentified.

Known aviation

5.2.9 There are no designated aviation heritage receptors in the ASA. There are no known aviation sites within the ASA.

Maritime and aviation archaeological potential

Geophysical anomalies

- 5.2.10 The assessment of geophysical data within the study area resulted in a total of 102 anomalies identified as being of possible archaeological interest. These are summarised as follows:
 - a total of 26 were assigned an A2_h archaeological rating; and
 - a total of 76 were assigned an A2_I archaeological rating.
- 5.2.11 Due to these anomalies being located close to shore within a known currently busy and active area all the A2 anomalies have the potential to be modern debris, but without visual inspection this could not be confirmed, and so all were retained as a precaution.

Maritime potential

5.2.12 As an island nation, the UK has a long maritime history with potential for the archaeological evidence of maritime sites from the late Mesolithic through to the present day. The Humber is one of the largest estuaries in Britain with a rich and nationally important archaeological, geological and palaeoenvironmental record. It has been, and still is, a significant transport, trade and communication route. Maritime sites are defined for the purposes of this assessment as either wrecks (seagoing vessels or aircraft) and/or material that has been accidentally or deliberately lost overboard from a vessel or aircraft. The proposed development lies close to some of the historic shipping routes for British vessels travelling along the east coast, with vessels stopping at intermediate ports, including the Ports of Hull, Grimsby, New Holland and North Killingholme Haven. The main drivers for these routes were the trade in coal, ship building, the steel industry, and the fishing industry. There is the potential for the presence of maritime archaeological material from all periods within the study area.



Aviation potential

5.2.13 There is potential for the presence of aviation material dating from the early 20th century until more recent times, with a concentration dating to the World Wars and in particular to the Second World War. Discoveries may occur anywhere within the study area, but potential may increase nearer the coastlines in the vicinity of coastal defence networks protecting the strategically important military and civil infrastructure on England's east coast.

6 POTENTIAL IMPACTS

6.1.1 Impacts on the marine heritage receptors from the development could take place from construction and subsequent operational activities of the IERRT project. These could include direct and indirect impacts.

6.2 Direct

- 6.2.1 Any direct impacts to marine archaeological receptors are likely to occur during the construction stage of the proposed IERRT project. Impacts resulting in adverse effects upon archaeological receptors from construction works are those involving contact with the seabed. Marine archaeological receptors with height, such as shipwrecks, may also be impacted by activities that occur within the water column.
- 6.2.2 Construction activities that could have direct impacts will primarily consist of piling which could lead to physical damage of the archaeological resource and deformation of the surrounding deposits. The use of floating/jack up barge will be used to undertake piling on the finger piers.
- 6.2.3 Direct impacts to marine archaeological receptors are also likely to occur during dredging activities. The dredging will be conducted using a tug assisted backhoe dredger and possibly a trailer suction hopper dredger (TSHD). If dredged material is to be dispersed at sea then it will be transported to the identified disposal sites by bottom dumping split barges.

6.3 Indirect

6.3.1 The indirect effects upon the known and potential marine archaeological receptors are those which occur as a result of changes to hydrodynamic and sediment transport regimes, where these changes have occurred as a consequence of activities and structures associated with the construction and dredging activities. These impacts may occur through sediment dispersal / deposition from dredging activities or scour associated with the disturbance from construction activities and structures.

7 MITIGATION

7.1 Introduction

- 7.1.1 The following proposed measures are designed to mitigate against the impact the proposed work has on any sites with known or unknown archaeological potential:
 - An archaeological assessment (see section 7.2) of geophysical data collected prior to the start of works;



- The implementation of a bespoke finds report Protocol for Archaeological Discoveries (PAD) (see section 7.4) during dredging operations to ensure that any archaeological finds are reported via the Retained Archaeologist to Historic England and North East Lincolnshire HER; and
- An archaeological assessment (see section 7.5) of geoarchaeological data collected as part of the ground investigation works.

7.2 A1s

7.2.1 A1 objects (receptors) are items of anthropogenic origin and archaeological interest identified through the geophysical survey. Currently no A1 anomalies have been identified. If any A1 anomalies are identified, consultation will take place with the Retained Archaeologist.

7.3 A2 geophysical anomalies

7.3.1 A2 anomalies (receptors) are items of uncertain origin of possible archaeological interest identified during the geophysical survey process. There were 102 A2 anomalies identified in the ASA. As part of the mitigation process the contractors will receive an awareness presentation and material, including guidance on archaeological material, temporary exclusion zones if required and the reporting protocol process.

7.4 Unexpected discoveries

7.4.1 To mitigate against any possible unexpected discoveries during the dredging phase a PAD is outlined below (section 9.8) for implementation by the contractors with the support of the Retained Archaeologist.

7.5 Palaeogeographic assessment

- 7.5.1 A Stage 1 geoarchaeological assessment of the core logs will be carried out to further refine the palaeolandscape interpretation.
- 7.5.2 As there is the potential for peat to be present at the surface within the dredge area, any deposits of archaeological or palaeoenvironmental interest recovered during the proposed works should be reported to a suitably qualified archaeological contractor via a pre-agreed reporting protocol.
- 7.5.3 Finally marine boreholes are planned to be taken in the P1 cut and fill (**75022**) and the P1 possible peat overlying the channel in the north-east edge of the features (**75023**). These will also be subject to geoarchaeological assessment. Further information on these features is provided in the technical report (Wessex Archaeology 2022b).



Table 2 Borehole targets.

