

13 Cultural heritage

13.1 Introduction

Cultural heritage in respect of the project is assumed to include all humanly created features on the landscape, including portable artefacts, which might reflect the prehistoric, historic, architectural, engineering and/or social history of the area. Archaeological activity underwater and in the coastal zone has expanded significantly in recent years, with a consequent raising of awareness of the need to protect cultural resources in the marine environment from damage by human and natural action.

Archaeology is defined as the study of the past through the examination and analysis of material cultural remains. These include buildings, structures, features, marine wrecks and the landscape itself.

All archaeological sites and monuments are protected under the National Monuments Act 1930 and subsequent Amendment Acts, 1954, 1987, 1994, 2004, the Heritage Act, 1995 and 'The Valetta Convention'.

The European Convention on the Protection of Archaeological Heritage (revised), European Treaty Series No. 143, dated 16 January 1992 (commonly referred to as 'The Valetta Convention') entered into force for Ireland on 19 September 1997.

The archaeological and architectural heritage assessment comprises the results of a survey and evaluation of selected sites of archaeological potential and architectural heritage interest within and in the immediate environs of the proposed test site. The work consists of the results of a Paper Survey and Field Inspection.

This chapter has been prepared in conjunction with Moore Marine Services and is based on the detailed cultural heritage report prepared by them (see **Appendix 10: Cultural Heritage Report**).

13.2 Methodology

The cultural heritage of the area was examined through archaeological, architectural and historical studies. The archaeological and architectural study involved a documentary search and field inspection of the area. Field inspections of the marine environment (geophysics and dive surveys) and walkover surveys on the intertidal and land areas were also undertaken.

The historical study involved a documentary search as well as discussions with key stakeholders, including:

- Department of the Environment, Heritage & Local Government, Customs House, Dublin 1
- Map Library, University of Dublin, Trinity College Dublin 2
- National Museum of Ireland, Kildare Street, Dublin 2
- National Library of Ireland, Kildare Street, Dublin 2
- Ordnance Survey of Ireland, Phoenix Park, Dublin 8
- Royal Society of Antiquaries, 63 Merrion Square, Dublin 2

Desk study

A list of sites and areas of archaeological potential and architectural heritage interest was compiled, based on an examination of the following sources:

- The Geological Survey of Ireland Aerial Photograph Collection.
- Cartographic sources, including Bald's map of County Mayo (1817), the first edition of the Ordnance Survey (O.S.) six-inch map series published in 1838, the twenty-five inch O.S. map published in 1900 and the six-inch O.S. revision published in 1906. Maps were sourced in the Map Library of Trinity College Dublin, Mayo County Library in Castlebar and the National Maritime Museum in Greenwich, London.
- Irish Excavations Database: 'Excavations' is an annual bulletin, which contains summary accounts of all excavations carried out in Ireland, North and South (www.excavations.ie).
- Lewis Topographical Dictionary, which gives a unique insight into early nineteenth-century life in Irish counties and towns.
- Mayo County Development Plan (2008-2014), which contains the Record of Protected Structures (RPS) for County Mayo as well as landscape appraisals.
- Mayo County Library, where a number of local histories, general historical/archaeological texts and historical maps were consulted (see bibliography for details).
- The National Shipwreck Inventory, which is based on archival studies of all documentary sources around the coast, including Lloyd's List, House of Commons Sessions Papers, local newspapers, cartographic sources and other relevant documentary sources.
- The Ports and Harbours Archive, which contains details of all alterations and refurbishment works carried out on ports and harbours, including OPW works.
- The National Inventory of Architectural Heritage, which identifies and records the architectural heritage of Ireland from 1700 to the present day, in a systematic and consistent manner.
- The Record of Monuments and Places (RMP), which enabled consideration of the proximity of the development area to known and identifiable archaeological monuments.
- The Topographical Files held in the National Museum of Ireland, which provide information on artefacts and their find spots, and on field monuments which have been notified to the National Museum, along with reports of excavations undertaken by National Museum archaeologists in the early twentieth century.

Field surveys

A programme of field surveys was carried out across the entire development site between September 2010 and October 2011.

Terrestrial environment

The terrestrial visual field inspection was carried out on 20 September 2010. It investigated the cable route along the beach and foreshore up to the terminus. It also visited the nearby sites identified in the RMP and analysed the impact the development would have on them. A programme of archaeological testing was carried out on the site of the proposed substation and approach road on 2 August 2011, under excavation licence 11E0260.

Marine environment

The submarine field survey comprised a diver survey and a high-resolution marine archaeo-geophysical survey.

The diver survey was carried out on 20 and 21 of September 2010 and comprised a diver visual survey and a metal detection survey of the nearshore cable route, from Belderra Beach to the inner limits of the high-resolution marine geophysical survey. The survey covered a 100m-wide corridor centred on the proposed centreline of the cable route and used overlapping diver transects to ensure that the area was surveyed completely.

The high-resolution marine archaeo-geophysical survey of the submarine aspect of the project involved surveying the 100m water depth offshore test area, the 50m water depth offshore test area and all related cable routes to the outer limit of the diver survey. It was carried out from 28 September to 3 October 2010, from the survey vessel M.V. *Dúlra na Mara*. The survey comprised 121.3 linear kilometres of combined side-scan sonar survey and marine magnetometer survey. Survey lines were planned at spacing increments of 70m and this survey pattern, coupled with the side-scan sonar slant range, ensured 100% overlap between all survey lines.

