REPORT

South Bank Quay

Archaeological Written Scheme of Investigation (Offshore) and Protocol for Archaeological Discoveries

Client: Tees Valley Combined Authority

Reference: PC1084-RHD-SB-EN-RP-EV-1123

Status: Final/01

Date: 06 January 2022

Royal HaskoningDHV

Enhancing Society Together

HASKONINGDHV UK LTD.

Marlborough House
Marlborough Crescent
Newcastle upon Tyne
NE1 4EE
Water & Maritime
VAT registration number: 792428892

+44 191 2111300 **T**
+44 1733 262243 **F**
info@uk.rhdhv.com **E**
royalhaskoningdhv.com **W**

Document title: South Bank Quay

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Reference: PC1084-RHD-SB-EN-RP-EV-1123
Status: 00/Final
Date: 06 January 2022
Project name: South Bank Quay
Project number: PC1084
Author(s): Victoria Cooper

Drafted by: Victoria Cooper

Checked by: Steven Rayner

Date: 23.11.21

Approved by: Jamie Ellis

Date: 23.11.21

Classification
Project related

Royal HaskoningDHV

Table of Contents

1 BACKGROUND

South Tees Development Limited (STDL) is proposing to construct a new quay at South Bank in the Tees estuary (referred to hereafter as the proposed scheme). The proposed scheme is required to support STDL's landside proposals for general industry and storage or distribution uses within part of the South Industrial Zone (which has been subject to a separate planning application - reference R/2020/0357/OOM). It is envisaged that the new quay would be utilised predominantly by the renewable energy industry, as well as supporting more general industrial and storage/distribution activities.

In summary, the proposed scheme comprises demolition, capital dredging, offshore disposal of dredged material, placement of rock in the berth pocket and construction and operation of a new quay (to be set back into the riverbank).

Marine Licence Applications (MLA) for Phase 1 (MLA/2020/00506) and Phase 2 (MLA/2020/00507) of the new quay were submitted to the Marine Management Organisation (MMO) on 6th November 2020. MLAs for the two phases (see **Drawing PC1084-RHD-SB-DN-DR-C-1380**) were submitted separately so that Phase 1 of the proposed scheme (a 450m length of usable quay frontage) could be implemented without relying on Phase 2 (an approximately 600m length of usable quay frontage).

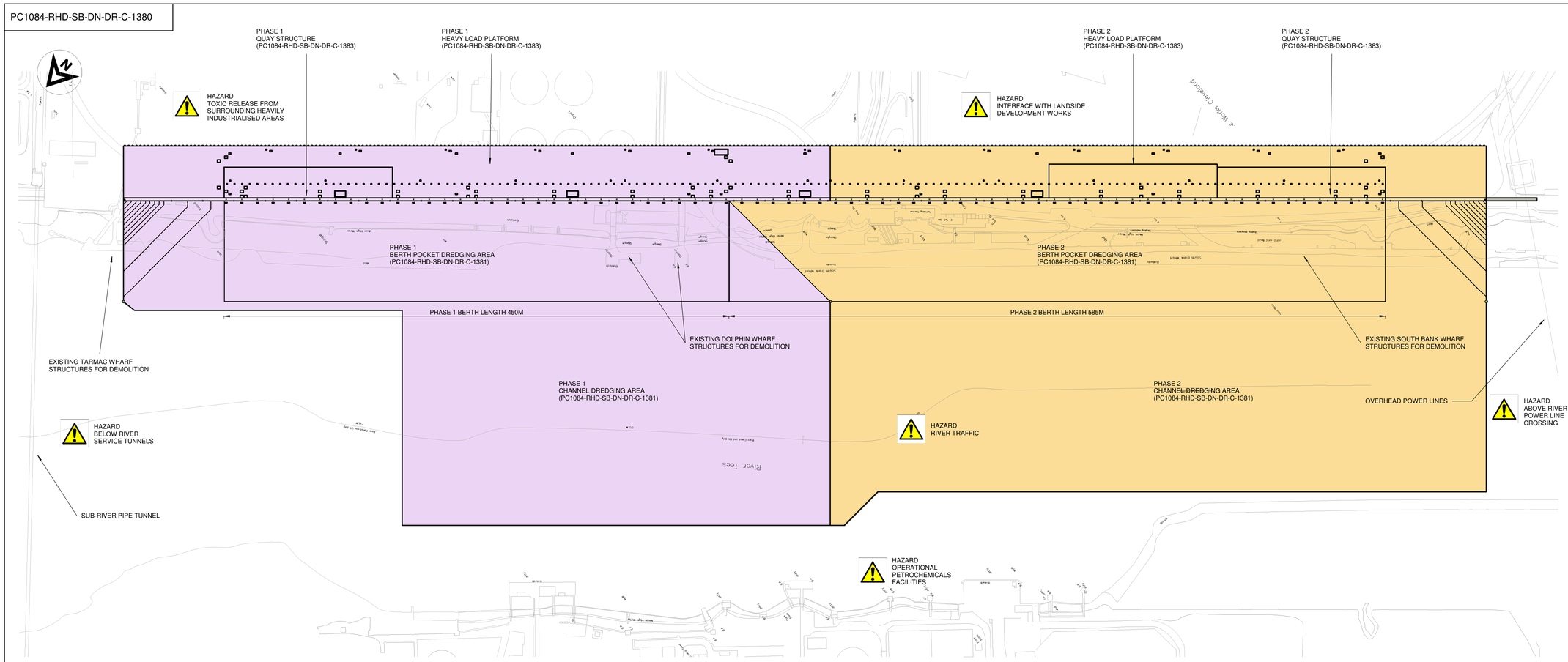
The MLAs were supported by an Environmental Impact Assessment (EIA) (Royal HaskoningDHV, 2020) which included consideration of archaeology and cultural heritage. This was followed by a geoarchaeological assessment of borehole and vibrocore logs undertaken by Wessex Archaeology (2021) to inform understanding of the archaeological deposits that could be impacted by the marine elements of the proposed scheme. The archaeological baseline is summarised in **Section 2** and potential impacts are described in **Section 3.**

This document represents an offshore Written Scheme of Investigation (WSI) (**Section 5**) and Protocol for Archaeological Discoveries (PAD) (**Section 6**) as required by Condition 5.2.4 of the marine licence for Phase 1 (L/2021/00333/1) which states:

"An archaeological protocol must be submitted to a the MMO 6 weeks prior to commencement of dredging activities, as an archaeological written scheme of investigation (WSI). Dredging works cannot commence until approval is given by the MMO. Reason: To mitigate the potential impacts from dredging."

As the proposed quay is to be constructed in the riverbank (i.e. on land), construction of the new quay itself is addressed through the planning application. Landside archaeological requirements, including the demolition works for the proposed scheme, are addressed through the onshore WSI.

PC1084-RHD-SB-DN-DR-C-1380



GENERAL ARRANGEMENT

1 : 2000

SITE PLAN TRUE NORTH

1 : 12000

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
2. ALL LEVELS ARE IN METRES RELATIVE TO CHART DATUM (mCD) UNLESS NOTED OTHERWISE

KEY:

- PHASE 1 DEVELOPMENT AREA
- PHASE 2 DEVELOPMENT AREA

REV	DATE	DESCRIPTION	DRW	CHK	APR
P01	24.08.20	FOR REVIEW AND COMMENT	CH	CF	TJR

REVISIONS

CLIENT

South Tees Development Corporation

PROJECT

TEES STUDY

TITLE

CONCEPT DESIGN
GENERAL ARRANGEMENT

Royal HaskoningDHV
Enhancing Society Together

Burns House, Harlands Road
Haywards Heath RH16 1PG
Tel: +44 (0)1444 458551
Email: info@rhdhv.com
Website: www.royalhaskoningdhv.com

DRAWN	CHECKED	APPROVED
CH	CF	TJR

DATE	SCALE AT A1	REF.
24/08/20	As indicated	

DRAWING No.	SUITABILITY	REVISION
PC1084-RHD-SB-DN-DR-C-1380	S3	P01

This WSI and PAD has been prepared with reference to available standards and guidance including:

- Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects (The Crown Estate, 2021);
- The Assessment and Management of Marine Archaeology in Port and Harbour Development (Cooper, V and Gane, T, 2016);
- Dredging and Port Construction: Interactions with Features of Archaeological or Heritage Interest (PIANC, 2014).
- Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate, 2014);
- JNAPC Code of Practice for Seabed Development (Joint Nautical Archaeology Policy Committee and The Crown Estate, 2006);
- Protocol for Reporting Finds of Archaeological Interest (BMAPA, English Heritage and Wessex Archaeology, 2005); and,
- Marine Aggregate Dredging and the Historic Environment; Guidance note (BMAPA, English Heritage and Wessex Archaeology, 2003).