ID	Classification	Depth range (mbSB) from	Depth range (mbSB) to	Description	Interpreted unit
75022	Cut and fill	1.1	4.1	Possible cut into interpreted till with a distinct basal reflector with internal parallel reflectors at the base, suggesting possible laminated deposits and overlain with more chaotic reflectors. Full extents may not be visible due to blanking. Overlain by very high amplitude reflectors at the seabed. No vibrocores were acquired within the extents of this feature.	4
75023	High amplitude reflector	1.3	4.4	Shallow high amplitude reflector indicating the possible presence of organic material. May form the basal reflector of a shallow feature which possibly cuts into or overlays the chaotic reflectors interpreted as sands (75018), and is overlain by the high amplitude reflectors at the seabed. May be associated with 75014 but cannot be sure as not definitively seen on intervening lines. No vibrocores were acquired within the extents of this feature.	4 (possibly)

8 METHOD STATEMENTS

- 8.1.1 This Marine Archaeological WSI provides a framework for further archaeological investigations for the IERRT project. This will be finalised as part of the DCO examination process. All works will be undertaken in accordance with the methodology set out within this WSI and in compliance with the standards outlined by the CIfA (CIfA 2014a-h), excepting where they are superseded by statements made below.
- 8.1.2 Detailed method statements will be produced, as required, for further archaeological works, primarily the geoarchaeological assessment of marine boreholes; such as those identified in the 'Scheme of Investigations' section, below, for example Watching Briefs if required.
- 8.1.3 Each archaeological method statement will correspond to a defined package of works, for example, archaeological assessment of marine geophysical data, archaeological assessment of ROV data from the UXO survey, and archaeological investigation using divers and/or ROVs.
- 8.1.4 Method statements will provide details about:
 - Form of commission and contractual relationship with the Client;
 - Relation between the method statement, the WSI and any relevant conditions in the DCO:
 - Context in terms of relevant construction works:
 - Specific objectives of archaeological works;
 - Extent of investigation;
 - Investigation methodology;



- Anticipated post-investigation actions, including processing, assessment and analysis of finds and samples;
- Reporting;
- Timetable;
- Monitoring arrangements; and
- Health, safety and welfare.
- 8.1.5 Method statements will be prepared in consultation with Historic England and then provided to ABP for comment. Method statements will be submitted to the Marine Management Organisation for approval four weeks prior to any works commencing. Such method statements will include provision for Historic England where appropriate to monitor the progress of the archaeological works, as appropriate to that element, be that through site visits or meetings with ABP, the Contractor(s), and the Retained Archaeologist.
- 8.1.6 All contractors and sub-contractors will be sent the approved archaeological method statements including the results of any relevant archaeological surveys prior to work commencing.

9 SCHEME OF INVESTIGATIONS

9.1 Introduction

- 9.1.1 The following schemes of investigations provide a framework for the implementation of any additional mitigation that may be required in response to any unexpected discoveries during the different phases of the project, based on the referenced guidance indicated below.
- 9.1.2 The Mitigation section (section 7) provided a brief overview of the types of further archaeological investigations recommended for identified High, Medium, and Low archaeological receptors, unknown, and riverbed prehistory and other archaeological receptors (Wessex Archaeology 2008 a, b, c; 2012; 2013). The Scheme of Investigations section sets out how these investigations will be undertaken.
- 9.1.3 The Retained Archaeologist will provide input on the contractors' proposed survey method statements to ensure data collection is optimised so that it can be used to identify features of archaeological importance and inform mitigation proposals such as avoidance of wrecks and wreck debris.

9.2 Standards and guidance

- 9.2.1 The method statements and specifications in this document are based on archaeological best practice and guidance for marine and port and harbour development. The principal sources in chronological order of issue are:
 - Identifying and Protecting Palaeolithic Remains: Archaeological Guidance for Planning Authorities and Developers (English Heritage, 1998);
 - Managing Lithic Scatters: Archaeological Guidance for planning authorities and developers (English Heritage (now Historic England), 2000);



- Military Aircraft Crash Sites: Guidance on their Significance and Future Management (English Heritage, 2002);
- Code for Practice for Seabed Development (Joint Nautical Archaeology Policy Committee (JNAPC) 2006);
- Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (English Heritage (now Historic England), 2008);
- Our Seas A Shared Resource: High Level Marine Objectives (Department for Environment, Food and Rural Affairs (DEFRA, 2009);
- Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition) (English Heritage (now Historic England), 2011);
- Ships and Boats: Prehistory to Present Designation Selection Guide (Historic England, 2012);
- Marine Geophysics Data Acquisition, Processing and Interpretation Guidance Notes (Bates et al 2013);
- Standard and guidance for archaeological field evaluation (ClfA 2014a);
- Standard and Guidance for historic environment desk-based assessment (ClfA 2014h);
- Standard and guidance for nautical archaeological recording and reconstruction (ClfA 2014g);
- Dredging and Port Construction: Interaction with Features of Archaeological or Heritage Interest, Guidance Document No 124-2014 (PIANC 2014);
- Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record (English Heritage (now Historic England), 2015a);
- Managing Significance in Decision-Taking in the Historic Environment: Good Practice Advice in Planning Note 2 (Historic England 2015b);
- Preserving Archaeological Remains: Decision-taking for Sites under Development (Historic England, 2016a);
- The Assessment and Management of Marine Archaeology in Port and Harbour Development (Historic England 2016b);
- Deposit Modelling and Archaeology. Guidance for Mapping Buried Deposits (Historic England 2020).

9.3 Archaeological reporting, data management and archiving

- 9.3.1 Each package of archaeological works will be accompanied by written reports pursuant to the requirements of those works and demonstrating appropriate planning, recording and data management and commitment to archiving and public dissemination of results.
- 9.3.2 For all aspects of recording, reporting, data management and archiving ABP will adhere to standards and guidance as set out in ClfA 2014b.



9.3.3 Key points relevant to recording, reporting, data management and archiving are included below and in sections 11.3 and 12.4.

Reports

- 9.3.4 Each package of work will give rise to one or more Archaeological Reports, as set out in the Method Statement relating to the work.
- 9.3.5 Each Archaeological Report will satisfy the method statement for the investigation and will present the project information in sufficient detail to allow interpretation without recourse to the project archive.
- 9.3.6 Archaeological reports will be prepared in accordance with the guidance given in the relevant ClfA Standards and Guidance document (ClfA 2014b).
- 9.3.7 Survey data and reports will be reviewed from an archaeological perspective to ensure suitable mitigation is put in place for the proposed works. The reviews will consider:
 - relationship between the survey work, the WSI and the licence condition(s);
 - context in terms of relevant construction works;
 - specific objectives data review;
 - extent of investigations undertaken;
 - methodology for data review or analysis;
 - mitigation requirements;
 - monitoring arrangements;
 - recommendations.
- 9.3.8 Illustrations will include a plan of the area subject to investigation in relation to the development scheme.
- 9.3.9 Each Archaeological Report will be submitted in draft to ABP by the Retained Archaeologist. Upon approval by ABP, Archaeological Reports will be submitted to the Archaeological Curator (Historic England) for approval within four weeks of completion of the works associated with each Method Statement and their agreement/acceptance will be assumed if no contrary response is received within 15 working days of submission.
- 9.3.10 On completion of all archaeological works relating to the project an overarching report on the archaeology of the scheme will be prepared within a timetable agreed with ABP and Historic England.

