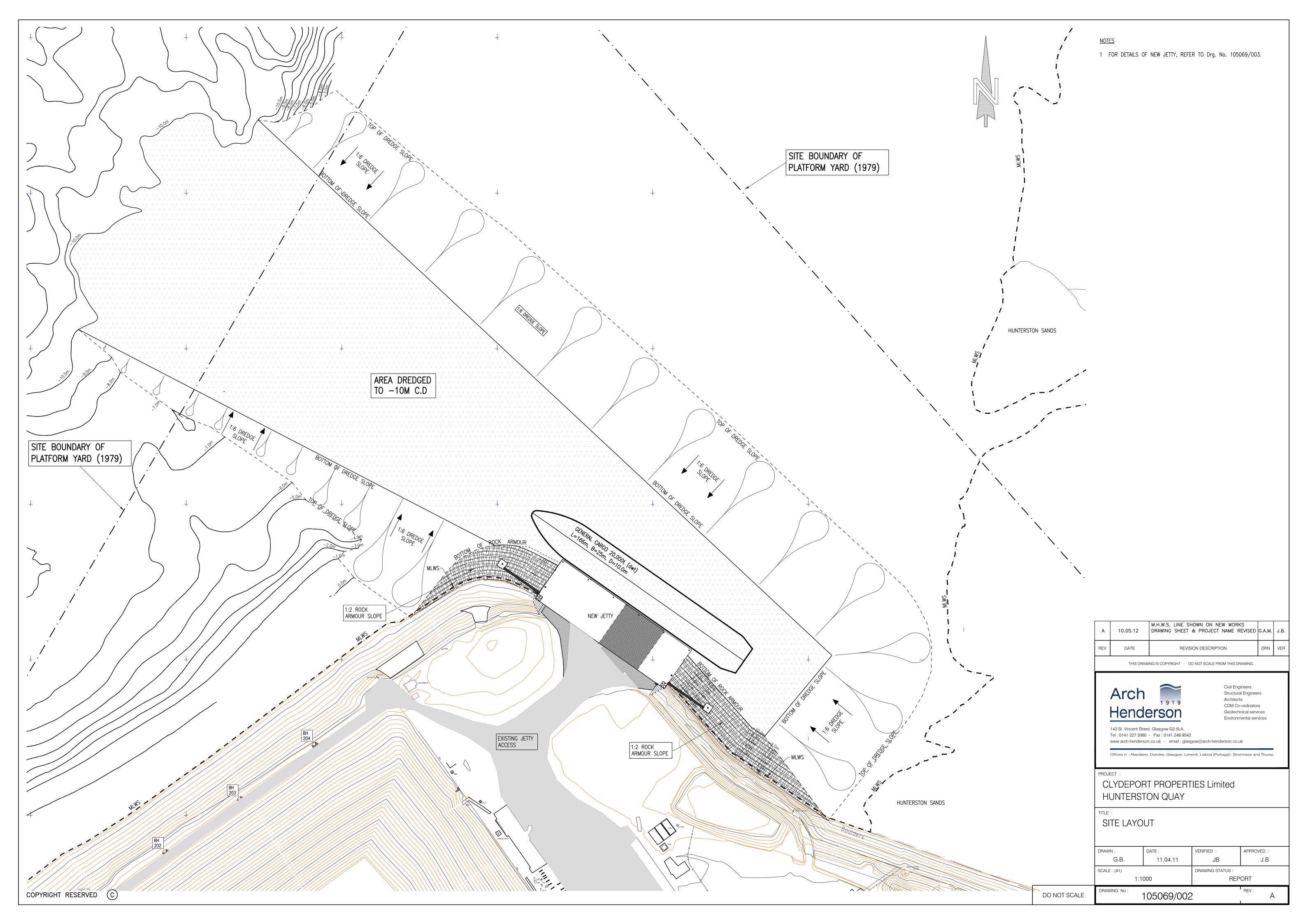
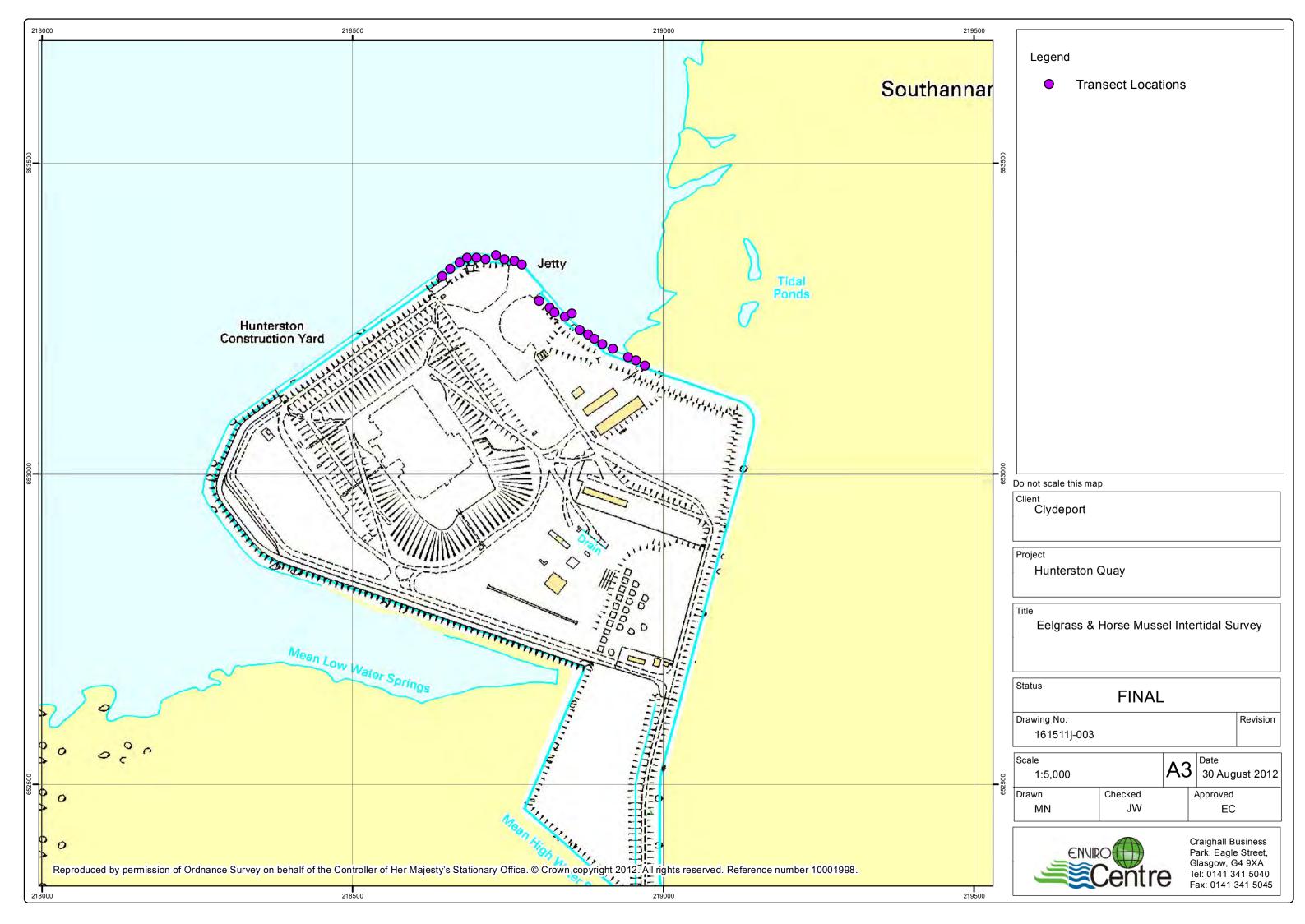
APPENDIX A Drawings