2 ARCHAEOLOGICAL BACKGROUND

The desk based assessment undertaken for the EIA Report (Royal HaskoningDHV, 2020) established the presence of designated heritage assets (**Figure 1**), non-designated heritage assets (**Figure 2**) and the potential for previously undiscovered archaeological remains to be present which could be impacted by the proposed scheme.

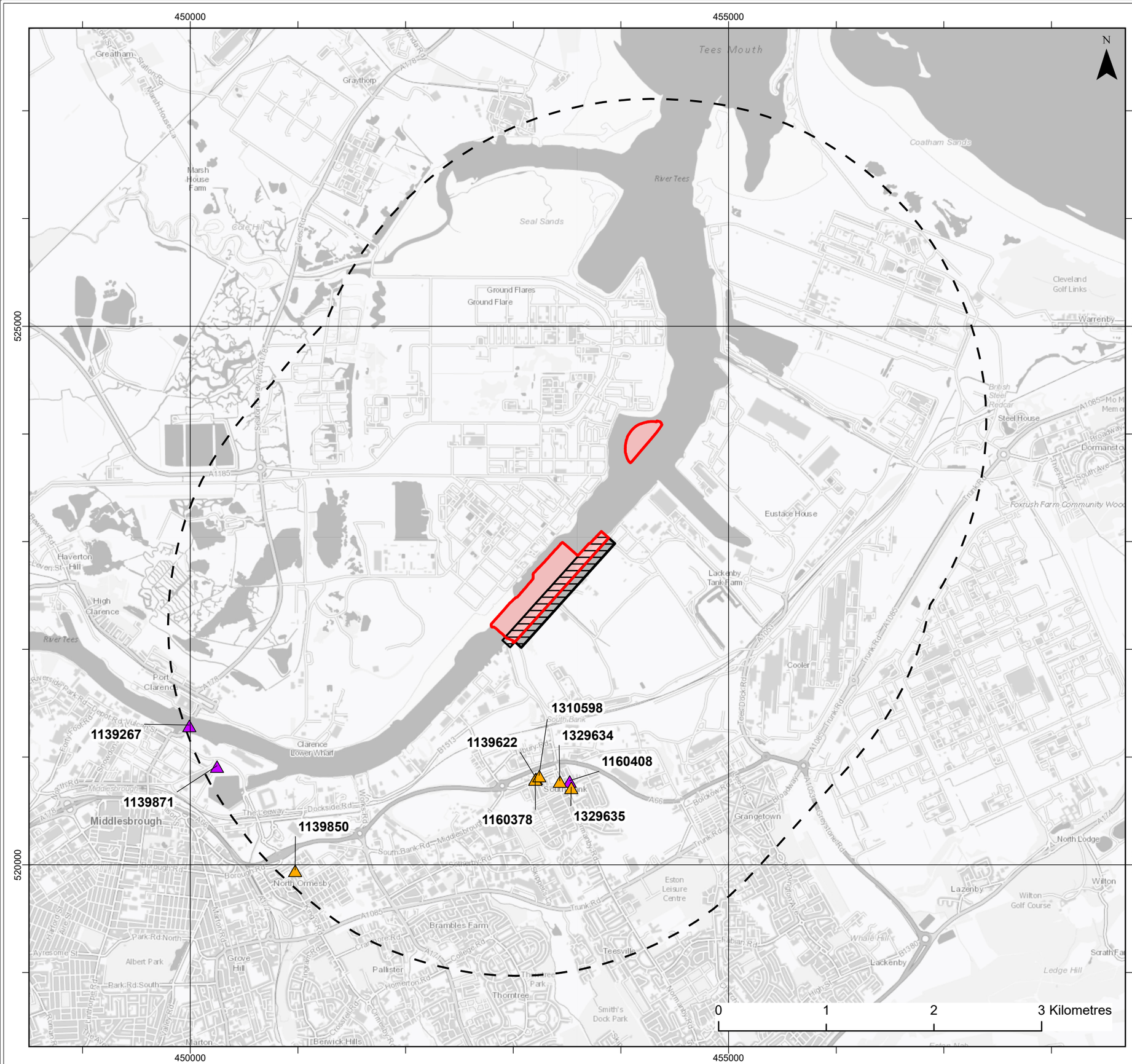
There are no designated heritage assets within the scheme footprint although there are nine Listed Buildings within 3km of the proposed scheme footprint which were assessed for potential impacts to their setting (**Table 1** and **Figure 1**).

Table 1 Designated heritage assets within the 3km study area

List entry	Name	Location	Grade
1139267	Transporter Bridge	Billingham, Stockton-on-Tees, TS2	II*
1139622	Church of St Peter	Redcar and Cleveland, TS6	II
1139850	Church of the Holy Trinity	Middlesbrough, TS3	II
1139871	Dock clock tower	Middlesbrough, TS2	II*
1160378	War memorial circa 5m south west of Church of St Peter	Redcar and Cleveland, TS6	II
1160408	Baptist church	Redcar and Cleveland, TS6	II*
1310598	1, Milbank Street	Redcar and Cleveland, TS6	II
1329634	War memorial	Redcar and Cleveland, TS6	II
1329635	Church of St John the Evangelist	Redcar and Cleveland, TS6	II

Of these, only the Transporter Bridge was found to have potential intervisibility with the proposed scheme and all other designated heritage assets were concluded to be of sufficient distance from the scheme so that impacts upon their setting (i.e. in terms of noise, dust or visual disturbance) would not occur. However, as set out in the Landscape and Visual Impact Assessment undertaken for the EIA Report (Royal HaskoningDHV, 2020), given the relative distance to the site and juxtaposition with the Teesside Bio Mass building, the proposed scheme will not incur significant adverse visual effects from the Transporter Bridge, with proposed features appearing similar in character and visually integrating with existing industrial features. With regard to the assessment of heritage setting, the focus of the viewer is the view of the Transporter Bridge (rather than from it) and the existing character of those views will not be significantly affected. Consequently, there will be no impact upon the heritage value of the bridge as a result from changes to its setting.

A search of the Redcar and Cleveland Historic Environment Record (HER) was undertaken by Prospect Archaeology (2020) to inform the planning application for the landside parts of the proposed scheme. The distribution of the HER records are shown on **Figure 2**. Of these, nine fall within (or in the immediate vicinity of) the proposed scheme footprint (**Table 2**).



Legend

- 3km Search Area
- Proposed Dredge and Excavation Envelope (including side slopes)
- Proposed Quay Envelope
- Proposed Demolition Area

Listed Buildings

Grade

- II
- II*

Client:	Project:
Tees Valley Combined Authority	South Bank Quay

Title:

Designated Heritage Assets

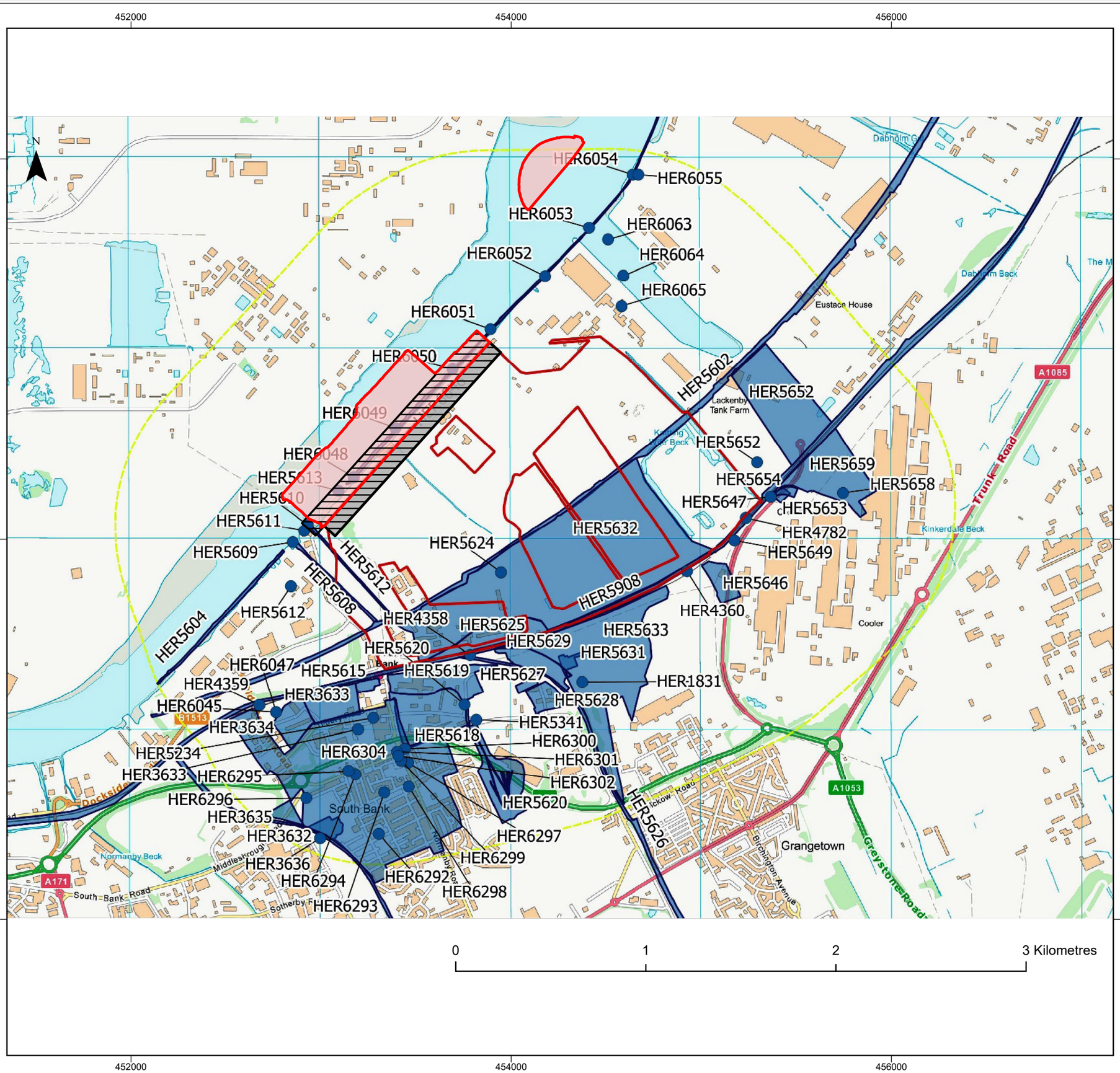
Figure 1

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
0	29/10/2020	TC	VC	A3	1:35,000

Co-ordinate system: British National Grid

Royal HaskoningDHV
Enhancing Society Together

ROYAL HASKONINGDHV
Marlborough House
Marlborough Crescent
Newcastle-upon-Tyne, NE1 4EE
+44 (0)191 211 1300
www.royalhaskoningdhv.com



Legend

- Proposed Dredge and Excavation Envelope (including side slopes)
- Proposed Quay Envelope
- Proposed Demolition Area

Client:	Project:
Tees Valley Combined Authority	South Bank Quay

Title:

Undesignated Heritage Assets (Cleveland & Redcar HER)

Figure 2

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
0	29/10/2020	TC	VC	A3	1:20,000

Co-ordinate system: British National Grid

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ROYAL HASKONINGDHV
Marlborough House
Marlborough Crescent
Newcastle-upon-Tyne, NE1 4EE
+44 (0)191 211 1300
www.royalhaskoningdhv.com

Table 2 HER Records within the proposed scheme footprint

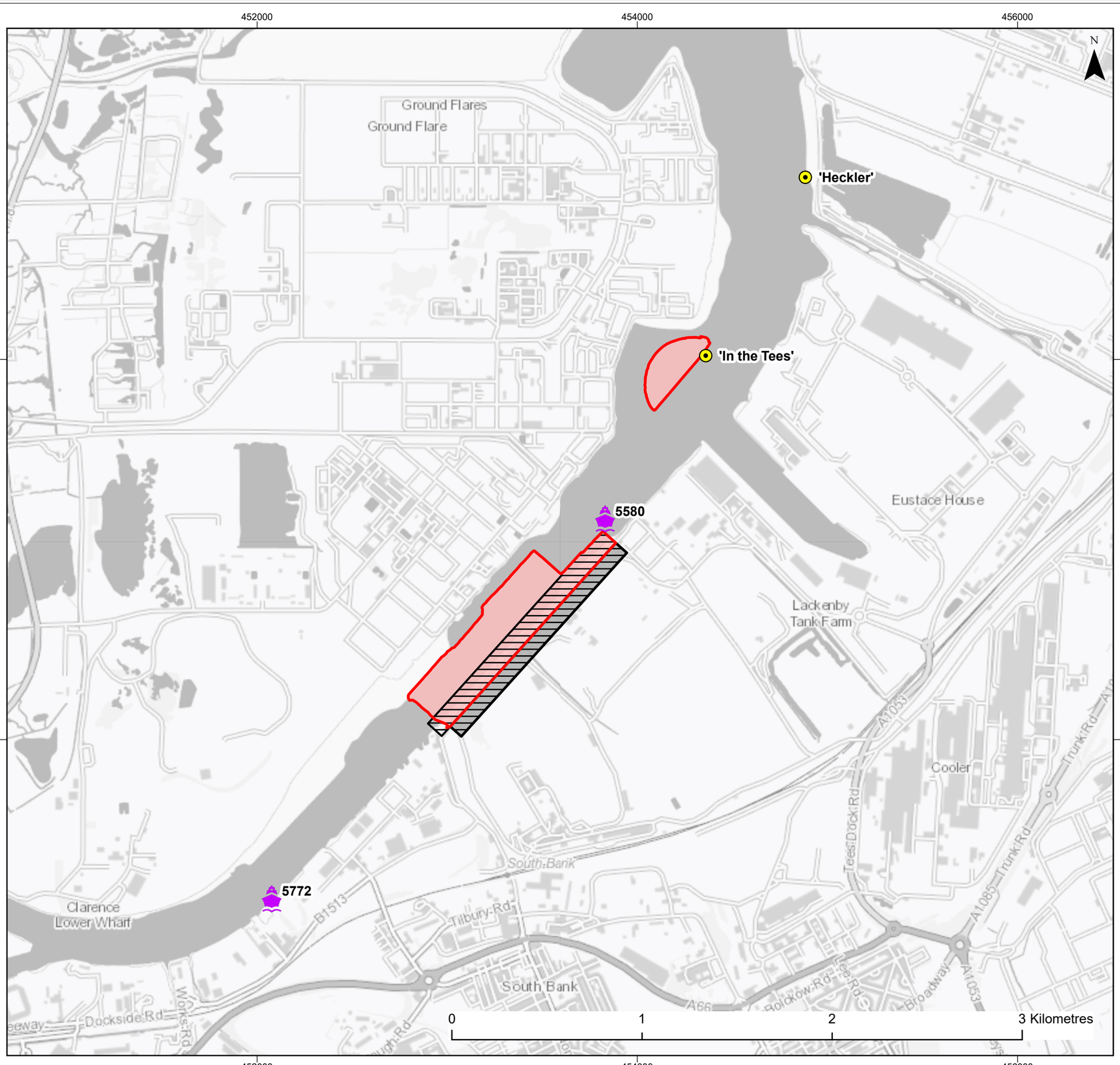
HER no.	Name / description	Date / Period
5610	Eston Wharf	19th century
5611	Custom House	19th century
5612	Eston Jetty	19th century
5613	Mooring Stage	19th century
6046	Reclamation Wall	19th century
6048	Beacon	19th century
6049	Beacon	19th century
6050	Beacon	19th century
6051	Beacon	19th century

The four HER records of Beacons relate to former marker beacons marked on the Ordnance Survey 1st Edition (1857) and do not represent extant heritage assets. Jetties and wharves constructed in the 19th century (including Eston Wharf, Eston Jetty and the Mooring Stage in **Table 2**) were all gone by 1915, when reclamation was extended to its current boundary, and do not, therefore, represent extant heritage assets. The reclamation walls (including HER6046 within the proposed scheme footprint) are marked along the riverbank dating from the 19th century. Assessment undertaken for the QEII Berth (Royal HaskoningDHV, 2009), which falls within the study area for the proposed scheme, states that, according to the Harbour Master, no existing evidence of these recorded assets remains at the recorded locations. The Custom House (HER5611), which had been built between Eston Wharf and Clay Wharf, was replaced by a new Custom House further to the North East along the riverbank.

Although there are no previously recorded, extant non-designated heritage assets within the proposed scheme footprint, the site of the proposed scheme is currently occupied by the dilapidated South Bank Wharf, three jetties and various buildings and structures on the riverbank. STDL has prior approval for the demolition of existing infrastructure within the landward part of the proposed scheme footprint (with the exception of an electrical substation and pipework associated with the pumping station). However, both the wharf and the jetties were determined in the EIA Report (Royal HaskoningDHV, 2020) as early 20th century heritage assets of low heritage significance (assets with local importance and compromised by poor preservation). Prior to demolition, historic building recording (e.g. photogrammetry) of the wharf and jetties will be completed as addressed in the onshore WSI.

There is a single record of a wreck corresponding to the remains of a Seaplane located WSW of Tees Dock, close to the existing dilapidated South Bank Wharf (which is to be demolished as part of the proposed scheme) in the intertidal zone (**Figure 3**). During the First World War there was a seaplane station at Seaton Carew (Archaeological Research Services, 2008). The position is, however, reported to be unreliable and no further details are known. This recorded wreck is not, therefore, considered to represent extant, existing remains but should be considered as a potential heritage asset, and remains may be present, possibly buried or fragmented, and potentially within the proposed scheme footprint.