Post-fieldwork Assessment

- 9.3.11 Following the completion of all relevant work, ABP will secure the implementation of all the post-construction archaeological work applicable to that relevant work.
- 9.3.12 Decisions regarding the scope of post-fieldwork assessment will be made by agreement between ABP and Historic England following submission of investigation reports, based on the possible importance of the results in terms of



their contribution to archaeological knowledge, understanding or methodological development.

- 9.3.13 The assessment phase may include (but is not limited to) the following elements:
 - the conservation of appropriate materials, including the X-raying of metalwork:
 - the spot-dating of all pottery from any investigation. This will be corroborated by the scanning of other categories of material and may include scientific dating methods;
 - the preparation of Site matrices with supporting lists of contexts by type, by spot-dated phase and by structural grouping supported by appropriate scaled plans;
 - an assessment statement will be prepared for each category of material, including reference to quantity, provenance, range and variety, condition, and existence of other primary sources; and
 - a statement of potential for each material category and for the data set will be prepared, including specific questions that can be answered and the potential value of the data to local, regional and national investigation priorities.
- 9.3.14 Once the final overarching assessment report has been approved by the Archaeological Curator (Historic England) and any subsequent analysis of the finds is completed, important results will be published in a recognised peerreviewed journal or as a monograph.

9.4 Archaeological exclusion zones

- 9.4.1 No archaeological exclusions zones (AEZ) have been implemented at this time.
- 9.4.2 In the case of high importance finds or finds thought to be of high importance, an AEZ dependant on the operation in action will be implemented until consultation with the Retained Archaeologist and Historic England have occurred. The AEZ will comprise a 50 m radius until consultation with the Retained Archaeologist and Historic England has occurred.

9.5 Marine geoarchaeological investigations

- 9.5.1 Further marine geotechnical work is planned. The scope and methodology of these further geoarchaeological works will be set out in a separate method statement, prepared by the Retained Archaeologist and agreed with the Archaeological Curator, including the Historic England Science Advisor.
- 9.5.2 The method statement will include clear provisions for the development of a collection, retention and storage strategy for cores, to allow for analysis to take place. It will be recommended for cores to be collected using light-proof sleeves, and that cores must be stored and split under light-safe (dark) laboratory conditions, in order to promote the preservation of the integrity of deposits of a certain age.



9.6 Archaeological watching briefs

- 9.6.1 A Watching Brief is recommended to monitor the dredging work. This work will depend on the dredging methods utilised, and its exact extent will be laid out in a Method Statement agreed with Historic England in advance. It is anticipated that the dredging will be conducted using a tug assisted backhoe dredger and possibly a trailer suction hopper dredger (TSHD). Dredged material will be transported to disposal sites by bottom dumping split barges.
- 9.6.2 Should any archaeological material be recovered during dredging, it will be analysed and recorded according to the principles set out in Section 9.2.
- 9.6.3 Recovery of any archaeological material within the Watching Brief will be completed under the supervision of the Retained Archaeologist with any artefacts or structural fragments returned to the quayside for appropriate archaeological storage (see Section 10).
- 9.6.4 For all aspects of archaeological watching briefs on board a dredging vessel, ABP and the Retained Archaeologist will adhere to standards and guidance as set out in CIfA 2014a, *Dredging and Port Construction: Interactions with Features of Archaeological or Heritage Interest* (PIANC 2014) and *The Assessment and Management of Marine Archaeology in Ports and Harbours* (Historic England 2016b).
- 9.6.5 Recording will include written, drawn, and photographic elements as conditions allow.
- 9.6.6 The findings of any watching briefs will be compiled as an Archaeological Report consistent with industry standards set out in Section 11.3.

9.7 Awareness training

- 9.7.1 The Retained Archaeologist will provide awareness training to all relevant contractors working on the dredging works. The detailed training on the identification of finds of archaeological potential will ensure that staff are aware of what constitutes an appropriate find and the procedure for reporting such discoveries. Where the origin or nature of an item is in question the precautionary principle will be employed and the item fully reported through the Protocol outlined below.
- 9.7.2 Training will focus on the types of material likely to be discovered during the dredging, for example:
 - aircraft material, what constitutes it, what types of material could be present and how to recognise it;
 - shipwreck material, including identifying wood that has been worked (for example, includes the presence of treenails and/or has been shaped, for example for a logboat or a clinker-built boat), fixtures and fittings, pottery, and other material that could be present on a shipwreck; and
 - prehistoric material, such as handaxes and palaeoenvironmental material that could be encountered.



- 9.7.3 Training will include an overview of levels of importance, and what constitutes an archaeological find. More information regarding the types of materials that could be discovered can be found in Annex 3.
- 9.7.4 Training will also include information on handling and storing archaeological discoveries.
- 9.7.5 Training given to the dredging staff will have a substantially greater level of detail than that provided for general staff under the terms of the PAD and will include advice on their responsibilities regarding the implementation of the WSI and PAD.
- 9.7.6 In addition, training will ensure that all staff understand their role and the method for reporting finds of archaeological potential through the PAD (see Annex 1).
- 9.7.7 Awareness visits will take place prior to the commencement of dredging work, and they will include: the works manager, superintendents, dredging staff, general vessel crew and office staff.
- 9.7.8 The timing of these visits will be based upon the dredging scheduled and staff/vessel changeovers, including pre-dredge clearance operations.
- 9.7.9 An awareness visit will be provided for each vessel before the dredging work commences. The captain and other crew members will be responsible for the training handover with their colleagues; however, additional awareness visits could be provided if requested to smooth the transition.
- 9.7.10 ABP will keep the Retained Archaeologist informed of the exact arrival dates for each vessel during the project.
- 9.7.11 Provision will be made for Historic England to attend a training session to monitor the approach and provide additional information if required. The Retained Archaeologist will contact Historic England regarding the most suitable awareness training. This is likely to be a virtual training session.
- 9.7.12 Periodic visits to the dredging site by the Retained Archaeologist will be planned to ensure proper adherence to the PAD (see Section 9.6). The frequency and timing of these visits will be determined in accordance with the dredging programme.
- 9.7.13 Although unlikely to be an issue, should the need arise, Historic England will be informed if the methods of reporting are falling short of necessary standards. This is to ensure that Historic England can be confident that every effort is made to protect and record archaeological material from unwarranted impacts.