13.3 Terrestrial baseline

13.3.1 History

Receiving environment

Archaeological sites within the study area

The desktop assessment of documentary sources relevant to the proposed development relates mainly to its terrestrial aspect.

The visual inspection of the area surrounding the cable route indicated that there are a number of sites in the immediate vicinity of the development that are identified in the RMP, as well as recorded topographical finds; none will be directly impacted by the development.

Sources examined indicate that the area surrounding the landfall, cable route and substation is of considerable archaeological and historical significance. There is archaeological evidence that the area has been occupied continually since Neolithic times. Although there are a number of recorded archaeological monuments and finds in the vicinity, none will be directly impacted by the proposed development. Historical and cartographic records detail the more recent development and improvement of the area. They record the changing fortunes of the area, changes in ownership, and general improvement in living and working conditions.

While there is little evidence in the archaeological record of Mesolithic activity in North Mayo, there is considerable evidence of Neolithic activity, in particular the numerous megalithic monuments, such as the Céide Fields – an unusually well-preserved system of fields dating from this period. The Bronze Age movement towards single burial can be seen in the area surrounding the subject site, where examples of small stone-lined chambers, called ‘cists’, have been found at Binghamstown, Carn, Cross and Tonamace. There are also many wedge tombs and standing stones in the area – for example, there is a standing stone at Binghamstown and one at Macecrump/Tonnamace. *Fulachta fiadh* also date from the Bronze Age and several have been found in the vicinity of Belmullet.

Promontory forts from the Iron Age are recorded at Annagh, Annagh Head and Termoncarragh. At Annagh Head and Termoncarragh, these are large monuments, incorporating possible hut sites and gatehouses. Ballymacsherron has two associated hut sites. Such a concentration of

contemporaneous monuments in the area would appear to indicate that there was an extensive Iron Age population there.

From the middle of the sixth century onwards, hundreds of small monastic settlements were established around the country. Examples of well-known early monastic sites in Mayo include Aughagower, Inishmaine, Ballintubber, Errew, Kilmore-Erris, Balla, Cong, Killala, Turlough, Moyne near Cross, and island settlements off the Mullet peninsula such as Inishkea North, Inishkea South and Duvillaun More (O'Hara and Ó Muraíle). There are two large religious settlements within 5km of the subject site, at Termoncarragh and Macecrump/Tonnmac. Each of these is recorded as an archaeological complex. Such a diverse and varied chronology of monuments near the site appears to indicate either continued use of the area or later reuse of earlier sites. Either way, it indicates extensive human exploitation of this area.

Various maps of the study area were subjected to a cartographic analysis.

Speed's map of County Mayo (1620) shows little detail about the subject site and does not record the location or nature of any cultural heritage (see Figure 13-1).

William Petty's map of the Barony of Erris (1683) was produced as part of his *Hiberniae Delineatio*. This map provides only a small amount of detail about the subject site, but clearly names the townlands of Emlagh (Emlybeg), Carne (Carn), Crogh (Cross) and the island of Enishglora (Inish Glora), and places them at their current locations. The map does not, however, record the location of any contemporary sites of cultural heritage significance (see Figure 13-2).

Bald's map of County Mayo (1817) depicts the landfall site as a sandy beach between two rocky headlands (Figure 13-3). The only sites of cultural heritage significance shown on the map are Cross Church, Cross Graveyard and Inish Glora Church. It records a small *clochán* of houses to the south of the proposed substation location. This area is named 'Belduragh', and Ordnance Survey Letters record Belderra Strand as having previously been called 'Beldurish Strand'.

The first edition Ordnance Survey map for County Mayo, Sheets MA 09 and 016, surveyed in 1838, is not very descriptive of the landfall site and is of limited benefit in identifying possible cultural heritage (Figure 13-4). The first edition map shows the beach access road in its current location, but secondary access roads appear to have changed. The access road which travels through west Cross townland previously started further west than currently. Cartographic evidence would appear to indicate that field boundary extensions and drainage works have now claimed this area, resulting in a distinct northerly diversion in the road route.

A second roadway that runs along the boundary between Cross and Ballymacsherron townlands is not shown on the 1838 map, and is clearly a later creation. A number of structures, including a rectangular house-type structure and smaller outhouses, are depicted on the map close to the location of the substation. These are absent from all subsequent maps and no trace of them can be seen on the site.

The second edition Ordnance Survey map of the area (1900) depicts a number of small changes as having taken place in the vicinity of the subject site (Figure 13-5). The former access road from Binghamstown to Belderra Strand and over to Cross church and graveyard is depicted in this map as a broken trackway, whereas it was previously a fixed routeway.

This map records a cairn at the site of RMP MA:016:06. This map also differs from the previous edition in that the small land plot and buildings situated in the townland of Ballymacsherron, immediately to the southeast of Belderra Strand, have all been removed – the 1900 edition of the map has no reference to any building cluster in this area.

Archaeological potential in the study area

The presence of such a large number of successive and often multi-period sites in close proximity to the cable route is indicative that this area has been the site of continued and successive human occupation.