The EIA Report (Royal HaskoningDHV, 2020) suggested that, although extensive dredging and reclamation has taken place within the Tees estuary, there may still be potential for the presence of prehistoric land surfaces (indicated by, for example, surviving peat deposits), preserved beneath later sediments. Given this potential, geoarchaeological assessment of geotechnical vibrocores/boreholes, planned as part of a marine ground investigation for the proposed scheme was recommended.



Legend

- Proposed Dredge and Excavation Envelope (including side slopes)
- Proposed Quay Envelope
- Proposed Demolition Area
- UKHO Wreck
- NRHE Maritime Record

Client:	Project:
Tees Valley Combined Authority	South Bank Quay

Title:

Wrecks and Reported Losses

Figure 3

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
0	29/10/2020	TC	VC	A3	1:20,000

Co-ordinate system: British National Grid

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ROYAL HASKONINGDHV
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However, the subsequent review of 34 boreholes and 26 vibrocore logs by Wessex Archaeology (2021) showed that the archaeological potential of deposits within the scheme footprint is low. The review identified the following deposits:

- Bedrock comprising mudstone of Triassic date, considered to have no archaeological potential due to its formation before the existence of humans;
- High strength heterogenous clay interpreted as a glacial diamict, most likely Devensian in age, and corresponding to a time period when the area would not have been suitable for human occupation; and,
- Low strength clay comprising clinker gravel, inclusions of plastic and rare organic matter interpreted to represent deposition in a modern estuarine environment and not of geoarchaeological interest.

Following review of the logs, no further geoarchaeological works was recommended.

With regard to the potential for previously undiscovered wrecks, and wreck related material to be present within the study area, the assessment undertaken for the Anglo American Harbour Facility (Royal HaskoningDHV, 2014) makes reference to 20 recorded losses of ships and boats recorded by the National Record of the Historic Environment (NRHE) within the River Tees (**Figure 3**). These are losses which have been documented historically but for which the remains of the recorded ships and boats have never been found. For example, Heckler (NRHE 908826/HER 3119) was a wherry, a type of boat traditionally used for carrying cargo or passengers within rivers or canals, that sank in River Tees in the fairway in the vicinity of Teesport in 1960. Nineteen further vessels are recorded as lost between 1751 and 1921, arbitrarily grouped by the NRHE at a 'Named Location' just to the north of the entrance to Tees Dock.

These losses are a useful indicator of the high potential for the presence of previous unidentified wreck remains within the River Tees. Furthermore, the use of the estuary as a historic shipping, transport and trade route, and also as a port from at least the medieval period onwards, points to the potential for greater numbers of vessels to have been lost within the Tees, but perhaps not officially reported, and for which surviving wreck material may potentially be present within the footprint of the proposed scheme.

There may also be archaeological remains associated with military activity with both the First and Second World Wars. During the First World War there was a seaplane station at Seaton Carew and the area that went on to become Teesport was used as a submarine base during the First World War, with properties understood to have been used as accommodation and administrative buildings for a Heavy Anti-Aircraft Gun Battery during the Second World War. As a major port and industrial centre, Teesport was a bombing target during the Second World War and a number of military defences including bombing decoy sites were constructed at this time.

The potential for buried/submerged archaeological material, however, is significantly reduced by the historic reclamation and disturbance from previous dredging within the channel. Although there is high potential for losses of wrecks and aircraft, for example, there is reduced potential for remains of these vessels to have survived in situ within the river channel. However, archaeological material may still survive, albeit fragmentary and dispersed, or potentially preserved within intertidal areas along the riverbank.

3 SUMMARY OF POTENTIAL IMPACTS

The EIA Report (Royal HaskoningDHV, 2020) assessed the following direct impacts during construction:

- Direct (physical) impacts to potential submerged or buried archaeology may occur as a direct result of construction activities including:
  - removal of the piles supporting the jetties and wharf and pipework feeding the pumping station;
  - capital dredging (to deepen the northern half of the Tees Dock turning circle, a section of the existing approach channel and to create a berth pocket);
  - construction of the new quay (to be set back into the riverbank); and
  - placement of jack up feet/vessel anchors.

It was proposed that an archaeological reporting protocol (PAD) is adopted to mitigate the potential impact on any as yet unidentified marine archaeological remains arising from construction activities. Ensuring that any new discoveries are quickly and efficiently reported and addressed through the protocol would result in a residual impact of **minor adverse** significance.

The EIA Report (Royal HaskoningDHV, 2020) proposed that the PAD would be formalised in a WSI. This offshore WSI has therefore been prepared to set out the approach to implementing a PAD during construction and to provide high-level approaches and a commitment by STDL to undertaking any additional investigation which may be required should an unexpected discovery occur.

Heritage recording of the wharf and jetties and all landside archaeological work packages are addressed through the onshore WSI.

4 CONSULTATION

Following submission of the EIA Report (Royal HaskoningDHV, 2020) and MLAs, a consultation response was received (22nd January 2021) by the MMO from Historic England, as their advisers on the historic environment.

The response confirmed that the baseline data has been collected from industry standard sources and as such was acceptable to inform the assessment. The response also confirmed that:

- the dredging for the Tees Dock turning circle and the berth pocket along the new quay(s) have the potential to disturb unrecorded or potential heritage assets, with specific reference to the seaplane, the location of which is not fixed but is recorded just outside the development area.
- the setting of the Grade II* Transporter Bridge will not be adversely impacted. Its current setting is generally industrial and whilst the potential wind turbines and the associated cranes on the quayside will be visible, these are temporary and that the impact therefore is low. The cranes will be permanent, but their open lattice design makes them less visible in long views which does not materially change the setting.
- There is no harm during the disposal of the dredged material as the area is an agreed (licenced) disposal area.
- An archaeological protocol submitted to the MMO as an archaeological WSI to mitigate the potential impacts from dredging and piling is an acceptable means of mitigating the identified impacts for the dredging.

However, Historic England also recommended that the MMO should not determine the application until the completion of the geoarchaeological assessment. This was subsequently completed by Wessex Archaeology (2021) demonstrating the presence of deposits with low archaeological potential. The results of the geoarchaeological review were shared with Historic England and confirmed the removal of their objection to the determination.

In summary, Historic England concluded:

An archaeological protocol will likely need to be agreed as a condition of a future licence which has been informed by the results of the geoarchaeological assessment, and to ensure that any features located during dredging are recorded and reported. We believe this approach is reasonable and proportionate to mitigate the impact of the development and is in line with both the stated policies of the UK Marine Policy Statement (Section 2.6.6.3) and the draft NE Marine Plan (Policy NE-HER-1).

5 WRITTEN SCHEME OF INVESTIGATION

5.1 Approach

Following completion of the geoarchaeological assessment by Wessex Archaeology (2021) which demonstrated the presence of deposits of low archaeological potential, there are currently no planned archaeological investigations required as mitigation in relation to the proposed activities covered by the marine licences. The primary means of mitigation is the implementation of the PAD as set out in **Section 6**.

Although the potential for buried/submerged archaeology has been significantly reduced by the historic reclamation and disturbance from previous dredging within the channel, archaeological material may still survive, albeit fragmentary and dispersed, or potentially preserved within intertidal areas along the riverbank. It is possible, therefore, that further investigative works may be required in the event of an unexpected discovery of archaeological significance. This WSI, therefore, represents a high-level approach to further investigations which could be required and will form the basis for the specifications of any required works which would be set out in method statements (work specific WSIs) to be agreed in consultation with STDL and the archaeological curators, if required.

In demonstrating adherence to industry good practice, the WSI has been compiled with regard to Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects (The Crown Estate, 2021). Although this guidance note is focused specifically on the construction and operation of offshore wind farms, no such parallel document exists for the ports or dredging industry. This guidance, therefore, is considered to represent an appropriate guide as to the contents of a WSI for the proposed dredge in the Tees estuary.