9.8 Protocol for archaeological discoveries

- 9.8.1 A Protocol for Archaeological Discoveries (the Protocol) will be implemented as best practice to ensure that the project is prepared for any unexpected discoveries of archaeological material including shipwreck material, aircraft remains, submerged prehistoric material or other archaeological material.
- 9.8.2 The Protocol will be utilised alongside the archaeological watching brief.



- 9.8.3 The Protocol will be implemented to ensure that unexpected discoveries of archaeological material made outside of the above mitigation methods— including submerged prehistoric material, shipwreck material aircraft remains, and any other archaeological material are addressed in a timely and appropriate manner.
- 9.8.4 The aim of the Protocol is to reduce any adverse effects of the proposed development on the historic environment by enabling people working on the proposed development to report archaeological finds in a manner that is both convenient to their everyday work and effective regarding curatorial requirements.
- 9.8.5 The Protocol has been specifically designed to deal with any discoveries made during the dredging phase of the project. Flow charts of actions/communications and recording sheets associated with the Protocol can be found in Annexes 1-2.
- 9.8.6 This Protocol is designed to be used in conjunction with the proposed backhoe and TSHD dredging methodology for capital dredging. Should other dredging methodologies be proposed, a review and re-issuing may be necessary.
- 9.8.7 Archaeological finds made during dredging and construction activities are important because they can shed light on past human use of the landscape, sea, and seabed. The information that such discoveries bring to light can help archaeologists better understand the human past and should, therefore be conserved to better protect these aspects of our history on behalf of future generations.
- 9.8.8 The Protocol will be implemented to ensure that these discoveries are reported and analysed. Whilst there are no industry standard PADs for harbour and port development, the following methodology has been adapted from already approved protocols for other industries, specifically the British Marine Aggregates Producers Association (BMAPA) and English Heritage (EH) Protocol for Reporting Finds of Archaeological Interest (BMAPA & EH 2005) and the Protocol for Archaeological Discoveries: Offshore Renewables Projects (Wessex Archaeology 2010).

Methodology

- 9.8.9 The implementation of the Protocol will be initiated by a visit by the Retained Archaeologist to the relevant vessels to ensure that all staff are aware of what constitutes an appropriate find. Contact details, including those of the Nominated Contacts and the Archaeological Contractor, will be circulated once they have been confirmed. Contact details will be circulated as soon as possible in advance of dredging commencing.
- 9.8.10 When discoveries are made by Staff, either on the seabed or onboard a vessel, they can then be reported to a Site Representative on their vessel. The Site Representative will generally be the Master, or a person nominated by the Master to be the Site Representative. The Site Representative then reports to the Nominated Contact a person who has been appointed by the dredging contractor to co-ordinate implementation of the Protocol. The Nominated Contact will then report any discoveries to the Retained Archaeologist.
- 9.8.11 The Retained Archaeologist will in turn inform the Archaeological Curator. If the find is a 'wreck' within the meaning of the *Merchant Shipping Act* (1995) then the



Client, with advice from the Retained Archaeologist, will also make a report to the Receiver of Wreck. The Retained Archaeologist will inform ABP of the discovery and will produce an archaeological report of the finds at the end of the marine works.

Actions on the vessel: anomalies on the seabed or finds recovered from the seabed

- 9.8.12 If an anomaly such as resistance on the drag head or interruption in the flow of dredged material indicates that an object or structure has been encountered on the seabed, the Officer on Watch will inform the Master / Site Representative.
- 9.8.13 Where it is possible to identify the position of the anomaly or find, the Officer on Watch will temporarily cease works in the vicinity of the seabed location until the advice of the Retained archaeologist has been obtained. The Officer on Watch will arrange for any dredging gear to be examined as soon as possible to see if any archaeological material is trapped within it and will inform the Master / Site Representative accordingly.
- 9.8.14 The Master / Site Representative will note the occurrence as soon as possible in the vessel's log together with the time and exact vessel position. Where possible, the log entry should include a close approximation of the original position of the anomaly on the seabed. Additionally, the area should be marked on navigational software.
- 9.8.15 The Master / Site Representative will also compile a Preliminary Record of the occurrence, using the form in Annex 2.
- 9.8.16 The Master / Site Representative will inform the Nominated Contact of the occurrence as soon as possible, and pass on all available information, including a copy of the Preliminary Record and copies of any photographs, drawings or other records that have been made.
- 9.8.17 If, after encountering an anomaly, no archaeological material has been recovered, then no additional actions are required of staff on the vessel.
- 9.8.18 If finds have been recovered, the Master will arrange for the find(s) to be immersed in seawater in a suitable clean container, which should be covered. Any rust, concretion or marine growth should not be removed.
 - Actions by the Nominated Contact
- 9.8.19 Once informed of a find by a Master / Site Representative, the Nominated Contact shall inform the Archaeological Contractor as soon as possible so that advice can be sought.
- 9.8.20 The Nominated Contact will confirm with the Master / Site Representative that all the details set out in the Preliminary Record are comprehensive and correct. The Nominated Contact shall pass on to the Archaeological Contractor all available information relating to the circumstances of the occurrence, including a copy of the Preliminary Record and copies of any other records that have been made.
- 9.8.21 The Nominated Contact informs other vessels dredging in the area where the discovery has been made and advises them to keep particular watch.



9.8.22 The Nominated Contact makes any recovered finds available for inspection by the Archaeological Contractor.

Actions by the Retained Archaeologist

- 9.8.23 When contacted by the Nominated Contact and once information has been passed on, the Archaeological Contractor will enter the information in the project database / GIS.
- 9.8.24 The Retained Archaeologist will review all information relating to the occurrence in conjunction with geophysical and/or desk-based information.
- 9.8.25 The Retained Archaeologist will advise the Nominated Contact of any further actions that may be required, including:
 - advice on immediate actions to be taken in respect of the discovery, including any recovered finds;
 - advice on the identification of finds and the character of their seabed locations.
- 9.8.26 When the available information has been reviewed, this may include relevant geophysical, geoarchaeological, desk-based data, and preliminary research, the Retained Archaeologist will assess the archaeological potential and importance of the discovery.
- 9.8.27 If a find is discovered on-board either the dredger or the associated spoil barges in the case of backhoe dredging, the find will be assessed for their level of archaeological interest by the on-board operatives, based on awareness training and the criteria outlined in Annex 3. If the find is of potential archaeological interest, they will follow the strategy outlined in the Major Archaeological Find, Intermediate Archaeological Find and Minor Archaeological Find sections below.