C DESK BASED ARCHAEOLOGICAL ASSESSMENT



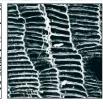














HUNTERSTON MARINE CONSTRUCTION YARD

Archaeological Desk-based Assessment for Envirocentre

13 December 2016



HUNTERSTON MARINE CONSTRUCTION YARD

Archaeological Desk-based Assessment

for Envirocentre

13 December 2016

HA Job no.: HMCY16

NGR: NS 18593 53062
Parish: West Kilbride
Council: North Ayrshire Council

Project Manager: Paul Masser
Author: Tom Janes
Fieldwork: n/a

Graphics: Tom Janes

Approved by:

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Illus 1: Heritage Assets within the Inner and Outer Study Areas

HUNTERSTON MARINE CONSTRUCTION YARD

ARCHAEOLOGICAL DESK-BASED ASSESSMENT

SUMMARY

It is proposed to construct and operate a marine-related decommissioning yard and associated infrastructure in the existing Marine Construction Yard, Hunterston. The site is intended to allow reverse engineering and decommissioning of marine structures, oil industry structures, and obsolete vessels. Although the yard is currently designed to serve as a dry dock, a new purpose built access structure will be required. This is expected to consist of a concrete caisson type structure to allow ready access and egress to the dry dock. In addition it is expected that the existing quay will require extending and strengthening.

One known heritage asset has been identified within the footprint of the proposed development; this comprises the existing marine construction yard which is recorded on the North Ayrshire Historic Environment Record (maintained by the West of Scotland Archaeology Service).

Due to previous land reclamation works and the construction of the existing yard, there is no risk of direct impacts upon known or unknown archaeological features as any such deposits that may have existed within the construction footprint are highly likely to have been removed.

Four Listed Buildings and 13 HER entries were assessed for potential setting impacts. These include the Category A-listed Hunterston Castle and Category B-listed Hunterston House, and associated C-listed buildings on the Hunterston estate. Hunterston House was designed with sea views in mind. However modern developments such as the Hunterston power station, the ore terminal and the existing construction yard have reduced the sensitivity of these views. The proposed development will have no significant setting impacts upon these assets.