5.2 Roles, responsibilities and communication

Overall responsibility for the implementation of this WSI lies with STDL (as the licence holder) who will ensure that its agents and contractors are contractually bound to adhere to the terms of the WSI and to implement the PAD (**Section 6**). As STDL's construction contractor, Grahams will be responsible for ensuring that all site staff are aware of their responsibilities under this WSI and for implementing the PAD. The key contact for the historic environment at STDL is:

- Joshua Riley (Project Manager)
- Email: joshua.riley@teesworks.co.uk
- Tel: 07596886716

The regulatory body responsible for enforcing conditions specified in the marine licence is the MMO. The MMO's advisor on the historic environment and the archaeological curators for heritage matters offshore (below Mean High Water Springs) is Historic England. The relevant contact is:

- Lee McFarlane (Inspector of Ancient Monuments)
- Email: Lee.mcfarlane @historicengland.org.uk
- Tel: 0191 269 1239

In the event of a discovery of archaeological material within the intertidal zone (above Mean Low Water Springs) consultation with the archaeological advisor to the Local Planning Authority (Redcar and Cleveland Borough Council (RCBC)) may also be required. The relevant contact is:

- Neil Cookson (North East Archaeological Research Limited (NEAR) advisor to RCBC on heritage matters)
- Email: nearlytd@gmail.com

For each package of archaeological works, STDL or their agents will, as required, procure the services of specialist archaeological contractors with the requisite experience and expertise to undertake the necessary works. In addition, STDL will retain the services of a suitably qualified and experienced archaeological contractor (the retained archaeologist) to ensure the effective implementation of the WSI/PAD and other contractual commitments in relation to archaeology. The responsibilities of a retained archaeologist include:

- Compiling, reviewing and updating this WSI following consultation with STDL and the regulators (MMO) and archaeological curators (Historic England);
- Advising STDL on their responsibilities regarding the implementation of the WSI and the PAD (**Section 6**);
- If required, compiling, agreeing and issuing method statements for archaeological contractors to adhere to, following consultation with STDL and the regulators and curators;
- Advising STDL on the necessary interaction with the regulators, curators and other third parties;
- Supporting STDL in procuring, monitoring the work of, and liaising with specialist archaeological contractors;
- Monitoring the preparation and submission of archaeological reports as appropriate and making them available to the regulators and curators for review and approval; and,
- Advising STDL on any final requirements and arrangements for further assessment, analysis, archive deposition, publication and popular dissemination.

All agents and contractors engaged by STDL will:

- Familiarise themselves with the requirements of this WSI and make it available to their staff, explaining the requirements and need for strict adherence;
- Familiarise themselves with the PAD (**Section 6**) and ensure the implementation of and adherence to the protocol by their staff, including ensuring staff awareness of the PAD and making staff available for training through toolbox talks, as necessary;
- Assist and afford access to the archaeological contractors as advised by STDL and the retained archaeologist; and,
- Inform the retained archaeologist and/or archaeological contractors of any environmental or health and safety constraints of which they may be aware that is relevant to the archaeologist's activities on site.

The specific responsibilities of the construction contractors and specialist archaeological contractors during any specific phases of work, if required in the event of an unexpected discovery, will be set out in method statements (work specific WSIs) as necessary and according to the requirements of this WSI. Each method statement would be prepared by the retained archaeologist in consultation with Historic England.

5.3 Archaeological method statements

The sections below outline high-level, outline approaches to the delivery of specific elements of archaeological investigation and mitigation should these be required in the event of an unexpected discovery below MHWS. The requirements for additional work packages will be considered on a case-by-case basis by STDL and their retained archaeologist in consultation with the archaeological curators. The approach to

each work package will adhere to standards and guidance as set out in this WSI and with specific considerations as relevant to each work package and set out in a method statement to be prepared by the retained archaeologist and agreed with the archaeological curators.

Each method statement will include the following details:

- Form of commission and contractual relationship between contractors and STDL.
- Relationship between licence condition(s), WSI and the method statement.
- Context in terms of phase of construction to which the archaeological works/assessments relate.
- Summary results of previous archaeological investigations and the anticipated archaeological potential.
- Specific objectives of archaeological works/assessment.
- Extent of investigation.
- Investigation/assessment methodology (including the specific approach to archaeological samples and artefacts and anticipated post-investigation actions, including processing, assessment and analysis of finds and samples in the event of intrusive works).
- Reporting, including Intellectual Property Rights in the report and associated data, confidentiality and timescale for deposition of the report in a publicly accessible archive.
- Timetable, to include investigation and post-investigation actions.
- Monitoring arrangements, including monitoring by archaeological curators.
- Health, safety and welfare.

5.4 Marine geophysical investigations

Marine geophysical investigations may be required to acquire further information on the nature and extent of any obstructions that may be encountered on the riverbed to inform requirements for further investigation and recording (e.g. diver/Remote Operated Vehicle (ROV) survey) and mitigation (e.g. Archaeological Exclusion Zones (AEZs) or Temporary Exclusion Zones (TEZs) or excavation and recording).

For all aspects of marine geophysical investigations, STDL and its contractors will adhere to good practice as set out in industry guidelines (including Plets R., Dix J. and Bates R. (2013) *Marine Geophysical Data Acquisition, Processing and Interpretation – guidance notes*, prepared for Historic England).

Any survey undertaken for the purposes of meeting specific archaeological objectives will be designed by an archaeological geophysicist. The specification and level or volume of data to be acquired and assessed will depend on the objectives of the survey and subsequent interpretation.

Data will be processed, assessed and interpreted by a suitably experienced and qualified archaeological contractor. The primary output from the assessment work will be an illustrated, archaeological survey report detailing the results of the data interpretation and including recommendations for further work (e.g. AEZs/TEZs and further investigation using a diver/ROV).

The specific approach to geophysical survey and assessment will be set out in survey-specific method statement prepared by the retained archaeologist as advised by the archaeological contractor. The method statement will set out the specific details of the survey and the methodology for archaeological assessment in order to inform consultation with the archaeological curator.

5.5 Marine geoarchaeological investigations

Vibrocores and boreholes undertaken within the footprint of the capital dredge have shown that *in situ* deposits of potential geoarchaeological interest do not survive within the depth of material which will be removed. No further site investigations are planned in association with this scheme and are not anticipated to be required in the event of an unexpected discovery.

5.6 Archaeological Exclusion Zones

During port and harbour developments, significant effects from direct impacts will not occur if heritage assets can be protected during the life of the project (Cooper and Gane, 2016). An effective form of protection can be achieved through the implementation of AEZs around these heritage assets which preclude development activities within their boundaries, where avoidance is practicable.

However, in order to achieve the objective of the dredging (to deepen the existing riverbed and intertidal), whilst it may be possible to accommodate AEZs adjacent to the external boundaries of the dredge footprint, it would not be possible for STDL to avoid any recommended AEZs within the channel or berth pockets themselves.

Should they be recommended on the basis of an unexpected discovery, the principal objective of an AEZ is to prevent damage to or disturbance of a wreck, aircraft or feature on the riverbed during activities that may cause direct impacts to a receptor. AEZs, therefore, preclude project related activities from taking place within their boundaries, thereby avoiding significant impacts to assets contained within.

There is no fixed, industry standard for the size and extent of AEZs. Rather, the requirements for each AEZ will be assessed on an individual, case-by-case basis. The position, extent and design of an AEZ should take into account all available information including geology, hydrology and sediment transport and should extend around the boundaries of the asset rather than around a centre-point within the site (Dix *et al*, 2008). In addition, an AEZ will incorporate a buffer in order to ensure that all material associated with that asset is encapsulated within its boundary, as well as to reduce the risk of unintentional impacts. The size of the buffer zone will also take into account local bed conditions, such as the prevailing current, the nature of the activity for which mitigation is required and will also allow for an appropriate margin of error in the positioning of an asset.

There are currently no AEZs recommended within the footprint of the scheme. However, new AEZs can be proposed and, once established, existing AEZs can be reduced, enlarged or removed in agreement with the archaeological curator if further relevant information becomes available, following the completion of further geophysical survey, for example. Unless modified by agreement, it is important that AEZs are retained throughout the project lifetime and monitoring of AEZs may be required by the regulator and archaeological curator to ensure adherence both during construction and in the future operation of South Bank Quay.

During dredging, should any previously unreported wrecks (vessel or aircraft) or other sites of archaeological interest become apparent within the capital dredge footprint these must be excluded as soon as they are discovered through the implementation of a TEZ. As for an AEZ, a TEZ precludes all activities from taking place within its boundary until further archaeological advice has been obtained and additional investigation and recording (e.g. the acquisition of further marine geophysical data, or investigation using an ROV of diver) will be required, accompanied by desk-based research, to establish the origin of the find and inform requirements for additional mitigation. The removal of a TEZ will occur only following consultation, and in agreement, with Historic England.

Should any AEZs (or TEZs) be required, STDL will ensure that details of the AEZs are supplied to all agents and contractors and will retain responsibility for ensuing adherence to the AEZs throughout the project lifetime (construction and operation).

5.7 Avoidance or further mitigation

Although it is anticipated that the risk of unexpected discoveries will be low, as avoidance is unlikely to be possible in order to achieve the required dredge depths, in the event of a significant discovery of archaeological material then additional mitigation may be required. Such mitigation will be considered on a case-by-case basis in consultation with archaeological curators but may include:

- Implementation of a TEZ prohibiting dredging within its boundaries until further investigation can be carried out and appropriate mitigation agreed. TEZs may only be removed in consultation with Historic England.
- Further, high resolution geophysical survey and archaeological interpretation of data from the location of the discovery.
- Further investigation to establish the nature, extent and archaeological interest of any material which may remain on the riverbed using an ROV or divers, or walkovers/high resolution drone survey within the intertidal areas.
- Recording and excavation of archaeological material or relocation of material beyond the dredging boundary.