The archaeological and historical background of the area, coupled with the researched baseline data, indicates that the subject site is one of very high archaeological potential and that, although the project will not impact any sites identified in the RMP or the RPS, the possibility of groundworks – and in particular cable trenching – impacting previously unknown subterranean cultural heritage deposits is relatively high.

13.3.2 Archaeology

Receiving environment

The Irish Excavations Database has no record of any archaeological fieldwork in the townlands of Annagh, Ardowen, Ballymacsherron, Binghamstown, Cross, Emlybeg North, Emlybeg South, Macecrump, Termoncarragh or Tonamace.

Records of Monuments and Places (RMP)

There are no sites within the area of the proposed development identified in the RMP. There are, however, a number of monuments in the general area, none of which will be directly impacted upon by the proposed works (Figure 13-6). The full Cultural Heritage Report (**Appendix 10**) sets out a complete list and description of all sites in the vicinity of the project that are identified in the RMP.

Field surveys

The field surveys did not identify any archaeological sites within the footprint of the project area. However, it is possible that there is archaeological heritage beneath the sands and dune system behind the beach area. RMP MA:016:007 (Ballymacsherron Promontory Fort and two hut sites) on the headland to the north of the beach and the RMP complexes MA016:006 and 007 indicate that a complex society was previously present in this area. The close proximity of such a significant and multi-period community would appear to indicate that the construction of a cable route through the dune area has the potential to uncover associated material culture.

The results of the programme of archaeological testing indicate that there are no archaeological features, material or deposits on the site of the proposed substation and its approach road.

Aerial photographic analysis

A number of aerial photographic sources were consulted in an attempt to identify any previously unrecorded cultural heritage deposits, both on land and in the shallow underwater section. These sources included Ordnance Survey aerial photographs and photographs from the Coastline Survey of Ireland. These did not identify any previously unrecorded cultural heritage deposits or features.

The aerial image in Photo 13.1, captured in 1999, shows a new road built across the foreshore. The area on the land side of the road is now filled in, possibly by windblown sand, and a small car park has been constructed adjacent to the road on the Belderra Strand side of the road.



Photo 13.1: Aerial image of Belderra Strand and adjacent shallow waters

13.3.3 Potential impacts

By their very nature, developments of this kind are likely to have an impact on the areas in which they are situated. Excavations associated with the substation foundations, cut-and-fill operations, cable joint bays and cable trenching also have the potential to uncover previously unrecorded features and material of archaeological interest and potential.

There are no identified sites of archaeological potential or interest located within the boundaries of the site, and consequently no negative physical impact on such sites is envisaged.

The following impact assessment is based on the results of the desktop study and field survey. Impacts are discussed for the construction, operations and decommissioning phases of the project.

Construction phase

There will be no impact on known protected structures or national monuments, and the development will not impact directly or indirectly upon sites or monuments listed in the Record of Monuments and Places or structures listed in the Record of Protected Structures for County Mayo.

There are no known and unprotected sites of archaeological or cultural heritage significance on or in the vicinity of the development, and consequently there will be no direct or indirect impact on known (and unprotected) archaeological or cultural heritage sites during the construction phase.

The field survey noted the extent of historical and archaeological deposits in the vicinity of the development, indicating that the area appears to have been the subject of continued human

habitation since earliest times. The construction of the landfall cable route has the potential to uncover archaeological and historical features and materials. Consequently, there is potential for works in the construction phase to have a negative, direct and long-term impact on any such cultural heritage deposits they encounter.

Operational phase

The development will not impact directly or indirectly on known and protected structures or national monuments during the operational phase.

Should any additional site works or modifications to the site be required during the operational phase, the potential exists for such works to have a negative, direct and long-term impact on any cultural heritage deposits they encounter.

Decommissioning phase

There will be no impact on known and protected sites, structures or national monuments, either directly or indirectly, during the decommissioning phase.

If invasive groundworks are to be carried out as part of the decommissioning works, there is potential for the decommissioning phase of the development to expose deposits of cultural heritage significance. If this were to happen, their exposure could have a negative, direct and long-term impact.

13.3.4 Mitigation

Remedial and mitigation measures are measures taken to avoid, reduce, correct or eliminate any significant adverse impacts of the development.

Measures identified below for each phase are practicable or reasonable having regard to the potential likelihood and significance of the impacts.

Construction phase

All cable trenching works, terrestrial and intertidal, should be monitored by a suitably qualified archaeologist. These works should be licensed by the National Monuments Section of the Department of the Environment, Community & Local Government and the National Museum of Ireland. The licensee should be suitably qualified, with adequate resources to investigate any deposits that may be encountered.

Operational phase

Any invasive groundwork arising from the operational phase should be monitored by a suitable qualified archaeologist and should be appropriately licensed.

Decommissioning phase

Any invasive groundwork should be monitored by a suitably qualified archaeologist, and should be appropriately licensed.

13.4 Marine baseline

13.4.1 History

Receiving environment

Marine archaeological sites within the study area

The admiralty chart of this area (Admiralty Chart No 2703) states that the seabed is comprised of rock and sand in the nearshore area, with rock, sand and broken shell in the outer section.