1 INTRODUCTION

1.1 Planning Background

Peel Ports Ltd. is making a planning application to North Ayrshire Council for the construction and operation of a marine-related decommissioning yard and associated infrastructure in the existing Marine Construction Yard, Hunterston. The site is proposed to also allow reverse engineering and decommissioning of marine structures, oil industry structures, and obsolete vessels. Although the yard is currently designed to serve as a dry dock, a new purpose built access structure will be required. This is expected to consist of a concrete caisson type structure to allow ready access and egress to the dry dock. In addition it is expected that the existing quay will require extending and strengthening.

Envirocentre have commissioned Headland Archaeology (UK) Ltd to produce this archaeological desk-based assessment to inform the application.

1.2 Site Description

The existing Peel Ports Hunterston Marine Construction Yard is on an artificial peninsula approximately 48Ha in area and lies on the Firth of Clyde, north of the EDF Hunterston Power Stations and west of the Hunterston

Coal Terminal. The site is adjacent to the Offshore Wind Turbine Test Facility operated by SSE, but is otherwise vacant at present, although maintenance is ongoing.

The site currently consists of a large scale dry dock with associated pumping infrastructure, laydown area/operational land and a hammerhead quay on the northern part of the construction yard with associated dredging activity. Previously to provide egress from the dry dock it was necessary to dredge out the northwest facing bund area and then replace it, also through dredging, to close off the dock again.

1.3 Consultation

No formal consultation with historic environment organisations has taken place. However the West of Scotland Archaeology Service (WoSAS) was contacted in order to obtain a digital data extract from the Historic Environment Record (HER) for North Ayrshire.

2 AIMS AND OBJECTIVES

The assessment has been carried out according to the *Standard and guidance for historic environment desk-based assessment* published by the Chartered Institute for Archaeologists (CIFA 2014), and aims to:

- Collate all available written, graphic, photographic and electronic information relevant to the development site;
- Describe the nature, extent and significance of the historic environment within the area potentially affected by the development, identifying any uncertainties in existing knowledge;
- Determine the potential impact of the proposed development; and
- Identify any requirements for further investigation that may be necessary to understand the effects of the proposed development on the historic environment.

3 METHODOLOGY

3.1 Study areas

The Proposed Development Area (PDA) corresponds to the application boundary in order to include any known or unknown heritage assets at risk of direct and indirect impacts.

The Study Area (SA) extends 1km beyond the application site boundary, so as to include any heritage assets that may continue into the site, or which may be affected by indirect impacts or impacts on assets' settings.

3.2 Data sources

The assessment has been based on a study of all readily available documentary sources, following the CIfA Standards and Guidance (CIfA 2014). The following sources of information were referred to:

- Designation data downloaded from the Historic Environment Scotland website on 11 August 2016;
- The National Record of the Historic Environment (NRHE), including the Canmore database and associated photographs, prints/drawings and manuscripts held by HES;
- Historic Landscape Assessment data, viewed through the HLAMap website;

- The West of Scotland Archaeology Service (WoSAS) Historic Environment Record (HER) digital data extract received 8 December 2016;
- The National Collection of Aerial Photography (NCAP);
- Lidar data supplied by the Scottish Government;
- Geological data available online from the British Geological Survey;
- Historic maps held by the National Library of Scotland;
- Ordnance Survey Name Books
- Unpublished maps and plans held by the National Records of Scotland;
- Relevant internet resources, including <u>www.hunterston.eu</u>
- Readily available published sources and unpublished archaeological reports.

Following study of historic mapping and an appraisal of their present locations, it was apparent that the PDA would not merit a study of existing LiDAR data. Hunterston Marine Construction Yard is in an area of reclaimed land, heavily landscaped and developed in the mid twentieth century. Landscaping works and standing buildings would obscure above-ground traces of any potential archaeological deposits.

3.3 Identification of heritage assets

The assessment aims to identify all known heritage assets potentially affected by the proposed development, and to estimate the potential for currently unknown heritage assets. A heritage asset is defined as any element of the historic environment which has cultural significance. Both discrete features, and extensive landscapes defined by a specific historic event, process or theme, can be defined as heritage assets; and assets may overlap or be nested within one another. Some heritage assets are designated as Scheduled Monuments, Listed Buildings, World Heritage Sites, Conservation Areas, Inventory Gardens and Designed Landscapes, Inventory Historic Battlefields, Historic Marine Protected Areas, or locally designated through policies in the Local Plan. Undesignated assets may be recorded in the NRHE or Historic Environment Records, while many other assets are currently unrecorded.

Heritage assets in the SA are shown on Illus. 1 and listed in Tables 3 and 4. Designated heritage assets are labelled with the reference number assigned by Historic Environment Scotland (prefixed by 'LB' for Listed Building); undesignated assets with the reference number in the HER.