Reporting

- 9.8.28 The Client will report any discovery of 'wreck' to the Receiver of Wreck, using the Receiver of Wreck website.
- 9.8.29 The Retained Archaeologist will produce an archaeological report of the analysis of any finds or anomalies at the end of the project and, if required will produce periodic reports following maintenance dredging. The results will be presented in a stand-alone format and will refer to the previous archaeological work.

9.9 Archaeological assessment of post dredging survey data

- 9.9.1 Following completion of the dredging works and the post-dredging survey by the contractor the data will be made available to the Retained Archaeologist for archaeological assessment.
- 9.9.2 Any new survey data will be reviewed, where relevant, by the Retained Archaeologist and will be interpreted by an archaeologist with an appropriate level of expertise. If any further items of interest are identified, Historic England will be consulted prior to any changes to the mitigation strategy.



- 9.9.3 The results of further interpretation will be compiled as an Archaeological Report by the Retained Archaeologist, consistent with the provisions on reporting within this WSI and with the updated Scope of Works.
- 9.9.4 Where an additional survey is carried out primarily for archaeological purposes, the specification should be prepared by a suitably qualified marine archaeologist from the Retained Archaeologist. In addition, the survey should be carried out by a survey company with appropriate archaeological expertise on-board if required.

10 FINDS AND ENVIRONMENTAL

10.1 Finds

General

- 10.1.1 All archaeological finds from excavated contexts will be retained, although those from features of modern date (19th century or later) may be recorded on site and not retained, depending on the research objectives of the project. Where appropriate, soil samples may be taken and sieved to aid in finds recovery. Any finds requiring conservation or specific storage conditions will be dealt with immediately in line with First Aid for Finds (Watkinson and Neal 1998) and First Aid for Underwater Finds (Robinson 1998). A full record will be made of any treatment given.
- 10.1.2 Finds and other items of archaeological interest recovered offshore in the course of investigation are the property of ABP as the leaseholder for the river bed, with the exception of any human remains, and 'wreck' for the purposes of the *Merchant Shipping Act 1995*, or material covered by the *Protection of Military Remains Act* 1986. The powers of the statutory harbour authority may also affect the issue of ownership, and the reporting requirements of any finds made.

10.2 Ordnance

10.2.1 If items of ordnance are discovered, they will be treated with extreme care. Company Health & Safety policies and established operational procedures should always take priority over archaeological reporting of munitions and ordnance.

10.3 Human remains

- 10.3.1 In the event of discovery of any human remains (articulated or disarticulated, cremated or unburnt), all excavation of the deposit(s) will cease pending the Retained Archaeologist obtaining a Ministry of Justice Licence (this includes cases where remains are to be left *in situ*).
- 10.3.2 Should human remains require removal, all excavation and post-excavation will be in accordance with the Retained Archaeologist's protocols, with any directions which may be given by the Secretary of State, and current guidance documents (e.g. McKinley 2013; McKinley and Roberts 1993; ClfA 2017). Appropriate specialist guidance/site visits will be undertaken if required.
- 10.3.3 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.



10.4 Treasure

- 10.4.1 The Retained Archaeologist will immediately notify ABP and the Curator(s) on discovery of any material covered, or potentially covered, by the *Treasure Act* 1996 (as amended by *The Coroners and Justice Act* 2009). All information required by the *Treasure Act* (i.e., finder, location, material, date, associated items etc.) will be reported to the coroner within 14 days. Items falling under the *Treasure Act* will be removed from the site by the Retained Archaeologist and stored in a secure location, pending a decision by the coroner.
- 10.4.2 Material recovered below Mean High Water Springs (MHWS) to 12 nm may be regarded as Wreck under the *Merchant Shipping Act* 1996.

10.5 Aircraft

- 10.5.1 The majority of aircraft wrecks are military and therefore fall under the *Protection of Military Remains Act* 1986. All military aircraft crash sites in the UK, its territorial waters, or British aircraft in international waters, are controlled sites under this Act. It is an offence under this Act to tamper with, damage, move or unearth any items at such sites, unless the Ministry of Defence (MoD) has issued a licence authorising such activity. Consequently, anyone wishing to recover a military aircraft or excavate a military aircraft crash site in the UK is required to obtain a licence from the Joint Casualty and Compassionate Centre (JCCC). A licence is required irrespective as to whether the aircraft was in the service of another nation's armed forces.
- 10.5.2 Any finds that are suspected of being military aircraft will be reported immediately to the Retained Archaeologist. In the case of a military aircraft being investigated under licence, any human remains will be reported immediately.

10.6 Wreck

- 10.6.1 Archaeological artefacts that have come from a ship are 'wreck' for the purposes of the *Merchant Shipping Act* 1995. The Client should ensure that the Receiver of Wreck is notified within 28 days of recovery, for all items of wreck that have been recovered.
- 10.6.2 All material reported as wreck may be required to be retained and held on indemnity to the Receiver of Wreck's orders whilst the droit remains open, which could extend beyond a year. The location(s) of such storage will be confirmed following discussion between the Client and/or their appointed representatives and the Retained Archaeologist. The Receiver of Wreck must be made aware of these storage locations and any further movement of reported material.
- 10.6.3 If the Receiver of Wreck has not found ownership of any recovered wreck material within one year, the material becomes 'unclaimed' and as such the property of the Crown. The Receiver of Wreck can then dispose of these items on behalf of the Crown. For material that is of historical or archaeological importance, the Receiver of Wreck will try to ensure that it is offered to an appropriate museum. If an appropriate museum or institution is not found, then the Receiver of Wreck may offer the material to the finder *in lieu* of salvage. Due to the longevity of this process, it is essential that the Client/their representative are fully aware of the obligations of the *Merchant Shipping Act* 1995 and frequently liaise with the



Receiver of Wreck until a decision on ownership has been made and the droits can be formally closed.