The chart does not record the presence of any shipwrecks or other features of cultural heritage significance.

The National Shipwreck Inventory records two vessels as having possibly foundered in or around the area of Annagh Peninsula:

- 'St George, 26 Jan 1847, Belmullet, 128 ton sailing vessel was on the shore.'
- 'Sisters, 13 Mar 1899, between Mayo and Belmullet. The wooden smack of Westport was 36 years old and weighed 21 tons. Stranded in SW wind with a cargo of limestone.'

The locations given for the loss of these vessels are imprecise. The high-resolution marine archaeo-geophysical survey of the two test area sites and the associated cable routes did not record the presence of any wreckage.

The Ports and Harbour Archive of the Department of the Environment, Community & Local Government has no records for the proposed landing location.

This was a seafaring area in both historic and prehistoric times. St Brendan is recorded as having a close affinity with Inis Glora and visited the island on several occasions. Fishing has been carried on in this area for centuries. There is thus a possibility that there are non-ferrous artefacts buried under the sand. Non-ferrous material, such as log boats, has been found off the Irish coast at Skerries, Co. Dublin and at Galway Bay.

Marine archaeological potential within the study area

In the submarine zone, Dr Seamus Caulfield and his late father Pádraig unearthed submarine peat deposits at various locations around the Belmullet Peninsula, such as at Broadhaven and Blacksod. These submarine deposits extended from the foreshore past the low water mark, and were considered to be prehistoric. If similar deposits were found at the subject site, the excavation of a cable trench through the area would have a direct impact on these deposits and it would have the potential to uncover prehistoric archaeological material.

Field work

A diver survey was carried out on 20 and 21 September 2010 under dive licence. The survey comprised a diver visual survey and metal detection survey of the nearshore cable route, from Belderra Beach to the inner limits of the high-resolution marine geophysical survey. The diver survey showed that the seabed in the area of the proposed nearshore cable route was comprised mainly of rippled sandy shallows. Areas of bedrock outcrop were noted at the outer edges of the survey zone at Ballymacsherron Promontory and at Cross. The survey did not reveal any visible or detectable archaeological remains along the landfall route.

Geophysical surveys of the test areas and cable route were conducted as shown in Figure 13-7. The side-scan sonar survey of the 100m water depth offshore test area covered an area measuring 3.5km in length and 1.5km in width along the cable route and at the test area locations. The survey revealed that the seabed in this area is uniformly flat, consisting mainly of medium to coarse sand. The high-resolution marine archaeo-geophysical survey did not reveal the presence of any potential cultural heritage in the area.

The side-scan sonar survey of the cable route from 100m water depth offshore test area to 50m water depth offshore test area provided a very good image of the area. The survey area measured almost 9km in length and 0.7km at its widest. The survey did not reveal the presence of any cultural heritage in this area.

The survey area of the 50m water depth offshore test area measured 1.2km in length and 750m in width. The survey did not reveal the presence of any cultural heritage in this area.

The geophysical survey of the cable route from the 50m water depth offshore test area to the inner extent of the offshore survey measured almost 6.5km in length and 0.6km in width. The survey did not reveal the presence of any material which could indicate of the presence of cultural heritage in this area.

13.4.2 Potential impacts

Construction phase

The construction phase of the development will not impact directly or indirectly upon any historic shipwrecks listed in the Shipwreck Inventory of County Mayo.

Although no visible or detectable cultural heritage was recorded in the submarine zone, there is a possibility that remnants of prehistoric landscapes, such as those discovered at Blacksod and Broadhaven, could be encountered in the nearshore section. Non-ferrous materials, such as log boats or timber raft remains, could also be uncovered in offshore sands. The construction of the landfall cable route has the potential to uncover archaeological and historical features and materials. Consequently, there is potential for construction phase works to have a negative, direct and long-term impact on any cultural heritage deposits they encounter.

Operational phase

The operational phase of the development will not impact directly or indirectly upon any previously recorded Historic Shipwrecks listed in the Shipwreck Inventory of County Mayo.

Unknown and unrecorded deposits could be impacted during the operational phase through physical impact or exposure. Exposure would mainly be achieved through secondary impact such as scour, erosion or mooring. If this were to happen, the exposure would have a negative, direct and long term impact on those deposits.

Decommissioning phase

The decommissioning phase of the development will not impact directly or indirectly upon any historic shipwrecks listed in the Shipwreck Inventory of County Mayo.

As in the construction phase, exposure of unknown cultural heritage deposits could have a negative, direct and long-term impact on those deposits.

13.4.3 Mitigation

Construction phase

Submarine electricity cable trenching works should be monitored using appropriate equipment and by a suitably qualified archaeologist. The works should be licensed by the National Monuments Section of the Department of the Environment, Community & Local Government and the National Museum of Ireland.

Operational phase

After the cable has been laid, surveys of the submarine cable route should be carried out at specified intervals, with the complete suite of results being sent to a suitably qualified archaeologist for interpretation and reporting.

Decommissioning phase

As in the construction phase, any invasive groundwork should be monitored using appropriate technology and by a suitably qualified archaeologist, and should be appropriately licensed.

