

REPORT

Millport Coastal Flood Protection Scheme: Environmental Statement

Chapter 15 Archaeology and Cultural Heritage

Client: North Ayrshire Council

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Acronyms

Acronym	Acronym description
ALHS	Aspect Land and Hydrographic Surveys Limited
CIA	Cumulative Impact Assessment
DBA	Desk-based Appraisal
EIA	Environmental Impact Assessment
ES	Environmental Statement
HEPS	Historic Environment Policy for Scotland
HER	Historic Environment Record
HES	Historic Environment Scotland
LDP	Local Development Plan
MPAs	Marine Protected Areas
MS-LOT	Marine Scotland Licensing Operations Team
NRHE	National Record of the Historic Environment
PAD	Protocol for Archaeological Discoveries
SLVIA	Seascape, Landscape and Visual Impact Assessment
UKHO	United Kingdom Hydrographic Office
UXO	Unexploded Ordnance
WoSAS	West of Scotland Archaeology Service
WSI	Written Scheme of Investigation
ZTV	Zone of Theoretical Visibility

Glossary

Glossary Term

Glossary Text

Environmental Impact Assessment (EIA)

A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Directive and EIA Regulations, including the publication of an Environmental Statement.

Environmental Statement (ES)

A document reporting the findings of the EIA and produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations.

Millport Coastal Flood Protection Scheme

The scheme consists of offshore rock armour structures which will be built in the vicinity of the rock islets within Millport Bay. Onshore works will include flood walls, improvement works to existing coast protection structures, and works to raise the level of existing grass areas. Works on the foreshore include shore-connected rock armour breakwaters and rock armour revetments.

15 Archaeology and Cultural Heritage

15.1 Introduction

1. This chapter of the Environmental Statement (ES) considers the potential impacts of the proposed Millport Coastal Flood Protection Scheme (the proposed scheme) on archaeology and cultural heritage
2. This chapter provides a summary description of key aspects relating to existing archaeology and cultural heritage followed by an assessment of the magnitude and significance of the effects upon the baseline conditions resulting from the construction, operation and decommissioning of the proposed scheme as well as those effects resulting from cumulative interactions with other existing or planned projects.
3. All figures referred to in this chapter are provided in Volume II of this ES.
4. The assessment of potential effects has been made with specific reference to Scotland's National Planning Framework and Planning Policy. These are discussed further in **Chapter 2 Policy and Legislation** and outlined below in Section 15.2. These are the principal decision-making documents for flood protection schemes.
5. This chapter has been prepared by Royal HaskoningDHV in accordance with the relevant legislation and policies, adhering to the methodology for Environmental Impact Assessment (EIA) and Cumulative Impact Assessment (CIA) as discussed in Section 15.4.
6. Due to the close association between setting, heritage and indirect impacts, this chapter should be read in conjunction with **Chapter 6: Marine Geology, Oceanography and Physical Processes** and **Chapter 22 Seascape, Landscape and Visual Impact Assessment**.
7. Additional information to support the assessment of impacts on archaeology and cultural heritage is provided separately in **Appendix 15.1** (Volume III): Archaeology and Cultural Heritage Desk Based Appraisal.

15.2 Policy, Legislation and Guidance

8. There are a number of pieces of legislation applicable to archaeology and cultural heritage including national and international policy which recognise the value and significance of cultural heritage. The policies and plans outlined throughout this section have also been reviewed for their relevance to archaeology and cultural heritage when undertaking the EIA for the proposed scheme.

15.2.1 International Legislation and Policy

9. Table 15-1 below provides a brief summary of the key international legislation and policy relevant to the scheme with respect to archaeology and cultural heritage.

Table 15-1 Summary of key international legislation and policy relevant to this proposed scheme

Legislation/Policy	Relevance
UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972	<p>Article 1. For the purposes of this Convention, the following shall be considered as "cultural heritage":</p> <p>[...] sites: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view</p> <p>Article 4. Each State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to in Articles 1 and 2 and situated on its territory, belongs primarily to that State. It will do all it can to this end, to the utmost of its own resources and, where appropriate, with any international assistance and co-operation, in particular, financial, artistic, scientific and technical, which it may be able to obtain.</p>
International Convention for the Law of the Sea, 1982	<p>Article 303. Archaeological and historical objects found at sea:</p> <p>1. States have the duty to protect objects of an archaeological and historical nature found at sea and shall cooperate for this purpose.</p> <p>2. In order to control traffic in such objects, the coastal State may, [...] presume that their removal from the seabed in the zone referred to in that article without its approval would result in an infringement within its territory or territorial sea of the laws and regulations referred to in that article.</p>
European Convention on the Protection of the Archaeological Heritage, Valletta, 1992	<p>Article 1. The aim of this (revised) Convention is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study.</p>
European Landscape Convention, 2000	<p>Article 1: "Landscape" – an area perceived by people whose character is the result of the action and interaction of natural and/or human factors.</p> <p>Article 2: this Convention applies to the entire territory of the Parties and covers natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as every day or degraded landscapes.</p> <p>Article 5. Each Party undertakes:</p> <p>a. to recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity;</p> <p>b. to establish and implement landscape policies aimed at landscape protection, management and planning through the adoption of the specific measures [...]</p>
UNESCO Convention on the Protection of the Underwater Cultural Heritage, 2001	<p>Although the United Kingdom has not ratified the UNESCO, the principles set out in the Annex have been adopted. Rule 1. of the Annex states: The protection of underwater cultural heritage through in situ preservation shall be considered as the first option. Accordingly, activities directed at underwater cultural heritage shall be authorized in a manner consistent with the protection of that heritage, and subject to that requirement may be authorized for the purpose of making a significant contribution to protection or knowledge or enhancement of underwater cultural heritage.</p>

15.2.2 National Legislation and Policy

10. Paragraph 110 of the Scottish Planning Policy (Scottish Government, 2014b) states that the Scottish Government's policy on the historic environment and guidance on relevant legislation is set out in the Scottish Historic Environment Policy.
11. Scotland's Historic Environment Policy has subsequently been updated (published in April 2019) setting out the principles and policies that make up the Historic Environment Policy for Scotland (HEPS) and aiming to deliver the shared vision that:
12. Scotland's historic environment is understood and valued, cared for and protected, enjoyed and enhanced. It is at the heart of a flourishing and sustainable Scotland and will be passed on with pride to benefit future generations.
13. Although HEPS is non-statutory, HEPS is designed to support and enable good decision making about changes to the historic environment and should be considered whenever a decision will affect the historic environment and is a material consideration for planning proposals that might affect the historic environment. The policies for managing the historic environment are set out in Table 15-2.

Table 15-2 HEPS Policies for Managing the Historic Environment

Policy Reference	Policy Text
HEP1	Decisions affecting any part of the historic environment should be informed by an inclusive understanding of its breadth and cultural significance.
HEP2	Decisions affecting the historic environment should ensure that its understanding and enjoyment as well as its benefits are secured for present and future generations.
HEP3	Plans, programmes, policies and strategies, and the allocation of resources, should be approached in a way that protects and promotes the historic environment. If detrimental impact on the historic environment is unavoidable, it should be minimised. Steps should be taken to demonstrate that alternatives have been explored, and mitigation measures should be put in place.
HEP4	Changes to specific assets and their context should be managed in a way that protects the historic environment. Opportunities for enhancement should be identified where appropriate. If detrimental impact on the historic environment is unavoidable, it should be minimised. Steps should be taken to demonstrate that alternatives have been explored, and mitigation measures should be put in place.
HEP5	Decisions affecting the historic environment should contribute to the sustainable development of communities and places.
HEP6	Decisions affecting the historic environment should be informed by an inclusive understanding of the potential consequences for people and communities. Decision-making processes should be collaborative, open, transparent and easy to understand.

14. The primary current legislation relating to the historic environment in Scotland is the Historic Environment Scotland Act 2014 which sets out Historic Environment Scotland's (HES) role and legal

status, including changes in processes for the designation of monuments and buildings (scheduling and listing) and for consents relating to scheduled monuments, listed buildings and conservation areas. The Act amended the following pieces of legislation:

- Ancient Monuments and Archaeological Areas Act 1979;
 - Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997;
 - Environmental Assessment (Scotland) Act 2005; and
 - Marine (Scotland) Act 2010.
15. In addition to listed buildings and scheduled monuments within terrestrial environments, archaeological sites on the forehorse may also be protected as scheduled monuments, such as crannogs and fish-traps, the remains of castles, industrial and religious sites along the coastal edge as well as settlements, coastal defence networks and military defences. Similarly, coastal buildings and structures of special architectural or historic interest may be protected as listed buildings, such as harbours, lighthouses or piers and bridges.
16. Marine historic assets of national importance which are situated in Scottish territorial waters (0–12 miles) can be designated as historic Marine Protected Areas (MPAs) under the Marine (Scotland) Act 2010. In Scotland, MPAs have replaced Section 1 of the Protection of Wrecks Act 1973, which provides protection for designated shipwrecks in the United Kingdom. Section 1 of the of the Protection of Wrecks Act 1973 provides for wrecks to be designated because of historical, archaeological or artistic value. Section 2 provides for designation of dangerous sites. Military wrecks and aircraft are further addressed through the Protection of Military Remains Act 1986., Under the Act all military aircraft wrecks are automatically designated as Protected Places under the Protection of Military Remains Act 1986. Vessels may be designated as either a Protected Place or a Controlled Site. Divers can visit a Protected Place on a ‘look but don’t touch’ basis. Divers may not visit a Controlled Site without a license.

15.2.3 Regional Legislation and Policy

17. Planning advice to North Ayrshire Council with respect to the historic environment is provided by the West of Scotland Archaeology Service (WoSAS). The document Procedural Guidance for Archaeology and Development (WoSAS, 2009) provides additional detailed information on the standard procedures adopted by all the WoSAS Member Councils to handle applications for planning consent, which have been identified as raising archaeological issues. The guidance is applicable: ‘to all archaeological sites and landscapes both above and below ground; unlisted historic buildings or other built structures; designed gardens, cemeteries, or landscapes; battlefield or skirmish sites; and sites with historical or cultural associations’. This guidance is relevant to supporting the delivery of archaeology and cultural heritage objectives established though Local Development Plans.
18. The Clyde Regional Marine Plan will contribute to the management of the competing demands for the use of the Clyde Marine Region while protecting and enhancing the marine environment. The Plan is being produced by the Clyde Marine Planning Partnership and pre-consultation on the draft Clyde Regional Marine Plan took place between 18th March and 27th May 2019. **Chapter 2** of the pre-consultation draft recognises that the Clyde Marine Region has a rich maritime history linked to its industrial past and destination as a key shipping port. It defines the cultural and historical heritage as follows:
19. The cultural and historical heritage covers both sea and land-based activities and the built environment includes maritime wrecks, historic buildings and sites, maritime and heritage museums, historic ports, docks, quays, warehouses and cranes. It can also include submerged paleo-landscape

features. The historical and cultural assets in the Region make a notable contribution to visitor and tourism experiences, as well as providing an educational resource and contributing to the sense of place.

20. It is also noted that the preservation of assets helps to foster the cultural identity of the Clyde Marine Region and that it is important to understand each site, including its setting, where relevant, as well as its conservation requirements, in order to understand the effect that any development or activity may have.

15.2.4 Local Planning Policy

21. In September 2019, North Ayrshire Council submitted an approved Local Development Plan (LDP2) for North Ayrshire to the Scottish Ministers, intended to replace the currently adopted plan (2014) (North Ayrshire Council, 2019). The LDP covers a 10-year period, up to 2025, and is replaced every 5 years.
22. As part of Strategic Policy 3 (Strategic Development Areas) the Plan supports the development of Millport (Strategic Development Area 8: Cumbrae – Millport) which includes the implementation of the Millport Conservation Area Regeneration Scheme, which will achieve a positive transformation for the Conservation Area through:
- Repairing and reinstating the architectural details of historic properties, including shop fronts, thereby improving the character and appearance of Millport for residents, businesses and visitors;
 - Developing advice and skills to promote and care for Millport's built heritage; and
 - Encouraging community engagement, participation and enjoyment of Millport's built heritage.
23. The Plan also states their support for the implementation of the Millport flood prevention scheme and associated regeneration opportunities that can provide or enhance tourism facilities, including step ashore facilities for marine activities.
24. Policy 9 of the Plan deals with preserving and enhancing Conservation Areas, stating that:
25. Development within or adjacent to a Conservation Area, that preserves or enhances its character and appearance, and is consistent with any relevant Conservation Area Appraisal or Management Plan, will be supported providing it can be demonstrated that it retains appropriate scale, proportion, siting, massing, design, and use of materials whilst not inhibiting high quality innovative design.
26. Policies 11 to 13 of the Plan deal with listed buildings, historic gardens and designed landscapes, schedules monuments and non-designated archaeological sites and monuments. All policies favour preservation where possible with clearly stated conditions for the acceptance of proposals which would have an adverse effect upon assets and their settings.

15.2.5 Best Practice and Guidance

27. Managing Change in the Historic Environment is a series of guidance notes published by HES about making changes to the historic environment. This assessment has been carried out in accordance with the published guidance, specifically:
- Managing Change in the Historic Environment: Setting (2016); and
 - Guidance on Conservation Areas (2019).

28. The approach is also informed by available standards and guidance, including the Chartered Institute for Archaeologists' Standard and Guidance for Historic Environment Desk- Based Assessments (2014a) and Code of Conduct (2014b).

15.3 Consultation

29. Pre-application advice from HES was sought and a response provided on 06/06/2016. This confirmed that it is unlikely that the proposal would result in significant adverse impacts on the site or setting of HES's historic environment interests and therefore setting impacts to those designated heritage assets for which they are responsible for could be scoped out of further assessment. However, the only heritage asset within the study area which represents a historic interest for HES is the Category 'A' Cathedral of the Isles. In addition, a scoping opinion was received from HES (Ruth Cameron, Senior Heritage Management Officer (EIA)) on 28/04/2017. The response stated that HES have no specific requests for the scope of the Environmental Statement and reiterated that they consider it unlikely that there will be significant impacts on their historic environment interests.
30. Full details of the proposed scheme consultation process to date is presented within **Chapter 3 EIA Methodology and Consultation**.

15.4 Methodology

15.4.1 Baseline Data and Study Area

31. In February 2018 Royal HaskoningDHV delivered a desk study which assessed the cultural heritage of the site and its environs as they appear in existing information through designation, the national and local archaeological record, documentary sources and other studies. This chapter is informed by the results of the desk study presented in the archaeological desk-based appraisal (DBA) (**Appendix 15.1**).
32. Baseline data for the DBA was obtained through a number of sources, namely:
- Records acquired from the WoSAS Historic Environment Record (HER) on 1st February 2018 (Extract ID: RH1089);
 - Records of OceanWise wrecks and obstructions derived from the United Kingdom Hydrographic Office (UKHO) data provided by emapsite.com (Licence Number: EK001460007);
 - Records of reported losses of vessels accessed from the National Record of the Historic Environment (NRHE) via Canmore, compiled and managed by HES (<https://canmore.org.uk>);
 - The North Ayrshire Council Conservation Area Appraisal and Conservation Management Plan for the Millport Conservation Area;
 - Archaeological reports for investigations undertaken within the study area;
 - Relevant online and secondary sources; and
 - The results of a site visit undertaken in November 2017 by Royal HaskoningDHV and summarised in the DBA.
33. The study area for archaeology and cultural heritage comprises the footprint of the potential landside, foreshore and offshore works plus a 500m buffer.
34. Within this study area there are 43 listed buildings, including the Category A 'Cathedral of the Isles' and Millport is also designated as a Conservation Area. In addition, there are 27 further records of

non - designated heritage assets recorded by the WoSAS HER. Of these, 11 relate to findspots of archaeological artefacts and material, five to documentary references which may indicate the location of buried archaeological remains or former heritage assets and 11 which represent extant heritage assets including two paddling/leisure pools and a number of pier/jetties/harbour installations.

15.4.2 Setting

35. HES (2016) define the setting of a heritage asset as “the way the surroundings of a historic asset or place contribute to how it is understood, appreciated and experienced”.
36. The extent of setting is not fixed, and elements of setting can provide both positive and negative contributions to the significance of an asset. Views are often referred to when describing an asset’s setting, which allows for a relatively concise way of articulating the assets physical surroundings and how the setting is experienced or appreciated. These are not the only factors in identifying how the setting contributes to an asset however. Other considerations include the asset’s physical elements as well as perceptual and associational attributes relating to its surroundings. Examples of these considerations include: the asset’s relationship with other assets, its visual dominance, tranquillity, effect of noises, smells and other pollution issues, degree of interpretation or promotion to the public, celebrated artistic representations *etc.*
37. HES’s guidance described three stages in assessing the impact of a development upon the setting of a historic asset or place:
- Stage 1: identify the historic assets that might be affected by the proposed development;
 - Stage 2: define and analyse the setting by establishing how the surroundings contribute to the ways in which the historic asset or place is understood, appreciated and experienced; and
 - Stage 3: evaluate the potential impact of the proposed changes on the setting, and the extent to which any negative impacts can be mitigated.
38. The three stages of this process are undertaken as part of this chapter in Section 15.6. Impact Assessments below.
39. This assessment is further informed by **Chapter 22 Seascape, Landscape and Visual Impact Assessment** which assesses the following landscape, seascape and visual receptors:
- Landscape and seascape character, key characteristics and elements;
 - Designated landscapes and seascapes; and
 - Views and visual amenity experienced by residents, tourists, visitors, and road and ferry users.
40. A Zone of Theoretical Visibility (ZTV) has been produced within a 2km study area from the proposed scheme. In addition, nine viewpoints were selected to inform the SLVIA assessment (Table 15-4 and Volume II Figure 22-2).

Table 15-3 Viewpoint Locations

Viewpoint	Receptor Type and Comment
1: Milburn Street	Viewpoint to illustrate site context and view from residential properties, local footpath, children’s play area, visitors to West Bay, and the local road and recreational route network. Viewpoint located within the Millport Conservation Area.

Viewpoint	Receptor Type and Comment
2: Crichton Street	Viewpoint to illustrate site context and view from residential properties, visitors to the small bay and users of recreational routes. Viewpoint located within the Millport Conservation Area.
3: Clyde Street (rear view)	Viewpoint to illustrate site context and view from residential properties on Clyde Street. Viewpoint located within the Millport Conservation Area.
4: Millport Pier	Viewpoint from the Millport Pier, to illustrate the view from the pier along the promenade, and the Eileans within Millport Bay, representative of views for visitors / tourists. Viewpoint located within the Millport Conservation Area.
5: Stuart Street	Viewpoint on Stuart Street, to illustrate the view from residential properties along the promenade, tourists / visitors, and the local road and recreational route network. Viewpoint located within the Millport Conservation Area.
6: Guildford Street	Viewpoint on Guildford Street to illustrate the view from residential properties along the promenade, tourists / visitors, and the local road and recreational route network. Viewpoint located within the Millport Conservation Area.
7: Glasgow Street	Viewpoint on Glasgow Street to illustrate the view from residential properties along the promenade, tourists / visitors, and the local road and recreational route network. Viewpoint located within the Millport Conservation Area.
8: Kelburn Street	Viewpoint on Kelburn Street to illustrate the view from residential properties along the promenade, tourists / visitors, and the local road and recreational route network. Viewpoint located within the Millport Conservation Area.
9: Ridge between Farland Hill and Craigengour Hill	Receptors are likely to include recreational users on a ridge between Farland Hill and Craigengour Hill.

41. This information has also been used to inform the settings assessment presented in Section 15.6. Impact Assessments below.

15.4.3 Impact Assessment Methodology

42. General methods for EIA are discussed in **Chapter 3 EIA Methodology and Consultation**. The following sections describe the methodology used to assess the potential impacts of the proposed scheme on archaeology and cultural heritage in more detail.
43. The assessment presents:
- The perceived heritage importance (sensitivity) of identified assets;
 - A consideration of heritage significance, and where relevant the contribution that setting makes to the heritage significance of the assets identified as being affected, both designated and non-designated;
 - The anticipated magnitude of impact (change to and degree of harm to heritage significance) upon those assets identified; and
 - The significance of effect (in EIA terms) of any identified impacts upon those assets identified.
44. The importance of a heritage asset is a measure of the degree to which protection of that asset is sought (e.g. through legislation, policy or the weight given to preservation in planning tests and decisions). Heritage importance can be identified as for example High, Medium or Low.