11 POST-EXCAVATION AND REPORTING

11.1 Finds

- 11.1.1 All retained archaeological finds will, as a minimum, be washed, weighed, identified and given a unique identifier. They will then be recorded to a level appropriate to the aims and objectives of the investigation.
- 11.1.2 Metalwork, especially from stratified contexts, will be X-rayed and, along with other fragile and delicate materials, stored in a stable environment. The X-raying of objects and other conservation needs will be undertaken by the Retained Archaeologist's in-house conservation staff, or by another approved conservation centre.
- 11.1.3 Artefacts and other finds that do not require specific conservation measures will be suitably bagged and boxed in accordance with the guidance given by the relevant museum and generally in accordance with the standards of the ClfA (2014b).

11.2 Conservation and storage

All recovered materials of archaeological interest will be subject to a Conservation Assessment to gauge whether special measures are required while the material is being held. The Conservation Assessment must be approved by the Archaeological Curator(s) and, where applicable, the Receiver of Wreck. This Conservation Assessment will be carried out by the Retained Archaeologist or an Archaeological Contractor with an appropriate level of expertise, with advice from appropriate specialists. The Retained Archaeologist or an Archaeological Contractor with appropriate expertise will implement recommendations arising from the assessment. If no special measures are recommended, finds will be conserved, bagged, boxed and stored in accordance with industry guidelines (CIfA 2014b).

11.3 Reporting

General

- 11.3.1 Following completion of the fieldwork and/or the assessment of the data, draft report(s) will be submitted for approval to the Client and the Curator(s), for comment. Reports may be issued for individual fieldwork or assessment packages with a final close-out report, or the work summarised in a single final report. Once approved, a final version will be submitted.
- 11.3.2 The report will typically include the following elements:
 - A non-technical summary;
 - The aims and methods of the work;
 - The results of the work including finds and environmental remains;
 - A statement of the potential of the results;
 - Proposals for further analysis and publication;



- Appendices;
- Illustrations; and
- References
- 11.3.3 A copy of the report(s) will be deposited with the National Marine Heritage Dataset (Mariner) and the relevant Historic Environment Record (HER), along with surveyed spatial digital data (.dxf or shapefile format) relating to the evaluation.
- 11.3.4 It is essential that information from this project be made publicly available, as this will lead to beneficial effects, and is a requirement of Historic England. The information can then support appreciation and enjoyment of the historic environment, on local, regional and national levels, and also enable further academic research and inform marine plans. In addition, dissemination can bring about greater awareness of the historic environment, which can in turn engender local pride.

Publication

11.3.5 If no further mitigation works are undertaken, a short report on the results of the evaluation will be prepared for publication in a suitable journal, if considered appropriate and agreed with the Client and the Curator(s).

OASIS

11.3.6 An OASIS online record (https://oasis.ac.uk/) will be created, with key fields completed, and a .pdf version of relevant reports submitted, within six months of each report being approved by the Client. Copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service ArchSearch catalogue. However, projects subject to any contractual requirements on confidentiality, or with the discovery of vulnerable sites, will only be uploaded to OASIS following confirmation from the Client and/or Archaeological Curator.

12 ARCHIVE STORAGE AND CURATION

12.1 Museum

- 12.1.1 Every effort will be made to identify a suitable repository for the archive resulting from the investigation. If no suitable repository is identified, the Retained Archaeologist will continue to store the archive, but may institute a charge to the client for ongoing storage beyond a set period.
- 12.1.2 Deposition of any finds with will only be carried out with the full agreement of The Crown Estate or the owner (as confirmed by the Receiver of Wreck).

12.2 Transfer of title

12.2.1 On completion of the investigation (or extended fieldwork programme), every effort will be made to encourage the legal owner of any finds recovered (e.g. The Crown Estate), with the exception of human remains and any objects covered by the *Treasure Act* 1996 or aircraft material covered by the *Protection of Military Remains Act* 1986 (and therefore under the ownership of the Joint Casualty and Compassionate Centre of the Ministry of Defence), to transfer their ownership to a museum in a written agreement. Furthermore, ownership would be sought by the



Receiver of Wreck for any material reported under the *Merchant Shipping Act* 1995. Droit reports associated with such material must be formally closed prior to material being accessioned by a museum.

12.3 Preparation of archive

- 12.3.1 The complete project archive, which may include paper records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material, and in general following nationally recommended guidelines (SMA 1995; CIfA 2014d; Brown 2011; ADS 2013). The archive will usually be deposited within one year of the completion of the project, with the agreement of the Client.
- 12.3.2 The relevant Archaeological Curator(s) and the Retained Archaeologist will agree with the receiving institution a policy for the selection, retention and disposal of recovered or excavated material, and confirm requirements in respect of the format, presentation and packaging of archive records and materials. The receiving institution will be notified in advance of any fieldwork.
- 12.3.3 All digital data will be considered part of the primary archive and will accord with the procedures recommended by The Crown Estate, Marine Environment Data and Information Network (MEDIN), Archaeological Data Service (ADS) and the accepting institution.

12.4 Selection strategy

- 12.4.1 It is widely accepted that not all the records and materials (artefacts and ecofacts) collected or created during the course of an archaeological project require preservation in perpetuity. These records and materials will be subject to selection in order to establish what will be retained for long-term curation, with the aim of ensuring that all elements selected to be retained are appropriate to establish the significance of the project and support future research, outreach, engagement, display and learning activities, i.e., the retained archive should fulfil the requirements of both future researchers and the receiving Museum.
- 12.4.2 The relevant Archaeological Curator(s) and the Retained Archaeologist will agree with the receiving institution a policy for the selection, retention and disposal of recovered or excavated material, and confirm requirements in respect of the format, presentation and packaging of archive records and materials. This will be underpinned by national guidelines on selection and retention (Brown 2011, section 4) and generic selection policies (SMA 1993; Wessex Archaeology's internal selection policy) and follows the ClfA's Toolkit for Selecting Archaeological Archives. It should be agreed by all stakeholders (Wessex Archaeology's internal specialists, external specialists, museum) and fully documented in the project archive.
- 12.4.3 Where possible, the receiving institution will be notified in advance of any fieldwork. However, due to the nature of some types of fieldwork whereby it is often unknown what finds could be recovered, these discussions may take place during or even after fieldwork has ended. However, selection, retention and disposal of recovered or excavated material should only occur if the legislative requirements of the *Merchant Shipping Act* 1995 and *Protection of Military Remains Act* 1986 are fully undertaken and the Receiver of Wreck and Ministry of



Defence are involved in any such decisions, for instance ensuring all droits are closed prior to discard or transfer to a suitable museum.