In the event that additional mitigation is required, each package of archaeological work will be subject to a method statement setting out the approach to that work package for agreement with stakeholders. Method statements will be drafted by the retained archaeologist and each method statement will be submitted by the retained archaeologist, on behalf of STDL, to the archaeological curators in advance of the archaeological works commencing. This will be in accordance with a timeframe agreed between STDL and the archaeological curators should further archaeological works are required.

5.8 Archaeological investigations using divers and/or ROVs

Diver and/or ROV surveys can be employed in order to gather archaeological data concerning any unexpected discoveries of wreck sites or other riverbed obstructions to safeguard the archaeological record or to alter (enlarge, reduce, move or remove) TEZs/AEZs. In the event of an unexpected riverbed obstruction being encountered during dredging, it is possible that certainty of the nature and extent of the obstruction may only be achieved through the use of diver and/or ROV survey.

Should diver/ROV investigations be required, a method statement will be produced detailing the full methodology and aims and objectives of the survey. The diver/ROV assessment will be directed by an archaeological contractor, with the appropriate expertise and experience of the environment/conditions likely to be encountered.

Recording will be conducted to a level whereby a statement can be made as to the date, character, extent and archaeological importance of the site. Significant diagnostic features will be recorded by photography and video and backed up with written records and measurements where required.

If required to support identification, selected items from the locations may be retrieved from the riverbed for further analysis. Initial first aid measures will be applied to ensure the safety and stability of each find brought to the surface in lieu of a formal plan for conservation and analysis.

Following the characterisation of archaeological material on the riverbed, if a site is determined to be of high archaeological significance and there is no possibility for avoidance, the retained archaeologist will develop a plan for further mitigation, such as the relocation of material and/or full excavation of a site. Any further work packages would themselves require a method statement, developed by the retained archaeologist in consultation with STDL and the archaeological curators.

The results of the survey will be compiled in an illustrated technical report which will also set out recommendations for any further work.

5.9 Archaeological watching briefs

A watching brief is a formal programme of archaeological monitoring. A watching brief could be required, for example, to monitor the removal of archaeological material which may be encountered during dredging.

No watching briefs are currently proposed during dredging although the works will be monitored through the mechanism of the PAD (**Section 6**).

Watching briefs which may be required onshore (to be determined in consultation with the NEAR advisor to RCBC) following planned onshore geoarchaeological investigations) are addressed through the onshore WSI.

5.10 Archaeological recording, samples and artefacts

The approach to recording any *in situ* sites or features will be agreed with archaeological curators and will take account of the anticipated significance of the remains and how safe recording might be achieved, with due consideration of appropriate health and safety constraints associated with working in a sub-tidal or intertidal environment for example.

The *Standard and guidance for nautical archaeological recording and reconstruction* published by the Chartered Institute of Archaeologists (CIfA) (CIfA, 2014a) states that the primary aim of recording nautical archaeological remains is to complete an accurate as-found record of the vessel or parts thereof so they can be properly interpreted by a specialist. If the burial environment allows for safe recording, a visual record (scale drawings, sketches, photographs, point data) will be produced to provide sufficient detail to understand its construction and hull-form and the CIfA distinguishes three levels of documentation as follows:

- Level 1: Basic overall dimensions and record of hull-form with limited photographic coverage or sketching. The nature and relationship of fittings and ancillary components should be noted. This record will allow for an informed interpretation of the vessel remains, or parts thereof.
- Level 2: Basic overall dimensions with a record of hull-form, scantling, fittings and fastenings, accompanied by an extensive photographic record with scale drawings of significant features, fittings and/or ancillary components. This record will allow correct interpretation of the vessel or parts thereof and may allow a simple reconstruction of the vessel or part thereof.
- Level 3: A complete scaled survey including hull-form and photographic record of the remains of the whole vessel, recording all significant features, fittings and ancillary components. This record should contain data on the size, shape, material and condition of all elements of the vessels structure, fittings and ancillary components including a record of constructional features, all fastenings (size and type), tool marks (type and size), shipwrights marks, carpentry features (joints, bevels, chamfers), wood features, (grain, sapwood, knots, pins, bark), wear and compression marks, means of propulsion and steering, fittings (internal and external) and outer and internal coatings (paint, paying, caulking). Where sufficient remains are available, this record should be to a standard to enable a reliable reconstruction

leading to a full interpretation of the vessel.

Any samples and finds encountered during activities associated with the construction of the South Bank Quay will be treated in accordance with the relevant guidance provided in (but not limited to):

- Standards and guidance for the collection, documentation, conservation and research of archaeological materials (CIfA, 2014d).
- Waterlogged Organic Artefacts: Guidelines on their recovery, analysis and Conservation (English Heritage, 2012).
- Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood (Engilsh Heritage, 2010).
- Investigative Conservation: Guidelines on how the detailed examination of artefacts from archaeological sites can shed light on their manufacture and use (English Heritage, 2008).
- Guidelines on the X-Radiography of Archaeological Metalwork (Fell et al, 2006).
- First Aid for Underwater Finds (Robinson, 1998).

Isolated discoveries of artefacts that may come to light during the course of construction will be dealt with through the PAD (see **Section 6**).

With regard to archaeological works, if required, from the point of discovery, all finds will be held by the archaeological contractor in appropriate conditions pending further recording, investigation, study or conservation. Contingency will be made for specialist conservation advice from an appropriately qualified and experienced archaeological conservator should unexpected, unusual or extremely fragile and delicate objects be recovered. All care of finds will follow appropriate guidance (such as English Heritage, 2008; English Heritage, 2010; English Heritage, 2012; Fell *et al.,* 2006).

In the event that any item(s) of ordnance is discovered, it should be treated with extreme care as it may not be inert. Guidelines on addressing UXO discoveries provided to contractors by STDL must be followed prior to any recording of items for archaeological purposes.

In the case of the discovery of human remains, which are subject to special legal requirements under the Burial Act 1857, at all times, human remains must be treated with respect and dignity. Where practical, human remains will be left *in situ*, covered and protected. Where human remains have been found and development will unavoidably disturb them, the remains will be fully recorded, excavated and removed from the site only once the appropriate licence has been obtained. Any suspected human bone would be reported to the Police and the Coroner. If deemed archaeological, and released by the Coroner, remains will be assessed by an osteoarchaeologist and addressed in line with the Guidelines to the Standards for Recording Human Remains (Mitchell and Brickley, 2017) and follow best practice as appropriate (BABAO 2019; Mays 2004; Mays et al. 2013).

With respect to human remains suspected to originate from military wrecks or aircraft crash sites, all discoveries would be reported to the Ministry of Defence through the Historic Casework Section of the Joint Casualty and Compassionate Centre at RAF Innsworth in Gloucestershire, whose primary concern is the protection and respectful treatment of human remains.

With regard to the remains of crashed aircraft, the majority of aircraft wrecks are military and so fall under the legal protection of the Protection of Military Remains Act 1986. Any finds that are suspected of being military aircraft will be reported immediately to the retained archaeologist.

All archaeological artefacts that have come from a ship are wreck for the purposes of the Merchant Shipping Act 1995. Under this Act, all wreck material recovered from UK territorial waters, and any wreck material brought into the UK from outside UK territorial waters, must be reported to the Receiver of Wreck, including:

- Wreck material found in or on the sea.
- Wreck material washed ashore in tidal waters.
- Material recovered from a wreck site - regardless of age, size or apparent importance or value.

As advised in the Maritime and Coastguard Agency Guidance on Wreck and Salvage Law, wreck material can take many forms, including, for example, portholes, bells, compasses, fixtures and fittings, personal belongings, cargo material, medieval pots, gold coins, cannon, etc. and also includes the remains of aircraft. STDL, via its retained archaeologist, should ensure that the Receiver of Wreck is notified within 28 days of recovery for all items of wreck that have been recovered.

All recovered materials, on land and underwater, will be subject to a conservation assessment to gauge whether special measures are required while the material is being held. 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 (where appointed) or an archaeological contractor with appropriate expertise will implement recommendations arising from the conservation assessment. Where no special measures are recommended, finds will be conserved, bagged, boxed and stored in accordance with industry guidelines.

Decisions regarding the scope of post-fieldwork assessment will be made by agreement between STDL and the archaeological curators following submission of investigation reports and based on the possible importance of the results in terms of their contribution to archaeological knowledge, understanding or methodological development. On the basis of recommendations made by the post-fieldwork assessment, and as agreed by the relevant archaeological curators, mitigation requirements will be satisfied by carrying out analysis and reporting of the post-fieldwork assessment. If appropriate, this may include publication of important results in a recognised peer-reviewed journal or as a monograph.

Recovered objects will be selected, retained or disposed of in accordance with the policy agreed with the institution receiving the archive, and in consultation with the archaeological curators.

5.11 Data management, reporting, publication and archiving

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.