3.4 Assessment of cultural significance and importance

Heritage assets are assessed in terms of their cultural significance and importance. Cultural significance is a quality that applies to all heritage assets, and as defined in 'Historic Environment Scotland Policy Statement 2016' (Annex 1, paragraph 3), may be artistic, archaeological, architectural, historic, traditional, aesthetic, scientific or social, and may be 'inherent in the monument itself, its fabric, setting, use, associations, meanings, records, related monuments and related objects'. Following 'Scottish Planning Policy' paragraph 137, the analysis of a heritage asset's cultural significance aims to identify its 'special characteristics' which should be protected, conserved or enhanced. Such characteristics may include elements of the asset's setting, which is defined in Historic Environment Scotland's guidance as "the way in which the surroundings of a historic asset or place contribute to how it is experienced, understood and appreciated" (HES 2016 'Managing Change in the Historic Environment: Setting', Section 1).

The importance of a heritage asset is the overall value assigned to it based on its cultural significance, reflecting its statutory designation or, in the case of undesignated assets, the professional judgement of the

assessor (Table 1). Assets of national importance and international importance are assigned a high and very high level respectively. The criterion for Listing is that a building is of 'special architectural or historic interest'; following HESPS Note 2.17, Category A refers to 'buildings of national or international importance', Category B to 'buildings of regional or more than local importance', and Category C to 'buildings of local importance'. Any feature which does not merit consideration in planning decisions due to its cultural significance may be said to have negligible heritage importance; in general, such features are not considered as heritage assets and are excluded from the assessment.

Table 1: Criteria for Assessing the Importance of Heritage Assets

Importance of the	Criteria	
asset		
Very high	World Heritage Sites and other assets of equal international importance	
High	Category A Listed Buildings, Scheduled Monuments, Inventory Gardens and Designed Landscapes, Inventory Historic Battlefields, Historic Marine Protected Areas and	
	undesignated assets of national importance	
Medium	Category B Listed Buildings, Conservation Areas, and undesignated assets of regional	
	importance	
Low	Category C Listed Buildings and undesignated assets of lesser importance	

3.5 Potential for unknown heritage assets

Archaeological features are often impossible to identify through desk-based assessment. The likelihood that significant undiscovered heritage assets may be present within the PDA is referred to as *archaeological potential*. Overall levels of potential can be assigned to different landscape zones, following the criteria in Table 2, while recognising that the archaeological potential of any zone will relate to particular historical periods and types of evidence. The following factors are considered in assessing archaeological potential:

- The distribution and character of known archaeological remains in the vicinity, based principally on an appraisal of data in the HER;
- The history of archaeological fieldwork and research in the surrounding area, which may give an indication of the reliability and completeness of existing records;
- Environmental factors such as geology, topography and soil quality, which would have influenced land-use in the past and can therefore be used to predict the distribution of archaeological remains;
- Land-use factors affecting the survival of archaeological remains, such as ploughing or commercial forestry planting; and
- Factors affecting the visibility of archaeological remains, which may relate to both environment and land-use, such as soils and geology (which may be more or less conducive to formation of cropmarks), arable cultivation (which has potential to show cropmarks and create surface artefact scatters), vegetation, which can conceal upstanding features, and superficial deposits such as peat and alluvium which can mask archaeological features.

Table 2: Archaeological potential

Potential	Definition
High	Undiscovered heritage assets are almost certainly present, and these are likely to include
	assets of high or medium importance.
Medium	Undiscovered heritage assets are likely to be present, and it is possible, though unlikely, that
	these may include assets of high or medium importance.

Potential	Definition
Low	The study area may contain undiscovered heritage assets, but these are unlikely to be
	numerous and are highly unlikely to include assets of high or medium importance.
Negligible	The study area is highly unlikely to contain undiscovered heritage assets of any level of
	importance.
Nil	There is no possibility of undiscovered heritage assets existing within the study area.

4 RESULTS

4.1 Overview of the historic environment

Previous investigations

The WoSAS HER records four previous archaeological investigations and surveys within 1km of the PDA. Two of these were related to Hunterston Power Station (Event 4378 and Event 5582) and the other two related to work at Hunterston Castle (Event 838) and the Firth of Clyde Coastal Zone Assessment Survey (Event 768).

Event 4378 was a desk-based assessment and walkover survey carried out in 2010 in advance of a proposed new power station at Hunterston. This survey identified some coastal features which were subsequently added to the WoSAS HER. Event 5582 was the 2014 excavation of prehistoric features in advance of the construction of a new substation at Hunterston North. The features included a roundhouse and some pits which yielded a number of lithic and pottery finds.

The work at Hunterston Castle (Event 838) identified nothing of archaeological significance, and the Coastal Zone Assessment (Event 768) undertaken in this area was part of a wider survey of the Firth of Clyde coastal zone. Features identified during this survey have been added to the HER.

Geology and geomorphology

The local bedrock of the area is sandstone of Devonian age (Old Red Sandstone) belonging to the Kelly Burn Sandstone Formation, overlain by glacial sand and gravel and raised marine deposits of Quaternary age.