45. Definitions of the different sensitivity (heritage importance) levels for heritage assets used for this assessment are provided in Table 15-4.

Table 15-4 Definitions of sensitivity (heritage importance) levels for the Historic Environment heritage assets

Sensitivity (Heritage Importance)	Definition
High	The heritage asset has an importance relative to an outstanding level of architectural, historic, artistic and/or archaeological interest. Designated Assets (World Heritage Sites, Scheduled Monuments, Listed Buildings, Registered Parks and Gardens and Conservation Areas).
Medium	The heritage asset has an importance relative to a high level of architectural, historic artistic and/or archaeological interest. Locally listed buildings and buildings of merit. Ancient Woodland or Trees. Regionally significant non-designated heritage assets (including buried archaeological remains).
Low	The heritage asset has an importance relative to some elements of architectural, historic, artistic and/or archaeological interest. Locally significant non-designated heritage assets (including buried archaeological remains) and hedgerows of historic interest.
Negligible	The 'heritage asset' has no significant architectural, historic, artistic and/or archaeological interest, due to its condition, level of survival or form. Previously excavated/removed buried archaeological remains. Documentary evidence for historic buildings / structures no longer extant (recorded within the HER's).

46. Heritage significance is the sum of the heritage interests (historic, architectural, artistic and archaeological) that are recognised within an asset, including the contribution of the setting of an asset to that significance. An assessment of the nature and extent of this significance is established through the collection and collation of baseline data, followed by consideration of each heritage asset's significance through professional judgement and experience. A statement of heritage significance should explain why we value a heritage asset. Understanding the heritage significance of an asset should not be confused with a description of that asset which does not articulate 'what matters and why'.
47. Impacts to heritage assets can be direct or indirect. Direct is used where the impact could cause a physical change to an asset through removal, disturbance or material change of the asset's fabric (which could impact heritage significance). Indirect is used where the impact could cause a non-physical change to a heritage asset through an alteration to its setting which could impact heritage significance.
48. In assessing the magnitude of impact, the magnitude of change/degree of harm to that heritage significance is measured to present a determination of the significance of effect in EIA terms. Impacts may be adverse or beneficial. Depending on the nature of the impact and the duration of development, impacts can also be temporary and / or reversible or permanent and / or irreversible. Table 15-5 summarises the definitions of magnitude that have been used for the assessment.

Table 15-5 Definitions for the magnitude of an impact on heritage assets.

Magnitude	Definition
High	<p>Negative Key elements of the asset's fabric and/or setting are lost or fundamentally altered, such that the asset's heritage significance is lost or severely compromised (adverse).</p>
	<p>Positive Elements of the asset's physical fabric which would otherwise be lost in a 'do-nothing' scenario, severely compromising its heritage significance, are preserved in situ; or Elements of the asset's setting, which were previously lost or unintelligible, are restored, greatly enhancing its heritage significance. For example, sympathetic restoration of a degraded or at-risk heritage asset (or improvements to its setting) which better reveals its significance. Bringing an at-risk heritage asset into sustainable use with long-term management plans.</p>
Medium	<p>Negative Elements of the asset's fabric and/or setting which contribute to its significance are affected, but to a more limited extent, resulting in an appreciable but partial loss of the asset's heritage significance.</p>
	<p>Positive Elements of the asset's physical fabric or setting which would otherwise be lost in a 'do-nothing' scenario, leading to an appreciable but partial loss of heritage significance, are preserved in situ; or Elements of the asset's setting are considerably improved, appreciably enhancing its heritage significance; or Research and recording leads to a considerable enhancement to the archaeological or historical interest of the asset. This only applies in situations where the asset would not be otherwise harmed <i>i.e.</i> it is not recording in advance of loss.</p>
Low	<p>Negative Elements of the asset's fabric and/or setting which contribute to its heritage significance are affected, resulting in a slight loss of heritage significance.</p>
	<p>Positive Elements of the asset's physical fabric which would otherwise be lost in a 'do-nothing' scenario, leading to a slight loss of heritage significance, are preserved in situ; or Elements of the asset's setting are improved, slightly enhancing its heritage significance; or Research and recording leads to a slight enhancement to the archaeological or historical interest of the asset. This only applies in situations where the asset would not be otherwise harmed <i>i.e.</i> it is not recording in advance of loss.</p>
Negligible	The asset's fabric and/or setting is changed in ways which do not materially affect its heritage significance.
No Impact	No change to the assets fabric or setting which affects its heritage significance.

49. Following the identification of receptor sensitivity (heritage asset importance) and magnitude of the impact, it is possible to determine the significance of the effect. The significance of effects has been considered using the matrix presented in Table 15-6 and supported by professional judgement.

Table 15-6 Impact significance matrix

		Negative Magnitude				Beneficial Magnitude			
		High	Medium	Low	Negligible	Negligible	Low	Medium	High
Sensitivity	High	Major	Major	Moderate	Minor	Minor	Moderate	Major	Major
	Medium	Major	Moderate	Minor	Minor	Minor	Minor	Moderate	Major
	Low	Moderate	Minor	Minor	Negligible	Negligible	Minor	Minor	Moderate
	Negligible	Minor	Minor	Negligible	Negligible	Negligible	Negligible	Minor	Minor

50. The impact significance categories are defined in **Chapter 3** as set out in Table 15-7.

Table 15-7 Impact significance definitions

Value	Definition
Major	Very large or large change in receptor, either adverse or beneficial, which are important at a population (national or international) level because they contribute to achieving national or regional objectives, or, expected to result in exceedance of statutory objectives and / or breaches of legislation.
Moderate	Intermediate or large change in receptor, which may be important considerations at national or regional population level. Potential to result in exceedance of statutory objectives and / or breaches of legislation.
Minor	Small change in receptor, which may be raised as local issues but are unlikely to be important at a regional population level.
Negligible	No discernible change in receptor.

51. Note that for the purposes of the EIA, major and moderate impacts are deemed to be significant. In addition, whilst **minor** impacts are not significant in their own right, it is important to distinguish these from other non-significant impacts as they may contribute to significant impacts cumulatively or through interactions.
52. Embedded mitigation has been referred to and included in the initial assessment of impact. If the impact does not require mitigation (or none is possible) the residual impact remains the same. However, if mitigation is required, an assessment of the post-mitigation residual impact is provided.
53. For an introduction to the methodology used for the CIA, please refer to **Chapter 3 EIA Methodology and Consultation**. This chapter includes only those cumulative impacts that are specific to archaeology and cultural heritage. It is assumed that any consented development would be subject to mitigation and management measures which would reduce impacts to non-significant unless there were exceptional circumstances, it is accepted that such projects or schemes may contribute to a wider cumulative impact. Also, in cases where this proposed scheme has negligible or no impact on a heritage asset (through for example avoidance of impact through routing or construction methodology) it is considered that there is no pathway for a cumulative impact.

15.5 Existing Environment

15.5.1 Desk-based Appraisal (Summary)

54. The existing environment for archaeology and cultural heritage is described in detail in the DBA (**Appendix 15.1**). In summary, within the study area these are:
- 43 listed buildings comprising:
 - One Category 'A' (buildings of national or international importance);
 - 16 Category 'B' (buildings of regional or more than local importance); and
 - 26 Category 'C' (buildings of local importance).
 - 27 records of non-designated heritage assets and findspots recorded in the WoSAS HER comprising:
 - 11 records relating to findspots (i.e. discoveries recorded from a location at which no extant remains are known to survive);
 - Five relating to documentary references to the locations of heritage assets which are either no longer in place, or for which buried archaeological remains may be present at the recorded location; and
 - 11 records relating to extant heritage assets including .
55. There are no battlefields, gardens or designated landscapes listed on 'the inventories' under the Ancient Monuments and Archaeological Areas Act 1979, and no scheduled monuments, marine protected areas or world heritage sites. Much of Millport is, however, designated as a Conservation Area extending from West Bay Road to the most eastern point of Marine Parade. The southern limit of the Conservation Area marked by Millport Bay and the northern limit by Bute Terrace, Barend Street, Kames Street and Ninian Street.
56. In addition to the above, there are five records within the OceanWise marine themes database relating to UKHO wrecks and obstructions. All are, however, recorded as underwater rocks and are not considered to be of archaeological interest.
57. The distribution of these records and the positions of known heritage assets within the study area are illustrated on Figure 15-1.
58. In addition to these 'known' heritage assets, the DBA also identifies that the potential for further, previously undiscovered, buried archaeological remains within the study area.
59. Onshore, this potential is concluded to be low. The ground investigations (Royal HaskoningDHV, 2017b) demonstrate that the main soil units corresponding to potential phases of human occupation within the study area (overlying consolidated glacial till and weathered bedrock) comprise made ground, marine beach deposits and raised beach deposits with limited archaeological potential. Similarly, records of previous archaeological investigations within the Millport demonstrate a pattern of disturbed deposits and demolition debris (made ground) overlying bedrock, in places close to the surface.
60. However, as noted in the Conservation Area Character Appraisal (North Ayrshire Council, 2013a: 44), 'there has been no systematic archaeological investigation to determine the condition and extent of any surviving archaeological remains within Millport Conservation Area'. While it is recognised that 20th century development is likely to have compromised early settlement remains, some caution should still be taken where ground works are required. Specific areas of potential identified within the Conservation Area include:

- Possible archaeological remains associated with the present 18th century planned town;
 - Archaeological remains associated with earlier Viking occupation at the western end of the town around Foul Port; and
 - Some potential for archaeology of similar periods to those surrounding archaeological sites on Great Cumbrae recorded in the 1870s, 1930s and 1960s.
61. Offshore, the ground investigation report and marine geophysical data demonstrated the presence of marine beach deposits overlying glacial till and weathered Millport Cornstone Member. The till and weathered bedrock deposits are of no archaeological interest and there is no evidence for surviving deposits relating to former, now submerged, prehistoric land surfaces. There are, however, a number of recorded losses of vessels within and around Millport Bay, the remains of which are yet to be located, indicating high potential for the remains of wrecks and maritime related finds to be present within the study area.

15.5.2 Ground Investigations (Offshore)

62. In order to further qualify the potential for the presence of debris and/or wreck remains within the footprint of the proposed development offshore, the DBA (**Appendix 15.1**) recommended that marine geophysical survey data acquired as part of the ground investigations be archaeological assessed. Since completion of the DBA, further ground investigations have been carried out offshore including the acquisition of seven vibrocores 26th to 27th August by SOCOTEC UK Limited (Socotec). The results of all the ground investigations, including the marine geophysical data assessment, have been reviewed by the Marine Heritage Consultant at Royal HaskoningDHV to further understand the potential for archaeological remains to be present within the offshore footprint.
63. Geophysical data (multibeam bathymetry, sidescan sonar, magnetometer and sub-bottom profiler) were acquired by Aspect Land and Hydrographic Surveys Limited (ALHS) in January and February 2017. The survey provided full coverage (at least 200% insonification) of the survey area with multibeam and sidescan sonar. Sub-bottom profiler data were acquired at 10m line spacing and magnetometer data at 5m line spacing.
64. Two horizons were digitised by ALHS in the course of processing the sub-bottom profiler (boomer) data: horizon one (boundary between heavy and unconsolidated sediments) and horizon two (hard return, intersecting with outcropping rock). Combined with the results of ground investigations for the scheme (including the vibrocores acquired by Socotec in 2019), the sub-bottom data show that offshore, Quaternary sediments are limited to marine beach deposits overlying glacial till and weathered Millport Cornstone Member. As concluded in the DBA, the till and weathered bedrock deposits are of no archaeological interest and there is no evidence for surviving deposits relating to former, now submerged, prehistoric land surfaces. The archaeological potential of the marine beach deposits is, therefore, associated with the potential for wrecks and associated maritime related finds only.
65. The unconsolidated sediments range in thickness due to topography of the Bay and are between 0m and 5m to the north of the Leug and the Spoig. To the east of Millport Pier, the thickness of the unconsolidated sediments ranges between 2m and 8m. The level of the top of rock generally ranges from 0m to -16mCD, the greatest depth being located between the Eileans and the Spoig and to the east of Millport Pier.
66. Outcropping rock, boulders and mooring blocks were recorded on the seabed by ALHS in the multibeam bathymetry data with more detail on seabed features provided in the sidescan sonar data

and magnetometer data. In total, 99 sidescan sonar anomalies and 251 magnetometer anomalies have been identified within the surveyed area (Figure 15-2).

67. Of the total 99, 43 of the sidescan sonar anomalies have been positively identified as mooring blocks, several with associated seabed lines (see data example in Plate 15-1), and one (99) as a tyre. These are not considered to be of potential archaeological interest.
68. Eleven are associated with linear anomalies, or groups of numerous linear anomalies (see data example in **Error! Reference source not found.**). Linear anomalies may represent modern mooring lines, ropes or cables or lengths of pipes or poles, for example, but may also be of archaeological interest such as anchor chains or ropes or structural elements originating from a wreck, for example. All but two of these linear anomalies are located close to shore and four (21, 22, 23, 30) correspond to a group of numerous linear anomalies located just inshore of the end of the existing pier and most likely represent modern debris due to their co-location with the approach to the harbour.

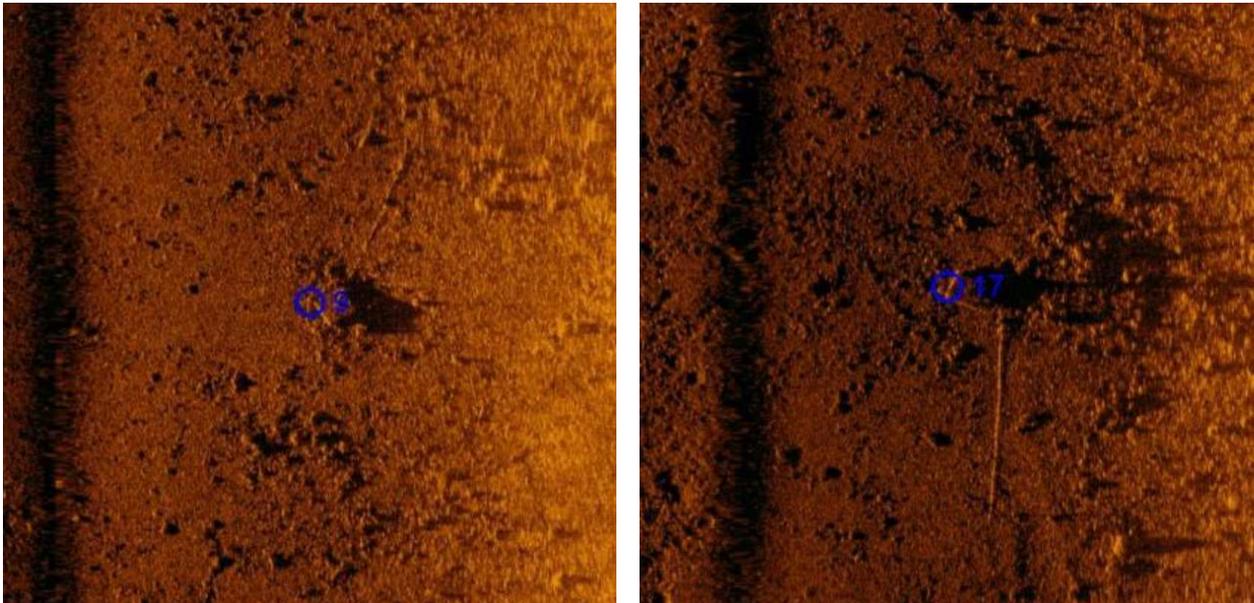


Plate 15-1 Data Example Mooring Blocks with Seabed Lines (ALHS 2017, ID 9 and ID 17)

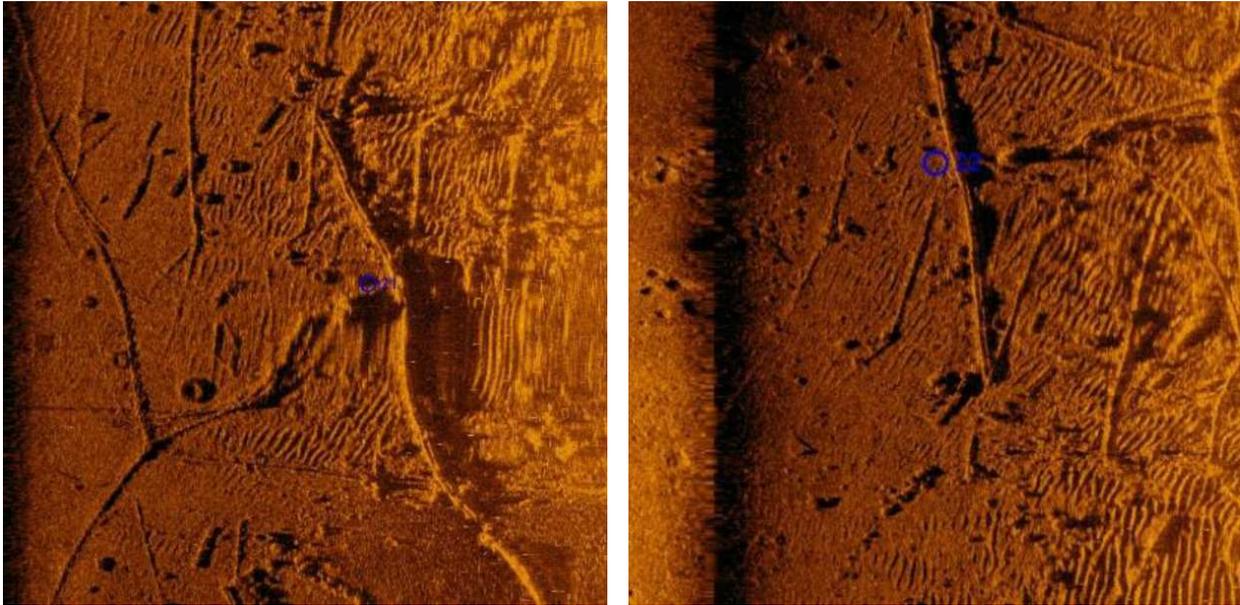


Plate 15-2 Data Example Linear Objects (ALHS 2017 ID 21 and ID 23)

69. One of the linear anomalies (80) is located in between The Spoig rock outcrop and the southern Eilean isle and c. 45m to the north of the proposed breakwater between the two. This anomaly is associated with four magnetometer targets (234, 119, 232, 116), maximum 50 nT, suggesting that this could represent a chain, or a linear object with associated buried ferrous debris which may be of archaeological interest.
70. The second of these two linear objects positioned further offshore (71) is located at the northern tip of The Leug outcrop. There are no associated magnetic anomalies associated with this sidescan sonar feature suggesting that this may represent a length of rope (4.8m long) possibly associated with abandoned fishing gear or mooring line.
71. The remaining 44 features are all described as 'objects'. These items may be of modern or natural origin (including potential boulders) but may also be of archaeological interest, associated with historic maritime activities, including fishing, or with the many documented losses of historic vessels known from the area. These objects range in size from 0.1m (7) up to 5.4m in length (57) and several are associated with magnetic anomalies indicating the presence of ferrous material. Without ground truthing these objects (though diver or remote operated vehicle (ROV) survey, for example), it is not possible to determine their archaeological interest or otherwise. However, all are located beyond the footprint of the proposed breakwaters and will not be impacted by the scheme.
72. In addition to the sidescan sonar anomalies there are a total of 251 magnetic anomalies identified by ALHS, of which 56 have been correlated with sidescan sonar anomalies (all beyond the dredging footprint), leaving 195 magnetic only anomalies (i.e. magnetic signatures without surface expression) indicating the presence of ferrous material, either of insufficient size to be identifiable on the sidescan sonar or multibeam data, or possibly buried. Thirty anomalies are located within the footprint of the proposed breakwaters ranging from 10nT up to 500nT in amplitude. As for the sidescan sonar anomalies above, these may represent modern or historic debris and without ground truthing it is not possible to determine the archaeological interest of these features. None of these magnetic anomalies are anticipated to represent Unexploded Ordnance (UXO), following a preliminary risk assessment carried out by UXO specialists Zetica for North Ayrshire Council which concluded that

the site and the surrounding area were not thought to pose a significant risk of bombing or historical military activity, therefore the site was deemed to have a low UXO hazard level.