For all aspects of recording, reporting, data management and archiving, STDL, their agents and archaeological contractors will adhere to standards and guidance as set out in this WSI and The Crown Estate guidance on archaeological WSIs (The Crown Estate, 2021) and with specific considerations as relevant to each work package and set out in the method statement to be prepared by the retained archaeologist and agreed with the archaeological curators in advance of each package of works.

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. Reports will typically include:

- 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 (if appropriate).
- Illustrations and appendices to support the report.

Each archaeological report will be submitted in draft to the retained archaeologist for submission to STDL. If the report is prepared by the retained archaeologist, it will be submitted directly to STDL.

On completion of archaeological works relating to construction of South Bank Quay, a final report will be prepared to demonstrate the effective implementation of the PAD throughout the works. In the event that no discoveries are encountered, a 'nil discoveries' report will be produced outlining how the PAD was applied.

It is accepted practice to keep project archives, including written, drawn, photographic and artefactual elements (together with a summary of the contents of the archive) together wherever possible and to deposit them in appropriate receiving institutions once their contents are in the public domain. Archives will be developed in line with guidance including:

- Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (CIfA, 2014c).
- Environmental Guidelines for the Permanent Storage of Excavated Material from Archaeological Sites (Institute of Conservation, 1984).
- Guidelines for the preparation of excavation archives for long-term storage (Walker, 1990).

STDL, the archaeological curators and the archaeological contractor will agree with the receiving institution a policy for the selection, retention and disposal of excavated material, and confirm requirements in respect of the format, presentation and packaging of archive records and materials, and will notify the receiving institution in advance of any fieldwork.

On completion of construction of South Bank Quay, the archaeological contractor or retained archaeologist will produce an OASIS (Online Access to the Index of archaeological investigations) form for any completed and agreed archaeological reports produced as a result of this WSI and ensure that a copy is submitted as a PDF file. Notification of the completion of the OASIS form will be automatically sent to relevant local HERs and Historic England to enable compliance with any relevant consent. Additionally, a summary of archaeological data will be compiled in a format suitable for submission of Monument, Event and Source records to the National Record of the Historic Environment (NRHE) and the relevant local HER.

6 PROTOCOL FOR ARCHAEOLOGICAL DISCOVERIES

6.1 Approach

The approach taken in implementing the PAD during the construction phase will follow that set out in the Marine Aggregates Industry (MAI) Protocol for reporting finds of archaeological interest (BMAPA, English Heritage and Wessex Archaeology, 2005) and the Offshore Renewables Protocol for Archaeological Discoveries (ORPAD) (The Crown Estate, 2014). This approach comprises the following structure:

- Awareness training provided to staff and contractors in advance of works commencing;
- Discoveries are made on the riverbed, on board a vessel or ashore;
- Staff/crew provide first aid to finds and record basic details of the discovery;
- Discoveries are reported to the archaeological contractor who will provide initial advice and seek specialist advice as necessary;
- Measures to address the discovery are established by the archaeological contractor, in consultation with STDL and the archaeological curator, as necessary;
- Measures are implemented by staff/crew; and,
- A summary report is provided to stakeholders by the archaeological contractor and a MIDAS compliant report is forwarded to national and local authority heritage data archives.

6.2 Types of discovery

Discoveries may comprise finds or riverbed obstructions. Finds are categorised as:

- Wreck: all artefacts that have originated from a vessel in accordance with the legal definition of ‘wreck’ in the Merchant Shipping Act (1995) and which must be reported to the Receiver of Wreck;
- Non-wreck: cultural artefacts that are present within terrestrial contexts and on the riverbed as a result of having been lost on land, either at times of lowered sea-level or eroded from the shore, for example; and,
- Treasure: artefacts above low water that are not ‘wreck’ and that are considered ‘treasure’ under the Treasure Act 1996 must be reported to the relevant Coroner’s Office, the Finds Liaison Officer for the North East (who is the designated treasure co-ordinator for the North East), STDL and the archaeological curators.

If discoveries comprise UXO then measures put in place by STDL will take precedence. Historic ordnance, however, may still be of archaeological interest and can still be reported under the PAD once UXO policy has been satisfied.

An obstruction, or ‘site’, on the riverbed may comprise previously undiscovered wrecks or fragments of wrecks, including aircraft, former port and harbour structures or the remains of other structures or installations.

6.3 Circumstances of discovery

It is currently anticipated that dredging will be undertaken using a combination of a Trailing Suction Hopper Dredger (TSHD) and a backhoe dredger, with Cutter Suction Dredger (CSD) being considered as an option. It is envisaged that up to three barges will be required to support with the transport of sediment dredged using the backhoe dredger to the offshore disposal site.

In addition to the removal of marine sediments, the proposed scheme will require the excavation of soils/landside materials within the riverbank in order to create the berth pocket (as the berth line has been set inland from the edge of the channel). It is anticipated that such material would be excavated using standard long reach excavators working from the land. This activity is addressed through the onshore WSI.

This PAD addresses finds of archaeological interest, should they be encountered during dredging on the riverbed or on-board vessels. Scenarios that may result in discoveries of archaeological interest include, but are not limited to:

- Unexpected obstruction encountered by jack-ups or the draghead/dredge bucket on the channel floor;
- Archaeological material observed within dredged material or trapped in the dredge gear or caught on vessel anchors;
- Archaeological material excavated/brought to the surface by shore based plant, involved in demolition activities, for example;
- Exposure of material within the intertidal zone during the construction phase..

6.4 Roles and responsibilities

6.4.1 STDL

STDL will retain ultimate responsibility for implementing of the PAD. Specific responsibilities will include:

- Securing the services of an archaeological contractor to facilitate the implementation of the PAD;
- Assigning staff to the key roles of Nominated Contact and Site Champions and ensuring their awareness of their responsibilities under the PAD;
- Ensuring the availability of staff/crew and contractors for tool box talks; and,
- Providing a report following the completion of activities to the curator to demonstrate adherence to the PAD.

As STDL's construction contractor, Grahams will be responsible for the co-ordination and implementation of the PAD on site.

6.4.2 Archaeological Contractor

An archaeological contractor will be secured by STDL to facilitate the implementation of the PAD. The archaeological contractor will be responsible for:

- Arranging tool box talks with relevant staff and contractors to ensure awareness of the PAD and to provide guidance on the types of discoveries that may be encountered;
- Providing initial advice to staff/crew in the event of a discovery;
- Undertaking an assessment of archaeological potential;
- Seeking specialist advice to inform the interpretation of discoveries, where necessary;
- Consulting with stakeholders (e.g. the archaeological curators) to agree proportionate measures to address discoveries;
- Producing summary reports and MIDAS compliant reports to disseminate data to stakeholders; and
- Ensuring that the Receiver of Wreck is informed in the event of discoveries of wreck material.

6.4.3 Nominated Contact

A member of staff from STDL/Grahams will be nominated to act as the single point of contact for all communications regarding archaeology. The Nominated Contact will be responsible for:

- Co-ordinating reports of discoveries from site champions and ensuring that appropriate 'first aid for finds' is carried out and that initial data is recorded;
- Reporting discoveries to the archaeological contractor and to the Receiver of Wreck, if required;
- Communicating appropriate measures to site staff as advised by the archaeological contractor; and,
- Ensuring that measures are implemented as appropriate.

6.4.4 Site Champion

The Nominated Contact will identify a Site Champion, or Champions as appropriate, to act as a single point of contact for staff on site/ on board the dredger. The Site Champion will be responsible for:

- Implementing a TEZ where the location of the discovery is known;
- Ensuring observation of the TEZ by all staff and contractors;
- Compiling Preliminary Record sheets for discoveries; and,
- Reporting discoveries to the Nominated Contact.

6.4.5 All staff/crew and contractors

On making a discovery all staff/crew and contractors have a responsibility under the terms of the PAD to:

- Safeguard finds:
  - Handle with care;
  - Leave marine growth, rust, sediment or concretion intact; and,
  - Undertake appropriate first aid measures, such as immersing waterlogged finds in seawater in a clean, covered container.
- Undertake initial recording:
  - Record the position of the discovery;
  - Photograph finds in the condition in which they were recovered; and,
  - Label finds with a unique ID number as advised by the archaeological contractor.
  - Report the discovery to the Site Champion.

All staff and contractors also have a responsibility to observe mitigation measures agreed by STDL with the archaeological curator such as the implementation of a TEZ at the location of a discovery.

6.5 Reporting discoveries

A flow chart illustrating the reporting protocol as described below is included as **Appendix 1**.

Staff/crew or contractors making a discovery will report the find or obstruction to the Site Champion.

If the discovery comprises an obstruction on the riverbed, and the position is known, then intrusive works (dredging) will cease in the vicinity of this position and the position of the obstruction will be recorded. Works

will not recommence in this vicinity of the position until archaeological advice has been obtained. The Site Champion will implement a TEZ and ensure observation by staff and contractors.