Glacial and post-glacial activity beginning approximately 20,000 years ago resulted in sea-level changes along the west coast of Scotland. The retreat of glaciers caused the land to slowly rise as the weight of ice was lifted. The melting ice also caused sea-levels to increase, but along the Ayrshire coast the land rose faster and further than the sea. This is evidenced by a series of raised beaches along the Ayrshire coast; these are more apparent further south of the PDA around Northbank and Portencross. By around 10,000 years BP the fertile soil left by the retreating glaciers had given rise to birch forests, and Mesolithic hunter-gatherers had found their way to the coasts.

The PDA is entirely on an artificial island reclaimed from the sea during the creation of the Hunterston Marine Construction Yard in the 1970s. The land comprises a mixture of dredged sand and sandstone quarried from Campbelton Hill, to the south-east of the SA.

Prehistoric

Recent excavations associated with development at Hunterston Power Station (HER Event 5582) have revealed evidence of multiphase activity with finds dating from the Mesolithic, Bronze Age, Iron Age and medieval period, and features of Iron Age date indicating the presence of settlement and possibly ironworking in the area.

The HER also records chance finds of prehistoric artefacts in the area; in 1896 a perforated stone axe-hammer was found near Hunterston Castle (HER 5246); in 1927 prehistoric pottery and beads were found during ploughing at Fences farm steading (HER 5235), and in 1976 a single flint arrowhead was discovered on the foreshore at Hunterston (HER 5236).

Roman

There is very little definitive evidence of Roman activity in the Study Area. A harbour at Little Brigurd (HER 5233) was identified in a 1976 study of aerial photographs and suggested as being Roman. The feature was visited by Wessex Archaeology and RCAHMS in 2013 and is described in Canmore thus;

"A stone-built harbour lies at the very low water mark on Brigurd Point. Rectangular on plan but open to the sea on the south-west, it measures 61m from north-east to south-west by at least 46m transversely over a ruinous wall constructed of large boulders but now standing no more than two courses high. The external corners of this wall are faceted and the outer, seaward, face on the NW appears to have been strengthened by incorporating large boulders and positioning them so that their flat, long sides faced outwards. Aerial photographs appear to indicate that there is a cleared area of sea-bed directly outside the mouth of the harbour."

However, the date of the harbour remains unclear following this investigation, and the report suggests a variety of dates; nineteenth century, thirteenth century or later, or Roman². The location of the harbour could indicate that it became submerged following a rise in sea-levels, or it could be that the harbour was sited at the edge of the deep waters of the Clyde to allow ships to dock without risking the sandbanks of Hunterston Sands.

Medieval

As well as the possible medieval harbour at Little Brigurd (HER 5233), a number of probable fish traps (HER 5243) have been identified in the inter-tidal zone of Hunterston Sands. Appearing as stone walls and circular stone features substantial timbers were discovered beneath one of them. Dendrochronological samples taken from these timbers returned an early thirteenth century date³.

Post-medieval and modern

Although the harbour at Little Brigurd (HER 5233) may have been in use during the medieval and post-medieval period, the only definitive post-medieval features within the study area are those within the Hunterston estate. Hunterston Castle was built in the late fifteenth or early sixteenth century, and the estate itself is named (as 'Hunterstoun') on Gordon's map of 1636-52, indicating that it was established by this date. Roy's map of the 1750s depicts neat plantings of ornamental woodlands amid fields at 'Hunterston'. The Hunterston estate policies as defined by the WoSAS HER (HER 53438) appear to correspond with those broadly defined on Armstrong's 1775 map and the 1st Edition OS map of 1857.

Early twentieth century activity within the study area is represented by the jetty (HER 62916) and track (HER 62917) at Hunterston. These are first depicted on the 1911 OS 6-inch map, and it is presumed that they were built around the turn of the century.

-

¹ https://canmore.org.uk/site/40655/brigurd-point-hunterston-sands

² Wessex Archaeology Coastal and Marine, 2014, Coastal Archaeological Landscape: Intertidal & Estuarine Survey Project, Data Structure Report

³ ibid

Modern activity recorded on the HER comprises the two nuclear reactors at Hunterston Power Station. Hunterston A (HER 5244) was opened in 1964 and closed in 1990. It is currently being decommissioned and dismantled. Hunterston B (HER 14108) was opened in 1976 and is still operational. Both stations occupy land that formerly belonged to the Hunterston estate. The Hunterston Construction Yard within the PDA is also recorded on the HER (HER 13456) and is discussed below.

4.2 Assessment of heritage significance

Known heritage assets within the Inner Study Area

The Hunterston Construction Yard is recorded on the HER as HER 13456. However, as a modern industrial structure of negligible cultural heritage significance, it is not considered a heritage asset in this assessment.

There are no heritage assets within the PDA.

Archaeological potential of the Inner Study Area

The building of the Hunterston Marine Construction Yard in the 1970s required the reclamation of approximately 50Ha of land from the sea and foreshore. Although archaeological features are known to be present in the vicinity of the PDA, the landscaping and groundworks involved in the building of the yard is highly likely to have removed, buried or otherwise destroyed any archaeological deposits that may have been present within the PDA.