Finds

- 12.4.4 Consultation with all stakeholders regarding project-specific selection decisions will be undertaken throughout the project as necessary, however at a minimum of three project review points:
 - Data gathering: if any unforeseen discovery on site necessitates an amendment to the proposed collection strategy, or if adjustments are made to any sampling strategy;
 - End of data gathering (assessment stage); and
 - Archive compilation.
- 12.4.5 If material is not accepted by a museum or other organisation and all legislative requirements are fully undertaken, then consideration will be given to the suitability for their use within handling or teaching collections by the museum or Wessex Archaeology, or whether they are of particular interest to the local community. Remaining de-selected material will be disposed of. All such material will be adequately recorded to the appropriate level before de-selection.

Documentary and digital records

- 12.4.6 It is widely accepted that not all records collected during the course of an archaeological project require preservation in perpetuity. These records will be subject to selection in order to establish what will be retained for long-term curation, with the aim of ensuring that all elements selected to be retained are appropriate to establish the significance of the project and support future research, outreach, engagement, display and learning activities, i.e. the retained archive should fulfil the requirements of both future researchers and the receiving Museum.
- 12.4.7 To promote long-term future reuse, deposition file formats will be of archival standard, open source and accessible in nature following national guidance (ADS 2013; ClfA 2014c) and the requirements of the digital repository.
- 12.4.8 Any sensitive data to be handled according to Wessex Archaeology data policy to ensure it is stored and transferred securely. The identity of individuals will be protected in line with GDPR. If required, data will be anonymised and redacted. Selection and retention of sensitive data for archival purposes will occur in consultation with the client and relevant stakeholders. Confidential data will not be selected for archiving and will be handled as per contractual obligation.
- 12.4.9 De-selected data will be stored on Wessex Archaeology secured servers on offsite storage locations. The Wessex Archaeology IT department has a backup strategy and policies that involves daily, weekly and monthly and annual backups of data as stated in the DMP. This strategy is non-migratory, and original files will be held at Wessex Archaeology under their unique project identifier, as long as they remain useful and usable in their final version format. This data may also be used for teaching or reference collections by the museum, or by WA unless otherwise required by contractual or copyright obligations.



Palaeoenvironmental material

- 12.4.10 All contexts suitable for environmental sampling will be considered for sampling. A site-specific sampling strategy (SSSS) may be recommended for this project and will be prepared to accompany this WSI. The SSSS is intended to guide the retrieval of paleoenvironmental evidence during the site investigations with the purpose of addressing their site-specific objectives. The SSSS will be prepared following Wessex Archaeology's in-house guidance, which adheres to the principles outlined in Historic England's guidance (English Heritage 2011 and Historic England 2015a). Where applicable, the Archaeological Curator should be included in any discussions.
- 12.4.11 De-selected material from samples will be disposed of after processing and postexcavation recording. All processed material will be adequately recorded to the appropriate level before de-selection.

12.5 Security copy

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

13 COPYRIGHT

13.1 Archive and report copyright

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

13.2 Third party data copyright

13.2.1 This document, the evaluation report and the project archive may contain material that is non-Wessex Archaeology copyright (e.g., Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which the Retained Archaeologist will be able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the *Copyright, Designs and Patents Act* 1988 with regard to multiple copying and electronic dissemination of such material.



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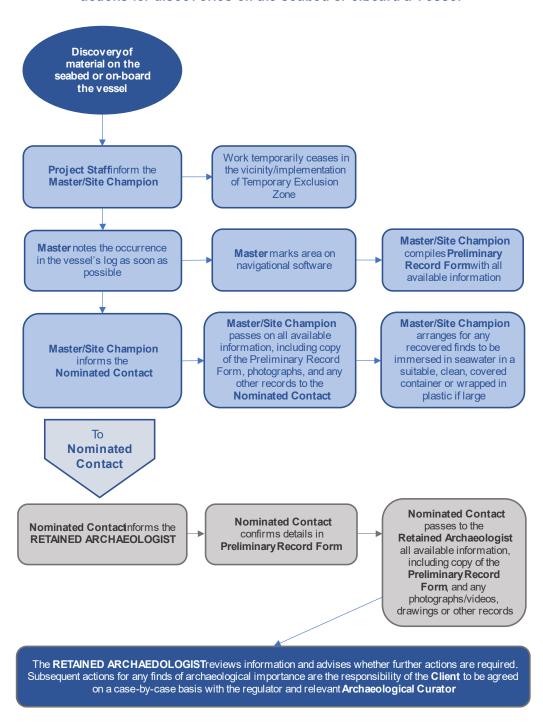
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ANNEXES

Annex 1: Actions on the vessel - anomalies on the seabed or finds recovered from the seabed- (Vessel chain of command to be confirmed)

Protocol for Archaeological Discoveries: actions for discoveries on the seabed or orboard a vessel





Annex 2: Preliminary Recording Form

Discoveries: Preliminary Record Form				
When and Where?				
Where Found: Wharf □ Vessel □ Seabed (e.g. anomaly) □				
Name of Finder: Date Found:				
Seabed Development Area:				
Track plot of vessel provided? Yes \square No \square				
Position (if possible):				
Datum:				
Accuracy:				
☐ GPS Fix ☐ Approximate				
☐ Centre point ☐ Estimated from Sources				
What is it?				
Description of the find(s):				
What Next?				
Photographs taken □				
Treatment Given: Kept Wet \square Kept Dry \square				
Current Location:				
□ Wharf: □ Other: □				
☐ Vessel: ☐ Seabed (for anomalies encountered)				
Any other notes:				
Form Complete				
Name of compiler:				
☐ Site Champion ☐ Vessel Master ☐ Other				
Signed: Date:				



Annex 3: Guidelines for Identifying Finds of Archaeological Interest

This text is based on the categories outlined in the Protocol for Reporting Finds of Archaeological Interest, published by the British Marine Aggregate Producer's Association (BMAPA) and English Heritage (now Historic England), 2005. The variety in significance across each type of find means that the day-to-day assessment of individual receptors as Major, Intermediate or Minor finds will be completed by an appropriately qualified archaeologist, either working directly on site with each receptor or remotely using images, dimensions and video stills.