15.5.3 Anticipated Trends in Baseline Conditions

73. It is important to recognise that the baseline physical environment is not static, but instead will exhibit considerable variability due to cycles or trends of natural change. These can include (for example) the short-term effects of storms and surges, the well-observed patterns in the movement of tides during spring and neap cycles and the longer-term effects of sea-level rise associated with global climate change.
74. Climate change is warming the oceans, the ice at the poles is melting, and sea levels are rising. We are also witnessing changes in the chemical composition of oceans, for example in their acidity or salinity. Moreover, currents are changing their patterns and, as a consequence, ecosystems are becoming increasingly more endangered. Climate change, therefore, is likely to have a direct impact on tangible cultural heritage. Higher global surface temperatures will dry out some submerged heritage items while sea-level rises will flood many coastal areas. Each one of the changes—namely, warmer waters, changes in currents, rising oceans and chemical changes—will have a different effect on the various materials constituting currently submerged archaeological sites.
75. According to the Scotland's National Marine Plan, Annex B, the use of the marine environment is spatially planned where appropriate and based on an ecosystems approach which takes account of climate change and recognises the protection and management needs of marine cultural heritage according to its significance. (HLMO 18). The Marine (Scotland) Act 2010 also recognises climate change and states in Article 4: Mitigation of and adaptation to climate change:
76. In exercising any function that affects the Scottish marine area under this Act, the Climate Change (Scotland) Act 2009 (asp 12), or any other enactment (a) the Scottish Ministers, and (b) public authorities, must act in the way best calculated to mitigate, and adapt to, climate change so far as is consistent with the purpose of the function concerned.
77. In Millport, onshore works will include flood walls and improvement works to existing coast protection structures. Works on the foreshore include shore-connected rock armour breakwaters and rock armour revetments. Offshore in Millport Bay, offshore rock armour structures will be built in the vicinity of the rock islets within the bay. These works, although likely to impact cultural heritage assets, are also essential to protect these cultural heritage assets from climate changes: increasing frequency of flood events, increased sea level and increased storm level surges.

15.6 Impact Assessment

15.6.1 Overview of Potential Impacts

78. Following the methodology presented in Section 15.4.3 above, the impacts associated with the archaeological and heritage assets described in Section 15.5 have been assessed and are presented in this section. Where measures over and above the embedded mitigation described in Section 15.6.2 are required to avoid, reduce, remedy/compensate or enhance the adverse impacts of the proposed scheme, this information has been provided.
79. The potential impacts assessed for construction and operation are as follows:
 - Impact 1: Direct impact to known heritage assets;
 - Impact 2: Direct impact to potential heritage assets;

- Impact 3: Impacts on settings and historic character; and
- Impact 4: Impacts associated with changes to physical processes.

80. Inter-related Impacts to seascape and landscape are considered in **Chapter 22 Seascape, Landscape and Visual Impact Assessment** (Impact 3). Impacts to coastal changes are considered in **Chapter 6 Marine Geology, Oceanography and Physical Process** (Impact 4).

15.6.2 Embedded Mitigation

81. Embedding mitigation into the proposed scheme design is a type of primary mitigation and is an inherent aspect of the EIA process. Additional mitigation measures are also included to follow best practice and policy requirements.
82. The development of the design of the proposed scheme has taken into consideration a number of design opportunities relevant to archaeology and cultural heritage. This includes consideration of the nature and extent of existing heritage assets to avoid them through design where possible (see Section 16.5.3 for further details).
83. Of particular note is the development of the design with respect to 'landscape design considerations' set out in detail in **Chapter 22** (Section 22.6.4). In summary, key design elements which will reduce potential setting impacts for heritage assets include:
- Elements are designed to be unobtrusive and to blend with the existing streetscape elements;
 - Care has been taken with colour and materials to ensure that they blend with existing features;
 - The design seeks to reduce the visual effects of new wall elements in views from the road by raising the level of open grassland between them and the road to screen them, where possible;
 - Linear walls are designed to function as seating elements where possible to further integrate and provide familiar elements into views; and
 - The proposed offshore breakwater is designed using natural rock which would emulate existing rock features offshore such as the Spoig, the Leug and other rock outcrops.
84. The methodology for additional mitigation will be agreed in consultation with the archaeological adviser to North Ayrshire Council and with HES as the archaeological adviser to MS-LOT. This is currently expected to comprise an archaeological Written Scheme of Investigation (WSI). The WSI will include provision for a protocol for archaeological discoveries in the event that any unexpected archaeological material is identified during the construction works.

15.6.3 Potential Impacts during Construction

15.6.3.1 Construction Impact 1: Direct impact to known heritage assets

85. There are no designated heritage assets within the footprint of the proposed scheme and no anticipated direct impacts to any of the listed buildings within the study area.
86. Where works are undertaken in close proximity to listed buildings, sufficient measures should be taken, such as the erection of suitable fencing or barriers, during construction to clearly demarcate construction areas in order to prevent accidental impacts from machine movements, for example. These areas include:
- Works for the proposed rock armour breakwater, the replacement of the masonry revetment and the new flood wall along Crichton Street in proximity to Nos. 12-28 Crichton Street (LB37831), covering eight separate properties;
 - Works for the rock armour revetment on the foreshore at Clyde Street in proximity to Nos 8 and 9 Quayhead (LB37834) and Nos 1-7 Clyde Street (LB37833);

- Works to the Strathwherry jetty (WoSAS ID 54526) which may impact elements of the Old Harbour at the Quayhead (LB37826); and
 - Works around Kames Bay adjacent to the listed buildings on Kelburn Street (Nos 6 to 13, LB37840 LB37841 and LB37842) and Devenport Place (Nos 14-25, LB37839).
87. With the implementation of the above measures there will be **no impact** to designated heritage assets during construction.
88. With respect to non-designated heritage assets, the design has been developed so as to avoid direct impacts to known heritage assets where possible. For example, proposed works to the Millport Pier and harbour complex (WoSAS ID 54525 and 43038) have been removed from the design and works to flood walls along Marine Parade will terminate prior to the Ninian Brae diving station (WoSAS ID 54462) and paddling pool (WoSAS ID 54490). Similarly, along West Bay Road, works, including the main site compound, proposed to be on the grass area near to the children's playground, will avoid the Little Brae pool (WoSAS ID 54513). As for the designated structures above, where works are undertaken in close proximity to these extant heritage assets sufficient measures should be taken, such as the erection of suitable fencing or barriers, during construction to clearly demarcate construction areas in order to prevent accidental impacts. No works are proposed in proximity to The Lorne (WoSAS ID 5226) or Keppel Port (WoSAS ID 54488).
89. With the exception of historic jetties and existing defences (discussed below) which themselves require repair as part of the coastal flood protection works, with the implementation of the above measures there will be **no impact** to extant and non-designated heritage assets during construction.
90. The Strathwherry jetty (WoSAS ID 54526) and the Leck (Crocodile) jetty (WoSAS ID 54527/54516) will both require refurbishment as part of planned improvements to existing defences. As described in **Chapter 5** (Section 5.2.3), the refurbishment work will include repointing or grouting of existing masonry and infilling of any voids. Additional mass concrete toe protection may be provided in some places, to a depth of about 1m below the beach level. Prior to finalisation of the approach, consultation will be undertaken with the heritage stakeholders to ensure that conservation measures are appropriate to the significance of these heritage assets. The original masonry and appearance of the structures are key to the heritage significance of the jetties and the approach should look to retain these features wherever possible, for example through the use of sympathetic materials and methods which aim to minimise the removal of, or damage to, original fabric of the jetties.
91. In accordance with the definitions presented in Table 15-4, these jetties are assessed as being of **low sensitivity** (heritage importance). Although the jetties are in poor condition, they retain importance for their original construction and are a significant part of the historic character of the town, having been used mainly by boat hirers and representing key local landmarks relevant to the past, and present, prevalence of the tourism industry.
92. Dependent upon the implementation of an appropriately sympathetic approach to their conservation (to be confirmed with heritage stakeholders), in securing their longevity and enabling their continued use, the proposed works will result in a positive impact upon the jetties. In accordance with the definitions in Table 15-5, the potential change is assessed to be of **high magnitude**. In a 'do nothing' scenario, the jetties would continue to decline and would ultimately be lost to the sea, leading to a complete loss of heritage significance. With the proposed works, however, the jetties would be preserved in situ.

93. The overall impact to these jetties, therefore, is assessed as being of **moderate beneficial** significance.

15.6.3.2 Construction Impact 2: Direct impact to potential heritage assets

94. Direct impacts to previously undiscovered, buried or submerged archaeology may occur during the following construction activities:
- dredging to remove loose sands and gravels from the sea bed prior to constructing the breakwater;
 - anchoring of barges delivering materials for the works, and other vessels required in construction;
 - jacking-up of barge for construction of the offshore breakwaters;
 - excavation of beach materials;
 - excavation and reinstatement of the existing footpath/promenade; and
 - excavations for the flood wall foundations.
95. The potential for material to be present within the footprint of onshore works is anticipated to be low. Nonetheless, as identified by North Ayrshire Council (2013a) some caution should be taken where groundworks are required.
96. Offshore, there is relatively high potential for the presence of wrecks and maritime finds within the study area. There are no sidescan sonar anomalies within the footprint of the scheme offshore, although there are a number of magnetic anomalies which may represent isolated finds from historic vessels or wrecks, but which may equally represent modern debris.
97. The heritage importance of any buried or submerged remains which may be present are currently unknown. However, the presence of significant buried remains or submerged wrecks is limited by the nature of the sub-surface geology, both onshore and offshore, and the nature of archaeological material is anticipated to be limited to isolated finds rather than extensive structures or sites. These types of finds are considered likely to be of local importance and for the purposes of this assessment, therefore, potential finds are assessed as being of **low sensitivity**.
98. It is anticipated that if remains are present, and if they are encountered during works, the nature of their discovery will result in removal from their current burial context and loss of heritage significance. As a precautionary measure, therefore, it is anticipated that this could result in a **high magnitude**, and consequently, a **moderate adverse** impact.
99. In order to mitigate this potential impact, it is recommended that a Protocol for Archaeological Discoveries (PAD) be implemented to allow site staff to report any discoveries of chance finds and to ensure that unexpected remains can be effectively addressed. Due to the low potential for encountering archaeological remains a full watching brief is not recommended. Rather, the PAD should be supported by a programme of archaeological monitoring during groundworks and training to construction staff, site crews and work teams with regard to the practical application of the protocol in their day to day work. The PAD and the approach to monitoring will be agreed in advance of construction with heritage stakeholders. However, it is anticipated that specific objectives of the protocol will include:
- Ensuring all staff and contractors are fully aware of the mechanisms for reporting under the protocol and are provided with advice on identifying finds, 'first-aid for finds' and initial recording;
 - Ensuring that all discoveries are addressed in an efficient and proportionate manner to prevent adverse effects from further impacts associated with the proposed scheme; and
 - Ensuring that details of the discovery(ies) are forwarded to heritage stakeholders (including WoSAS and HES) and to the Receiver of Wreck and the MOD (if required), and any other stakeholders, as relevant and required.

100. Although the extent of any residual impact will depend on the presence and nature of any archaeological remains encountered during works, with the appropriate application of the PAD all archaeological material will be captured and recorded, thus reducing the loss of heritage significance. With the application of appropriate mitigation, therefore, the residual impact will, therefore, be **minor adverse**.

15.6.3.3 Construction Impact 3: Impacts on settings and historic character

101. Potential impacts to the setting of heritage assets, and the overall setting of the Conservation Area, and changes to the historic character of the study area are assessed with reference to how that character could change as a result of the project and how the ability to perceive that historic character could be affected by works.
102. Following the HES (2016) guidance on setting, this assessment has been undertaken in three stages, as presented below.

Stage 1: identify the historic assets that might be affected by the proposed development

103. The ZTV presented in **Chapter 22** shows limited onshore theoretical visibility within the 2km study area due to the low-lying nature of the proposed scheme in combination with the surrounding built development, areas of woodland and rising landform around the bay which serve to screen the proposed scheme. Based upon this patchy and very limited intervisibility between the proposed scheme and the area behind the first row of buildings facing the shore, heritage assets located landwards of the coastal road and foreshore are not considered further as part of this assessment.
104. Offshore, theoretical visibility spans across the open expanse of water in the bay and beyond. However, there are no known and extant heritage assets offshore for which setting is considered to form part of their heritage significance. The settings assessment is, therefore, limited to heritage assets above low water.
105. The heritage assets taken forward for specific settings assessment are, therefore as follows:
- Nos 12-28 Crichton Street (LB37831);
 - Nos 8 and 9 Quayhead (LB37834) and Nos 1-7 Clyde Street (LB37833);
 - The Old Harbour at the Quayhead (LB37826);
 - Listed buildings on Kelburn Street (Nos 6 to 13, LB37840 LB37841 and LB37842) and Devenport Place (Nos 14-25, LB37839);
 - Millport Pier and harbour complex (WoSAS ID 54525 and 43038);
 - Ninian Brae diving station (WoSAS ID 54462) and paddling pool (WoSAS ID 54490);
 - Little Brae paddling pool (WoSAS ID 54513); and
 - Strathwherry jetty (WoSAS ID 54526) and Leck (Crocodile) jetty (WoSAS ID 54527/54516).
106. The setting of the Millport Conservation Area, including potential changes to its character are also considered. The area considered equates to the fourth main character area within the Conservation Area (North Ayrshire Council, 2013a: 43-44, 2013b: 10-11):
107. The old harbour and the promenade, the interface between town and sea including: the Pier, the Old Harbour at the Quayhead, the drying greens at Clyde Street and Crichton Street, the 1929 sea wall, the paddling pool on Marine Parade and the play area and paddling pool at West Bay.

Stage 2: define and analyse the setting by establishing how the surroundings contribute to the ways in which the historic asset or place is understood, appreciated and experienced

108. The Conservation Area Character Appraisal (North Ayrshire Council, 2013a: 45), describes Millport as the best-preserved example of a Firth of Clyde holiday resort, and identifies the following key areas of significance associated with Millport:
- The late 1700s plan of the original settlement reflects developments in Scottish town planning;
 - The development of the town is tied up with the growth of trade between Scotland's West Coast and the colonies on the Eastern Seaboard of America (the Revenue Cutters were based at Millport so as to prevent smuggling and ensure that taxes derived from this profitable trade were secured for the UK Exchequer);
 - The later Victorian shift towards tourism with the establishment of hotels and the construction of villas along both Marine Parade and West Bay;
 - The rise of day trippers and the 'Doon the Watter' holiday as a social phenomenon promoted by the rival Railway companies promoting steamer services from various pierheads along the Clyde Coast.
 - The magnificent natural setting, within an estuary at the junction of a great geological boundary, which controls key approaches to the entrance to the upper Clyde.
109. The Character Appraisal concludes that the Conservation Area is of high regional significance for these reasons. Similarly, the setting of all of the heritage assets located within the coastal/foreshore area are considered to form a fundamental part of their heritage significance with respect to these key areas.

Stage 3: evaluate the potential impact of the proposed changes on the setting, and the extent to which any negative impacts can be mitigated.

110. A detailed consideration of construction activities upon the viewpoints in Table 15-3 is presented in **Chapter 22** (Table 22-14).
111. During construction, the setting of all heritage assets along the seafront will be disrupted by the works (i.e. from the presence of work teams and machinery and the associated disturbance to how an asset is experienced in terms of visual impact, noise of machinery and dust and smells associated with the works).
112. This will result in an appreciable loss of the heritage assets significance for the duration of construction and a **medium magnitude** impact.
113. The DBA (**Appendix 15.1**) concluded that the settings of individual assets within the town, and the historic character of the Conservation Area should be considered to be of high regional importance. However, although the impact will be continuous (the impact persists over the life of the activity causing it), it will also be short-term (the period over which the impact is experienced is temporary and lasts for the period of construction or less) and limited to the immediate area of the works. The total construction period is estimated to be about 18 months, commencing in Autumn 2021 and, in addition, the project design will also seek to minimise local disruption with measures including use of barges to deliver machinery and materials by sea and the erection of fences around work areas. The assessed heritage assets, therefore are considered to be of **medium sensitivity** to these temporary disturbances given their proximity to the seafront and the associated traffic and activities associated with the immediately adjacent urban environment.

114. The residual impact to the setting of the Conservation Area and individual heritage assets is, therefore, considered to be **moderate adverse** during construction.

15.6.3.4 Construction Impact 4: Impacts associated with changes to physical processes.

115. Changes in coastal processes can lead to re-distribution of erosion and accretion patterns, while changes in tidal currents, for example, may affect the stability of nearby morphological and archaeological features. Indirect impacts to heritage assets may occur if buried heritage assets become exposed to marine processes, due to increased wave/tidal action and erosion, for example, as these will deteriorate faster than those protected by sediment cover. Conversely, if increased sedimentation results in an exposed site becoming buried this may be considered a beneficial impact.
116. **Chapter 6 Marine Geology, Oceanography and Physical Processes** has assessed that as a result of the construction of the proposed scheme, additional sediment deposition on the sea bed local to the scheme would be extremely small in thickness (less than a millimetre). These sediments are then highly likely to become re-entrained by waves and transported away. The deposition of sediments would extend within a few hundred metres of each release point), but the thickness of deposits would be even smaller than close to the scheme. In such a highly dynamic area, this would be an immeasurably small change.
117. As a consequence, there will be **no impact** to offshore heritage assets.

15.6.4 Potential Impacts during Operation

15.6.4.1 Operation Impact 1: Direct impact to known heritage assets

118. No works will be carried out during operation, as a consequence, there will be **no impact** to known heritage assets.

15.6.4.2 Operation Impact 2: Direct impact to potential heritage assets

119. During operation, maintenance will be undertaken as required to check the integrity of the flood walls, sea walls and breakwater, and conduct any remedial works required. As described in **Chapter 5** (Section 5.3.1), maintenance works will be low level and there are **no further impacts anticipated** beyond those during construction.

15.6.4.3 Operation Impact 3: Impacts on settings and historic character

Stage 1: identify the historic assets that might be affected by the proposed development

120. The heritage assets anticipated to be affected by the presence of the scheme during operation are the same as those identified for the construction phase above (Section 15.6.3.3).

Stage 2: define and analyse the setting by establishing how the surroundings contribute to the ways in which the historic asset or place is understood, appreciated and experienced

121. As for construction above, the setting of all of the heritage assets located within the coastal/foreshore area, including the Conservation Area are considered to form a fundamental part of their heritage significance.