13.5 Conclusion

Desktop and cartographic sources indicate that the area surrounding the subject site is of considerable archaeological and historical significance. Archaeological assessment provides indicative evidence for the continued and uninterrupted occupation of the area since Neolithic times. Although there are a number of recorded archaeological monuments and finds in the vicinity, none will be directly impacted by the proposed development. Historical and cartographic records detail the more recent development and improvement of the area. They record the changing fortunes of the area, changes in ownership, and general improvements in living and working conditions.

The combined results of the desktop assessment and the field survey indicate that, although the subject site is one of considerable archaeological and historical significance, there is no evidence of archaeological material in the proposed development. Notwithstanding this, there is potential that invasive ground works at the subject site may impact previously unrecorded archaeological material. Consequently, it is recommended that a suitably qualified archaeologist be present during the construction and decommissioning phases of the project, and that the works should be licensed appropriately. Any excavations during the operational phase will also require the presence of an archaeologist.

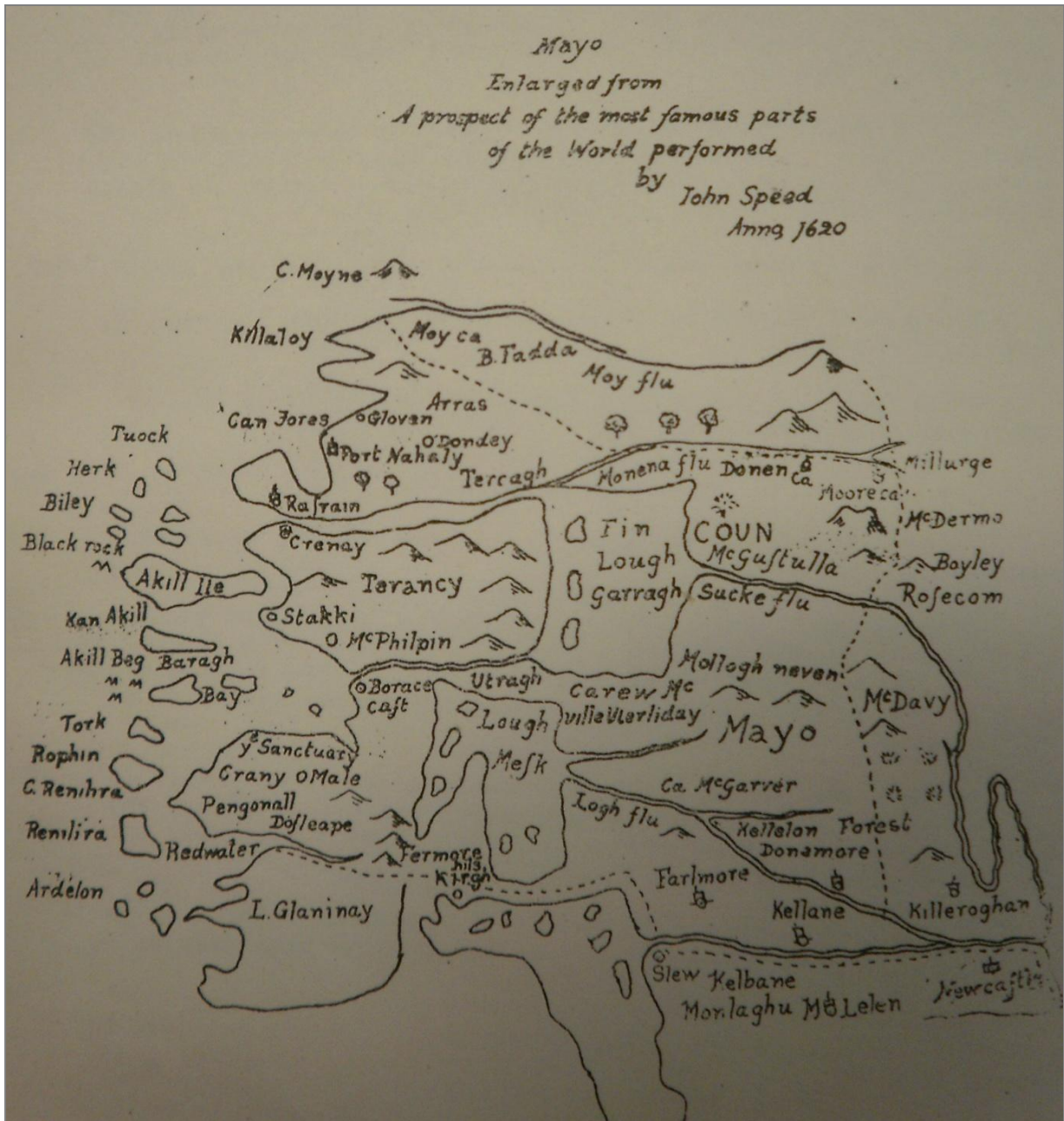


Figure 13-1: Extract from Speed's Map of County Mayo (1620)