Bone

Major Archaeological Finds

Human bone is definitely of archaeological interest and is also subject to special legal requirements under the Burial Act 1857. Any suspected human bone should be reported and treated with discretion and respect.

Large quantities of animal bone may indicate a wreck (the remains of cargo or provisions) and should be reported.

Objects made out of bone – such as combs, harpoon points or decorative items – can be very old and are definitely of archaeological interest. All occurrences should be reported and recovered if feasible.

Intermediate Archaeological Finds

Individual fragments or small quantity/low densities of animal bone, teeth and tusks are of archaeological interest because they may date to periods when the seabed formed dry land, and should be reported. Such bones, teeth, tusks etc. may have signs of damage, breaking or cutting that can be directly attributed to human activity. Should any such anthropomorphic damage, breaking of cutting be identified then the find will be considered a Major Archaeological Find.

Pottery

Intermediate Archaeological Finds

Any fragment of pottery is potentially of interest, especially if it is a large fragment. Individual fragments or small quantity/low densities of pottery are considered an Intermediate Archaeological Find and likely to date prior to 1750. Items with unusual shape, glaze or fabric should be reported. It is noted that there is the potential for residue analysis on ceramic sherds and vessels recovered from marine environments, and this should be considered where these are recovered (Historic England 2017).

As the area may have been used as a landing place for ships during the Roman period, there is also the potential for trade and exchange to be visible within the ceramic assemblage.

Minor Archaeological Finds



Items which look like modern crockery would be considered to be a minor archaeological find, until further assessment.

Brick

Intermediate Archaeological Finds

Bricks that do not have v-shaped hollows ('frogs') and/or are small, thin, or generally appear different than modern bricks could date back to the medieval or Roman period and should be reported.

Minor Archaeological Finds

Bricks with modern proportions and 'frogs' are of little to no archaeological interest.

Wood

Major Archaeological Finds

If the material discovered on the seabed, or recovered to the surface, appears to represent material from a wreck site, it must be reported.

Pieces of wood that have been shaped or jointed may be of archaeological interest, especially if fixed with wooden pegs, bolts or nails. All occurrences should be reported. Objects made out of dark, waterlogged wood, such as bowls, handles, shafts and so on – can be very old and are definitely of archaeological interest. All occurrences should be reported.

Intermediate Archaeological Finds

Roundwood that has clearly been shaped or made into a point should be reported.

Minor Archaeological Find

Light coloured wood, or wood that floats easily, is probably modern and is unlikely to be of archaeological interest. 'Roundwood' with bark, such as branches – is unlikely to be of archaeological interest.

Peat and Clay

Major Archaeological Find

Peat is black or brown fibrous soil that formed when sea-level was so low that the seabed formed marshy land, on the banks of a river or estuary, for example. The peat is made up of plant remains, and also contains microscopic remains that can provide information about the environment at the time it was formed. This information helps us to understand the kind of landscape that our predecessors inhabited, and about how their landscape changed. It can also provide information about rising sea-level and coastline change, which are important to understanding processes that are affecting us today. Prehistoric structures (such as wooden trackways) and artefacts such as stone tools, including hand axes, are often found within or near peat, because our predecessors used the many



resources that these marshy areas contained. As these areas were waterlogged and have continued to be waterlogged because the sea has risen, organic artefacts made of wood, leather, textile and so on often survive together with the stone and pottery which are found on 'dry' sites. Should evidence for trackways associated with peat be uncovered, this would constitute a Major Find and further investigations would be necessary.

Fine-grained sediments such as silts and clays are often found in the same places as peat. These fine-grained sediments also contain the microscopic remains that can provide information about past environments and sea-level change.

Intermediate Archaeological Finds

Isolated discoveries of peat or clay.

Stone

Major Archaeological Finds

The recovery of numerous stones may indicate the ballast mound of a wreck or a navigational cairn, and all occurrences should be reported. Additionally, if a large concentration of stone material (as described below) is encountered, it would also be considered a major archaeological find.

Intermediate Archaeological Finds

Small to medium size stones that are shaped, polished and/or pierced may be prehistoric axes. Objects such as axe heads or knife blades made from flint are also of prehistoric date. Large blocks of stone that have been pierced or shaped may have been used as anchors or weights for fishing nets. All occurrences should be reported.

Rubber, Plastic, etc.

Major Archaeological Finds

If rubber and plastic materials are discovered in the same area as aluminium objects and structures, they could indicate wreckage from a World War II aircraft, and therefore this material should be reported.

Minor Archaeological Finds

Except for the above, in most cases, rubber, plastic, Bakelite and similar modern materials are of little to no archaeological interest.

Iron and Steel

The potential range and date of iron and steel objects is so wide that it is difficult to provide general guidance. However, the following provides an outline of what might constitute a major or intermediate find.

Major Archaeological Finds



If the material discovered on the seabed or recovered to the surface appears to represent material from a wreck site.

If an area contains numerous 'concretions' (iron and steel objects covered by a thick amorphous concrete-like coating), it could represent a wreck site, and should be treated as a major archaeological find.

A concentration of pieces of metal sheet and structure may also represent a wreck site and should be treated as a major archaeological find.

Intermediate Archaeological Finds

The discovery of an isolated anchor would be considered to be an intermediate archaeological find, however, if it is discussed in association with timber or iron and steel material as discussed above, it could be part of a wreck site.

Isolated concretions, pieces of sheet metal and/or structure may also be of archaeological interest, and should be reported.

Minor Archaeological Finds

Isolated modern material, such as lost fishing gear, would be considered a minor archaeological find.

Other Metals

Major Archaeological Finds

Aluminium objects may indicate aircraft wreckage from World War II, especially if two or more pieces of aluminium are fixed together by rivets. All occurrences should be reported.

Concentrations of copper and copper alloy (bronze, brass) objects, precious metal objects and coins are of interest, as they could indicate a wreck site.

Minor Archaeological Finds

Items made of thin, tinned or painted metal sheet are unlikely to be of archaeological interest.

Isolated discoveries.

Ordnance

Any ordnance that is discovered should be dealt with based on the company UXO policy, as safety takes priority over archaeological objectives. However, discoveries of ordnance may be of archaeological interest (including cannonballs, bullets and shells), and they should be reported.





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