Stage 3: evaluate the potential impact of the proposed changes on the setting, and the extent to which any negative impacts can be mitigated

122. A detailed consideration of operation impacts upon the viewpoints in Table 15-3 is presented in **Chapter 22** (Table 22-14).
123. Also, in **Chapter 22** (Section 22.6.6.2) 'Key Features' of the Conservation Area are addressed as follows:
- **War Memorial (Millport Cenotaph) and Crazy Golf at Guildford Street.** Parts of the proposed scheme would be visible from this area of the promenade. The magnitude of change would be Low;
 - **Strathwherry Jetty.** Parts of the proposed scheme would be visible from this area of the promenade. The magnitude of change would be Low;
 - **Crocodile Rock.** The magnitude of change would be Low to Negligible;
 - **The Leck** There would be upgrades and repair to the jetties at either side of The Leck. The magnitude of change would be Low to Negligible;
 - **Kames Bay esplanade.** This area would be enhanced as part of the proposed scheme. There would be an increase in ground level in this area such that the area of grassland would be re-graded near to the coastal edge and stepped revetments acting as terraced seating would be added. This would not change the character of the area or the use of the promenade in this location and the magnitude of change would be Low;
 - **Marine Parade paddling pool at Kames Bay.** Parts of the proposed scheme would be visible from this area. The magnitude of change would be Negligible;
 - **Play area and model boat pond at West Bay.** Parts of the proposed scheme would be visible from this area. The magnitude of change would be Negligible;
 - **Millport Bay and the Eileans.** There would be No Change to the main characteristic of the sea ebbing and flowing into the Conservation Area. The magnitude of change would be Negligible;
 - **Green Character.** The proposed scheme would introduce elements to the promenade including sections of low-lying flood wall that would double as seating. Some of the flood wall would be on the seaward side of a slight increase in ground level where it adjoins open grassland. Stepped revetments would also act as areas of terraced seating onto the foreshore in some locations. The magnitude of change would be Low; and
 - **Landscape Setting.** The proposed coastal setting would continue to introduce high-quality elements to the promenade and retain and enhance the visual amenity of the town and its scenic approach. The magnitude of change would be Low.
124. It is noted that within the recommendations, the 'Millport Conservation Area Appraisal' states that:
125. There is a need to improve the standard of, and better co-ordinate, street surfaces, street furniture and signage in select locations throughout the Conservation area..."
126. **Chapter 22** concludes that the proposed scheme addresses this recommendation with increased cohesion of elements across the middle and eastern edges of the bay and the area around Foul Port to the west of the bay.
127. The setting of the individual heritage assets along the seafront and foreshore within the Conservation Area would similarly be impacted by the introduction of the proposed scheme elements. With the application of the proposed embedded mitigation (Section 15.6.2) there will be no change to the historic character of these heritage assets and it is anticipated that positive changes from the introduction of increased seating, foreshore access and a sense of cohesion to the experience of the area, will result in a positive impact to the setting of the heritage assets. As determined for the Conservation Area above, the magnitude of this change ranges from **negligible to low** with the importance of designated assets considered to be **high** and non-designated heritage assets

considered to be **low**. The positive benefit to setting is, therefore, considered to range from **negligible** to **moderate significance**.

15.6.4.4 Operation Impact 4: Impacts associated with coastal processes

128. For operation, **Chapter 6 Marine Geology, Oceanography and Physical Processes** assesses potential changes to sediment transport and erosion/accretion patterns due to the presence of the scheme. **Chapter 6** concludes that, while changes to will occur, there would be little change in predicted wave heights and only small and local changes to tidal currents in Kames Bay and at Kames Bay Beach. The scheme would reduce or accelerate tidal current velocities locally, but given the baseline currents are already low velocity, these local changes would not influence the wider sedimentation patterns in Kames Bay. As the amount of sediment transported is small, the anticipated impact of the scheme on the natural sediment transport system of the identified receptors groups is negligible impact.
129. As a consequence, there will be **no impact** upon heritage assets during operation as a result of changes to sedimentation or seabed morphology.

14.6.5. Potential Impacts during Decommissioning

130. The structures forming the coastal flood prevention scheme would be designed to have a life of at least 50 years. As the purpose of the scheme is for flood protection, it is unlikely that it would be decommissioned entirely; it is more likely that the scheme would be repaired, or sections replaced or improved as needed in the future. No decision has been made regarding the final decommissioning policy for the offshore infrastructure of the scheme as it is recognised that industry best practice, rules and legislation change over time.
131. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. As discussed in **Chapter 5 Project Description**, a decommissioning plan will be submitted for approval by the regulatory authorities prior to construction. As such, impacts no greater than those identified for the construction phase are expected for the decommissioning phase.

15.7 Cumulative Impact Assessment

132. Cumulative impacts may occur where archaeological heritage assets also have the potential to be impacted by other existing, consented and/or proposed developments or activities. The key consideration is whether there is spatial or temporal overlap of effects from projects or schemes on the same heritage assets. Therefore, unless there is a spatial overlap there is no pathway for cumulative impact between spatially separated projects or schemes.
133. Projects identified for CIA comprise the diversion of excess flows from the Mill Burn through flow control structures due to be completed in 2020, permission for a 5MW solar farm to the east of Wee Minnemour, 1.5km to the north of the Millport seafront and the decommissioning marine structures and alterations to existing structures at Hunterston on the mainland. As there are no spatial or temporal overlaps with these schemes there are no anticipated cumulative impacts with respect to archaeology and cultural heritage. In addition, public realm works within the Conservation Area are also planned which may further add to the positive impacts associated with the proposed scheme for Millport.

15.8 Summary

134. A summary of the potential impacts and proposed mitigation is presented in Table 15-8.

Table 15-8 Potential Impacts Identified for archaeology and cultural heritage

Potential Impact	Heritage asset	Sensitivity	Magnitude	Significance	Examples of Potential Mitigation Measures	Residual Impact
Construction						
Impact 1: Direct impact to known heritage assets	Designated heritage assets	High	N/A	N/A	Avoided through design, fencing/barriers to prevent accidental damage	No impact
	Non-designated heritage assets	Low				
	Strathwherry jetty (WoSAS ID 54526) and Leck (Crocodile) jetty (WoSAS ID 54527/54516)	Low	High	Moderate beneficial	Preservation in situ, sympathetic design (agreed in consultation with heritage stakeholders)	Moderate beneficial
Impact 2: Direct impact to potential heritage assets	Previously undiscovered, buried or submerged archaeology	Low	High	Moderate adverse	PAD and monitoring during ground works	Minor adverse
Impact 3: Impacts on settings and historic character	Millport Conservation Areas and heritage assets along the seafront and foreshore	Medium	Medium	Moderate adverse	Measures to minimise local disruption	Moderate adverse
Impact 4: Impacts associated with changes to physical processes	Heritage assets on the foreshore and marine areas	N/A	N/A	N/A	N/A	No impact
Operation						
Impact 1: Direct impact	Designated and non-	N/A	N/A	N/A	N/A	No impact

Potential Impact	Heritage asset	Sensitivity	Magnitude	Significance	Examples of Potential Mitigation Measures	Residual Impact
to known heritage assets	designated heritage assets					
Impact 2: Direct impact to potential heritage assets	Previously undiscovered, buried or submerged archaeology	N/A	N/A	N/A	N/A	No impact
Impact 3: Impacts on settings and historic character	Millport Conservation Areas and heritage assets along the seafront and foreshore	Low/High	Negligible to Low	Negligible to moderate beneficial	Increased seating, foreshore access and a sense of cohesion to the experience of the area.	Negligible to moderate beneficial
Impact 4: Impacts associated with changes to physical processes	Heritage assets on the foreshore and marine areas	N/A	N/A	N/A	N/A	No impact
Decommissioning						
As a flood prevention scheme, the Proposed Scheme is anticipated to be maintained rather than removed, and therefore decommissioning activities are currently unknown. This will be assessed at the time of any decommissioning activities required.						

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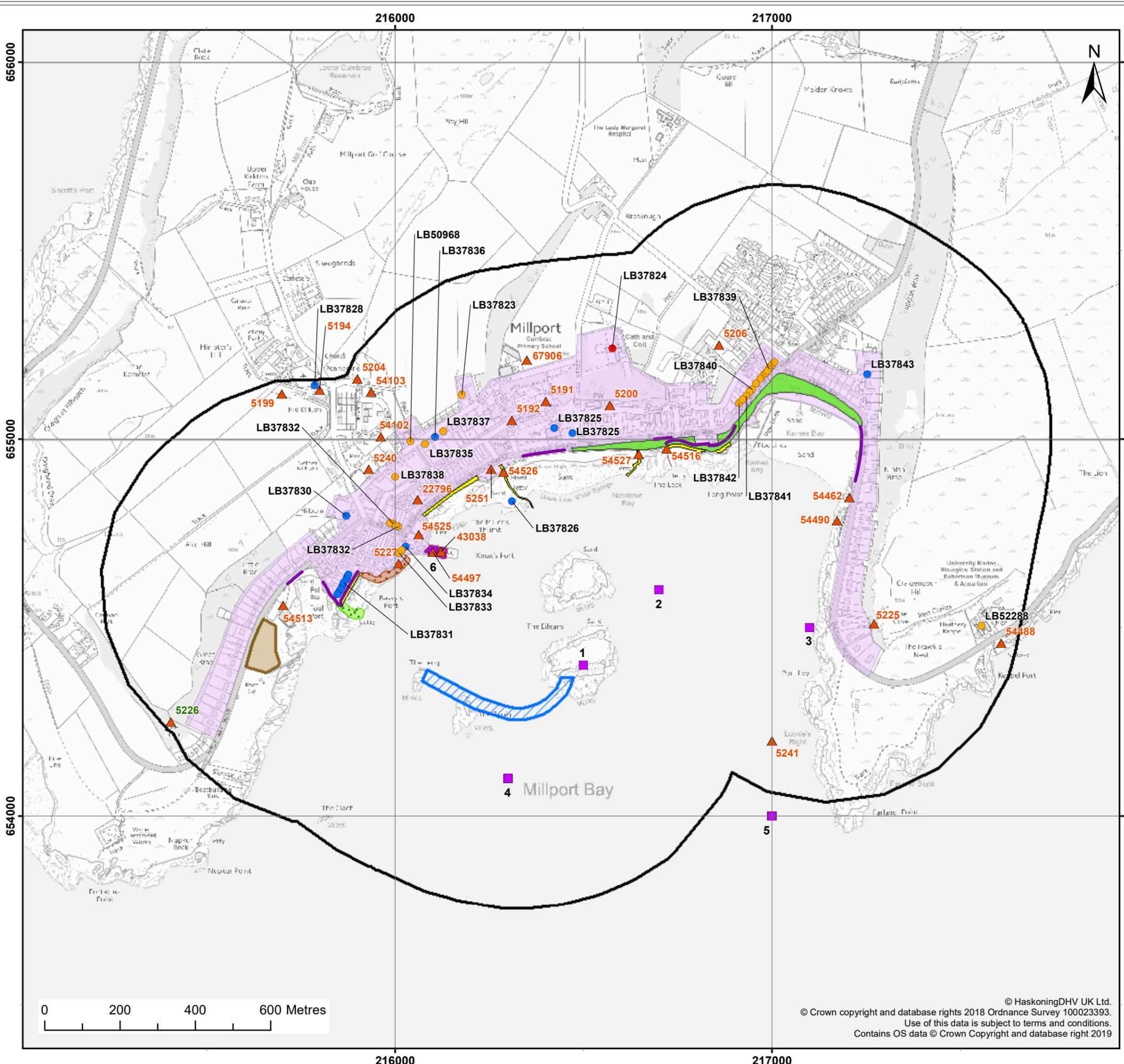
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Legend

- Study Area
- Potential Site Compound
- Potential Materials Storage
- Flood Walls
- Rock Breakwater
- Rock Revetment
- Modifications to existing coast protection structures
- Modifications to existing promenade and grass areas
- Offshore Breakwater
- Non-Designated Records
- Recorded Losses

Designated Records (Listed Buildings)

- A
- B
- C
- Conservation area

Client: North Ayrshire Council
 Project: Millport Flood Protection Scheme - EIA Report

Title: Heritage Assets

Figure: 15.1 Drawing No:

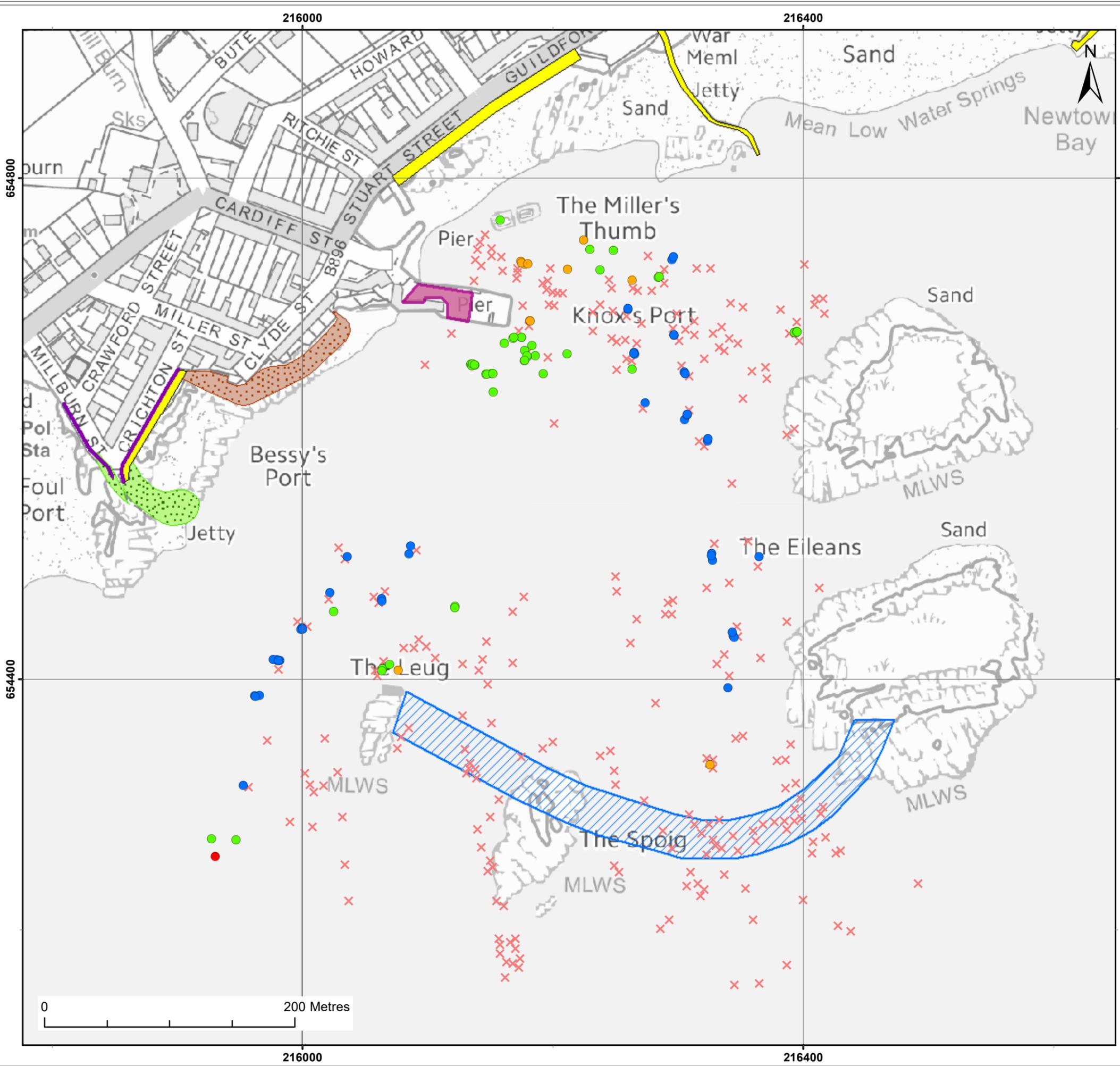
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
1	04/02/2020	TC	AS	A3	1:10,000
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Co-ordinate system: British National Grid



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- Legend**
- Study Area
 - Potential Materials Storage
 - Flood Walls
 - Rock Breakwater
 - Rock Revetment
 - Modifications to existing coast protection structures
 - Modifications to existing promenade and grass areas
 - Offshore Breakwater
 - x Magnetometer Anomalies
- Sidescan Sonar Anomalies**
- Linear object
 - Mooring block
 - Object
 - Tyre

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Distribution of Sidescan Sonar and Magnetometer Anomalies

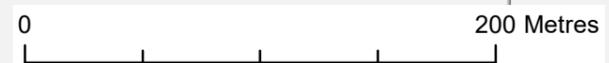
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REPORT

Millport Coastal Protection Scheme

Appendix 15.1 Archaeology and Cultural Heritage Desk Based Appraisal

Client: North Ayrshire Council

Reference: PB4749-RHD-ZZ-XX-RP-Z-0015.1

Status: 0.1/Final

Date: 20 February 2018

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Document short title: Millport Archaeology DBA
Reference: PB4749-RHD-ZZ-XX-RP-Z-0015.1
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Date: 20 February 2018
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Project number: PB4749
Author(s): Victoria Cooper

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Date / initials: 16 February 2018 / FS

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Classification

Project related



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- Appendix A: Gazetteer of Listed Buildings
- Appendix B: Gazetteer of Non-Designated Heritage Assets
- Appendix C: Gazetteer of Reported Losses

Executive Summary

This report has been compiled to present the results of a desk-based appraisal and site visit undertaken in order to establish the archaeological and cultural heritage baseline which will inform an Environmental Impact Assessment (EIA) for the proposed Millport Flood Protection Scheme. The proposed scheme includes a number of elements, specifically:

- Flood walls (landside);
- Improvement works to existing coast protection structures (landside);
- Construction of shore-connected rock armour breakwaters and revetments (foreshore); and,
- Construction of either a rock armour breakwater extension to Millport Pier or an offshore breakwater in the vicinity of the rock islets.

The development of Millport can be traced from its origins in 1634 which followed a decision to place a revenue cutter in the Firth of Clyde and an accompanying requirement for a building programme to house the crews. From the later 18th century through the 19th and 20th centuries the town transformed from a small port settlement, with an economy based on agriculture, fishing and quarrying, into one of the best known 'Doon the Watter' tourist resorts, up to the present day.

The Study Area for this initial appraisal of archaeology and heritage comprises the footprint of the potential landside, foreshore and offshore works plus a 500m buffer. Within this Study Area there are 43 Listed Buildings, including the Category A 'Cathedral of the Isles' and Millport is also designated as a Conservation Area. In addition, there are 27 further records of non-designated heritage assets recorded by the West of Scotland Archaeology Service (WoSAS) Historic Environment Record. Of these, 11 relate to findspots of archaeological artefacts and material, five to documentary references which may indicate the location of buried archaeological remains or former heritage assets and 11 which represent extant heritage assets including two paddling/leisure pools and a number of pier/jetties/harbour installations.

The potential for previously unknown buried archaeological remains onshore is anticipated to be low, associated with made ground, marine beach deposits and raised beach deposits only. However, there has been no systematic archaeological investigation to determine the condition and extent of any surviving archaeological remains within Millport and caution is recommended for development proposals which could further impact any surviving evidence. As a minimum, a Protocol for Archaeological Discoveries (PAD) supported by archaeological monitoring (watching briefs) is recommended to ensure that unexpected archaeological discoveries can be recorded prior to any loss or where possible avoided. A key area of consideration is that impacts to extant heritage assets should be avoided through design and in-advance siting considerations of the final scheme (wherever possible) and, if works to the old pier are selected in the final scheme design, then further consultation with HES and WoSAS will be required to ensure that the pier is recorded to an appropriate level prior to any loss or alteration of historic fabric.

Offshore, there is no evidence for deposits relating to submerged prehistoric land surfaces and, as such, the potential for archaeology offshore is limited to finds of wreck material and maritime related artefacts. Two finds of potential maritime origin and possible archaeological interest were observed on the foreshore near the Old Harbour during the site visit. It is recommended that marine geophysical data acquired for the proposed scheme in 2017 be archaeologically assessed to determine the potential for the presence/absence of material of archaeological interest on the seafloor. During all works, the implementation of the PAD will ensure that unexpected discoveries can be effectively addressed and managed.

The potential for indirect impacts to heritage assets associated with potential changes to coastal and marine processes has been identified. This will be fully assessed as part of the EIA based upon the results of coastal processes modelling and assessment which will be undertaken for the proposed scheme.

Following consultation with Historic Environment Scotland (HES) it was concluded that potential impacts to the setting of their historic interests could be scoped out of the assessment, However, the only heritage asset within the Study Area which represents a historic interest for HES is the Category 'A' Cathedral of the Isles. Therefore, the potential for change to the setting of non-designated heritage assets, Category 'B' and 'C' Listed Buildings and to the historic character of the Conservation Area, has been reviewed as part of this initial appraisal work. Since the construction of the new ferry slip in 1972 in the north of Cumbrae, and the decline of the direct ferry route between Largs and Millport, the setting and character of Millport, defined by 'the hustle and bustle of boats coming into the pier' as approached by the sea, has been replaced with the more common and current approaches to Millport by road.

There remains, however, four main character areas within the town:

- 1 The historic core of the town;
- 2 The grounds of the Cathedral of the Isles and the Garrison;
- 3 A series of detached villas associated with Victorian and Edwardian 'suburban extensions'; and
- 4 The old harbour and the promenade.