It is considered that there is no likelihood that any archaeological deposits or artefacts survive as buried remains within the PDA, and the archaeological potential of the PDA is nil.

Heritage assets in the Outer Study Area

Listed Buildings

There are four Listed Buildings within the SA. They comprise one Category A, one Category B and two Category C-listed buildings. All four are within the Hunterston estate (HER 53438) and include the late medieval Hunterston Castle; the eighteenth century Hunterston House, and a well and walled garden contemporary with the house.

Table 3: Listed Buildings included in the assessment

LB no.	Name	Category
LB14313	Hunterston Castle	Α
LB14286	Hunterston House	В
LB14287	Hunterston House, Well	С
LB14288	Hunterston House, Walled Garden	С

Hunterston Castle (Category A, LB14313) consists of a late fifteenth century or early sixteenth century tower house/keep enlarged in the seventeenth century with the addition of a house. There are small courtyards to the north and south of the castle, but a range of buildings formerly attached to the castle have been demolished and replace with a modern house. The castle was superseded as the Hunter family home in the eighteenth century when Hunterston House was built.

Hunterston House (Category B, LB14286) was built in 1799, and extended in the late nineteenth century. Approximately 280m north of Hunterston Castle, it is set among the traces of a formal lawn, planted with

trees. The house faces due north, allowing views over the much-reduced remains of a landscaped park towards Oilrig Road and the Firth of Clyde beyond.

The well (LB14287) and walled garden (LB14288) at Hunterston House are both Category C-listed. The well is a carved stone wellhead with an ornate wrought-iron superstructure. It is on a stone plinth in front of Hunterston House and resembles the Venetian courtyard wells of the eighteenth century. The walled garden is west of the castle and is believed to be eighteenth century with later alterations.

The buildings of Hunterston estate largely derive their heritage significance from their architectural and historic interest. The relationship and views between the buildings also contributes as the Hunter family's move from the castle to the later house is an important aspect of the estate's history, and the well and walled garden derive significance from being ornamental and functional features of the estate. Although Hunterston House was designed to offer wide northern views across the estate to the sea, these are now of less relevance to heritage significance. The construction of the Ore Terminal and the Construction Yard have reduced the sensitivity of these views and now they only make a limited contribution to the heritage significance of Hunterston House and its associated buildings.

Other Designated Heritage Assets

There are no World Heritage Sites, Inventory Gardens and Designed Landscapes, Inventory Historic Battlefields, Scheduled Monuments or Conservation Areas within the SA.

Undesignated heritage assets

There are 13 entries recorded on the HER within 1km of the proposed development. Three of the entries (HER 5235, 5236 and 5246) record chance finds of artefacts – none of these will be subject to direct or indirect impacts. Two other entries (HER 5244 and 14108, not on Illus. 1) record elements of the Hunterston nuclear power station; as modern industrial buildings neither is considered to be a heritage asset for the purposes of this assessment.

The remaining eight entries record upstanding features comprising six structures in and around Hunterston Bay including fish traps, a jetty, a harbour and a raised track; Hunterston estate designed landscape, and the gateway and gate piers into the estate.

Table 4: Undesignated heritage assets included in the assessment

HER Ref.	Name/Description	Туре	Importance
53438	Hunterston (Huterston (Blaeu), Hunterstown (Roy))	Designed landscape	Medium
5233	Little Brigurd, Harbour	Structure	Low
5243	Hunterston Sands / Fairlie Roads, fish traps	Structure	Low
42998	Hunterston House, Gateway and Gate Piers	Structure	Low
62914	Hunterston Sands	Structure	Low
62915	Hunterston Sands	Structure	Low
62916	Hunterston Jetty	Structure	Low
62917	Hunterston, track	Structure	Low
5235	Fences - Cinerary Urn; Bead	Findspot	Negligible
5236	Hunterston Sands - Flint	Findspot	Negligible
5246	Hunterston / Hunterstone - Axe-hammer	Findspot	Negligible

The harbour at Little Brigurd (HER 5233), and the fish traps (HER 5243), structures (HER 62914 and 62915), jetty (HER 62916) and raised track (HER 62917) on and around Hunterston Sands derive their heritage

significance from their location on the shore of the Clyde, and their immediate relationship with the coast, as well as from their intrinsic interest as archaeological resources. Wider views are of limited relevance to their heritage significance.

The gate piers and gateway (HER 42998) of Hunterston estate also derive most of their heritage significance from their relationship to nearby features; in this case the buildings and estate of Hunterston. Wider views are of limited relevance to their heritage significance. The gate piers are also not in their original location, which was at the eastern end of Largs Avenue where it met the A78. When the Ore Terminal was constructed requiring the realignment of the A78 in the 1970s, the gates were moved to their present location.