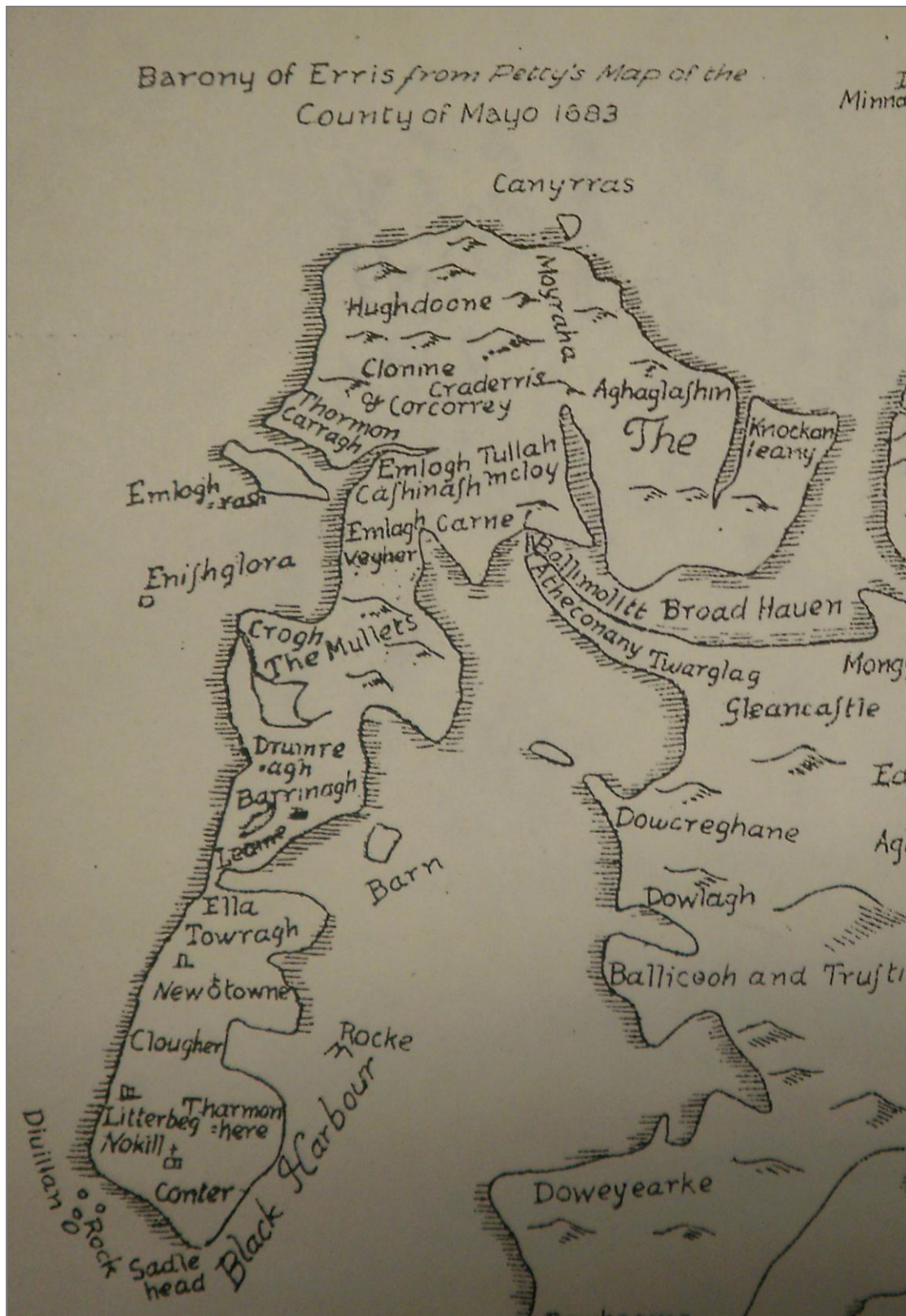


Figure 13-2: Extract from William Petty's Map of the Barony of Erris (1683)