A landscape and visual impact assessment will be undertaken for the EIA and it is recommended that the results of this specialist assessment are reviewed to inform further assessment of the potential impact upon the setting and historic character of the Conservation Area (in particular the old harbour, pier and promenade) in further consultation with WoSAS.

1 Introduction

1.1 Project Background

In 2015, Royal HaskoningDHV, on behalf of North Ayrshire Council completed an assessment of coastal flood risk and an appraisal of management options for Millport. These reports concluded that Millport is at risk from coastal flooding due to wave overtopping which occurs during storms originating to the south or south west within the Firth of Clyde. A range of coastal flood risk management options were assessed prior to selection of the proposed scheme, which includes works on land, works on the foreshore and works within the coastal waters at Millport Bay (Figure 1 and Figure 2). In summary, the proposed scheme includes a number of elements, specifically:

- Flood walls (landside);
- Improvement works to existing coast protection structures (landside);
- Construction of shore-connected rock armour breakwaters and revetments (foreshore); and,
- Construction of either a rock armour breakwater extension to Millport Pier (Option 1b) or an offshore breakwater in the vicinity of the rock islets (Option 3a).

An environmental scoping report for the proposed 'Millport Flood Protection Scheme' (hereafter referred to as the proposed scheme) was submitted in March 2017 (Royal HaskoningDHV, 2017a). The scoping report specified that the archaeological significance of the proposed scheme footprint will be assessed through a site-specific desk based assessment (appraisal) and that a walkover / site visit will be undertaken as part of this work. This report has been compiled to present the results of an initial desk-based appraisal and site visit (undertaken in November 2017).

1.2 Aims and Objectives

The aim of this appraisal is to establish a baseline for archaeology and cultural heritage which will form the basis of a full assessment of potential impacts to heritage assets and their settings from the proposed scheme as part of the Environmental Impact Assessment (EIA), and reported upon within the subsequent and relevant Environmental Statement (ES) chapter. The objectives are as follows:

- To establish the planning and legislative context relevant to the consideration of archaeology and cultural heritage;
- To collate information within a defined Study Area and to establish the known and potential baseline for archaeology and cultural heritage;
- To establish the potential significance of heritage assets and their settings (and how setting may contribute to heritage significance, where relevant);
- To provide a high-level description of potential impacts associated with elements of and likely activities associated with the proposed scheme; and
- To provide recommendations for mitigation options and for consultation with historic environment advisors (consultees/regulators) as part of the EIA process.

Figure 1: Heritage Assets Option 1b

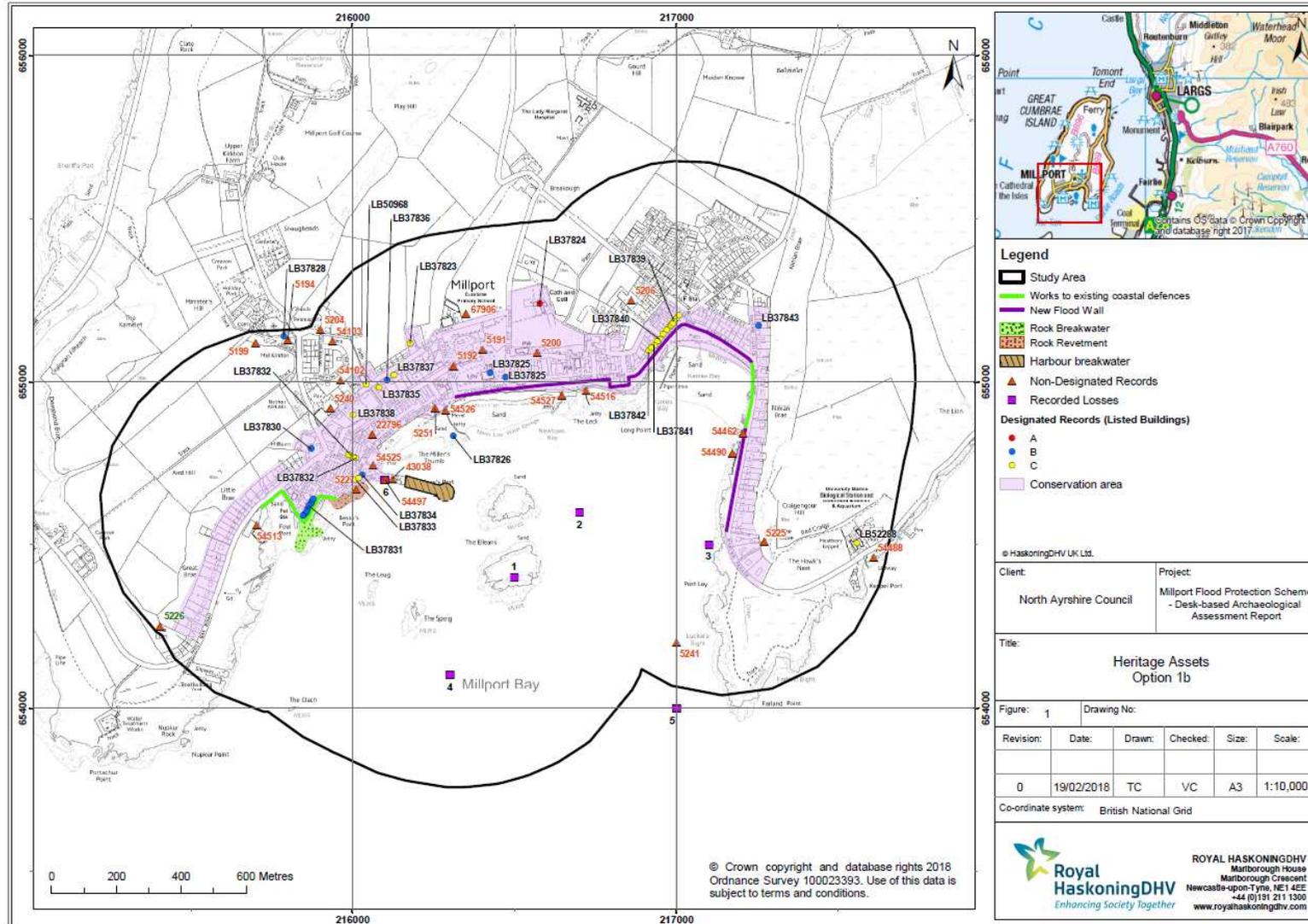
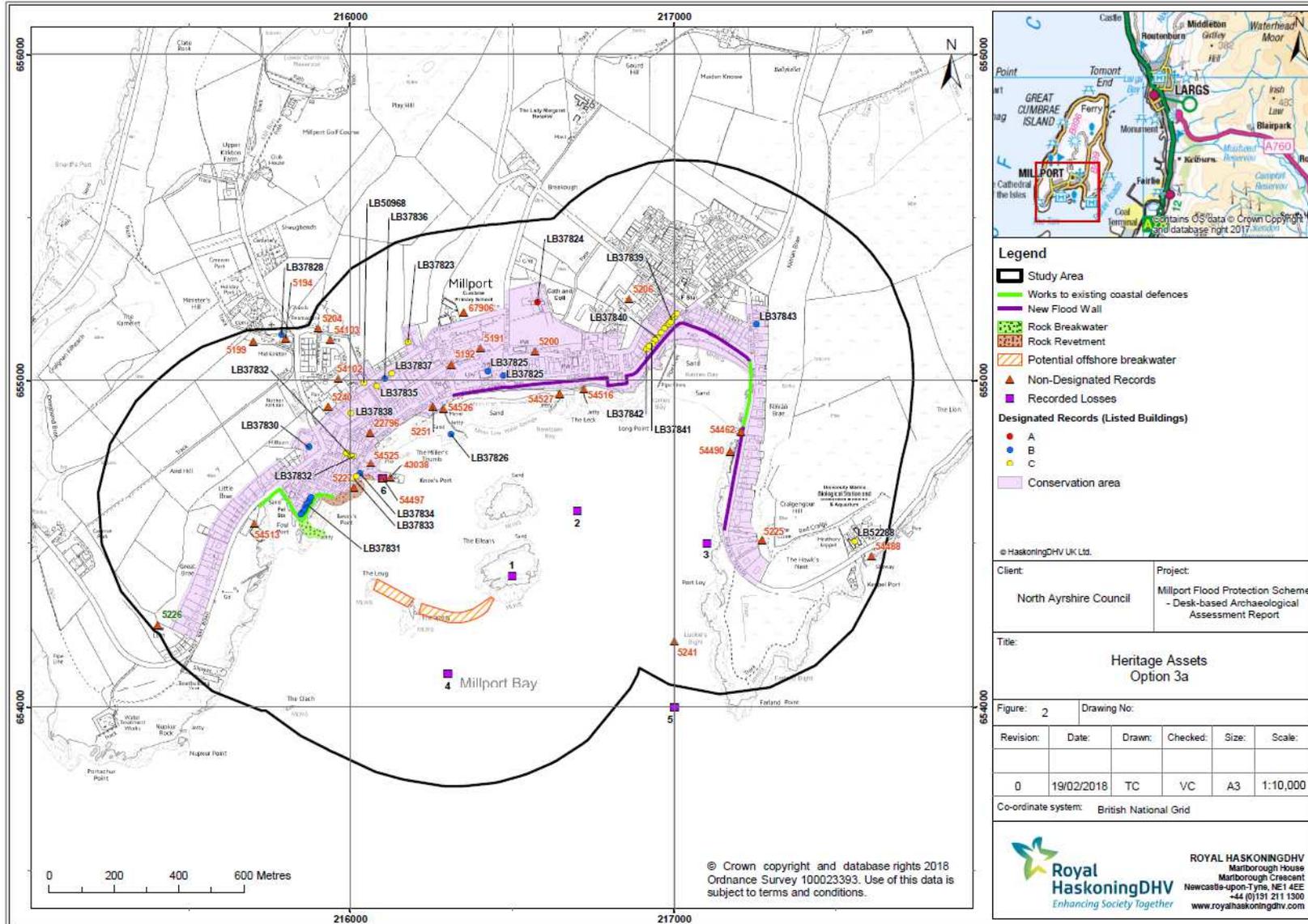


Figure 2: Heritage Assets Option 3a



1.3 Study Area

The Study Area for the assessment of archaeology and cultural heritage comprises the footprint of the potential landside, foreshore and offshore works plus a 500m buffer within which data and sources of information relevant to establishing the baseline conditions have been examined (Figure 1 and Figure 2).

The town of Millport is located at the southern end of the island of Great Cumbrae, 2.5km offshore from mainland North Ayrshire in the Firth of Clyde. The western part of the Study Area comprises predominantly rocky foreshore known as Bessy's Port, and includes Millport Pier and a small harbour. The central part of the Study Area comprises a sandy beach, known as Newtown Bay. Approximately 400m offshore of Newtown Bay, there is a group of small uninhabited rocky islands known as "The Eileans". Further east there is another area of rocky foreshore known as Long Point, and the eastern end of the Study Area is a sandy embayment known as Kames Bay.

1.4 Data Sources

The assessment was undertaken with reference to:

- Records acquired from the WoSAS Historic Environment Record (HER) on 1st February 2018 (Extract ID: RH1089);
- Records of OceanWise wrecks and obstructions derived from the United Kingdom Hydrographic Office (UKHO) data provided by emapsite.com (Licence Number: EK001-460007);
- Records of reported losses of vessels accessed from the National Record of the Historic Environment (NRHE) via Canmore, compiled and managed by Historic Environment Scotland (<https://canmore.org.uk>);
- The North Ayrshire Council Conservation Area Appraisal and Conservation Management Plan for the Millport Conservation Area;
- Archaeological reports for investigations undertaken within the Study Area;
- Relevant online and secondary sources; and
- The results of a site visit undertaken in November 2017 by Royal HaskoningDHV and presented in this report.

2 Planning and Legislation

It is understood that works will require a Marine Licence to be granted by Marine Scotland for all works below Mean High Water Springs (MHWS) and planning permission to be granted by Scottish Ministers for works above Mean Low Water Springs (MLWS).

The Scottish Government's policy on the historic environment is set out in the document *Our Place in Time: The Historic Environment Strategy for Scotland* (Scottish Government, 2014), which sets out a vision from the Scottish Government that:

Scotland's historic environment is understood and valued, cared for and protected, enjoyed and enhanced. It is at the heart of a flourishing and sustainable Scotland and will be passed on with pride to benefit future generations.

This vision is underpinned by the following high-level aims:

- Understanding - By investigating and recording our historic environment to continually develop our knowledge, understanding and interpretation of our past and how best to conserve, sustain and present it.
- Protecting - By caring for and protecting the historic environment, ensuring that we can both enjoy and benefit from it and conserve and enhance it for the enjoyment and benefit of future generations.
- Valuing - By sharing and celebrating the richness and significance of our historic environment, enabling us to enjoy the fascinating and inspirational diversity of our heritage.

The primary current legislation relating to the historic environment in Scotland is the Historic Environment Scotland Act 2014 which amended the:

- Ancient Monuments and Archaeological Areas Act 1979;
- Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997;
- Environmental Assessment (Scotland) Act 2005; and
- Marine (Scotland) Act 2010.

The requirements relating to the Act are covered by Historic Environment Circular 1 (Historic Environment Scotland, 2016). Key aspects of the Act as described in this Circular and which are of potential relevance to the appraisal presented in this report are:

- Scheduling is the recognition through the Ancient Monuments and Archaeological Areas Act 1979 that a monument is of national importance;
- Listing is the recognition through the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 that a building or structure is of 'special' architectural or historic interest;
- Sites of national importance can be added to the inventory of historic battlefields or the inventory of gardens and designed landscapes ('the inventories') under the Ancient Monuments and Archaeological Areas Act 1979; and
- Marine historic assets of national importance which are situated in Scottish territorial waters (0–12 miles) can be designated as historic marine protected areas under the Marine (Scotland) Act 2010.

The lead public body for the historic environment in Scotland is Historic Environment Scotland (HES) established via the Historic Environment Scotland Act 2014. HES are responsible for the designation of nationally important assets (Listed Buildings and Scheduled Monuments) apart from historic marine protected areas, where Historic Environment Scotland act as an advisor to the Scottish Ministers who retain the power to designate such areas. Their role in the planning system is to provide advice on the potential impacts on the historic environment with respect to developments which may affect:

- a historic garden or designed landscape;
- the site of a scheduled monument or its setting;
- a Category 'A' Listed Building or its setting;
- a historic battlefield;
- land which is situated within 800 metres of any Royal Palace or Park, and which might affect the amenities of that Palace or Park; and
- a World Heritage Site.

Historic Environment Scotland is also a consultation body for all Environmental Impact Assessment

regimes in Scotland.

Planning advice to North Ayrshire Council with respect to the historic environment is also provided by the West of Scotland Archaeology Service (WoSAS). The document *Procedural Guidance for Archaeology and Development* (WoSAS, 2009) provides additional detailed information on the standard procedures adopted by all the WoSAS Member Councils to handle applications for planning consent, which have been identified as raising archaeological issues. The guidance is applicable: 'to all archaeological sites and landscapes both above and below ground; unlisted historic buildings or other built structures; designed gardens, cemeteries, or landscapes; battlefield or skirmish sites; and sites with historical or cultural associations'. This guidance is relevant to supporting the delivery of archaeology and cultural heritage objectives established through Local Development Plans.

North Ayrshire Council is currently progressing work for a new Local Development Plan (LDP2), which is intended to be adopted in 2019. The existing Local Development Plan adopted in 2014 by North Ayrshire Council aims to:

- Protect, conserve and enhance Conservation Areas in towns and villages;
- Encourage buildings of special architectural or historic interest to be maintained in good repair and protect them from insensitive development;
- Conserve important historic designed landscapes and their settings;
- Conserve the setting of scheduled ancient monuments and other sites of archaeological significance; and
- Enhance the quality of the historic environment through design.

Account has been taken of the above policy, legislation and associated guidance framework in undertaking the appraisal presented in this report. Further detail is provided within the appropriate sections of this report where relevant to the proposed scheme.

3 Consultation

Pre-application advice from HES was sought and a response provided on 06/06/2016. This confirmed that it is unlikely that the proposal would result in significant adverse impacts on the site or setting of HES's historic environment interests and therefore setting impacts to those designated heritage assets for which they are responsible for could be scoped out of further assessment. However, the only heritage asset within the Study Area which represents a historic interest for HES is the Category 'A' Cathedral of the Isles. In addition, a scoping opinion was received from HES (Ruth Cameron, Senior Heritage Management Officer (EIA)) on 28/04/2017. The response stated that HES have no specific requests for the scope of the Environmental Statement and reiterated that they consider it unlikely that there will be significant impacts on their historic environment interests.

Based upon the results of this appraisal it is recommended that further advice be sought from WoSAS (as historic environment advisors to North Ayrshire Council) as part of the EIA, with respect to the potential for impacts on predominantly undesignated heritage assets, but also to Category 'B' and 'C' Listed Buildings and the Conservation Area of Millport.

4 Historic Environment Baseline

4.1 Archaeological and historical background

During the last glacial period, following the glacial maximum (c. 18,000 to 20,000 BP), when the Clyde Area was completely covered by ice, rapid deglaciation resulted in much of the region being free of ice by c. 13,000 BP (GUARD, 2003). During the Loch Lomond Stadial, glacial re-advance (which reached its maximum extent c. 10,500 BP) was accompanied by periglacial conditions, which came to an end c. 10,000 BP with the start of Holocene warming. This is reflected geologically by the presence of till along much of the coastal fringe. Rapid sea level rise up to c. 6,500 BP saw a minor landward relocation of the coastline, which has since fallen to its current location, and Cumbrae is noted for its raised beaches.

At Newtown Bay and Kames Bay superficial deposits of sand and gravel are present overlying sedimentary bedrock (Royal HaskoningDHV, 2016, 2017b). These superficial Pleistocene and Holocene (Quaternary) deposits comprise marine beach deposits, raised marine deposits and glacial till. Ground investigations, comprising 4 cable percussion boreholes, eight hand dug inspection pits and 26 machine excavated trial pits, were carried out for the proposed scheme by BAM Ritchies between 18th January and 2nd February 2017 (Royal HaskoningDHV, 2017b). The top of rock was encountered in several locations and varied from 0.6m to 8.00m below ground level. Rock exposures were observed along the foreshore at Foul Port, Bessy Port, Long Point and eastern side of Kames Bay. In addition, the entire landward portion of the site is covered by a layer of made ground. The thickness of the made ground varied between 0.25m to 2.5m except at the pier where the maximum thickness was 7.7m.

Marine geophysical survey was also undertaken as part of the ground investigations including sub-bottom profiler data, which indicated that the site is comprised of unconsolidated sediments overlying heavy sediments, consolidated sediments (glacial till or weathered rock), overlying bedrock (Royal HaskoningDHV, 2017b). The unconsolidated sediments range in thickness due to topography of the Bay, and are between 0m and 5m to the north of the Leug and the Spoig. To the east of Millport Pier, the thickness of the unconsolidated sediments ranges between 2m and 8m. The level of the top of rock generally ranges from 0m to -16mCD, the greatest depth being located between the Eileans and the Spoig and to the east of Millport Pier.

Knowledge and research of the prehistoric occupation of Great Cumbrae is limited, including only the remains of a possible fort of unknown date at Bell Craig, a cist on Aird Hill excavated in the later 19th century and a standing stone (known locally as Gouklan Stone) along the B899 (North Ayrshire Council, 2013a, 2013b). Great Cumbrae is first mentioned in the Aberdeen Breviorum of 546 AD and is referred to as the 'The Isles of the Virgins' in the Annals of Ulster in 714 AD. In 843 AD the islands were conquered by Harald Harfager, King of Norway and intermittently remained in Norse control until the Battle of Largs in 1263. The inlet to the west of Crichton Street known as Foul Port stems from the Norse term 'Fouleport' meaning 'the port of the mighty' and a settlement at this natural harbour is believed to have developed from the place the Norse sailors brought their long boats ashore.

In 1539 the island was divided into a series of baronies and holdings under the Crown, although it wasn't until 1634 that the decision to station a revenue cutter in the lower reaches of the Firth of Clyde resulted in the establishment and subsequent growth of Millport as the primary settlement on Great Cumbrae (North Ayrshire Council, 2013a, 2013b). The purpose of the revenue cutter was to deter smuggling and to collect tolls and duties for the Crown. The initial vessel, 'The Kings Boat', is reported to have had a crew of three as well as four 'tide-waiters' who would accompany vessels up river, necessitating a programme of building to house the crews.

During the 18th century the growth of Millport is largely attributed to the efforts of the sea captains for the revenue cutters, Captain Andrew Crawford of the *Cumbræ Wherry* and his son Captain James Crawford (North Ayrshire Council, 2013a, 2013b). Captain Andrew Crawford established the Garrison in 1745 as a barracks for himself and his crew and built a small watch tower on the larger Inner Eilean. Captain James Crawford continued his father's role in the *Cumbræ Cutter* later renamed the *Royal George*, a much larger ship with a crew of 60, also requiring further accommodation, including a further residence at the Garrison. Prior to this point the main landing point in the Bay was Strathwherry, although now a proper quay was constructed, the Old Harbour at the Quayhead, to create a safe anchorage and harbour for the crew.

In the 18th century the Millport economy was largely dependent on fishing and agriculture, and on quarrying after Captain James Crawford approached the Commissioners for Portpatrick Harbour to suggest that Millport stone may prove suitable for the new harbour's quay walls (North Ayrshire Council, 2013a, 2013b). This led to quarrying on both the Eileans and Craiglea (a geological 'island' now concealed under the Royal George Hotel on the Quayhead). From the early 19th century onwards, however, the economy shifted to one based on tourism.

In 1833 a company, led by Captain James Miller, was formed to finance construction of a new Pier which would be accessible at all tides and allowed the harbour to accommodate 30 to 40 herring boats at anchor (North Ayrshire Council, 2013a, 2013b). The rocky outlet 'Craiglea' formed the base for the new pier forming the Quayhead area. At this time, the growth in the Clydeside economy, fuelled by Glasgow's industrial revolution, was reflected in an increasing number of inhabitants in Millport and the subsequent expansion of settlement. The 6th Earl of Glasgow, George Frederick Boyle, erected a new Episcopalian college on the island which included the Cathedral of the Isles built in 1851. His father had purchased Garrison House from the Crawford's in 1819 at which time it was extended and it remained in the hands of the Earl of Glasgow until Boyle sold it to the Marquis of Bute in the late 1880s.

In 1860 the harbour was extended again leading to regular steamer services and the growing popularity of Millport as a seaside destination (North Ayrshire Council, 2013a, 2013b). Several purpose-built hotels were established and the construction of villas along Marine Parade catered to the middle class 'carriage folk' who would spend the summer season in resorts such as Millport. West Bay saw the development of boarding houses in a move away from family homes. This growth was also bolstered by the 'Doon the Watter' practice of Glaswegians and their families escaping the shipyards and factories for a day away from the city, travelling down the Clyde to resorts such as Millport.

During the later 19th century, the Old Harbour was partially infilled by the Pier and Harbour Company in 1872 and the Stuart Street seawall was constructed in 1874 (North Ayrshire Council, 2013a, 2013b). The early 20th century saw further expansion and Millport Pier was extended to its present size. The quayside at the Old Harbour was built out with a new platform for a pavement supported on iron pillars and stone piers. This included the addition of the timber extension to the pier and a new stone ticket office, a pavilion and clock tower with turnstiles for pedestrian access to the pier and a new signal building. In the 1960s, these Edwardian buildings were demolished and replaced by new mixed-use building incorporating offices and public toilets.

In 1912 extensive damage to the seafront and the pier occurred with an extreme winter storm and in 1929 a new sea wall was constructed further out to the beach (North Ayrshire Council, 2013a). The iron pillars and stone piers supporting the Quayhead pavement were infilled at this time, Stuart and Guildford Streets were considerably broadened and the Old Harbour reduced in size. In 1958/1959 the Garrison boundary wall was repositioned to widen Glasgow Street, making the grounds of the Garrison smaller. The Edwardian structures on the Old Pier have also been demolished and replaced in 1964 by a new mixed-

use building including offices and public toilets. In the later 20th century Millport has continued to develop and expand with the single storey cottages at 35-37 Cardiff Street and 45-47 Glasgow Street demolished and a number of buildings overhauled for Isle of Cumbrae Housing Association between 1994 and 1995. In 1972, a new 'roll on/roll off' ferry between Largs and the Cumbrae slip was introduced which reduced times for ferry trips to the island from 30 to 10 minutes and resulted in the decline of the original Largs - Millport Old Pier route which was discontinued in October 1973.

4.2 Known Heritage Assets

4.2.1 Designated Heritage Assets

Within the Study Area there are 43 Listed Buildings (Appendix A) (Figure 1 and Figure 2):

- One Category 'A':
 - Cathedral of the Isles and Collegiate Church of the Holy Spirit (LB37824)
- 16 Category 'B':
 - The Garrison East Gates (LB37825) and The Garrison, including the walled garden and entrance gateways (also covered under LB37825);
 - The Old Harbour (LB37826);
 - Mid Kirkton (LB37828);
 - Millburn House (LB37830);
 - Nos. 12-28 Crichton Street (LB37831), covering eight separate properties;
 - Nos. 8 and 9 Quayhead (LB37834);
 - No. 14 Bute Terrace, Springfield (LB37836); and
 - Nos. 9, 10 and 11 Marine Parade, Eastwood (LB37843).
- 26 Category 'C':
 - Nos. 4, 6, 8 and 10 Cardiff Street (LB37832), covering four separate properties;
 - Nos. 1 to 7 Clyde Street (LB37833), covering two separate records 1 to 3 and 5 to 7;
 - No. 12 Bute Terrace, Fairlie Bank (LB37835);
 - No. 16 Bute Terrace, Seaview (LB37837);
 - Bute Terrace, Strahoun (LB37838);
 - Nos. 14 to 25 Devenport Place (LB37839), covering nine separate properties;
 - Nos. 10, 11, 12 and 13 Kelburn Street (LB37840), covering two separate records 13 Kelburn street and 10, 11 and 12 Kelburn Street;
 - Nos. 8 and 9 Kelburn Street (LB37841);
 - Nos. 6 and 7 Kelburn Street (LB37842), covering two separate properties;
 - Cumbrae Parish Church, including boundary wall and gate piers (LB50968);
 - Former United Presbyterian Manse, Bute Terrace (LB37823); and
 - The Robertson Building, Millport Field Centre, Marine Parade (LB52288).

Within the Study Area, there are no battlefields, gardens or designated landscapes listed on 'the inventories' under the Ancient Monuments and Archaeological Areas Act 1979, and no scheduled monuments, marine protected areas or world heritage sites. Millport is, however, designated as a

Conservation Area (Figure 1 and Figure 2). The Conservation Area Management Plan (North Ayrshire Council, 2013b: 5) describes the Conservation Area as follows:

The Conservation area is central to our understanding of the development of both Millport and the Upper Clyde region. Millport's development can be traced from its establishment in 1634 - pre-dating the Treaty of Union - through the growth of the planned late 18th century settlement into the 19th and early 20th centuries when it was transformed from a small port settlement with an economy based on agriculture, fishing and quarrying into one of the best known 'Doon the Watter' resorts, up to the present day.

4.2.2 Non-Designated Heritage Assets

The WoSAS HER includes 27 records of non-designated heritage assets and findspots within the Study Area (Appendix B) (Figure 1 and Figure 2).

In 2002/2003 a rapid coastal zone assessment survey (RCZAS) was conducted by Glasgow University Archaeological Research Division (GUARD), which included the whole of Great Cumbrae Island (GUARD, 2003). Many of the heritage assets and documented locations of former assets and find spots were ground truthed as part of this RCZAS and several of the HER records are based upon assets as recorded during this survey. The recorded locations were also ground truthed by Royal HaskoningDHV during a site visit undertaken in November 2017 in support of this appraisal.

There are 11 records relating to findspots (i.e. discoveries recorded from a location at which no extant remains are known to survive). These comprise two groups, those reported in the 19th century and those relating to more recent chance finds or archaeological works within the town. Those reported in the 19th century comprise:

- Stone coffins found before 1807 in a large cairn in a field near the Garrison (WoSAS ID 5191). It is reported that the stones of the cairns were subsequently used for building the Garrison;
- In the same field, near the west gate of the Garrison a body buried in an oak coffin in a sand-hill was found in 1874 (WoSAS ID 5192);
- Stone coffins have also been found at Kirkton farm, near the present parish churchyard (WoSAS ID 5194);
- A small flake or slab of stone with an incised cross upon found near St Andrew's Church (WoSAS ID 5200); and
- A Medieval stone cross (the 'Trahoun Cross') and stone coffin found in 1823 about 5 or 6 ft. below the surface of a natural sandhill (WoSAS ID 5251). The cross head is in the Cathedral.

Those finds found in the 20th century comprise:

- A cave in the face of the cliffs forming Farland Hill, opening onto an Early Post-Glacial raised beach excavated in 1933 and yielding evidence of seasonal habitation including two bone needles and a few pieces of lignite, possibly including a bracelet (WoSAS ID 5225).
- A fairly worn Alexandrian bronze coin of Hadrian, of AD 132-3 found at the bowling green (WoSAS ID 5240).
- The neck and shoulder of a Rhenish wine flagon was found on the sea bed in 21m of water 135-180m off shore (WoSAS ID 5241); and
- A single undiagnostic body sherd of medieval green glazed pottery (WoSAS ID 54102) and a complete lead fishing weight of possible post-medieval date (WoSAS ID 54103) uncovered during evaluation trenching in advance of a residential development at Golf Road, Millport.

A further record relates to a programme of archaeological investigative works carried out in 2016 on ground adjacent to Bute Terrace during works carried out for Cumbrae Parish Church (WoSAS ID 67906). A truncated posthole and possible prehistoric hearth, and 19th or 20th century ceramic and stone drains were identified, accompanied by an assemblage of lithics and 19th to 20th century ceramics, glass and metal (Rathmell Archaeology, 2016).

Five of the WoSAS records relate to documentary references to the locations of heritage assets which are either no longer in place, or for which buried archaeological remains may be present at the recorded location:

- The recorded location for a wreck in Millport Bay (WoSAS ID 54497);
- A 19th century reference to St Maura, an early Christian lady missionary, who probably had a hospice in the Creang Haque, the field to the west of the old church (WoSAS ID 5199);
- A reference to a location on the small barony of Penmachrie where "the village of the Sheriff's Auld Haw once stood" (WoSAS ID 5204) and the site of the Auld Ha' or mansion of the Sheriff of Bute, a feudal office, behind no.9 Clyde Street (WoSAS ID 5227); and
- A reference to a photograph of Millport Gasworks taken in 1980 (WoSAS ID 5206).

The recorded location of the site of the Auld Ha' (WoSAS ID 5227) and the wreck in Millport Bay (WoSAS ID 54497) were visited by GUARD in 2002/2003, but no extant remains were observed.

The 11 remaining records relate to extant heritage assets, many of which were recorded by GUARD and were also observed by Royal HaskoningDHV during the site visit in November 2017.

The HER record WoSAS ID 22796 relates to the town of Millport itself: *the first harbour at Millport, in the bay at the south of Great Cumbrae, was built in 1750 and the town gradually spread round the bay.*

Two of the sites correspond to the remains of former paddling pools/leisure pools. The Ninian Brae paddling pool (WoSAS ID 54490) (Figure 3) is recorded by GUARD as a slightly off square disused paddling pool (20 m by 20 m and 0.3 m deep), constructed of stone and concrete and on top of a rock platform, which is partially covered at high tide. The Little Brae pool (WoSAS ID 54513) (Figure 4) is recorded by GUARD as a low walled paddling pool constructed from stone and concrete, built on flat rock at the coast edge and likely to date to the 18th/19th century. Both pools were observed during the November 2017 site visit.



Figure 3: Ninian Brae paddling pool (WoSAS ID 54490)



Figure 4: Little Brae paddling pool (WoSAS ID 54513)

The HER record WoSAS ID 5226 relates to "The Lorne": *the site of "the foundations, fosse and other vestiges of a ruined strength" discovered by the Rev Lytteil about 1872*. Surviving evidence at the site comprises a ditch which cuts off the promontory on the north-west side to form a defended site and a raised stony platform, which may be the trace of a building.

Keppel Port (WoSAS ID 54488) is located on the south-eastern coast of the island in the very eastern part of the Study Area. The site was visited as part of the GUARD RCZAS and described as: a complex of maritime structures now part of the University of Glasgow field station, possible second world war buildings. The complex includes a concrete slipway with iron rails that extend from a building into the sea and three single storey flat roofed buildings and a two-storey command post.

The remaining six records relate to port and harbour installations within Millport. The Millport pier and harbour complex (WoSAS ID 54525 and 43038) is described in a report from the RCZAS as: a site complex including a walled harbour (Figure 5) measuring c. 50 m by 50 m with the entrance on the SE side. A pier extends off the SW corner of the Harbour. The Pier is constructed of stone and concrete for the initial c.70 m before changing to wooden pillars and platform for the remaining 20 - 30 m (Figure 6). A modern passenger ramp is fitted to the wooden area of the pier. A disused ticket kiosk exists at the shore end of the pier.



Figure 5: Millport harbour (WoSAS ID 54525)



Figure 6: Millport pier (WoSAS ID 43038)

There are two extant, historic jetties in Newtown Bay. The first (WoSAS ID 54526) is a stone/rock and cement built jetty extending for over 70m into the sea (Figure 7). The Jetty is marked on the 1st Edition Ordnance Survey map of 1856 as 'Straw Wherry' and corresponds to the main landing point in the Bay (Strathwherry) prior to the construction of the Old Harbour at the Quayhead.



Figure 7: Newtown Bay jetty (WoSAS ID 54526)

The second (WoSAS ID 54527) is also a stone/rock and concrete built jetty which extends for over 50 m and is not linear in construction, rather turning at small angles numerous times (Figure 8). A lattice addition extends from the end of the stone structure into the sea. A large rock to the south east of feature has been painted as a dragon (Figure 9). The Millport 'crocodile rock' is locally reported to have been painted by at least 1913 when a local artist was acknowledged for painting the rock by the local council. Local folklore states that 'Mr Brown' painted the crocodile or dragon after a couple of drinks one lunchtime.

Further along the beach is The Leck (WoSAS ID 54516) recorded by GUARD as: the fragmentary remains of a jetty extending c. 10m seaward from the coast edge. Built on top of a rock platform the jetty consists of stone walling and concrete with remains of iron stakes and mooring rings. This area is marked on the 1st Edition Ordnance Survey map of 1856 as 'The Leck'. It is unclear whether the pier or jetty structure marked on this map relates to these remains at the Leck or to the jetty shown in Figure 8 (WoSAS ID 54527).



Figure 8: Newtown Bay jetty (WoSAS ID 54527)



Figure 9: Dragon painted rock adjacent to jetty

The final record is that of a 'jetty' located adjacent to the Ninian Brae pool along Marine Parade (Figure 10). The HER records this as a diving station (WoSAS ID 54462), built on a rock platform with a high wall on the southern and eastern side and steps down from the road. There is also evidence for small shed like 'lean-tos' which were once changing cubicles for swimmers. Further stairs lead down to the sea at seaward end and there are four heavily corroded diving board attachments visible on the platform.

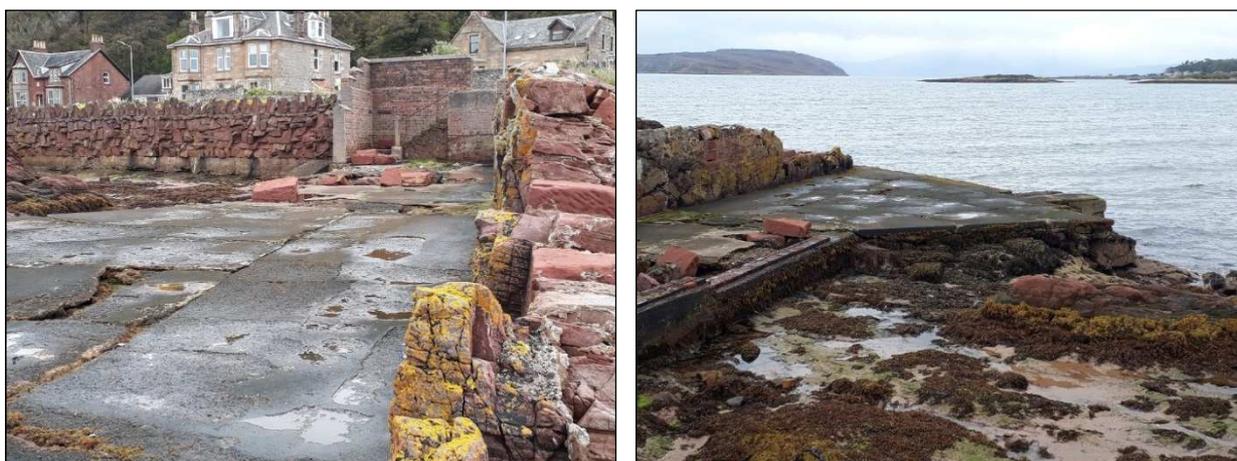


Figure 10: 'Diving station' (WoSAS ID 54462)

In addition to the above, there are five records within the OceanWise marine themes database relating to UKHO wrecks and obstructions. All are, however, recorded as underwater rocks and are not considered to be of archaeological interest.

4.3 Potential Heritage Assets

4.3.1 Onshore

The potential for previously undiscovered, buried archaeological remains onshore within the Study Area is anticipated to be low. The ground investigations (Royal HaskoningDHV, 2017b) demonstrate that the main soil units corresponding to potential phases of human occupation within the area (overlying the consolidated glacial till and weathered bedrock) are:

- Made Ground encountered over the onshore site, with a surface layer variability comprising of concrete, tarmac or topsoil. The made ground beneath the surface layer consisting predominantly of coarse soils varies from slightly silty to silty, slightly sandy to sandy GRAVEL with low to high cobble content, to gravelly to very gravelly, slightly sandy to very sandy SILT occasionally with high cobble content;
- Marine Beach Deposits predominantly comprised of gravelly to very gravelly silty SAND, SAND & GRAVEL to slightly sandy slightly silty GRAVEL, with low to medium cobble content; and
- Raised Beach Deposits consisting of even graded gravelly to very gravelly silty SAND, medium graded SAND & GRAVEL with low cobble content to multi graded sandy to very sandy very silty Gravel, with low to medium cobble content. The material described as Peat was a multi graded gravelly silty SAND.

The presence of peat described within a sample is of potential palaeoenvironmental interest as an indication of past semi-terrestrial conditions. However, the archaeological potential of the made ground and marine beach deposits is anticipated to be limited to the potential for chance finds only. Many previous archaeological investigations and watching briefs have failed to identify deposits of

archaeological interest in the town. For example, no archaeological remains or deposits of potential interest were encountered during:

- a desk-based assessment and evaluation of land at the northern edge of Millport (Craig-en-Ros) in 2003 (Canmore Event ID: 269097, WoSAS Event ID: 761);
- a programme of archaeological works undertaken in 2004 at 8 Howard Street (Canmore Event ID 273863, WoSAS Event ID: 3255);
- a programme of archaeological monitoring carried out in Golf Road in 2006 (Canmore Event ID 293546, WoSAS Event ID: 3540);
- an archaeological watching brief during the excavation of foundations at Plot 1 Golf Road (Rathmell Archaeology, 2007) (WoSAS Event ID: 3599);
- an archaeological watching brief at 18 Ritchie Street (Rebecca Shaw Archaeological Services, 2008) (Canmore Event ID 300426, WoSAS Event ID: 3991);
- an archaeological watching brief conducted during excavation of foundation trenches at Penmachrie, Golf Road (CFA Archaeology, 2011) (Canmore Event ID 320582, WoSAS Event ID: 4698);
- monitoring of the ground-breaking works at the Millport Marine Research Station (Rathmell Archaeology, 2015) (WoSAS Event ID: 5484).

Archaeological remains have been found during excavations for Cumbrae Parish Church (see Section 4.2.2 above) (Rathmell Archaeology, 2016) and during an evaluation at Golf Road (comprising a single sherd of medieval glazed pottery (WoSAS ID 54102) and a lead fishing weight (WoSAS ID 54103). Most of the archaeological remains reported from the Study Area correspond to cross slabs, cists and burials, for example, uncovered within the grounds of the Garrison and the churches. Many of these reported finds date to the 19th century. Similarly, during the 19th century, when the circumferential road was being constructed around the island in the 1870s, a series of Bronze Age and early Christian discoveries were made in the grounds of the Garrison, at Tomont End, the Lady's Grave, White Bay and Fintry Bay (North Ayrshire Council, 2013b).

The above investigations demonstrate a pattern of disturbed deposits and demolition debris (made ground) overlying bedrock, in places close to the surface and the archaeological potential of the made ground and beach deposits is considered to be low.

However, the Conservation Area Character Appraisal (North Ayrshire Council, 2013a: 44) identifies that 'there has been no systematic archaeological investigation to determine the condition and extent of any surviving archaeological remains within Millport Conservation Area'. Specific areas of identified potential are as follows:

- possible archaeological remains associated with the present 18th century planned town;
- archaeological remains associated with earlier Viking occupation at the western end of the town around Foul Port; and
- some potential for archaeology of similar periods to those surrounding archaeological sites on Great Cumbrae recorded in the 1870s, 1930s and 1960s.

The appraisal concludes that: 'whilst 20th century redevelopment around the Quayhead area is likely to have compromised evidence of the 17th and 18th century settlement, some caution should be taken where significant earthworks are required as part of any development proposals as they may further impact on surviving evidence'.

4.3.2 Offshore

The ground investigation report and results of marine geophysical survey demonstrate that, offshore, marine beach deposits (predominantly comprised of gravelly to very gravelly silty sand, sand and gravel and slightly sandy slightly silty gravel, with low to medium cobble content) are overlying glacial till and weathered Millport Cornstone Member. The till and weathered bedrock deposits are of no archaeological interest and there is no evidence for surviving deposits relating to former, now submerged, prehistoric land surfaces. The archaeological potential of the marine beach deposits is, therefore, associated with the potential for wrecks and associated maritime related finds only.

There is a single record of a wreck recorded by WoSAS (ID 54497) and reported in the RCZAS (GUARD, 2003) although there is no evidence of remains at the recorded location and this appears to be related to a reported loss only. There is potential for the discovery of isolated finds, however, as evidenced by the discovery of the neck and shoulder of a Rhenish wine flagon found in 1975 c. 135-180m offshore, to the West of Farland Point (WoSAS ID 5241). Magnetometer and side scan survey data acquired as part of the ground investigations undertaken for this project indicate that there are a number of mooring blocks and linear line features on the sea bed (Royal HaskoningDHV, 2017b).

Further losses within Millport Bay are recorded in the NRHE comprising 22 losses recorded at six locations within the Bay (Appendix C). These losses are grouped by the NRHE at named locations, i.e. arbitrary positions on the seabed where documentary sources suggest that wreck events took place (Figure 1 and Figure 2). Named locations do not, except by chance, represent the presence of physical remains on the seabed.

The *Countess of Eglinton* (Canmore ID 112326) was a paddle steamer which was blown from its moorings, stranded on the Eileans and wrecked in 1845. The recorded location (ID 1) is noted as tentative, although it is also recorded that the vessel's engine and boiler were later used in the *Monarch* built in 1846. This indicates that salvage took place, although it is likely that remains of this vessel may still be present, albeit fragmentary, on the seabed in the vicinity.

To the East of the Eileans (Recorded Location ID 2), a further vessel is reported as lost, representing an unknown smack reported in 1887 as 'lost 60 years ago' and its pump and clock washed ashore (Canmore ID 325621). To the East of Millport Bay is also recorded the loss of a smack, *Elizabeth*, which was driven ashore in a gale and became a total loss in 1879 (Canmore ID 267758) (Recorded Location ID 3).

Five losses are recorded at a location to the south west of The Spoig (Recorded Location ID 4). One (Canmore ID 302688) refers to the same loss of a smack 60 years prior to 1887, as described above. *Ailsa*, *Winifred* and *Volante* were three 19th century yachts reportedly stranded and 'expected to become wrecks' in 1879 (Canmore ID 302683, 302684 and 302685 respectively). Whether these three vessels were ultimately lost or not remains unclear. The fifth loss is that of a 20th century schooner *Sarah Jane* (Canmore ID 220420) which 'stranded at the entrance to Millport' in 1914.

Eight losses are recorded at a named location on Millport Pier (Recorded Location ID 6):

- *Ilma* (Canmore ID 112332) a steam yacht lost while proceeding from anchorage to slip in Millport Bay in 1896;
- *Margaret* (Canmore ID 112343) a wooden smack which sank in Millport after collision with the SS Argyle in 1885;
- *Muriel* (Canmore ID 220116) a wooden lugger, stranded and wrecked whilst lying at Millport in 1893;
- *Iris* (Canmore ID 220353) a wooden yacht driven from moorings and stranded at Millport in 1904;

- *Jarra* (Canmore ID 251523) a wooden pleasure boat 'lying at Millport' recorded in 1893;
- *Amity* (Canmore ID 283332) a sloop which drifted ashore at Millport with the loss of all her canvas, and 'has received considerable damage' recorded in 1856;
- *Grace* (Canmore ID 302686) a vessel wrecked at Millport in 1878; and
- *Gipsy* (Canmore ID 302689) a vessel stranded at Millport and reported that part of the wreck was taken to Gourock in 1872.

The remaining six losses are recorded at a location just outside the Study Area to the west of the southern tip of Farland Point (Recorded Location ID 5):

- *Betsey* (Canmore ID 270504) was reported as on shore on Cumbrae and feared to be totally lost in 1809;
- *Helen* (Canmore ID 218235) was wrecked on Cumbrae in 1811;
- *Prince of Waterloo* (Canmore ID 268647) was reported as on shore on Cumbrae and feared to be totally lost in 1815;
- *Jane* (Canmore ID 271426) foundered off Cumbrae in 1822;
- *Iris* (Canmore ID 302691) was wrecked on Cumbrae in 1831; and
- *Fox* (Canmore ID 302692) was wrecked on Cumbrae in 1871.

The description of the location of these last six losses on Cumbrae means that the remains of these vessels could be present around the whole of the island and not necessarily within Millport Bay.

The reported losses described above provide an indication of the high potential for the remains of wrecks and maritime related finds to be present within the Study Area. During the site visit, two finds of potential maritime archaeological interest were observed on the foreshore at low tide adjacent to the Old Harbour (Figure 11). Both were small wooden items, one square and one round, which could have originated as ships fittings, although the origin and a date is currently uncertain. Both artefacts were left on the beach and not retained.



Figure 11: Objects of potential maritime origin observed on beach

No further items of wreck or finds of maritime origin were observed during the walkover of the beach within the study area.

4.4 Setting and Historic Character

Following consultation with HES it was concluded that potential impacts to the setting of their historic interests could be scoped out of the assessment, However, the only heritage asset within the Study Area which represents a historic interest for HES is the Category 'A' Cathedral of the Isles. Therefore, the potential for change to the setting of non-designated heritage assets, to Category 'B' and 'C' Listed Buildings and to the historic character of the Conservation Area, has been reviewed as part of this appraisal work.

In 1972, a new ferry slip reduced the ferry times between Largs and Cumbrae and the old Largs to Millport route declined, and was discontinued in 1973. As identified in the Conservation Area Character Appraisal (North Ayrshire Council, 2013a: 17): 'other than bi-weekly summer evening visits by the Waverley or the Balmoral, there are no longer ferries docking and disembarking visitors at the Old Pier - the experience of entering Millport from the sea has been much reduced along with the hustle and bustle of boats coming into the pier'. The current approaches to Millport are via Ferry Road and Farland Point, although the original approaches to Millport were by the sea with the Old Pier as the gateway to Millport.

The Conservation Area Character Appraisal (North Ayrshire Council, 2013a: 27-28) identifies the following key views:

- views into the town from across the bay particularly as Millport Bay is entered along the B896 from either Farland Point or Portachur Point (e.g. Figure 12);
- the spire of the 'A' listed Cathedral of the Isles;
- the clock tower of 'C' listed, English gothic, Cumbrae Parish Church (Figure 13);
- from the front of the Cathedral of the Isles, the bellcote of the unlisted East Church;
- the garden grounds of the Garrison dominated by the 'B' listed Garrison House with its 18th Century Gothic revival profile (e.g. Figure 14);
- the unlisted Royal George Hotel with its Dutch Mansard roof and Arts and Crafts style chimney which acts as an introduction to the town to those disembarking from the Old Pier and supplies a strong sense of enclosure to the Quayhead (Figure 15);
- the unlisted former Cumbrae Hotel at the corner of Cardiff Street and Stuart Street (Figure 16); and
- carefully structured urban views with key buildings being located so as to terminate key streets:
 - Cardiff Street where the 'B' listed Millburn House is framed by the tenements and terraces;
 - Cumbrae Parish Church, a 'C' listed gothic Church on Churchill Street, effectively terminating a dense Avenue of trees (Figure 13); and
 - Strahoun Lodge, a 'C' listed late Georgian villa at 24 Bute Terrace, with its asymmetrically placed pediment acting to terminate the vista of Reid Street though it is partially obscured by the dense tree belt (Figure 17).



Figure 12: View from Marine Parade looking west across Kames Bay and Newtown Bay



Figure 13: The Clocktower of Cumbrae Parish Church viewed from Churchill Street



Figure 14: View of the Garrison and grounds through the East Gate and from the promenade



Figure 15: View of the Royal George Hotel and harbour



Figure 16: The former Cumbrae Hotel



Figure 17: View toward Strahoun Lodge terminating the vista of Reid Street

The Conservation Area Character Appraisal (North Ayrshire Council, 2013a: 41-42) also identifies the following Listed Buildings which contribute positively to the townscape and appearance of the Conservation Area:

- The Cathedral of the Isles (Category A);
- Garrison House (Category B) (Figure 14);
- Millburn House (Category B);
- Cumbrae Parish Church (Category C);
- 12 - 28 Crichton Street (Category B) (Figure 18);
- Strahoun Lodge (Category C) (Figure 17); and
- Eastwood, 9 - 10 Marine Parade (Category B).



Figure 18: Crichton Street

Unlisted buildings which make a positive contribution to the character and appearance of the Conservation Area are listed as follows (North Ayrshire Council, 2013a: 42-43):

- 1 to 6 Stuart Street - the unlisted former Cumbrae Hotel at the corner of Cardiff Street and Stuart Street, which overlooks the Quayhead and forms a key part of the townscape of Millport (Figure 16);
- The Royal George Hotel, sitting out on the pier and addressing the Quayhead, and one of the most prominent buildings in Millport (Figure 15);

- East Church, whose bellcote above the south gable is prominently sited on the Millport skyline being located directly in front of the spire of the Cathedral of the Isles when viewed by those rounding the bend of the headland at Farland Point;
- Millport War Memorial, prominently located on Guildford Street (Figure 19);
- Our Lady of Perpetual Succour, between the Cathedral of the Isles and the back of the urban wall of Glasgow Street, important as a reflection of the increasing proportion of Catholics amongst Great Cumbrae's population in the post war years; and
- The Ritz Cafe at 26 Stuart Street, whose unaltered 1960s cafe interior with its 'jazzy moderne' style and the graphic colours of the Formica trims is an increasingly rare example of a 1960s retail interior.



Figure 19: Millport War Memorial

There are four main character areas within the Conservation Area (North Ayrshire Council, 2013a: 43-44, 2013b: 10-11):

- 1 The historic core of the town comprising the original Georgian Planned Town and the addition of the New Town extending towards Kames Bay;
- 2 The grounds of the Cathedral of the Isles and the Garrison, providing a large extent of the Conservation Area's open space;
- 3 Behind the esplanade and historic core, a series of detached villas set back from the street within spacious gardens, the Victorian and Edwardian 'suburban extensions'; and
- 4 The old harbour and the promenade, the interface between town and sea including: the Pier, the Old Harbour at the Quayhead, the drying greens at Clyde Street and Crichton Street, the 1929 sea wall, the paddling pool on Marine Parade and the play area and paddling pool at West Bay.

5 Summary of Baseline and Heritage Significance (Importance)

Designated heritage assets comprise 43 Listed Buildings within the Study Area (Section 4.2.1). Of these, the Cathedral of the Isles is of high national significance as a Category 'A' Listed Building. The 16 Category 'B' buildings are of high regional importance, while the 26 Category 'C' buildings are of high local importance.

Of the non-designated heritage assets, the records relating to findspots are no longer extant and, although these are indicative of the potential for further similar finds within the Study Area, these recorded locations are not in themselves considered to be of heritage significance. Similarly, the five records relating to documentary references are not considered to represent extant heritage assets and are not of material heritage significance.

The possible fort (The Lorn) (WoSAS ID: 5226) is assessed to be of potentially high local importance. The extent of any surviving archaeological material from records at the site is unknown and as such should be considered to be of high importance as a precautionary measure. Similarly, as the significance of remains which are yet to be discovered, and potentially buried within the footprint of the proposed scheme, is unknown, all potential archaeological discoveries should be considered to be of potentially high importance, particularly given the current lack of archaeological remains known from the town and bay.

All of the 10 remaining non-designated sites relate to jetties, piers and other installations (such as the two leisure pools) relating to the past use of Millport as a port and seaside resort following the origins of the town in the mid-18th century. However, all of these assets are in a 'poor' or 'fair' condition which could be considered to limit their significance as extant heritage assets. As such, non-designated heritage assets within the Study Area are considered to be of moderate local importance.

However, the location of these non-designated assets associated with the Millport Conservation Area indicates a higher significance in terms of their group value. The Conservation Area Character Appraisal (North Ayrshire Council, 2013a: 45), which describes Millport as the best-preserved example of a Firth of Clyde holiday resort, identifies the following key areas of significance associated with Millport:

- The late 1700s plan of the original settlement reflects developments in Scottish town planning;
- The development of the town is tied up with the growth of trade between Scotland's West Coast and the colonies on the Eastern Seaboard of America (the Revenue Cutters were based at Millport so as to prevent smuggling and ensure that taxes derived from this profitable trade were secured for the UK Exchequer;

- The later Victorian shift towards tourism with the establishment of hotels and the construction of villas along both Marine Parade and West Bay;
- The rise of day trippers and the ‘Doon the Watter’ holiday as a social phenomenon promoted by the rival Railway companies promoting steamer services from various pierheads along the Clyde Coast.
- The magnificent natural setting, within an estuary at the junction of a great geological boundary, which controls key approaches to the entrance to the upper Clyde.

The Character Appraisal concludes that the Conservation Area is of high regional significance for these reasons. The settings of individual assets within the town, and the historic character of the Conservation Area should therefore also be considered to be of high regional importance.

6 Potential Impacts and Mitigation

6.1 Proposed Works

The proposed scheme (Figure 1 and Figure 2) includes provision for:

- Onshore works:
 - new flood walls along the length of Glasgow Street and to the south of Kames Bay Road; and
 - improvement works to existing coast protection structures along West Bay Road, Millburn Street, Crichton Street and Marine Parade.
- Foreshore works:
 - shore-connected rock armour breakwater (c. 40m wide with height dependent upon level of rock) extending seaward over the rock foreshore at the entrance to West Bay; and
 - revetment (c. 25m wide and up to 7m high above the foreshore) constructed over the existing rock foreshore to the seaward side of Clyde Street for a length of about 150m.
- Offshore works:
 - Option 1b: a rock armour breakwater extension to Millport Pier, extending c. 150m to the south-east, c. 60m wide and 9 to 10m above the seabed;
 - Option 3a: a 120m breakwater (c. 50m wide at base and c. 7.5m above the seabed) connecting The Leug and The Spoig rock outcrops and a 200m breakwater (c. 60m wide and c. 10m above the seabed) connecting The Spoig and the southern Eilean islet.

Option 2, considered as part of the scoping report, comprising a breakwater connecting The Leug and The Spoig rock outcrops and two breakwaters between The Spoig and the southern Eilean isle, is no longer under consideration following a re-assessment of this option as a significant navigational hazard.

6.2 Potential Direct Impacts

Direct impacts to heritage assets, either present on the seafloor or buried within subsurface deposits, may result in damage to, or total destruction of, archaeological material or the relationships between that material and the wider environment (stratigraphic context or setting). These relationships are crucial to developing a full understanding of an asset. Such impacts may occur if heritage assets are present within the footprint of elements of the proposed scheme.

Direct impacts could occur during onshore, foreshore or offshore works associated with the following activities:

- Onshore:
 - Excavation of foundations for new flood wall. The foundation is expected to be c. 1m deep and c. 1m wide, requiring an excavation of c. 2 to 2.5m width;
 - Excavations associated with possible drainage improvements;
 - Possible footpath excavations associated with improvements to existing walls;
 - Possible excavation of the beach adjacent to the existing structures to a depth of c. 1m and up to 3m wide.
- Foreshore:
 - Placement of breakwater and associated raised platform/causeway required for construction;
 - Possible excavation of beach materials required to remove a limited volume of sands and gravels from over the rock outcrops prior to constructing the breakwaters.
- Offshore:
 - Placement of breakwaters and associated causeway if required for construction;
 - Dredging which may be required to remove loose sands and gravels from footprint of breakwater;
 - Demolition of existing timber section of the pier (currently unsafe); and
 - Works to the seabed (if required) associated with potential additional moorings and associated pontoons and docking facilities to be attached to the breakwater.
- All works:
 - Potential for accidental damage to heritage assets associated with machine movements; and
 - Potential for direct damage to archaeological material on the seabed from vessel anchors.

There are no designated heritage assets (e.g. Listed Buildings) within the footprint of the proposed scheme and it is anticipated that the buildings listed in Section 4.2.1 are located sufficiently far away from the proposed works to prevent accidental impacts from machine movements from occurring. The only possible exception is the Category B Old Harbour at the Quayhead, which originally extended back to the base of Cardiff Street. It is recommended that if any works, including temporary compounds, are planned within the area of the Old Harbour then advice should be sought from HES and WoSAS.

The finite nature of archaeological remains means that physical (direct) impacts are almost always adverse, permanent and irreversible; the 'fabric' of the asset and, hence, its potential to inform our historical understanding, will be removed. For this reason, the primary mitigation for known heritage assets is avoidance (preservation *in situ*) and, where possible, the final design of the proposed scheme should be developed to avoid the 11 extant heritage assets listed in Section 4.2.2. In particular, works to improve the sea walls along Marine Parade should take into account the historic fabric of the Ninian Brae leisure pool and diving station (WoSAS ID 54490 and 54462). If it is not possible to avoid direct impacts to the historic fabric then further measures to record remains prior to works commencing may be required (preservation by record).

If Option 1a is selected, which includes the demolition of the timber extension and extension of the Pier to create a new breakwater, it is anticipated that measures to ensure that the Pier is fully recorded prior to works commencing would be required. The level of recording and the detail required will be informed through further consultation with WoSAS.

With regard to the potential for buried archaeology to be present, the potential for material to be present within the footprint of onshore works is anticipated to be low. Nonetheless, as identified by North Ayrshire

Council (2013a) some caution should be taken where groundworks are required. It is anticipated that as a minimum, a Protocol for Archaeological Discoveries (PAD) should be implemented to allow site staff to report any discoveries of chance finds and to ensure that unexpected remains can be effectively addressed. It is also recommended that this is supported by a programme of archaeological monitoring during groundworks to be agreed with WoSAS.

Offshore, there is relatively high potential for the presence of wrecks and maritime finds within the Study Area. It is recommended that the marine geophysical survey data acquired as part of the ground investigations be archaeological assessed by a suitably qualified and experienced archaeological contractor in order to further qualify the potential for the presence of debris and/or wreck remains within the footprint of the proposed development, including where there is potential for a requirement to anchor vessels delivering materials for the works. During dredging works the implementation of a PAD will allow for any chance finds which may be encountered to be reported and effectively addressed.

These recommendations take into account 'CAMP 6.0' of the eight strategic objectives of the Millport Conservation Area Management Plan (2013b):

- CAMP 6.0 Supporting the need to identify, survey, schedule all significant sites, structures, buildings, landscapes and battlefields of archaeological or historical interest in or around the study area, and ensure that all archaeology is retained, protected and preserved in situ within an appropriate setting.

6.3 Potential Indirect Impacts

The proposed scheme also has the potential to directly and indirectly change the hydrodynamic and sedimentary process regimes, both locally and regionally. Changes in coastal processes can lead to redistribution of erosion and accretion patterns while changes in tidal currents, for example, may affect the stability of nearby morphological and archaeological features. Indirect impacts to heritage assets may occur if buried heritage assets become exposed to marine processes, due to increased wave/tidal action for example, as these will deteriorate faster than those protected by sediment cover. Conversely, if increased sedimentation results in an exposed site becoming buried this may be considered a beneficial impact.

An assessment of the potential changes to coastal processes will be undertaken for the proposed scheme and the results of this work will be used to inform the potential for indirect impacts to occur with respect to archaeology and cultural heritage as part of the EIA.

6.4 Potential Impacts to Setting and Historic Character

The significance of a heritage asset not only derives from its physical presence but also from its setting and the surroundings in which it is experienced. Similarly, impacts to the historic character may occur with the introduction of new elements causing a change in that character which may affect present perceptions of that landscape, townscape or seascape.

Following consultation with Historic Environment Scotland (HES) it was concluded that potential impacts to the setting of their designated historic interests could be scoped out of the assessment, however, the only heritage asset within the Study Area which represents a historic interest for HES is the Category 'A' Cathedral of the Isles. Therefore, the potential for change to the setting of non-designated heritage assets, Category 'B' and 'C' Listed Buildings and to the historic character of the Conservation Area, has been reviewed as part of this initial appraisal work.

Specific considerations associated with the setting of these heritage assets, and the character of the Conservation Area are as follows:

- The new flood wall (reinforced precast concrete, possibly with brick or stone cladding) is proposed along the length of Glasgow Street and to the south of Kames Bay Road (up to 1.2m above ground level) which form part of the main promenade of Millport;
- Improvements to the sea walls along West Bay Road, Millburn Street, Crichton Street and Marine Parade including:
 - increasing existing defences to 1.2m in height (reinforced concrete crest wall will be fixed onto the existing coastal walls); AND
 - repairs such as grouting and infilling of voids, construction of concrete toe protection to c. 1m below beach level and possible rebuilding using existing masonry.
- Shore-connected rock armour breakwaters:
 - Breakwater (c. 40m wide) extending seaward over the rock foreshore by up to 80m from the existing coast protection structures at the junction of Millburn Street and Crichton Street; and
 - A revetment (c. 25m wide and up to 7m high above the foreshore) constructed over the existing rock foreshore to the seaward side of Clyde Street for a length of about 150m.
- Breakwaters Option 1a: Extension of pier c. 150m to the south-east with a rock-armour breakwater c. 60m wide and 9 to 10m above the seabed, including demolition of existing timber pier and improvements to existing masonry and concrete section of pier (e.g. replacing infill, grouting and replacement of concrete deck); or
- Breakwaters Option 3a:
 - a 120m breakwater connecting The Leug and The Spoig rock outcrops and a 200m breakwater connecting The Spoig and the southern Eilean islet;
 - The 120m breakwater would be c. 50m wide at base and c. 7.5m above the seabed;
 - The breakwaters between The Spoig and the southern Eilean would be about 60m wide and c. 10m above the seabed.
- Temporary impacts upon setting during construction associated with:
 - The presence of construction plant (for example, on land, likely to include small excavators, small dumpers, small compaction rollers, jackhammers and concrete trucks and pumps; offshore, likely to include dredgers, barges etc.)
 - During construction fencing will be erected around the works area, and site compounds will be required for the storage of plant and materials; and
 - It is anticipated that delivery of materials will be by both sea and by road via the existing ferry from Largs.

The proposed works will take place within the context of the existing Millport harbour and along roads which form part of the main promenade of Millport. They are lined by a number of historic and tourist attractions on the seaward side, including the war memorial, a wishing well, crazy golf and children's play park. Shops, houses and holiday accommodation are located on the landward side of the roads. As such the visual appearance and alignment of the flood wall will be carefully considered as part of the EIA for the proposed scheme to include consideration of key viewpoints within the town. The assessment of potential landscape and visual impacts will thereby also potentially inform the assessment of setting and historic character as part of the EIA for archaeology and cultural heritage.

In addition, as the works will be undertaken within the Millport Conservation Area it is necessary to consider the requirements of the Conservation Management Plan prepared by North Ayrshire Council

(2013b). The Conservation Area Management Plan has identified eight strategic objectives of which two have relevance to consideration of setting and character with respect to the proposed scheme:

- CAMP 1.0 Specifying the criteria that will be applied to proposals for the alteration, extension, demolition or reuse of listed buildings and for important unlisted buildings within conservation areas in order to ensure that their value is not adversely affected by inappropriate change.
- CAMP 2.0 Identifying tests that will be applied to development proposals within the conservation area, within the curtilage of listed buildings, and backland areas which may have an impact on the character of the individual properties and the townscape generally.

It is recommended that consultation with WoSAS as historic advisors to North Ayrshire Council be undertaken once the results of the landscape and visual impact assessment are known to determine if there is potential for significant impacts to the setting of non-designated heritage assets, Category 'B' and 'C' Listed Buildings, or to the character of the Conservation Area.

7 Summary and Recommendations

The results of the desk-based appraisal and site visit have established the archaeological and cultural heritage baseline within the Study Area as follows:

- 43 Listed Buildings, including the Category 'A' Cathedral of the Isles;
- The designated Millport Conservation Area;
- 27 further records of non-designated heritage assets;
- Low potential for the discovery of buried archaeological remains onshore;
- High potential for the discovery of wreck material and maritime related finds associated with the reported loss of 22 vessels in the area which are yet to be discovered; and
- There are a number of key views approaching and within the town that should be considered as contributing to the significance of the Millport Conservation Area and its historic character.

Recommendation's for further assessment and for mitigation to prevent significant impacts from occurring during works are as follows:

- Known and extant heritage assets should be avoided in the final design to ensure that direct impacts do not occur (*preservation in situ*);
- Where avoidance is not possible it is expected that recording of historic features / fabric will be required, for example if the option to partially demolish and extend the pier is selected (*preservation by record*). All requirements for historic buildings/structure recording should be agreed in consultation with WoSAS;
- To prevent significant impacts to buried archaeological material a PAD should be implemented to ensure that unexpected discoveries can be effectively addressed/managed, supported by a programme of archaeological monitoring/watching briefs to be agreed with WoSAS;
- The potential for indirect impacts to heritage assets associated with potential changes to coastal and marine processes should be fully assessed as part of the EIA based upon the results of coastal processes modelling and assessment;
- The potential for impacts upon the setting and character of the Conservation Area (and associated Listed Buildings) should be fully assessed as part of the EIA based upon (or supported by, where relevant) the results of landscape and visual assessment, including consideration of key viewpoints within the town; and

- Once the final design options are known, further consultation with WoSAS will be required to determine the extent of any significant impacts upon the Conservation Area and heritage assets located within its boundary.

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Appendix A: Gazetteer of Listed Buildings

Name	Easting	Northing	Designation Reference	List Entry	Date of Designation	Category
COLLEGE STREET, CATHEDRAL OF THE ISLES AND COLLEGIATE CHURCH OF THE HOLY SPIRIT	216577	655240	LB37824	EPISCOPAL CATHEDRAL WITH COLLEGIATE BUILDINGS AND CLOISTER	14/04/1971	A
THE GARRISON, EAST GATES	216471	655015	LB37825	THE GARRISON, INCLUDING WALLED GARDEN AND ENTRANCE GATEWAYS	14/04/1971	B
HARBOUR, GENERAL	216310	654835	LB37826	OLD HARBOUR	14/04/1971	B
MID KIRKTON	215787	655142	LB37828	MID-KIRKTON	14/04/1971	B
WEST BAY ROAD, MILLBURN	215871	654796	LB37830	MILLBURN HOUSE	14/04/1971	B
22 CRICHTON STREET	215861	654611	LB37831	NOS. 12-28 CRIGHTON STREET (EVEN NUMBERS)	14/04/1971	B
14 CRICHTON STREET	215873	654634	LB37831	NOS. 12-28 CRIGHTON STREET (EVEN NUMBERS)	14/04/1971	B
16 CRICHTON STREET	215872	654628	LB37831	NOS. 12-28 CRIGHTON STREET (EVEN NUMBERS)	14/04/1971	B
26 CRICHTON STREET	215852	654595	LB37831	NOS. 12-28 CRIGHTON STREET (EVEN NUMBERS)	14/04/1971	B
24 CRICHTON STREET	215857	654603	LB37831	NOS. 12-28 CRIGHTON STREET (EVEN NUMBERS)	14/04/1971	B
12 CRICHTON STREET	215877	654640	LB37831	NOS. 12-28 CRIGHTON STREET (EVEN NUMBERS)	14/04/1971	B
18-20 CRICHTON STREET	215864	654619	LB37831	NOS. 12-28 CRIGHTON STREET (EVEN NUMBERS)	14/04/1971	B
28 CRICHTON STREET	215847	654588	LB37831	NOS. 12-28 CRIGHTON STREET (EVEN NUMBERS)	14/04/1971	B
8 AND 9 QUAYHEAD	216028	654715	LB37834	NO. 9 QUAYHEAD	26/02/1980	B
14 BUTE TERRACE, SPRINGFIELD	216106	655006	LB37836	SPRINGFIELD, BUTE TERRACE	26/02/1980	B
9, 10, 11 MARINE PARADE, EASTWOOD	217253	655172	LB37843	9, 10 MARINE PARADE, EASTWOOD	16/08/1989	B
GLASGOW STREET, THE GARRISON	216423	655029	LB37825	THE GARRISON, INCLUDING WALLED GARDEN AND ENTRANCE GATEWAYS	14/04/1971	B

Name	Easting	Northing	Designation Reference	List Entry	Date of Designation	Category
8 CARDIFF STREET	215995	654776	LB37832	NOS. 4, 6, 8 AND 10 CARDIFF STREET	26/02/1980	C
4 CARDIFF STREET	216009	654768	LB37832	NOS. 4, 6, 8 AND 10 CARDIFF STREET	26/02/1980	C
10 CARDIFF STREET	215987	654777	LB37832	NOS. 4, 6, 8 AND 10 CARDIFF STREET	26/02/1980	C
6 CARDIFF STREET	216003	654770	LB37832	NOS. 4, 6, 8 AND 10 CARDIFF STREET	26/02/1980	C
5-7 CLYDE STREET	216011	654697	LB37833	NOS. 1-7 CLYDE STREET	26/02/1980	C
1-3 CLYDE STREET	216018	654705	LB37833	NOS. 1-7 CLYDE STREET	26/02/1980	C
12 BUTE TERRACE, FAIRLIE BANK	216080	654986	LB37835	FAIRLIE BANK, BUTE TERRACE	26/02/1980	C
16 BUTE TERRACE	216128	655021	LB37837	SEAVIEW, BUTE TERRACE	26/02/1980	C
BUTE TERRACE, STRAHOUN	216000	654900	LB37838	STRAHOUN BUTE TERRACE	26/02/1980	C
18 KELBURN STREET	216978	655170	LB37839	DEVENPORT PLACE 14-25 (ODD AND EVEN NUMBERS)	26/02/1980	C
15-17 KELBURN STREET	216970	655160	LB37839	DEVENPORT PLACE 14-25 (ODD AND EVEN NUMBERS)	26/02/1980	C
22 KELBURN STREET	216996	655192	LB37839	DEVENPORT PLACE 14-25 (ODD AND EVEN NUMBERS)	26/02/1980	C
23 KELBURN STREET	217000	655196	LB37839	DEVENPORT PLACE 14-25 (ODD AND EVEN NUMBERS)	26/02/1980	C
19 KELBURN STREET	216984	655175	LB37839	DEVENPORT PLACE 14-25 (ODD AND EVEN NUMBERS)	26/02/1980	C
21 KELBURN STREET	216992	655186	LB37839	DEVENPORT PLACE 14-25 (ODD AND EVEN NUMBERS)	26/02/1980	C
24-25 KELBURN STREET	217007	655204	LB37839	DEVENPORT PLACE 14-25 (ODD AND EVEN NUMBERS)	26/02/1980	C
20 KELBURN STREET	216988	655181	LB37839	DEVENPORT PLACE 14-25 (ODD AND EVEN NUMBERS)	26/02/1980	C
14 KELBURN STREET	216958	655147	LB37839	DEVENPORT PLACE 14-25 (ODD AND EVEN NUMBERS)	26/02/1980	C
13 KELBURN STREET	216948	655132	LB37840	KELBURN STREET, NOS. 10, 11, 12 AND 13	26/02/1980	C
10, 11, 12 KELBURN STREET	216940	655124	LB37840	KELBURN STREET, NOS. 10, 11, 12 AND 13	26/02/1980	C
8 AND 9 KELBURN STREET	216932	655114	LB37841	KELBURN STREET, NOS. 8 AND 9	26/02/1980	C
6 KELBURN STREET	216913	655095	LB37842	KELBURN STREET, NOS. 6 AND 7	26/02/1980	C
7 KELBURN STREET	216922	655105	LB37842	KELBURN STREET, NOS. 6 AND 7	26/02/1980	C
PARISH CHURCH (CHURCH OF SCOTLAND),	216041	654994	LB50968	MILLPORT, BUTE TERRACE, CUMBRAE PARISH CHURCH	16/08/2007	C

Project related



Name	Easting	Northing	Designation Reference	List Entry	Date of Designation	Category
INCLUDING BOUNDARY WALL AND GATEPIERS				(CHURCH OF SCOTLAND), INCLUDING BOUNDARY WALL AND GATEPIERS		
25 BUTE TERRACE	216177	655118	LB37823	BUTE TERRACE, FORMER UNITED PRESBYTERIAN MANSE	22/12/1988	C
Millport Field Centre, Marine Parade, Millport	217556	654505	LB52288	THE ROBERTSON BUILDING, MILLPORT FIELD CENTRE, MARINE PARADE, MILLPORT, ISLE OF CUMBRAE	07/10/2014	C

Appendix B: Gazetteer of Non-Designated Heritage Assets

WoSAS ID	Name	Type	Easting	Northing
54497	Millport Bay	Wreck	216100	654700
5199	Millport, Great Cumbrae	'Hospice'	215700	655120
5204	Penmachrie, Great Cumbrae	Settlement	215900	655160
5206	Great Cumbrae, Millport Gasworks	Gasworks	216860	655250
5227	Millport, 'Sheriff's Auld Ha', Great Cumbrae	House	216010	654670
5191	The Garrison, Millport, Great Cumbrae	Cairn	216400	655100
5192	The Garrison, Millport, Great Cumbrae	Oak Coffin	216310	655050
5194	Kirkton, Great Cumbrae	Cists (possible)	215800	655130
5200	Millport, Great Cumbrae	Cross-incised Stone	216570	655090
5251	Millport, Great Cumbrae	Cross; Cist	216255	654920
5240	Millport, Great Cumbrae	Roman Coin	215930	654920
5241	Farland Point, Great Cumbrae	Wine Flagon	217000	654200
54102	Golf Road	Pottery	215962	655006
54103	Golf Road	Fishing Weight	215937	655125
5225	Farland Hill, Great Cumbrae	Cave	217271	654510
67906	Bute Terrace	Lithics; Posthole; Hearth (Possible)	216350	655210
54490	Ninian Brae, Millport	Paddling Pool	217173	654783
22796	Millport	Town	216060	654840
54513	Little Brae / Little Brae, Millport	Leisure Paddling pool	215703	654560
5226	The Lorn, Great Cumbrae	Fort (possible)	215405	654250
54488	Keppel Port	Port/shipping complex	217608	654459
54516	The Leck / The Leck, Millport	Jetty	216721	654974

Project related

WoSAS ID	Name	Type	Easting	Northing
54525	Millport Harbour/Pier complex	Harbour/pier	216063	654747
54526	Newtown Bay / Newtown Bay, Millport	Jetty/slipway	216288	654913
43038	Great Cumbrae Island, Millport, Pier	Pier	216122	654702
54527	Newtown Bay / Newtown Bay, Millport	Jetty	216646	654960
54462	Ninian Brae / Ninian Brae, Millport	Jetty	217206	654845

Appendix C: Gazetteer of Reported Losses

Recorded Location ID	Canmore ID	Name	Type	Easting	Northing
1	112326	Countess of Eglinton: The Eileans, Millport Bay, Great Cumbrae, Upper Firth of Clyde	Steamship (19 th Century)	216500	654400
2	325621	Unknown 1827	Smack	216700	654600
3	267758	Elizabeth: Millport Bay, Great Cumbrae, Upper Firth of Clyde	Smack (19 th Century)	217100	654500
4	220420	Sarah Jane: Millport, Great Cumbrae, Upper Firth of Clyde	Schooner (20 th Century)	216300	654100
4	302683	Ailsa: Millport Bay, Great Cumbrae, Upper Firth of Clyde	Yacht (19 th Century)	216300	654100
4	302684	Winifred: Millport Bay, Great Cumbrae, Upper Firth of Clyde	Yacht (19 th Century)	216300	654100
4	302685	Volante: Millport Bay, Great Cumbrae, Upper Firth of Clyde	Yacht (19 th Century)	216300	654100
4	302688	Unknown: Millport Bay, Great Cumbrae, Upper Firth of Clyde	Smack (19 th Century)	216300	654100
5	218235	Helen: Cumbrae, Upper Firth of Clyde	Ship (19 th Century)	217000	654000
5	268647	Prince of Waterloo: Cumbrae, Upper Firth of Clyde	Snow (19 th Century)	217000	654000
5	271426	Jane: Firth of Clyde	Craft (19 th Century)	217000	654000
5	270504	Betsey: Cumbrae, Upper Firth of Clyde	Craft (19 th Century)	217000	654000
5	302691	Fox: Firth of Clyde	Sloop (19 th Century)	217000	654000
5	302692	Iris: Cumbrae Islands, Firth of Clyde	Schooner (19 th Century)	217000	654000
6	112332	Lima: Millport, Great Cumbrae, Upper Firth of Clyde	Steam Yacht (19 th Century)	216100	654700
6	112343	Margaret: Millport, Great Cumbrae, Upper Firth of Clyde	Smack (19 th Century)	216100	654700
6	220116	Muriel: Millport, Great Cumbrae, Upper Firth Of Clyde	Lugger (19 th Century)	216100	654700
6	220353	Iris: Millport, Great Cumbrae, Upper Firth of Clyde	Cutter (20 th Century)	216100	654700
6	251523	Jarra: Millport, Great Cumbrae, Upper Firth of Clyde	Lugger (19 th Century)	216100	654700
6	283332	Amity: Millport, Great Cumbrae, Upper Firth of Clyde	Sloop (19 th Century)	216100	654700
6	302686	Grace: Millport, Great Cumbrae, Upper Firth of Clyde	Craft (19 th Century)	216100	654700
6	302689	Gipsy: Millport, Great Cumbrae, Upper Firth of Clyde	Craft (19 th Century)	216100	654700



■ Regional Office Locations

With its headquarters in Amersfoort, The Netherlands, Royal HaskoningDHV is an independent, international project management, engineering and consultancy service provider. Ranking globally in the top 10 of independently owned, nonlisted companies and top 40 overall, the Company's 6,000 staff provide services across the world from more than 100 offices in over 35 countries.

Our connections

Innovation is a collaborative process, which is why Royal HaskoningDHV works in association with clients, project partners, universities, government agencies, NGOs and many other organisations to develop and introduce new ways of living and working to enhance society together, now and in the future.

Memberships

Royal HaskoningDHV is a member of the recognised engineering and environmental bodies in those countries where it has a permanent office base.

All Royal HaskoningDHV consultants, architects and engineers are members of their individual branch organisations in their various countries.

Integrity

Royal HaskoningDHV is the first and only engineering consultancy with ETHIC Intelligence anti-corruption certificate since 2010.



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