Hunterston (HER 53438) is recorded on the HER as a Designed Landscape based on historic map evidence from Blaeu, Roy and the Ordnance Survey. The core of the designed landscape comprises the parkland, woodland and avenues surrounding Hunterston Castle and Hunterston House, and the much more extensive area defined in the HER (which includes farmland and a section of the Hunterston Power Station complex) presumably reflects the original estate boundary. While this designed landscape is considered to be of medium importance as a whole, not all elements of the landscape within the area defined in the HER are of equal importance, and parts of the estate and its environs have seen great change due to the construction of Hunterston Nuclear Power Station to the west, the Ore Terminal to the north and Hunterston Construction yard to the north-west.

5 PREDICTED EFFECTS OF THE DEVELOPMENT

Description of the Proposed Development

The proposed development comprises the redesign and upgrading of the existing dry dock entrance/exit with the construction of a concrete caisson, and the strengthening of an existing quay.

Potential Impacts

Potential impacts arising from the proposed developments include direct impacts involving disturbance or removal of heritage assets by construction groundworks and setting impacts arising from changes to views from and of heritage assets.

Predicted Direct Impacts

All of the work is proposed to take place in areas already likely to have been extensively disturbed by land reclamation and the construction of the existing construction yard and dry dock.

As the PDA is considered to be of nil archaeological potential, there is no risk of direct impacts upon any previously unknown archaeological deposits.

Predicted Setting Impacts

The proposed development will comprise the redesign and upgrading of the existing dry dock facility and quay. The existing structure is visible from heritage assets in the SA, and the proposed development will not constitute a change in views towards the PDA. The operation of the facility may involve intermittent and temporary changes to views as vessels are brought into the dry dock for decommissioning.

The proposed development and operations of the dry dock are likely to be visible in views from and across Hunterston House (LB14286), Hunterston Castle (LB14313), the well (LB14287) and walled garden (LB14288), and the Hunterston estate (HER 53438). However, although Hunterston House was designed to offer wide

northern views across the estate to the sea⁴, these are now of less relevance to heritage significance. The construction of the Ore Terminal and the Construction Yard have reduced the sensitivity of these views and now they only make a limited contribution to the heritage significance of Hunterston House, the estate and its associated buildings. There will be no significant setting impacts upon Hunterston estate and its associated buildings from the proposed development or its operation.

Wider views are of limited relevance to nine of the remaining 12 undesignated heritage assets within the SA. There will be no significant setting impacts upon the harbour at Little Brigurd (5233); the fish traps (5243); structures (62914 and 62915); the jetty (62916); the raised track (62917); the gate piers and gateway (42998) of Hunterston estate, or Hunterston Nuclear Generating Stations (5244 and 14108).

The final three of the HER entries record chance finds of artefacts – none of these will be subject to direct or indirect impacts.

6 CONCLUSIONS

Within the PDA, there will be no significant direct impacts upon HA1. As the PDA is considered to be of nil archaeological potential, there is no risk of direct impacts upon any previously unknown archaeological deposits.

Four designated assets and 13 undesignated assets within the SA were assessed for potential setting impacts. These include one Category A-listed building, one Category B-listed building and two Category C-listed buildings, as well as an undesignated designed landscape within which the four Listed Buildings are located.

The proposed development will have no significant setting impacts upon any of the four designated or 13 undesignated assets within the SA.

Mitigation

As there are likely to be no direct or setting impacts affecting the heritage significance of the heritage assets within and outside the PDA, it is considered that no further mitigation is required with respect to these.

7 REFERENCES

Bibliographic references

Davis, Michael C., 1991 The Castles and Mansions of Ayrshire

Headland Archaeology, 2009 'Chapter 9 – Archaeology and Cultural Heritage' in *Hunterston Windfarm:* Environmental Statement

Headland Archaeology, 2010 'Chapter 17 – Archaeology and Cultural Heritage' in *Ayrshire Power Station:* Environmental Statement

Headland Archaeology, 2014 Hunterston Estate Solar Farm: Archaeological Desk-Based Assessment

.

⁴ Davis, 1991 p289

Wessex Archaeology Coastal and Marine, 2014, Coastal Archaeological Landscape: Intertidal & Estuarine Survey Project, Data Structure Report

Digital references

Archaeology Data Service - www.archaeologydataservice.ac.uk

British Geological Survey; www.bgs.ac.uk

National Library of Scotland (historic maps); www.maps.nls.uk

http://virtual.hunterston.eu/index.htm

Historic maps

Gordon, R ca. 1636-52 Cunningham

Blaeu. J 1654 Cuninghamia, in Blaeu Atlas of Scotland

Armstrong, A 1775 A new map of Ayrshire

Ainslie, J 1821 Ainslie's map of the Southern Part of Scotland

Thomson, J 1828 Northern Part of Ayrshire, in John Thomson's Atlas of Scotland

Ordnance Survey Six-inch first edition: Ayrshire sheets 6 & 10 (surveyed 1855, published 1857-8)

