

# Project Adair

Mapping Marine Heritage Sites to  
Support New Marine Legislation





Royal  
Commission on the  
Ancient and  
Historical  
Monuments of  
Scotland



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Cover image: The block ship Nana, sunk in 1939,  
helped protect the High Seas Fleet, sheltering in  
Scapa Flow, from attack. DP058591

Back cover: The steamships Rhienfield and  
Elton, sunk as block ships in 1914, and later  
superceded by the construction of Churchill  
Barrier No. 2. DP053221

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Charlestown Harbour, Fife, 1882. SC1129275

# Project Adair

## Introduction

Project Adair was initiated in July 2011 as a partnership between Historic Scotland and the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS). Named after John Adair, the author of the *Description of the Coast and Seas of Scotland* published in 1703, Project Adair seeks to improve the record of the marine historic environment in a cost effective way and to ensure information is efficiently and effectively disseminated to underpin Scottish Ministers' policies for encouraging sustainable economic growth in the coasts and seas around Scotland through implementation of the Marine (Scotland) Act 2010 and UK Marine and Coastal Access Act 2009.

A Statement of Requirements for Project Adair in 2011 – 12 (Appendix 1) summarises the current policy and legislative context, and sets out priority actions that take on board the conclusions of two earlier reports:

- *Towards a Strategy for the Marine Historic Environment* (Historic Scotland and BEFS 2009).
- *Scotland's Marine Data Heritage Audit* (Wessex Archaeology 2011).

This report, Objective 3 of Project Adair 2011 – 12, summarises the results for Objectives 1a, 1b and 2. It also identifies priority tasks for continuation of Project Adair in 2012 – 13 and provides a forward look to help inform any development of longer term strategy in this area.

## Project Objectives and Results

### Objective 1a

*To integrate an updated United Kingdom Hydrographic Office (UKHO) download of wrecks data within the RCAHMS maritime record for the Scottish territorial and offshore waters (0–200 nautical miles around Scotland) and make this information widely available to support new marine planning systems.*

The need to reconcile heritage information in Canmore<sup>1</sup> with the continually updated database of wrecks and other obstructions held by the UKHO has been highlighted previously (Historic Scotland and BEFS 2009, 10; Wessex Archaeology 2011, 47). Addressing this need from 0–200 nautical miles around Scotland is considered a central aspect of Project Adair as it will ensure that there is a basic record in place to cover the full geographic area within which Scottish Ministers' devolved powers extend for planning and licensing (powers to designate Historic Marine Protected Areas extend to 12 miles only).

<sup>1</sup> In this report, Canmore is used to describe both the database of the National Collection, and the website used to provide access.

As of February 2012, there are over 23,000 records in Canmore classed as 'maritime' (see table below), 18,000 of which record losses of shipping off Scotland. In addition, many thousands of other records reflect maritime activities (such as kelp kilns, harbours and lighthouses), or are simply found in coastal locations.

	Number	% of whole
Total number of RCAHMS 'maritime' records	23793	100
Shipwrecks	1658	8
Casualties/losses to shipping	18423	77
Obstructions on the seabed	322	1
Aircraft	809	3
Other	161	1
Cancelled records	2420	10

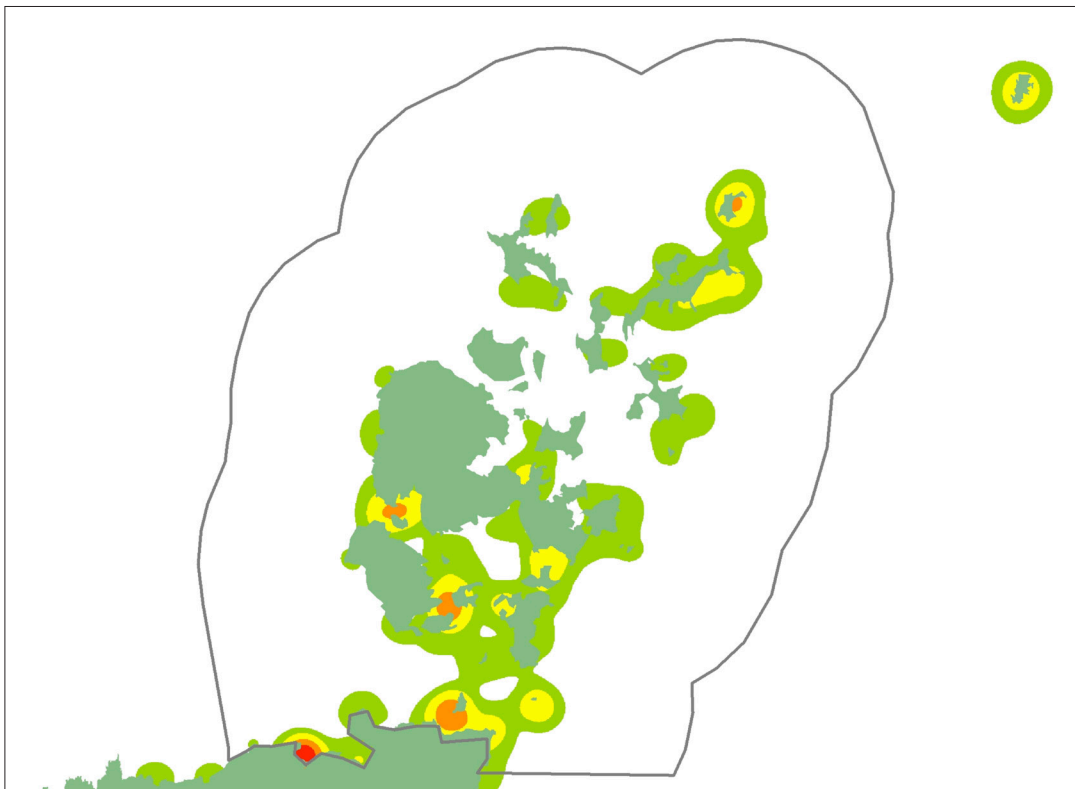
The number of records obtained from the new UKHO download is 5,265; the full integration of this information will therefore represent a significant increase in the c1,600 Canmore records that currently incorporate information from the UKHO.