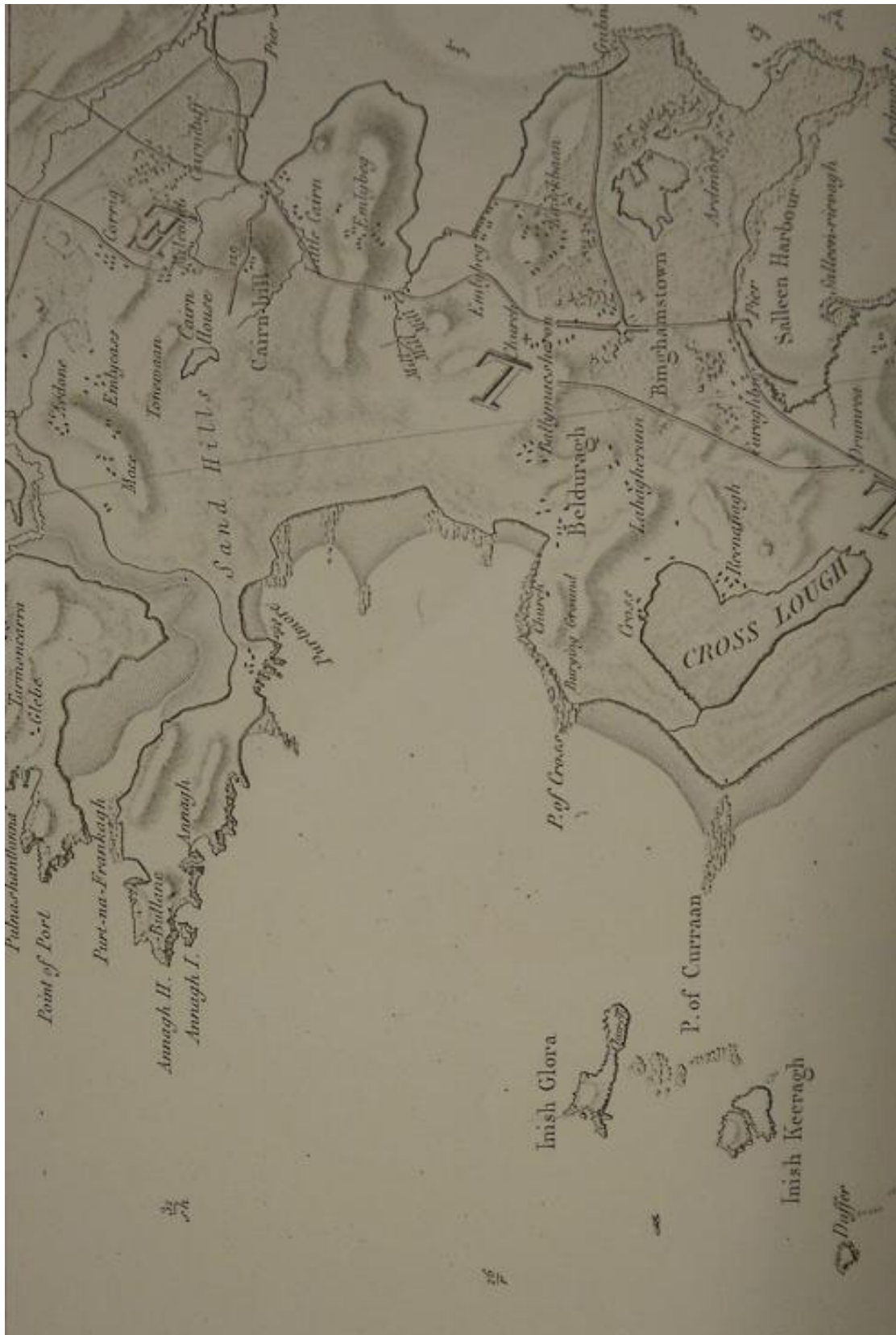


Figure 13-3: Extract from Bald's Map of County Mayo 1817

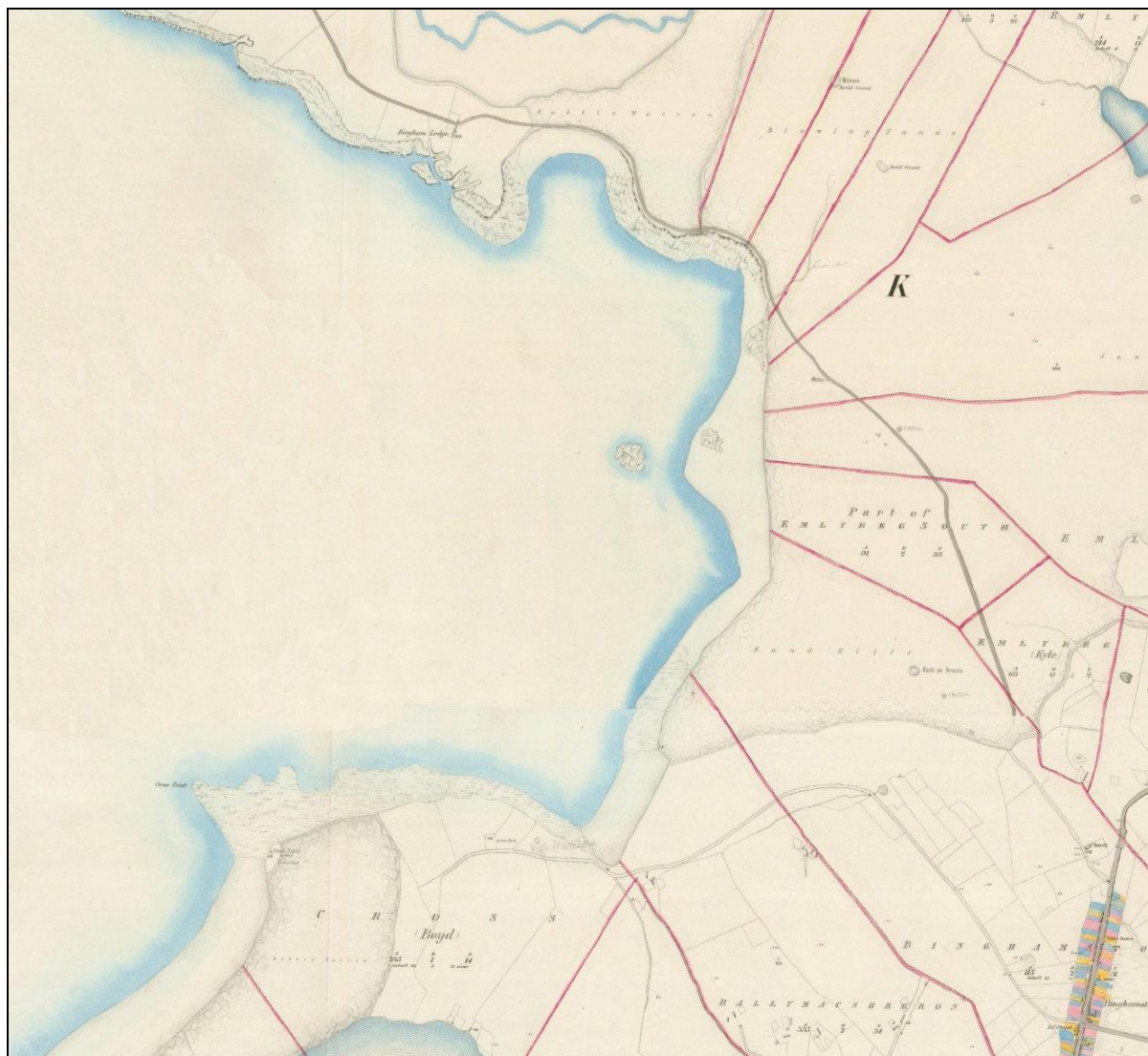


Figure 13-4: Extract from the first edition Ordnance Survey map of County Mayo (1838)