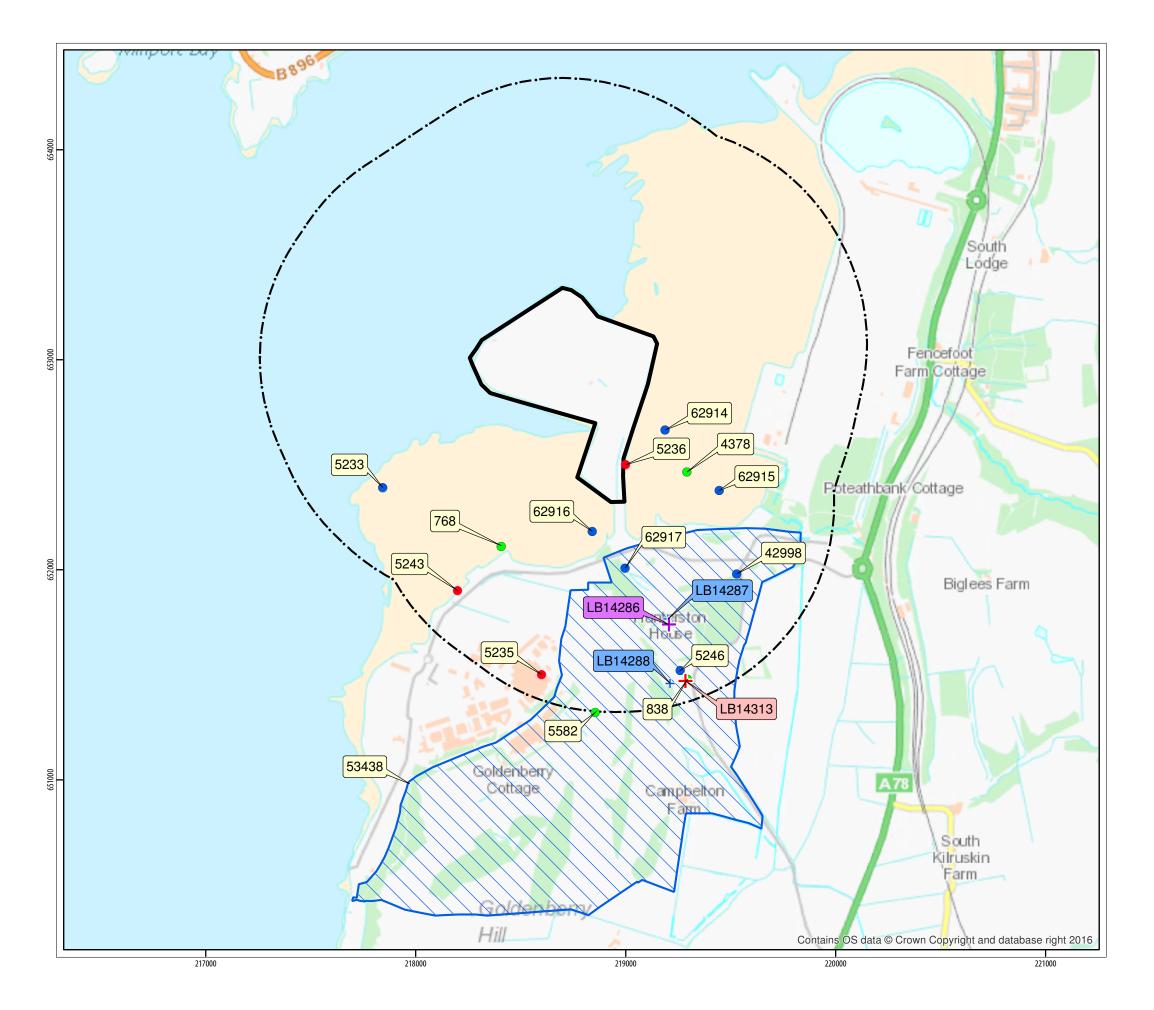
Ordnance Survey Six-inch second edition: Ayrshire sheets VI.SE & X.NE (revised 1895, published 1897)

Ordnance Survey Six-inch third edition: Ayrshire sheets VI.SE and X.NE (revised 1908, published 1911

Aerial Photographs

Table 5: Prints held by National Collection of Aerial Photography at HES

Library Ref	Sortie	Date	Frame nos.
C_0001	106G/UK/0077	10/5/46	6007-6010
B_0155	106G/UK/0084	10/5/46	4273
C_0049	106G/UK/0084	10/5/46	6121
B_0172	CPE/UK/0261	13/8/47	3231-3233, 3270-3272
B_0412	542/0145	11/3/55	0122
B_0439	58/2517	17/7/58	0027-0029





13 Jane Street Edinburgh EH6 5HE 0131 467 7705 www.headlandarchaeology.com

Category A Listed Building
Category B Listed Building
Category C Listed Building
Heritage Asset
Heritage Asset
HER Event Record
HER Artefact Find
Ikm Radius
Proposed Development Area

Historic Environment Record information derived from WoSAS data dated 8 December 2016 © Crown Copyright (area office)

Listed Building data provided by Historic Environment Scotland dated 11 August 2016 © Crown Copyright (Historic Environment Scotland)