This dataset has been provided as an ASCII delimited text file, and the work required to process and timetable the integration of this information with Canmore has been scoped to ensure it can be progressed most cost-effectively. A complex multi-stage process will need to be undertaken in order to assimilate this data into Canmore:

1. Archiving of data
2. Transfer data to a modern format
3. Establish concordance with Canmore database
4. Creation of new records in Canmore database where necessary
5. Creation of dedicated event for each UKHO entry
6. Linking events to records in Canmore

The integration of annual updates will be more straightforward thereafter, as there will be a concordance between Canmore and UKHO identification numbers.

As part of this work, a new web map service for wrecks and losses was published online in March 2012. This service allows users of Canmore to distinguish easily between 'wrecks', 'losses' and other maritime records by switching different layers on and off with a simple and user friendly legend. As previously, this updated information is also available to Local Authorities through their Archaeology Services to support enhancement of Sites and Monument Records (SMRs) and Historic Environment Records (HERs).



A 'density map' for Orkney waters gives an indication of where higher numbers of wrecks may be found.

The desirability of developing a methodology for identifying 'zones of potential' where archaeological sites offshore might be expected to exist was first recognised in *Towards a Strategy* (2009, 10). This drew attention to work undertaken in the *Shipwreck Inventory of Ireland* (Brady 2008) in relation to shipwrecks whereby a density map of recorded losses was produced. A methodology has subsequently been developed at RCAHMS for the creation of a 'density map' for Scotland. A draft map for Orkney Waters and the Pentland Firth has been produced and its applicability is being assessed by the project

team at the Orkney Research Centre for Archaeology (ORCA), as part of work discussed more fully under Objective 2. The biggest challenge with density mapping is the complexity and variability of the datasets on which they are based. With this in mind, an approach based on a single dataset created with a consistent and transparent methodology, such as Whittaker's (1998) *Off Scotland* database, may be more useful. To this end, discussions have begun with Ian Whittaker regarding the use and manipulation of his data to enhance Canmore, and a copyright agreement has recently been finalised.

### **Objective 1b**

*To establish an agreed data-sharing protocol with the UKHO or other relevant provider to ensure that the RCAHMS database is regularly and efficiently updated in the future with the latest UKHO information relating to wrecks and other obstructions located on the seabed around Scotland (0–200 nautical miles) and this information is made widely available.*

In July 2011, negotiations began between RCAHMS and UKHO to establish a Memorandum of Agreement on sharing data. A draft was circulated by the UKHO in October and, after wide consultation within both organisations, a final version was agreed and signed in December 2011. The agreement allows for the annual exchange of data between the organisations without charge. The arrangements with respect to the integration of the dataset are described under Objective 1a.

### **Objective 2**

*To work in collaboration with a third party contractor commissioned by Historic Scotland to interrogate key marine datasets for the Orkney Waters and the Pentland Firth, providing relevant data to the contractor and ensuring that information resulting from the contractor's work is efficiently assimilated into the RCAHMS database/local HERs for onward dissemination to support marine planning. (The project waters have been prioritised due to their high archaeological potential combined with confirmation by Marine Scotland that, after the Sound of Islay, Orkney and the Pentland Firth are likely to be the next area where marine renewable developments will be progressed.)*

ORCA was commissioned by Historic Scotland to interrogate key datasets for the Orkney waters and Pentland Firth, and the project inception meeting took place in October 2011. Several key datasets, listed below, were provided to ORCA free of charge, with guidance and support where appropriate.



1. Vertical and oblique aerial photographs hosted online
2. A shapefile of all Canmore data for the project area (9,986 records)
3. A shapefile of all maritime Canmore data for the project area (1,620 records)
4. A database of 'unlocated' maritime Canmore records for the project area (1,286 records)
5. A shapefile of nominal offshore council boundaries
6. A shapefile of parish boundaries
7. A shapefile of Ordnance Survey national grid quarter sheet numbers
8. Images for public relations

RCAHMS also provided ORCA with two template databases: one for the recording of text descriptions; and the other for the recording of information about site-extent polygons. The text description database was designed to match Canmore in a way that would simplify and speed up both the progress of the project itself, and the process of bringing the results into Canmore. The template was designed in collaboration with the Orkney Islands Council Archaeologist, and the Highland Council Historic Environment Record Officer in order to ensure compatibility of information with the relevant local SMR/HERs.

Each site-extent polygon created by the project team was recorded in a database according to the methodology set out in *Historic Environment Polygonisation Standards (Scotland)* (RCAHMS 2010a), a document developed in partnership with Historic Scotland, the Association of Local Government Archaeological Officers, and the Sites and Monuments Records Forum.

A project board with representatives from Highland Council, Historic Scotland, ORCA and Orkney Islands Council met regularly to discuss progress with the project, as well as detailed technical and methodological issues.

The final report of ORCA's project<sup>2</sup> was provided to Historic Scotland in March 2012 in tandem with the databases of site descriptions and polygon metadata, and a shapefile of site-extent polygons. This information will be entered into the RCAHMS database during 2012, thus making it widely available to national and regional bodies through the Canmore web portal. The database will be digitally archived by RCAHMS. ORCA will also be providing the databases to the Local Authority Archaeology Services in Orkney and Highland Council.

<sup>2</sup> [http://www.orkney.uhi.ac.uk/courses/archaeology/documents/293\\_Project\\_Adair\\_Orkney\\_and\\_the\\_Pentland\\_Firth\\_Report\\_web\\_version.pdf](http://www.orkney.uhi.ac.uk/courses/archaeology/documents/293_Project_Adair_Orkney_and_the_Pentland_Firth_Report_web_version.pdf)



This amended dataset will be immediately available to Orkney Islands Council through the Specialist User Recording Environment (SURE) programme which allows Council Archaeologists direct access to the Canmore database. This aspect of Project Adair was completed in March 2012.

### **Liaison**

A new single email address [marine@rcahms.gov.uk](mailto:marine@rcahms.gov.uk) was created to provide a single point of contact within RCAHMS. In order to gain a clearer understanding of the needs of development consultants, a series of meetings was set up with key private and charitable sector organisations, including Wessex Archaeology and Headland Archaeology. As well as opening doors for regular communication, these meetings have helped RCAHMS to clarify the needs of the development sector.

RCAHMS has been closely involved with the development of the Scottish Archaeological Research Framework (ScARF) and Project Adair will feature specifically in the marine and maritime panel document, *From Source to Sea*. A particular effort has been made to support the work of Colin and Paula Martin in connection with their extensive collection of archive material, which includes many of the key offshore archaeological excavations in modern times.

### **Fieldwork**

The opportunity to undertake maritime-themed fieldwork in the Western Isles proved extremely useful. A partnership between Comhairle nan Eilean Siar, Historic Scotland, RCAHMS and Wessex Archaeology, the Outer Hebrides Coastal Communities Marine Archaeology Pilot Project (OHCCMAPP) project was very successful, receiving widespread and positive coverage in the press. The experience of the team during fieldwork reinforced the need for a broad approach to the creation of a maritime heritage dataset, better opportunities for local communities to input information into established national and local datasets, and clearer methods of recording and presenting records.

### **Publicity**

A Project Adair web page was developed at RCAHMS, while an article in the *Scottish Diver* magazine explained the vital contribution that Scotland's divers can make to our understanding of shipwrecks (Mowat and Geddes 2011). The opportunity to speak at the annual general meeting of the Institute for Archaeologists' Scottish Group was used to promote the objectives of the project and RCAHMS' wider strategy with respect to marine and maritime heritage.

## Looking Forward

RCAHMS strategic priorities for 2010–15 are set out in *Future RCAHMS*. Project Adair has presented RCAHMS with an opportunity to re-assess its role in relation to marine heritage and to ensure that its objectives in respect of marine/maritime recording support the priorities of Scottish Government and Historic Scotland:

- The National Performance Framework (in particular National Outcomes 12 and 16).
- Scottish Government Marine Vision for 'clean, healthy, safe, productive coastal and marine environments managed to meet the long-term needs of people and nature.' This includes protecting and enhancing our most important marine heritage assets in such a way that they can be valued, understood and enjoyed.<sup>3</sup>
- UK High Level Marine Objectives<sup>4</sup>; UK Marine Policy Statement<sup>5</sup>; the development of a Scottish National Marine Plan by Marine Scotland, and in due course, regional marine plans that take account of heritage interests.
- Historic Scotland's work in relation to Marine Protected Areas and its forthcoming strategy for the protection, management and promotion of marine heritage. This recognises that inventories of archaeological sites and monuments (both those held by RCAHMS and by Local Authority Archaeology Services SMR/HERs) are invaluable sources of information to support understanding and management of the heritage resource.

<sup>3</sup> [www.scotland.gov.uk/Resource/Doc/308833/0097196.pdf](http://www.scotland.gov.uk/Resource/Doc/308833/0097196.pdf)

<sup>4</sup> [www.scotland.gov.uk/Resource/Doc/1057/0080305.pdf](http://www.scotland.gov.uk/Resource/Doc/1057/0080305.pdf)

<sup>5</sup> [www.scotland.gov.uk/Resource/Doc/295194/0115242.pdf](http://www.scotland.gov.uk/Resource/Doc/295194/0115242.pdf)

## Current Context and Next Steps

Discussions on arrangements for gathering, curating and disseminating marine and maritime heritage data to support these priorities must be framed in the context of the current options appraisal of RCAHMS, a review of Scottish Historic Environment Policy, and wider development of strategy for Historic Environment Records as a whole. With this in mind, it is considered appropriate merely to set out immediate priorities for Project Adair in 2012–13, and for the longer term, to set out what RCAHMS does now and where there might be opportunities to develop this contribution in the future.

The complexity and size of the marine datasets dealt with in the first year of Project Adair has left a series of unfinished tasks which will need to be prioritised in 2012–13:

1. The complete version of the UKHO database was received in

February 2012. The integration of this dataset will be completed in 2012–13. Once assimilated, this will represent the single largest improvement in Scotland's marine heritage data since 1995. This data will then be available online through Canmore and shared with Local Authorities through their Archaeology Services. The outcome will be a more up-to-date, user-friendly, national source of marine/maritime heritage information for consultants, developers and planners, and the public, encompassing the full geographic scope of the new marine planning system as it takes shape from 0–200 nautical miles around Scotland.

2. Information in the geo-database for Orkney and Pentland Firth waters created by ORCA as part of Project Adair will be integrated within Canmore. Both the site-extent polygons and the site descriptions will be linked to Canmore entries. Taken together with availability of this information through the Orkney/Highland Council Archaeology Services, this should result in an enhanced heritage data-set to guide sustainable development within this priority regional area for marine planning and renewables development.

Further crucial upgrades to the maritime Canmore database are needed. There is an opportunity to improve the location information for c8,000 (35%) of the records for losses, which would then display in RCAHMS external web map services. An example of an 'unlocated' record might state: 'vessel lost off Kinnaird Head'. In addition, just over 30% of all maritime records have more accurate locations, ie are located to within 1 square kilometre. In many cases the accuracy of these records could be improved by cross-referencing with more up to date sources.

## Long Term Planning

### Identification, Survey, Analysis

Until now, the gathering of information by RCAHMS in the marine environment has been limited to data entry into Canmore of readily available secondary source information (eg Whittaker; UKHO; archaeological reports). As input of the Whittaker Off Scotland data draws to a close and a protocol is in place to share data with the UKHO, the initial establishment of a basic marine/maritime record is nearing completion. This will, however, require to be regularly maintained and updated.

In the future, there would also be merit in deriving as much information as possible from developer-funded surveys, given the likelihood of the expansion of this area of work in future years. The OASIS<sup>6</sup> data capture form<sup>5</sup> has been designed to help the reporting of information from developer-funded archaeological fieldwork (including that offshore) by

<sup>6</sup> <http://oasis.ac.uk/scotland/>

data producers, such as contracting units, to the Local Authority SMR/HER community and to Canmore. The data capture form provides the opportunity to upload digital copies of both completed project archive reports (grey literature) as well as files defining the geographical extents of projects.

Beyond this, there may be opportunities for RCAHMS to explore development of a cost-effective, broad-ranging and well-managed programme of marine themed fieldwork. This could include:

- Outreach initiatives to encourage volunteer contribution (for example from community groups, such as fishermen and divers).
- Desk-based assessments of readily available marine survey data (as undertaken by ORCA for Orkney and the Pentland Firth waters), and utilising RCAHMS aerial photographic collections, cartographic sources and published material (as recommended by Wessex Archaeology (2011, 31, 37–9)).
- Ensuring that surveys by RCAHMS of coastal areas continue to include features on the foreshore.
- Exploring collaborative opportunities for RCAHMS to integrate archaeological expertise alongside other public sector funded marine survey initiatives in geographic areas of archaeological interest, to ensure cost effective access to high quality marine survey data as it is gathered, This might enable identification of new sites, revision of certain classifications of site, and in-depth analysis of individual significant sites.

### **Archiving and Collections**

RCAHMS is the main repository for paper and digital archives relating to heritage projects in Scotland. It has an extensive paper archive related to the marine historic environment, including important collections from Historic Scotland, the former Scottish Institute of Maritime Studies and Wessex Archaeology. In the future, where possible, elements of this material will be made available online, making it more accessible to professionals and to members of the public.

RCAHMS needs to work with colleagues in the sector to ensure that there is wide acceptance of RCAHMS continuing to be the main repository for marine archaeology digital archives, including, where appropriate, remote-sensing datasets, and that RCAHMS continues to develop methods for sharing this data with the Scottish Government, Local Authorities and the public. As evidence that this is beginning to happen,

several large and complex marine archaeology datasets have recently been added to the archive and linked to site records, for example that of HMS Campania.

The importance of the Marine Environmental Data Information Network (MEDIN) was noted in 2009, and it was clear then that both Historic Scotland and RCAHMS were committed in principle to archiving government-funded material in particular (Historic Scotland and BEFS 2009, 12). In 2011, MEDIN began the process of attempting to establish a secure Data Archive Centre (DAC) for marine historic environment data in the UK. Preliminary meetings in 2011 resulted in agreement that there should be a federated approach to the provision of a UK marine heritage DAC, provided by English Heritage/Archaeology Data Service, RCAHMS and RCAHMS. RCAHMS are taking forward internal discussion of the MEDIN DAC accreditation process in 2012.

### **Dissemination**

Changes in technology and developments in social media will allow RCAHMS to present information in its collections to the public in ever more effective ways, and to explore links with other online information sources (for example, Marine Scotland's National Marine Planning Interactive – NMPi). For example, efforts are being made to make more information available to users of web services in Scotland and further afield, including snapshots of geophysical surveys, archived grey literature and aerial photographs.

### **Conclusion**

Project Adair was initiated by Historic Scotland with a series of specific objectives for 2011–12. Work began in July 2011. The creation of a memorandum of agreement with UKHO provides the foundations for regular and complete integration of the most important dataset of wrecks in Scottish waters into Canmore. The UKHO data received in February 2012 includes over 4,000 records. It had been hoped that the majority of integration work could take place in 2011. However, a July start for the project, the requirement to agree a protocol with the UKHO prior to receipt of data, and the size of the dataset has meant that integration has only progressed as far as the scoping stage. The associated project covering Orkney Waters and the Pentland Firth was supported with the provision of a large number of RCAHMS datasets, templates for data entry and polygonisation, and day-to-day partnership working. Full integration of these data-sets represents the priority action for Project Adair 2012–13. The outcome of these two enhancement projects will provide a significantly improved source of information about Scotland's marine heritage in support of Scottish Ministers' policies for coastal and marine environments.

## Acknowledgements

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The associated project undertaken with ORCA involved collaborative work with Sylvina Tilbury of Highland Council, and Julie Gibson of Orkney Council. Edward Pollard, Mark Littlewood and Paul Sharman (all at ORCA), made every effort to ensure the success of the project at ORCA. Susan Casey, Leanne McCafferty and Mike Middleton (RCAHMS) designed the templates for the project database.

The project could not have been successful without the input of many staff at RCAHMS including, in particular, members of the Data and Recording Section and the Information Systems department. Many other individuals and organisations helped with various aspects of the project, including: Keith Packer (UKHO); Jonathan Benjamin, Stephen Lancaster and John McCarthy (Wessex Archaeology); Dan Atkinson (Headland Archaeology); Ian Whittaker; Emily Nimmo and Peter McKeague (RCAHMS); Colin and Paula Martin; Dave Tullett (Marine Scotland); Deanna Groom (RCAHMW).

## References and Abbreviations

### **BEFS**

The Built Environment Forum Scotland

### **Brady, K 2008**

*Shipwreck Inventory of Ireland: Louth, Meath, Dublin and Wicklow*, Dublin: The Stationary Office

### **EASE Archaeology 1997**

'Report on a Coastal Zone Assessment Survey of Orkney – Burray, Flotta, Graemsay, Hoy, South Ronaldsay'. Unpublished report commissioned by Orkney Archaeological Trust and funded by Historic Scotland

### **EASE Archaeology 1998**

'Report on a Coastal Zone Assessment Survey of Orkney – Westray, Papa Westray, Holm of Papa Westray, West Mainland'. Unpublished report commissioned by Orkney Archaeological Trust and funded by Historic Scotland



**EASE Archaeology 1999**

'Report on a Coastal Zone Assessment Survey of Orkney – Sanday and North Ronaldsay'. Unpublished report commissioned by Orkney Archaeological Trust and funded by Historic Scotland.

**Historic Scotland 2012**

*Scotland's Past, Scotland's Future: Corporate Plan 2012–2015*.  
Edinburgh: Historic Scotland

**Historic Scotland and the Built Environment Forum Scotland 2009**

*Towards a Strategy for Scotland's Marine Historic Environment*. Copy available at <http://www.historic-scotland.gov.uk/marine-strategy.pdf>

**Mowat, B and Geddes, G 2011**

'Your Wreck Needs You', *Scottish Diver* vol.51 no.6 (November/December 2011), 14–15

**RCAHMS 2010a**

*Historic Environment Polygonisation Standards (Scotland)*, Edinburgh: RCAHMS

**RCAHMS 2010b**

*Future RCAHMS, Business Strategy, the next five years 2010–2015*.  
Edinburgh: RCAHMS

**Scottish Government National Performance Framework**

<http://www.scotland.gov.uk/Resource/0038/00387872.pdf>  
(Consulted February 2012)

**Wessex Archaeology 2011**

'Scotland's Marine Data Heritage Audit'. Unpublished report for Historic Scotland. Copy available at <http://www.wessexarch.co.uk/projects/marine/scotland/historic-scotland-marine-data-audit>

**Whittaker, I 1998**

*Off Scotland: a comprehensive record of maritime and aviation losses in Scottish waters*, Edinburgh C-Anne



Crail Harbour, Fife, c1890. SC388582

## Appendix 1 – Statement of Requirements, July 2011

Project Adair, mapping marine heritage sites to support new marine legislation.

### Purpose

1. This project brief sets out the basis for a fixed-term, joint Historic Scotland/RCAHMS project to begin to improve the record of the marine historic environment and to ensure information is efficiently and effectively disseminated to underpin Scottish Ministers' policies in relation to marine planning and protection in the seas around Scotland. The project is to be funded by Historic Scotland and delivered by RCAHMS by virtue of a fixed term post within RCAHMS supported by a budget to procure licenses for marine seabed mapping data.
2. Future projects may be considered in due course if this project is successful and if future budget can be secured in relation to further data enhancement necessities that support the Scottish Government's priorities, particularly in relation to marine planning, protection of marine natural/cultural heritage, and development of renewable energy offshore.

### Context

3. The Marine (Scotland) Act 2010 and UK Marine and Coastal Access Act 2009 provide Scottish Ministers with new powers to undertake marine planning, licensing, protection and enhancement of the historic environment in the coasts and seas around Scotland from 0–200 nautical miles, in order to deliver sustainable economic growth from our coasts and seas. Key areas of anticipated growth are in relation to offshore wind and marine renewable energy development where ambitious government targets in relation to climate change are setting the agenda.
4. Articles 2, 5 and 7 of the Valetta Convention commit state parties including the UK to develop inventories of archaeological sites on land and at sea, to integrate consideration for archaeology within planning systems, and to disseminate knowledge about archaeological discoveries. For the purposes of this statement of requirements, 'inventories of archaeological sites at sea' encompass both the RCAHMS national inventory and the local authorities' Sites and Monuments or Historic Environment Records (SMRs/HERs). The RCAHMS national inventory is a record of all known and reported elements of the historic environment in Scotland, on land and at sea. Local Authority SMRs/HERs are records of all known and reported elements of the historic environment in that local authority area. These are normally maintained locally and, on land at least, often

contain more records than the RCAHMS national inventory. Under terrestrial planning legislation, local authorities have a primary role in providing heritage advice on sites and monuments down to the mean low water mark. For marine aquaculture, this role also extends offshore. The local authority SMRs/HERs are therefore important tools to help inform local authorities' decision-making in planning and protection of the historic environment, as well as being crucial in helping the public to understand and appreciate the local heritage resource.

5. RCAHMS began work to integrate maritime data within the national inventory (a monuments database known as Canmore) in the 1990s, as part of its role to identify, survey and analyse the historic and built environment of Scotland; to preserve, care for and add to the information and items in its national collection; and to promote understanding, education and enjoyment through the interpretation of the information it collects and the items it looks after.
6. The statutory role undertaken by Historic Scotland on behalf of Scottish Ministers in the marine environment now includes protection and management of heritage sites of national importance, provision of heritage advice to Marine Scotland on the new marine planning system, and environmental assessment of impacts to archaeological sites in the marine environment. Both Historic Scotland and RCAHMS are now receiving an increased level of enquiries relating to offshore developments, particularly in connection with the location of offshore renewable energy installations.
7. It is recognised that the provision of adequate archaeological advice requires access to reliable, up-to-date information on the historic environment. *Towards a strategy* observed<sup>7</sup> that the compilation of inventories of archaeological sites on the seabed around Scotland is at an early stage of development. Many local authority archaeology services hold records for coastal and marine areas within their SMRs/HERs, although it is generally the case that local authority records tend to be much less complete for marine areas than for terrestrial. The baseline position for the national inventory database, Canmore, (correct to 5 April 2011) is c20,423 maritime records (7% of overall database), comprising 17,637 reported casualties (86% of the overall maritime record), 1,617 located wrecks (8%), 676 aircraft (3.3%), and 314 obstructions (1.5%). <15% are records with any seabed location or basic descriptive information. *Towards a strategy* observed a bias towards recent remains, mostly shipwrecks. Records for earlier sites and submerged landscapes, as well as recorded information for heritage beyond territorial waters (ie the 12–200 nautical mile zone) are very scarce. Moreover, marine geophysical data gathered by a wide range of public sector organisations and

<sup>7</sup> *Towards a strategy for Scotland's marine historic environment* (2009), published by Historic Scotland in association with the Built Environment Forum of Scotland.

industry remains to be interrogated for the heritage information it contains.

8. At a time when a statutory marine planning system with national and regional tiers is being introduced Scotland-wide to guide sustainable development in the seas around Scotland, curators and planners would benefit from improved information about the marine historic environment to inform designation and stewardship of nationally important sites, and to underpin marine planning. An improved record would also be of wider public benefit.

### **Goals and Strategic Aims**

9. The ultimate goal is a comprehensive and widely available record of the marine historic environment, to help support Scottish Ministers' marine planning and protection policies and to help guide sustainable economic growth in the coasts and seas around Scotland. Advancing our knowledge about marine heritage and making this information widely available will help to realise the full potential of the marine historic environment as a resource — cultural, educational, economic and social — for the people of Scotland and further afield. This is the key challenge for the marine historic environment identified in the pre-consultation draft Scottish National Marine Plan.
10. The aim of the project is to begin to enhance the inventories of archaeological sites through coordinated data gathering, interpretation, archiving of key national marine data sets, and in relation to the Orkney and Pentland Firth waters, an area of high archaeological importance and a priority area for development of renewable energy, ensuring that this information is made widely available to support new marine planning systems.

### **Criteria for Prioritising Objectives**

11. The following key criteria have been selected to prioritise the objectives for this work programme in order to ensure best value for money:

Work must enhance inventories of archaeological sites at sea in relation to any or all of the following: all types and periods of marine historic assets that have left demonstrable remains around Scotland's coasts and seas; spot-finds and known seabed obstructions; designated historic assets including the extent of any protected areas; the spatial definition of the key elements of the historic character of the foreshore and seabed; delineated zones of archaeological potential for submerged terrestrial sites and landscapes; and wrecks of ships and aircraft.

The work must support marine planning work in relation to the key proposed areas for offshore and marine renewable energy (as this is likely to be a high priority for any incoming new SG administration given ambitious climate change targets and the forthcoming Scottish National Marine Plan).

The work must adopt the principle of ‘gather data once, use many times’, making use of existing data-sets and knowledge where at all possible to answer relevant questions. It must be undertaken in accordance with principles established by the Marine Environment Data Information Network (MEDIN); all data must be efficiently entered into existing data management structures for onward dissemination using existing mechanisms where possible, or new mechanisms as appropriate to support emerging marine planning systems.

## Objectives

12. The following objectives for the programme of work 2011 – 12 have been defined as a result of evidence gathered from the following scoping studies:
- Towards a strategy for Scotland’s marine historic environment (Historic Scotland/BEFS 2009)<sup>8</sup>
  - Scotland’s marine data heritage audit (Wessex Archaeology unpublished, 2011)<sup>9</sup>
  - The draft report of the Scottish Archaeological Research Framework (ScARF) marine-maritime group (forthcoming)

<sup>8</sup> See <http://www.historic-scotland.gov.uk/marine-strategy.pdf>

<sup>9</sup> See <http://www.wessexarch.co.uk/projects/marine/scotland/historic-scotland-marine-data-audit>

## Tasks, Project leads, Methodology and Success Measures

Objective	Task	Outcome
<p>1a – To integrate an updated UK Hydrographic Office download of wrecks data within the RCAHMS national inventory Canmore database for the Scottish territorial waters and offshore waters (ie 0 – 200 nautical miles around Scotland) and make this information widely available to support new marine planning systems.</p>	<p>An up-to-date copy of the UKHO wrecks and obstructions database for 0 – 200 nautical miles around Scotland will be obtained and used to update Canmore’s maritime records on a national scale.</p> <p>The possibility of integrating information from the two datasets and presenting this in a dynamic way will be considered and options presented. The Canmore database currently includes a field which contains UKHO numbers where available and it may be possible to develop and update this to improve interoperability between the databases (Wessex Archaeology 2011).</p> <p>A new wrecks and losses Webmap service will be developed for Scotland and published online, comprising point data and density of losses using existing Canmore information, and data gathered during this work.</p>	<p>Short report defining feasibility of integrating and regularly updating UKHO data within Canmore and presenting the two data sets, together with options and recommendations.</p> <p>Monthly update of progress, including numerical statistics where appropriate.</p> <p>New webmap service for wrecks and density of losses around Scottish waters published online and made available to Marine Scotland/ Historic Scotland/local authorities.</p>
<p>1b – To establish an agreed data- sharing protocol with the UK Hydrographic Office or other relevant provider to ensure that the RCAHMS database is regularly and efficiently updated in the future with the latest UKHO information relating to wrecks and other obstructions located on the seabed around Scotland (0 – 200 nautical miles) and this information made widely available.</p>	<p>If the UKHO wrecks database were made available to Canmore by regular update, disparities between the two databases could be minimised on an ongoing basis. Further discussion between RCAHMS and the UKHO on how this might best be implemented will be undertaken. The agreement developed between RCAHMS and the UKHO will be investigated as a model to follow and a similar agreement established.</p>	<p>Short report defining feasibility of integrating and regularly updating UKHO data within Canmore and presenting the two data sets, together with options and recommendations.</p> <p>Signed protocol in place between UKHO or other relevant data provider and RCAHMS.</p>

Objective	Task	Outcome
<p>2 – To work collaboratively with a third party commissioned separately by Historic Scotland to interrogate key marine data-sets for the Orkney Waters and Pentland Firth, providing relevant data to the contractor and ensuring that information resulting from the contractor’s work is efficiently assimilated into the RCAHMS national inventory and the Orkney and Highland SMRs/HERs for onward dissemination to support marine planning. (These waters have been prioritised due to their high archaeological potential, combined with confirmation from Marine Scotland that, after the Sound of Islay, Orkney and the Pentland Firth are likely to be the next area where marine renewable developments will be progressed.)</p>	<p>Any data requested from RCAHMS by the area project team will be provided free of charge.</p> <p>RCAHMS will participate in the regional data project steering group (by video conference where appropriate but three visits to Orkney should be allowed for).</p> <p>RCAHMS will coordinate with the area contractor to ensure that data it generates is developed and delivered in a manner that allows for assimilation within the national inventory through RCAHMS data structure deposition mechanisms.</p> <p>RCAHMS will carry out quality assurance of data delivered by the area contractor, and develop an enhanced geodatabase of information for the project area, promoted to national and regional planning bodies.</p>	<p>Geodatabase made available by the contractor to RCAHMS/ Orkney Council/ Highland Council and, if requested, also to Marine Scotland and/or Historic Scotland.</p>
<p>3 – To prepare a paper setting out the results of this project, identifying any further data priorities and options for the future assimilation of this data within the national inventory, as well as onward dissemination of this information to local authority SMRs/HERs and others as appropriate to support new marine legislation.</p>	<p>Written report based on findings from project and discussions with key parties.</p> <p>Options appraisal should include costs, and should take on board wider developments in marine/heritage data strategy (both on land and at sea).</p> <p>Preparation of this report will require some discussions to be held with other bodies to include:</p> <p>Marine Scotland</p> <p>ALGAO Scotland</p> <p>Other parties as relevant</p>	<p>Submission of report to Historic Scotland at conclusion of project.</p>



## Project Management

13. A small steering group will be convened by Historic Scotland comprising the project managers for this project, and the area project for Orkney/Pentland Firth. The local authority archaeology services for Orkney and Highland will be invited to participate in meetings for the area project.
14. The steering group will meet for an inception meeting at the start of the project, and for monthly updates to review progress until completion of the project. In the interests of cost effectiveness, where these steering group meetings require participation from the third party area contractor, they may involve use of video/teleconference.

## Deliverables, Outputs and Timescales

15. The table below sets out the required deliverables for the project

Item	Description	Target date
Project update	Brief monthly written updates presenting a short summary on progress, including numerical updates relating to data entry and key issues identified	1 month after the marine data manager commences work, and monthly thereafter (except where updates are provided in interim/final project reports)
Interim project report	Short report defining feasibility of integrating and regularly updating UKHO data within Canmore and presenting the two data sets, together with options and recommendations	Date to be confirmed at 1st project review meeting (one month after inception meeting)
Web map service for wrecks and recorded losses	New webmap service made available online for wrecks comprising point data and density of losses	Project end
Geodatabase for Orkney/Pentland Firth area (subject to separate commission)	Geodatabase made available by the contractor to RCAHMS/Orkney Council/Highland Council and, if requested, also to Marine Scotland and/or Historic Scotland	Project end
Final project report	Project report setting out results of work, and identifying next steps	Project end

16. The project must complete with submission of final deliverables and invoice not later than 25 March 2012 (project end date).



Project Adair is a partnership between  
Historic Scotland and RCAHMS