Figure 13-5: Extract from second edition Ordnance Survey map of County Mayo, sheets MA 09 & 016 (1900)



Figure 13-6: Extract from the Co. Mayo RMP, sheets MA09 & MA016

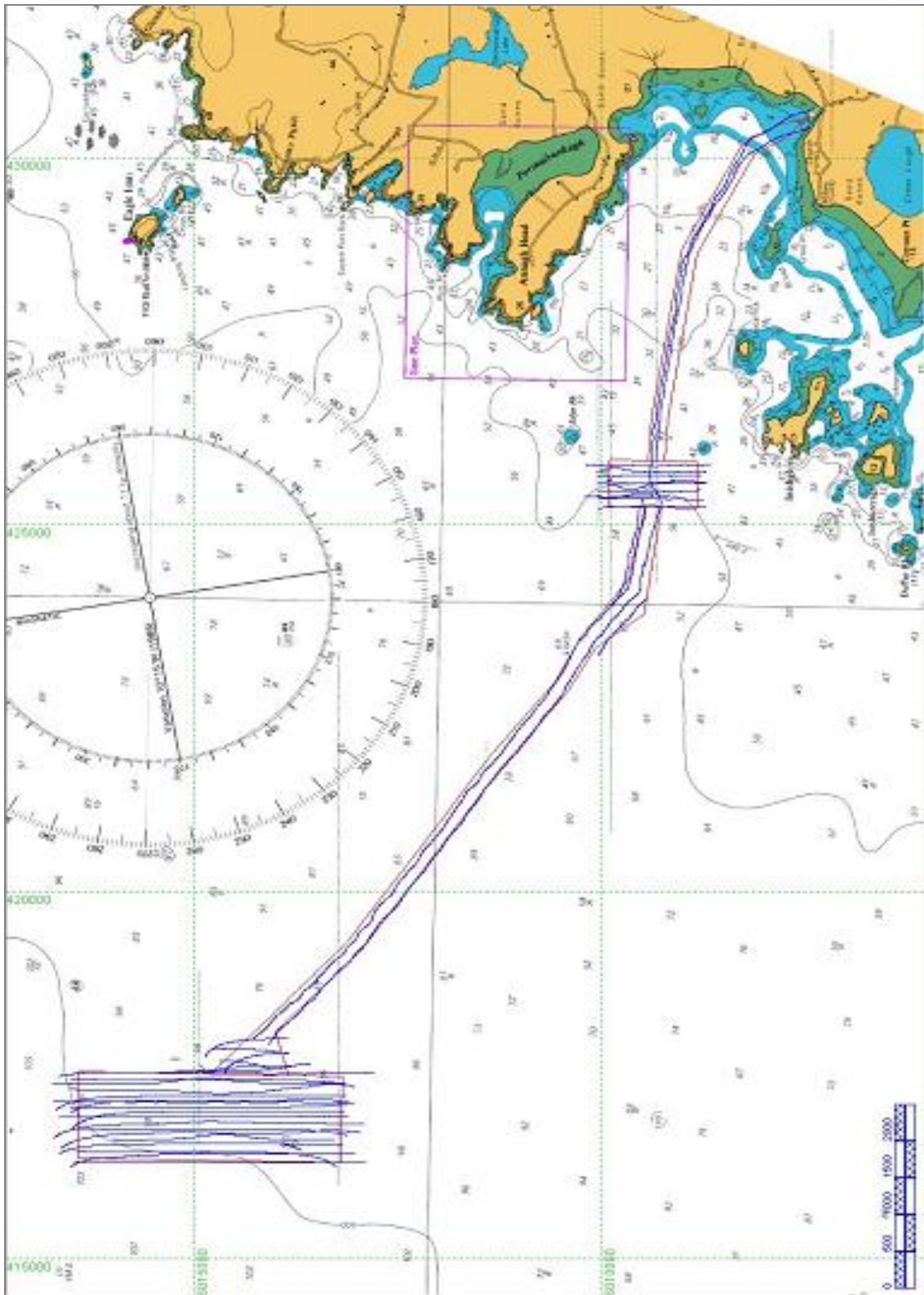


Figure 13-7: Geophysical survey track lines