If the discovery comprises archaeological material, the position of the discovery should be recorded. This will be the position of the find itself, if known, or the position of the dredger at the time of the discovery. The find should be photographed in its discovery condition, including an appropriate scale in the photograph. If photographs are not possible then a drawing or other record may be used as an alternative.

Measures will be taken by staff to safeguard the find including first aid conservation:

- Marine growth, rust, sediment or concretion should be left intact;
- Waterlogged finds should be immersed in seawater in a suitable clean and covered container; and
- Dry finds should be placed in a suitable container and stored in a cool, dark place.

The Site Champion will ensure that safeguarding has taken place and will compile a Preliminary Record (see **Appendix 2**) and pass this, along with any photographs, drawings or other records, to the Nominated Contact.

On receiving the report of a discovery, the Nominated Contact will confirm the details of the Preliminary Report with the Site Champion and inform the archaeological contractor as soon as possible. The Nominated Contact will ensure that all staff/crew and contractors that may be required to work in the area are aware of the discovery.

If the find is, or appears to be 'wreck', the Nominated Contact will, as soon as possible, notify the Receiver of Wreck in accordance with the Merchant Shipping Act (1995).

The archaeological contractor will advise the Nominated Contact of any further actions that may be required such as:

- Advice on first aid conservation or actions to be taken in respect of a find;
- Advice on the identification of finds and proposals to further evaluate discoveries; and,
- Advice to prevent further impacts, such as the implementation of an exclusion zone.

The archaeological contractor will undertake an assessment of the archaeological potential of discoveries and will liaise with the archaeological curator, STDL and other stakeholders as relevant, to agree measures to address the discovery, if required. The archaeological contractor will advise STDL on any additional work required to stabilise, conserve or record recovered finds.

Following identification, evaluation and the agreement of measures to address the discovery, if required, the archaeological contractor will compile a summary report for the discovery for distribution to stakeholders, as well as a MIDAS compliant report to submit details of the discovery to national and local authority heritage data archives.

6.6 Timing

Action will be taken immediately following a discovery so that the precise position of a discovery can be calculated and recorded (from the vessel track for example) and to minimise disruption to works.

Measures to safeguard finds, including the application of first aid conservation, will be implemented as soon as possible following discovery, in accordance with health and safety and practical requirements.

The initial record, including photographs, will be compiled and forwarded by the Site Champion to the Nominated Contact on the same working day that the discovery is made.

On receiving the report, the Nominated Contact will report the discovery to the archaeological contractor within two working days.

An initial response will be provided by the archaeological contractor to the Nominated Contact within two working days of receiving the initial report.

A timetable for implementing measures to address the discovery will be agreed following the initial response as appropriate to the archaeological interest of the discovery.

6.7 Temporary Exclusion Zones

A TEZ will be implemented by the Nominated Contact if the position of an obstruction, anomaly or find is known with reasonable certainty.

A TEZ precludes all activities from taking place in the vicinity of the obstructions, anomaly or find until further archaeological advice has been obtained.

In the event that, following further investigation, it can be reasonably concluded that there is no important wreck or other feature present within the TEZ then it will be revoked.

The TEZ may be formalised as an AEZ if:

- an important wreck or other site or feature is confirmed to be present on the riverbed; or,
- if STDL does not wish to undertake additional investigation to confirm the nature of the discovery.

The removal or formalisation of a TEZ will occur only following consultation and in agreement with the archaeological curator.

Additional investigation may include:

- high resolution geophysical survey;
- diver survey; or,
- ROV survey.

Where additional investigations are carried out they will be undertaken in accordance with the WSI in **Section 5** above and with specifications to be agreed by STDL with the archaeological curator, as advised by the archaeological contractor. A report detailing the results of the investigation will be submitted to the archaeological curator to inform discussions concerning the removal or formalisation of a TEZ.

If archaeological remains are confirmed and it is not possible to implement a formal AEZ then, subject to agreement with the archaeological curator, STDL may implement alternative forms of mitigation such as a programme of recording and/or recovery these measures will be detailed in a method statement, in accordance with the WSI (**Section 5**), and agreed with the archaeological curators as necessary.

All investigative works will be set out in a detailed method statement prepared in accordance with the WSI (**Section 5**) that will be submitted to the curator for approval in advance of works commencing.

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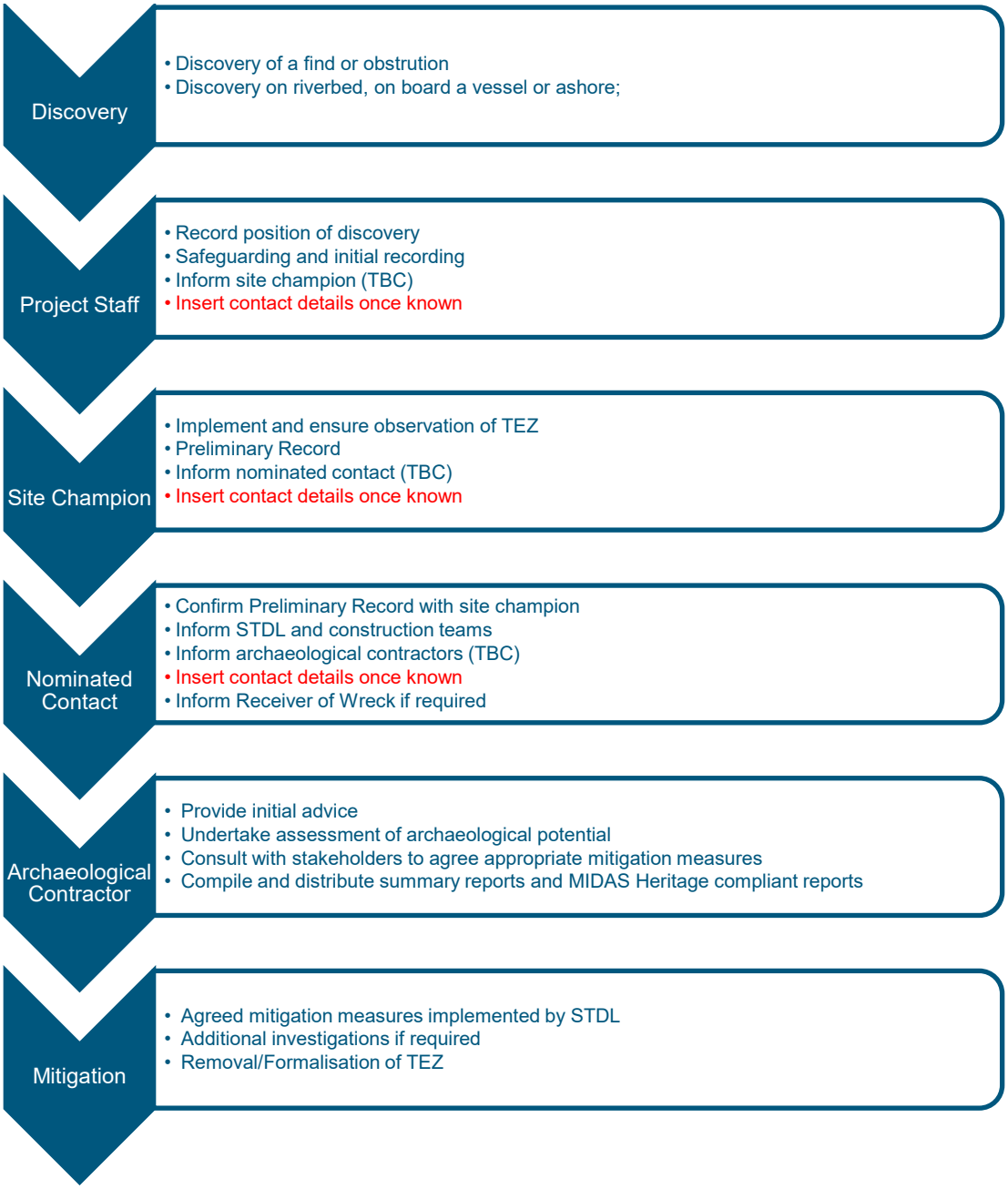
Appendix 1: PAD Reporting Flowchart



Appendix 2: PAD Preliminary Record Form

South Bank Quay Discoveries Preliminary Record Form	
Finder Details	
Vessel/Team/Contractor Name:	
Work Package:	
Date:	Time of compiling information:
Name of compiler (site champion):	
Name of finder (if different to above):	
Discovery Details	
Time at which discovery encountered:	
Original position of discovery on riverbed/inter-tidal/on land (if known):	
• Latitude:	
• Longitude:	
• Datum (if different from WGS84):	
Position of vessel:	
• Latitude:	
• Longitude:	
• Datum (if different from WGS84):	
Notes on accuracy of position:	
Description of the find/obstruction/anomaly:	

Size/extent:
Details of finds recovered:
Details of photographs, drawings or other records:
Details of treatment given to find(s):
Any other notes:
Date and time at which nominated contact informed:
Signed: Date: