

PROJECT

Port Pier Improvement Works, Co. Donegal

SCOPE

Underwater Archaeological Impact Assessment

TOWNLANDS

Port

LICENCE

24D0264 & 24R0539

CLIENT

AYESA

AUTHOR

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DATE

April 2025

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Abstract

This report relates the results of an archaeological assessment of proposed improvement works at Port Pier, Co. Donegal. *Mizen Archaeology* has been engaged by *AYESA* on behalf of Donegal County Council to undertake the Underwater Archaeology Impact Assessment (UAIA).

The likelihood of the proposed works uncovering on unknown potential archaeology is considered moderate to high.

1 Introduction

1.1 General

This report relates the results of the Underwater Archaeology Impact Assessment (UAIA) of proposed development works of Port Pier, Co. Donegal. *Mizen Archaeology* has been engaged by *AYESA* on behalf of Donegal County Council to undertake the assessment. This includes a desktop based study and a walk-over visual survey of the area or proposed works.

1.2 Conventions, Legislation and Guidelines

The Archaeological Desktop Assessment was undertaken with due regard to the following national and international protective conventions, legislation and guidelines and legislation:

- The Historic and Archaeological Heritage and Miscellaneous Provisions Bill 2023
- National Monuments Act, 1930, as amended in 1954, 1987, 1994, 2004 and 2014
- Heritage Act, 1995
- National Cultural Institutions Act, 1997
- The Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999
- Framework and Principles for the Protection of the Archaeological Heritage, 1999,
 Department of Arts, Heritage, Gaeltacht and the Islands
- Local Government (Planning and Development) Act, 2000 (as amended)
- Merchant Shipping (Salvage and Wreck) Act, 1993
- Council of Europe Convention for the Protection of the Architectural Heritage of Europe (Granada) 1985, ratified by Ireland in 1991
- Council of Europe European Convention on the Protection of the Archaeological Heritage (Valletta), 1992, ratified by Ireland in 1997
- Council of Europe's European Landscape Convention (Florence Convention), 2004
- The Burra Charter, the Australia ICOMOS Charter for Places of Cultural Significance, 1999
- UNESCO Convention concerning the Protection of World Cultural and Natural Heritage 1972,
 ratified by Ireland in 1991
- UNESCO Convention on the Protection of the Underwater Cultural Heritage, 2001, Ireland is a signatory since 2001; intends to ratify on changes if domestic law allows
- ICOMOS Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas. Paris: International Council on Monuments and Sites, 2005

In addition, the assessment took into account the following objectives from the Donegal County Development Plan 2024-2030:

Objectives for the Protection of Archaeological Heritage, Sites and Monuments:

AYH-O-1

To conserve and protect archaeological heritage, achieve a greater public knowledge and appreciation of archaeology, protect existing access to, and where appropriate provide new access and visitor infrastructure for, such heritage.

Policies

AYH-P-1

- a. Conserve and protect all forms of archaeological heritage including:
 - i. National Monuments,
 - ii. Structures on the Record of Historic Monuments (RHM),
 - iii. the Record of Monuments and Places (RMP)
 - iv. Sites and Monument Record (SMR),
 - v. Historic Graveyards and environs,
 - vi. Historic Towns,
 - vii. Historic battlefield sites,
 - viii. Unrecorded archaeology
 - ix. Industrial and post-medieval archaeology;
 - x. Underwater archaeology and
 - xi. The settings of such heritage
 - in accordance with the publication Framework and Principles for the Protection of Archaeological Heritage (DoAHGI 1999); and
- b. Conserve and Protect Zones of Archaeological Protection located in Urban areas of Ballyshannon, Donegal Town, Killybegs, Lifford, Ramelton, Rathmullan and St. Johnston as identified in the Record of Monuments and Places including requiring the carrying out of an archaeological assessment prior to the granting of permission and the undertaking of additional archaeological mitigation where required (e.g. more extensive testing, excavation or licensed archaeological monitoring) to inform the planning application or, if appropriate, the imposition of similar archaeological mitigation (more extensive testing, excavation or licensed archaeological monitoring) as conditions of planning.

The policy will be implemented save to the extent necessary to provide for strategic infrastructure projects including, but not restricted to, the TEN-T Priority Route Improvement Project, Donegal the Bridgend to County border project scheme, the Buncrana Inner Relief Road and Greenways, subject to such projects being in accordance with all relevant statutory and regulatory provisions or where no statutory or regulatory provisions apply in so far as the policy provisions can be practicably and reasonably achieved within the context of such projects.

AYH-P-3

Ensure that development proposals affecting archaeological heritage sites shall:

- a. Sensitively incorporate archaeological heritage Preserved In Situ in a manner which is compatible with the protection and proper management of such heritage and its setting including adequate safeguards from damage/vandalism and for public safety and suitable informational signage.
- b. Be accompanied by a long-term management plan that incorporates appropriate protections for the heritage site.
- c. Provide appropriate informational signage regarding any archaeological heritage which has been identified and Preserved by Record during the course of construction to an agreed standard with Donegal County Council and the National Monuments Service.

The policy will be implemented save to the extent necessary to provide for strategic infrastructure projects including, but not restricted to, the TEN-T Priority Route Improvement Project, Donegal, the Bridgend to County border project scheme, the Buncrana Inner Relief Road and Greenways subject to such projects being in accordance with all relevant statutory and regulatory provisions or where no statutory or regulatory provision applies in so far as the policy provisions can be practicably and reasonably achieved within the context of such projects.

2 Receiving Environment

2.1 Site Location

The townland of Port is located on the north western shore of Inver Bay, west of Donegal Bay on the south coast of County Donegal (Figure 1). It belongs to the Parish of Inver and the barony of Banagh. Port is approximately 2km west of Inver, 14km west of Donegal, and 14km east of Killybegs. The pier is located on a former natural spit on the southern edge of the townland.



Figure 1: Site location, Port Pier, Co. Donegal.

2.2 Geology and Topography

Inver Bay is part of an extensive field of subglacial features, including drumlins and ribbed moraines. The ribbed moraines are formed on bedrock of Lower Carboniferous limestone (Figure 2). The cliffs on the shores of the bay are covered by glacial drift and the peninsulas and islands are formed by drumlins. These are quaternary features deposited at the base of the ice sheet during the last Ice Age (McClure et al, 2019).

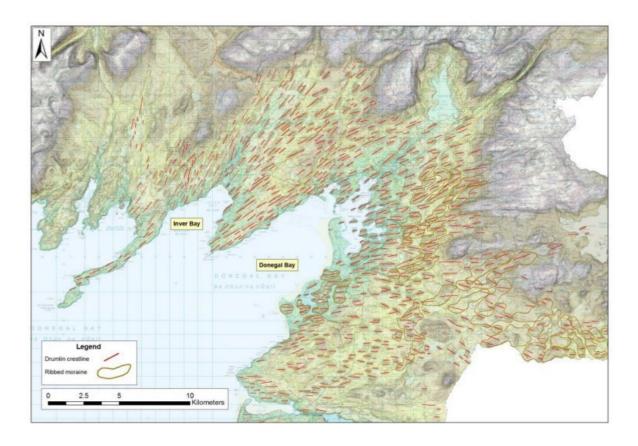


Figure 2: Drumlins and ribbed moraines in Donegal and Inver Bays. From McClure et al (2019) Geological Survey Ireland.

3 Scope of Works

3.1 Description of the Proposed Development

The proposed works on Port Pier, owned and maintained by Donegal County Council, aim to respond to the growing need to improve the pier facilities, as a result of the increase and diversification of activities taking place at this location.

Works entail the dredging of an area to the south and east of the pier, piling, and associated construction works. The extension of the pier will include two new sections covering the area shown in Figure 3:

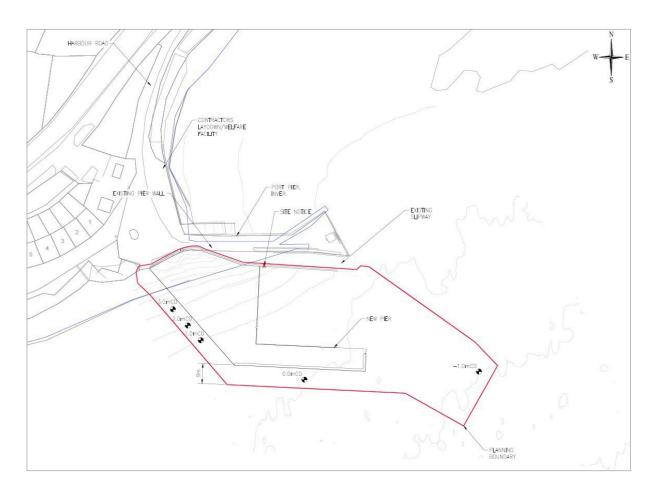


Figure 3: Proposed extension layout and site boundary to include dredging (AYESA 2025).

According to AYESA's construction method statement as quoted in the Natura Impact Statement (2024), the works will be implemented as follows:

"....The pier structure will consist of two parallel rows of sheet piles adequately tied back with tie-rods. Dredge material will be used as fill between the sheet piles. The top layer of fill will be selected engineered fill. The pier structure will be capped with a concrete deck.

The following sequence describes the construction of the Pier:

- Sheet piles will be driven into the seabed as shown on the drawings, using an excavator or crane fitted with a vibratory pile hammer (or similar).
- The sheet piles tie-back system will be installed, which will consist of a series of tie-rods and waling beams.
- The pier will be filled with material either from the dredging operation or selected fill imported from commercial sources.
- The fill will be compacted in layers (approximately 300mm) using a 5t roller (or similar).
- Selected engineering fill will be used in the top 900mm, to create a base layer for the concrete slab.
- The selected fill will be compacted in layers (approximately 300mm) using a 5t roller (or similar).

- A reinforced concrete capping slab will be constructed on top of the sheet piles and engineered fill. This will involve installing rebar cages, shuttering, and concrete casting.
- Quayside services such as lighting, drainage, and utilities shall be installed in accordance with relevant standards and regulations.

A dredge pocket will be created, as indicated on the drawings, using an excavator. The dredging operation will either be conducted in the dry during low water, or a barge will be required to support the excavator when the site is inundated with water.

The dredged/excavated material will be used as fill for the new pier extension, if suitable. The excavator will either dump the dredged material directly between the sheet piles, or it will be loaded onto tipper trucks for transportation. A hopper barge may be required to load and transport the material when the site is inundated. Approximately 3500m³ of material will be dredged.

If excess dredge material is available, or if the dredge material is unsuitable for use as fill, the material will be transported and disposed of at a suitable landside facility. The dredge material will first be stored in a bunded area and allowed to dry prior to transportation...."

4 Methodology

4.1 Aims and Objectives

The aims and objectives of the desk based assessment and walkover survey were as follows:

- To ascertain the character, condition and extent of any archaeological areas, features or objects likely to be affected by the proposed works, including any associated temporary works, and the likely impact of the proposed works on these remains;
- To accurately locate these archaeological areas, features or objects and document the findings in map form;
- To describe the same and discuss their likely provenance;
- To recommend appropriate measures for the avoidance of these remains or, where this cannot be achieved;
- To recommend measures to mitigate the impact of the works, which may include archaeological testing; and,
- To incorporate all the above into an illustrated report for the project, supported by tables or inventories, maps and photographs.

4.2 Desk-based Assessment

The following sources were consulted as part of the desk-based assessment:

- The Record of Monuments and Places (RMP) compiled by the Archaeological Survey of Ireland comprises lists, classifications of monuments and maps of all recorded monuments with known locations and zones of archaeological significance. The monument records are accessible online from the National Monuments Section (NMS) of the Department of Housing, Local Government, and Heritage at www.archaeology.ie. These were used to establish the wider archaeological context of the site.
- Ordnance Survey Ireland (OSI) historic and contemporary maps were examined to measure the changing landscape of the harbour.
- The Excavations Bulletin online database (www.excavations.ie) which contains summaries of all archaeological excavations in Ireland, was consulted to review archaeological investigations done previously in the area.
- Wreck Inventory of Ireland Database (WIID) and Wreck Viewer: The information contained
 within the inventory was gathered from a broad range of cartographic, archaeological and
 documentary sources, and each entry in the Inventory gives information on the ship's name,
 type of vessel, port of origin, owner's name, cargo, date of loss and other relevant information
 where available.
- The Record of Piers and Harbours is a draft unpublished document compiled by the DAHG. It draws on various historical sources dealing with historical piers and harbour development in Ireland.
- Cartography: Several historic maps and charts were examined (see references below for a full list).
- Aerial Photography: A variety of low and high-altitude aerial photography (vertical and oblique) was examined. Infra-red aerial photos undertaken by the Marine Institute were also examined as well as the aerial orthophotos from the National Monuments web site, www.archaeology.ie (see references below for full list)
- Documentary sources: Several sources were examined (see references below for full list)

4.3 Site Survey

The proposed works area at Port Pier was surveyed during a low Spring tide in September 2024. The conditions were excellent. The majority of the site falls with the inter-tidal zone and the sub-tidal area is wadable. A visual and metal detection survey was undertaken.

5 Results

5.1 Desk-based assessment

5.1.1 Historical and Archaeological Background

Potential for Submerged Landscapes

Recent research in the area of Inver Bay has shown that the area was once a dry landscape rather than an inundated bay (pers. comm. Cóilín Ó Drisceoil). Brooks *et al.* (2011), as modelled by EMODnet, estimates that the shoreline near Port Pier was *c.* 1.4km further out 6000 years ago than it is today and *c.* 1.5km further out 8000 years ago. Submerged forests and peats have been recorded around the Irish coast both in intertidal coastlines and subtidal zones (Westley and Woodman, 2020: 234). Submerged peats have been dated to 13,500–5,000 cal BP (Brooks and Edwards, 2006).

While most of these landscapes have so far yielded only palaeoecological or palaeontological remains, there remains potential for the discovery of archaeological materials. Later Mesolithic wooden fish traps, for instance, were identified below sea level beneath reclaimed land at Spencer Dock, North Wall Quay, Dublin (Westley and Woodman, 2020: 236). A Late Mesolithic wooden plank has also been recorded in the Shannon Estuary and a Neolithic logboat was identified in the intertidal zone of Strangford Lough (O'Sullivan, 2001; Forsythe *et al.*, 2007). Lithic discoveries within the intertidal and subtidal zones around Ireland further support the archaeological potential of submerged landscapes. For instance, two worked flints were recovered offshore of Arklow, Co. Wicklow in 2023 (ADCO 2023).

Whaling at Port Pier

The townland of Port was developed by Thomas Nesbitt as a whaling plant in 1759. Nesbitt is best known as the inventor of the first swivel-gun harpoon (McGonigle, 2008: 304–5). The primary residence of the Nesbitt family was Kilmacreddon House, less than 500m northwest of the pier (McNeary, 2007: 122). In 1762, a large part of the blubber casks sent from Port to Liverpool for trying out was lost, leading to Nesbitt petitioning the House of Commons in London for the money to build the first whale-rendering facility in Ireland. This was the only shore-based whaling station ever to be built in Ireland and the only one in Europe from this period. By 1776, and perhaps as early as 1771, the whaling industry in Donegal Bay had come to an end. The buildings at Port were remodelled as salt works by this time (McGonigle, 2008: 305–6 & 310–11).

Shore-based whaling stations generally included 'a pier, warehouses, a boiler-house or try-works, a flencing plane (a flat surface where the blubber was removed from the whale carcass)—often the

seashore—and sometimes a bone-dump on nearby land' (McGonigle, 2008: 306). At Port, it is likely that the flencing plane was indeed the shoreline and that the carcasses were dumped further out into the harbour (McNeary, 2007: 120). Dumping in the harbour is supported by the whale bones found in the 'Glar hole' in 1987 to the north of the pier (McGonigle, 2001: 309). A pier was built using public grant funding in 1755 to support the whaling industry at Port (McNeary, 2007: 121). The First Edition Ordnance Survey map published in 1836 only shows a natural spit feature at the site (see Section 5.1.5). Remains of a possible earlier pier was identified during survey of the site by McGonigle to the south of the modern pier. This was of large boulder construction and may have already been in disuse by the first edition map (McGonigle, 2008: 307).

Salt works at Port Pier

In Post-Medieval Ireland, salt was in high demand in both domestic and commercial spheres. Salt was not only used as a food preservative, particularly for meats and fish, but was also an important resource employed in various industrial processes (Forsythe, *et al*, 2018). Irish economy relied on the export of salted beef and butter at the time of the transatlantic trade (Forsythe, *et al*, 2015).

The establishment of salt works at different locations along Irish coasts saw an expansion during the second half of the 18th century (Forsythe, *et al*, 2023) and is evident in historic cartography from the 19th century. Between 1771 and 1776, Port had switched from the whaling industry to the salt industry (McGonigle, 2008: 306). Three salt pans were mentioned in McParlan's Statistical Survey of 1802 as being near Inver and in 1836 Alexander Nimmo mentions the salt-house at Port: 'There is a salt-house here, to which two or three vessels of sixty tons come yearly' (Nimmo, 1836: 70).

The success of salt production in Ireland as a viable economic activity was mainly determined by external factors such as price fluctuations or taxation in the broader international context. The salt tax, which imposed a tax on salt making in Britain and therefore encouraged such works in Ireland, was repealed in 1825 (McGonigle, 2008:122). A few years later, the Descriptive Remarks of the Ordnance Survey Parish Namebook 1830-1840 mentions that 'in it are Salt works which was a great source of employment to the inhabitants some time ago.' The description suggests a decline in salt production by the mid-19th century.

5.1.2 Archaeological Monuments

There are no sites listed on the Sites and Monuments Record (SMR) on footprint of development. The nearest sites on the protected Record of Monuments and Places (RMPs) are *c*. 1km west of the area of works. These are a church (DG098-008) and graveyard (DF098-008001) in the townland of Kilmacreddan (Table 1).

Table 1: Sites on the Record of Monuments and Places closest to the area of works.

SMR	Townland	Туре	ITM	Description (archaeology.ie)
DG098-008	Kilmacreddan	Church	578867E,	There is no trace of the church or
		(Site of)	876330N	graveyard (DG098-008001-) marked on
				the 2nd edition of the OS 6-inch maps.
				The site is located in undulating drumlin
				country in fairly good pasture. The sea
				shore is a short distance to the S.
DG098-	Kilmacreddan	Graveyard	578867E,	There is no trace of the church (DG098-
008001			876330N	008) or graveyard (DG098-008001-)
				marked on the 2nd edition of the OS 6-
				inch maps. The site is located in
				undulating drumlin country in fairly
				good pasture. The sea shore is a short
				distance to the S.

5.1.3 Architectural Heritage

There are no structures listed on the National Inventory of Architectural Heritage (NIAH) or the Record of Protected Structures (RPS) for County Donegal within the footprint of the development area. The sites is also not included in an Architectural Conservation Area (ACA). The closest listed site of architectural importance is located c. 565m northwest of the proposed works in the townland of Kilmacreddan. This is a 19^{th} century kiln (40909824) (Table 2).

Table 2: Structure on the Natioal Inventory of Architectural Heritage closest to the area of works.

NIAH	Name	Townland	Date	ITM	Description (buildingsofireland.ie)
40909824	Kiln	KILMACREDDAN	1860	579474E,	Freestanding single-bay lime kiln on
				876861N	circular-plan, erected c. 1860. Now out of
					use. Constructed of roughly coursed
					rubble stone masonry. Square-headed
					opening to front (west), the former oven
					aperture, having stone lintel over. Built
					into side of gently-sloping hill with
					roof/top level with land to the east
					formerly providing access to the loading
					bay to the summit. Set back from road in
					rural location to the east of Dunkineely.

5.1.4 Shipwreck Inventory

Three shipwrecks have been reported in an unspecified location in Inver Bay, Co. Donegal (Table 3). This includes a schooner, a steam yacht, and a fishing boat. The schooner was lost in 1879 while the other two were lost in 1906 and 1905 respectively.

Table 3: Shipwrecks recorded near the area of works.

Wreck No.	Wreck Name	Wreck Type	Date of Loss	Place of Loss
W07130	V07130 Annie (SS) 5		20/08/1906	Inver Bay, Donegal Bay
W16983	W16983 Esperance		20/10/1879	Inver Bay, Donegal Bay
W17040	Unknown	Fishing boat	07/03/1905	Inver Bay, Donegal Bay

5.1.5 Previous Archaeological Investigations

An Underwater Archaeological Impact Assessment (UAIA) was previously carried out at Port Pier in 2009. This included a dive/ wade survey under licence 09D0011 with use of a metal detector under licence 09R0031. This identified 19th century and later human activity and deemed the site of moderately low archaeological potential. Due to nearby navigational hazards and the known seafaring tradition in the area, it was recommended that all groundworks be monitored (Kieran, 2009: 4). No archaeological monitoring is known from works carried out after this UAIA.

Two other nearby archaeological investigations took place in the bordering townlands of Kilmacreddan (10E0204) to the west and Fanaghans (01E0120) to the east (Appendix 1). Test-trenching was carried out in both locations. No archaeological remains were recorded at either site.

5.1.6 Topographical Files of the National Museum of Ireland

The Topographical Files of the National Museum of Ireland (NMI) hold details of any artefactual material recovered from the 18th century to modern day. No finds are known from the area of the proposed works.

5.1.7 Cartographic information

Richard Bartlett's *Coastal Map* labels Inver Bay, 'Whitleye Bay,' in 1602–3. A slight bulge in the shoreline is shown near the location of the natural spit of Port (Figure 4 Left). Another of Barlett's maps of the same time, *A Generalle Description of Ulster*, shows the Eany Water of Inver to the west of Donegal Bay, but does not depict the Bay (Figure 4 Right).

William McCrea surveyed the area in 1796. He clearly labels the town of Port on A Map of the County of Donegal (Figure 5). The Bay is also noted as Inver Bay at this time while Inver itself is not labelled. The preference for Port on this map may indicate how important the industry of the townland was at the end of the 18th century. At this time, the industry was focused on salt works (see Section 5.1.1).

The first detailed cartographic survey of the area was the First Edition 6-inch Ordnance Survey Map published in 1836 (Figure 6). This map clearly shows 'Old Salt Works' including six buildings near a natural spit where the modern pier is located. Two of these structures still have physical remains today. To the north in Port proper are further buildings and a 'Pound Fair Green.' The remaining area of the townland is shown as greenfields. To the west of the salt works, the grounds of Kilmacreddan House, the home of the Nesbitt family, dominate the coastline.

The Second Edition 25-inch Ordnance Survey Map published in 1902 shows a pier in the location of the modern structure (Figure 7). The larger of the salt works structures is shown as an outline rather than a functional building, but the other structures that has physical remains today is still marked as a structure. A railway line now runs roughly southwest to northeast from west of the pier through Port proper with a station located to the north of the village. The majority of the townland remains greenfield. Kilmacreddan House is still shown to the west of the pier, though the railway line separates the estate from the coastline.





Figure 4: Left: Excerpt from a facsimile of A Coastal Map of Counties Donegal etc. (1602–3) by Bartlett (1861). Right: Excerpt from a facsimile of A Generalle Description of Ulster (1602–3) by Bartlett (1861)



Figure 5: Extract from 'A map of the county of Donegal', drawn from actual survey by William McCrea 1796; 4 sheets (1801).

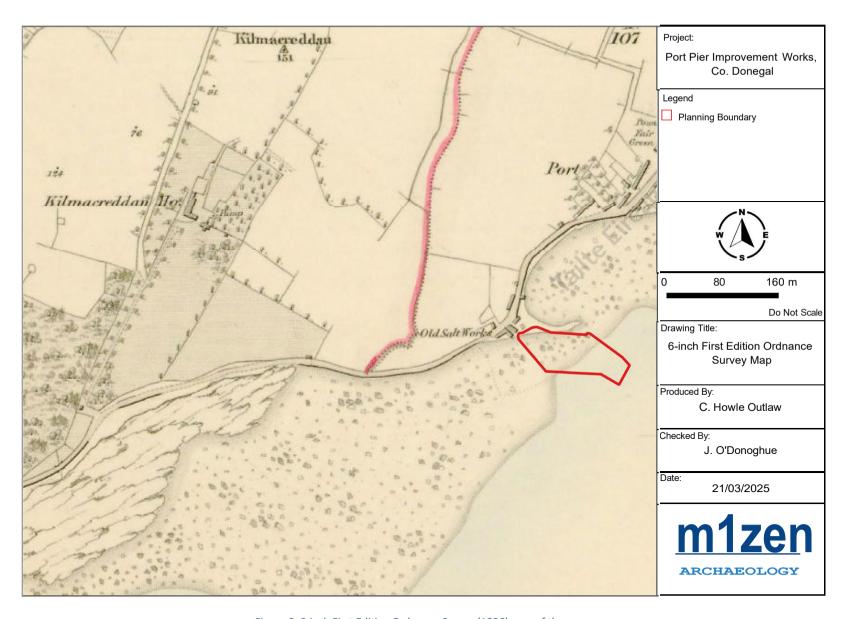


Figure 6: 6-inch First Edition Ordnance Survey (1836) map of the area.

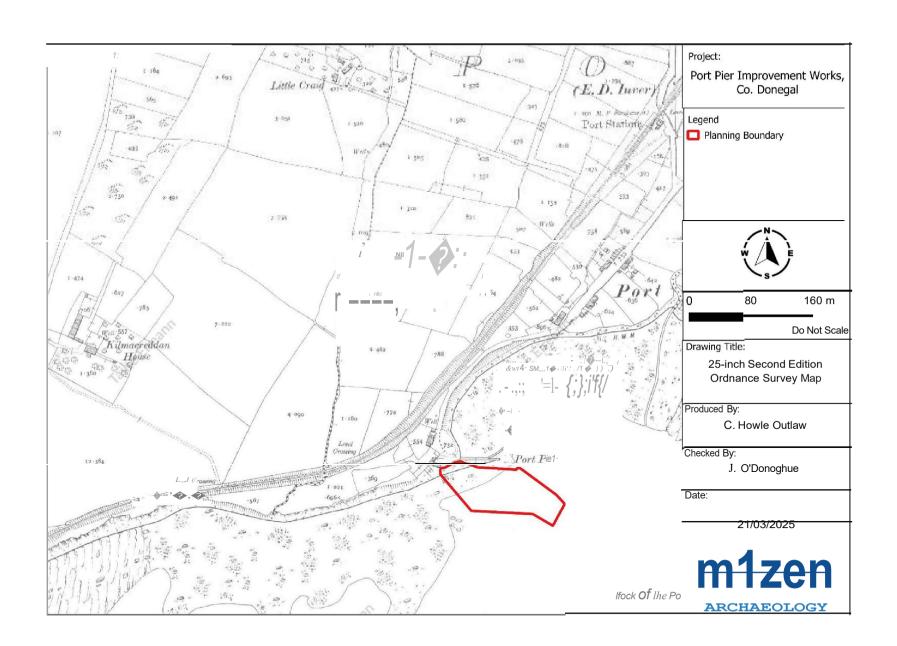


Figure 7: 25-inch Second Edition Ordnance Survey (1902) map of the area.

5.2 Walk-over survey

The area of proposed works at Port Pier were inspected during a low spring tide in September. The proposed works area is bounded to the north by a recently constructed concrete slip which abuts a 19th stone pier, and to the south by a row of large boulders running perpendicular to the shoreline and serving as an erosion protection measure (Plate 2). Bounding the site to the west are the remains of the whaling station, and behind this is a holiday complex comprising a block of five 3-story houses (Plate 1). Inver Bay extends to the east of the site.

The foreshore comprises a stony beach which slopes moderately from the whaling station towards the waterline in a south-eastern direction (Plate 5). On the northern side, adjacent to the modern slipway, there is an accumulation of large, rounded boulders and stones (Plate 3). In contrast, the southern portion of the site features smaller, subangular stones and pebbles. The density of stones gradually decreases towards the low water mark. In the subtidal zone, the seabed is predominantly sandy, with small stones scattered throughout and occasional boulders present.

An alignment of intermittently-set large stone blocks were recorded imbedded in the beach matrix within the tidal zone 5m and 8m to the south of the slip. This was the stone alignment surveyed by McGonigle (see Section 5.1.1). The orientation of these stones generally corresponds with the alignment of the existing pier. The alignment stretches 25m in length and consists of stones measuring between 1 m x 1.1m to 2.1m x 0.8m. The stones protrude from the seabed by between 0.1m to 0.4m in height. An additional two stones were noted adjacent to the eastern end of the new slipway (Plate 4; Figure 8). As the stones were partially buried, the full extent and nature of the stones could not be determined but notably most of the stones exhibit squared edges along their southern sides.

A bank of stones and construction rubble, measuring up to 1.2 metres in height and approximately 2–3 metres in width, is present along the upper foreshore. This accumulation likely resulted from the construction of the concrete slipway in 2023 (Plate 6). The development of the slipway appears to have led to the removal of approximately 25 metres of the 19th-century stone pier and its adjoining stone seawall (Plate 7). The pier itself appears to have undergone multiple phases of repair, upgrading, and reconstruction over time, with later concrete additions obscuring much of the original structure (Plate 8). However, the original stonework remains visible on the north-eastern elevation.

Stone fabric is also evident in places on the southern side of the pier. It is visible on the pier deck—extending approximately 8m to the east of the recently constructed slipway entrance and 4m to the west (Plate 7). Adjacent to this exposed stonework is a parapet wall on the southern elevation of the pier, which continues as a revetment or seawall curving back along the upper foreshore towards the

former whaling station (Plate 9). This wall is constructed in snecked masonry, comprising larger cut blocks measuring up to 0.6 metres by 0.4 metres, and smaller blocks measuring approximately 0.4 metres by 0.12 metres. Three basal courses of stonework, totalling 0.9 metres in height, remain extant, and the upper sections of the wall have been supplemented with concrete blocks and poured concrete of varying height (Plate 10).

A 4.6-metre-wide gap exists between the terminus of this revetment wall and one of the structures belonging to the whaling station, which currently serves as the sole access point to the foreshore south of the pier (Plate 11).

The remains of the whaling station, situated immediately adjacent to the works area, comprise two primary buildings along with several short sections of surviving wall. The main structures include a 13-metre-long building (Building A), aligned in a northwest—southeast direction, and a second building (Building B), measuring 22 metres in length, positioned at a perpendicular angle to Building A (nomenclature after McGonigle 2008). Building A was noted to be much reduced since McGonigle's 2006 survey with most of the western half no longer extant.

During the metal detection survey, three amorphous metal objects were identified on the foreshore (Plate 12). These were possibly from a vessel and included two roughly rectangular or cylindrical objects measuring roughly 20cm long and one globular form measuring roughly 20cm long.



Plate 1: View of upper foreshore/northern side of proposed development area, taken from the east.



Plate 2: Easternmost boulder alignment forming modern erosion protection measures.



 ${\it Plate 3: View of foreshore and recently constructed slipway at northern end of proposed works area, taken from the south.}$



Plate 4: Possible continuation of stone alignment from the west.



Plate 5: Concrete embankment with modern tarmac.



Plate 6: Left: New slipway from the west. Right: New slipway from the east.



Plate 7: Left: View of pier taken from the north. Note the break in the wall (right) to facilitate the recently constructed slipway. Right: View of pier taken from the north. Note the break in the wall (left) to facilitate the recently constructed slipway.



Plate 8: Left: Pier structure from the west. Right: Pier structure from the east.



Plate 9: View of revetment wall, note the stone courses at base of wall. Taken from the south.

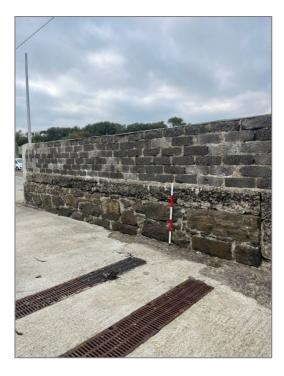


Plate 10: Possible original courses of pier wall beneath modern expansion. From the southeast.



Plate 11: View of beach access taken from the east. Note the remains of whaling station/saltworks to the left and the stone wall to the right.



Plate 12: Metal objects identified on the foreshore during survey.

6 Discussion

Port Pier was an important site of industrial heritage for much of the 18th and 19th centuries. Thomas Nesbitt started a whaling operation at the site in 1759. In 1762, he built Ireland's only shore-based whaling station which was, at the time, unique to Europe as a whole as pelagic whaling was the predominant form of whaling during the period. It remained a relatively successful centre for Irish whaling until sometime between 1771 and 1776. At this point, it acted primarily as a station for salt works until the mid-19th century.

The fishing and maritime industries of Port Pier would have made it a busy pier. Due to nearby hazards, it is likely that vessels coming to and from Port may have suffered damage and may have even wrecked off the coast of the pier.

Structures from these industries are still present on the site, immediately west of the area of works. Further structures are known to have been included in the industrial history of the site based on 19th century maps. While the 18th century pier from the whaling operations is not recorded cartographically, it was likely along the same natural spit formation on which the modern pier was built.

During a 2006 study of the whaling station, McMonigle recorded a stone alignment feature within the proposed works area and interpreted it as part of an earlier pier predating the 19th century stone pier.

This partially buried feature was recorded on the foreshore as part of this study but in the absence of further investigation its purpose and date cannot be determined.

The structures associated with the former whaling station, saltworks, and pier are not designated as recorded archaeological monuments, protected structures, nor are they listed on the National Inventory of Architectural Heritage. Nevertheless, they represent a significant component of Donegal's maritime heritage. In recent years, various upgrades and developments have contributed to the gradual erosion of this historic resource. Notably, there has been a visible reduction in the footprint of the whaling station building since 2007, and in 2024, a section of the stone revetment wall and pier was removed to facilitate the construction of a new slipway.



Figure 8: Locations of potential early piers/slipway structure based on surveyed stone alignments.

7 Potential Impacts

Given the site's considerable industrial heritage, which extended over approximately 100 years between the 18th and 19th centuries, the area is assessed as having moderate to high archaeological potential. There is a potential that previously unrecorded industrial infrastructure and associated artefacts may be encountered during proposed dredging works. Such remains may include, for instance, an artificial hardstanding potentially used for flensing activities during the period when the site functioned as a whaling station.

Excavation works may also have the potential to reveal evidence of submerged palaeolandscapes, such as buried peat deposits. There is also the potential for wreck sites to be uncovered due to the nature of the maritime industry and local hazards near Port. Further, there is the potential for waterlogged archaeological material to be uncovered which could date from any period.

An alignment of large stones is recorded for 25m on the foreshore, the purpose and date of which has not been established. In order to complete the dredging works, this potential site would be destroyed.

The 19th-century seawall/stone revetment wall situated along the upper foreshore will be demolished to facilitate access to the foreshore for dredging operations and associated construction works. An indirect impact is further predicted from site machinery passing beside the whaling station/ salt works structure. Such activity poses a risk of accidental contact with, or destabilisation of, the historic structure.

8 Recommended Mitigation

A number of mitigation measures are proposed in advance of development. The following is a list of recommended mitigation measures to address the potential impacts presented in Section 7.

All mitigations measures are recommendations only. The ultimate decision rests with the National Monuments Service of the Department of Housing, Local Government and Heritage in collaboration with the National Museum of Ireland.

 A full, measured and georeferenced survey of the pier and associated features should be carried out. This should include profile drawings of all 18th and 19th century structures. The potential earlier pier should be included along with the salt work buildings and the pier itself.

- Archaeological testing should be carried out to target the stone alignment located on the foreshore (Figure 8).
- Once the drawings and archaeological testing have been completed, the results shall be compiled into a final UAIA report and submitted to the National Monuments Service. The UAIA shall also make recommendations regarding results of the archaeological testing for example, if the stone alignment is determined to be of archaeological significance, it should be fully excavated under archaeological licence.
- All dredging operations and excavation works should be subject to licensed archaeological monitoring by an underwater archaeologist.
- The whaling station/salt works buildings should be fenced off prior to works commencing. All
 archaeological requirements/constraints should be outlined and addressed in the
 Construction Environmental Management Plan. Toolbox talks should be given to ensure that
 workers are aware of the features so they can be avoided.

With the implementation of the mitigation measures recommended above there will be only imperceptible to slight residual impacts on the archaeological heritage of the site as any features of significance will be preserved either in-situ or by record. All residual effects would be offset by archaeological recording to preserve disturbed features and materials by record.

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9.2 Other sources

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EMODnet Map Viewer: https://emodnet.ec.europa.eu/geoviewer/#!/

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9.3 Cartographic Sources

A coastal map of counties Donegal (part of), Fermanagh, Sligo and Mayo (part of) (1602-3), Richard Bartlett; facsimile [of Public Record Office, London MPF 1/37] published by Ordnance Survey, Southampton (1861).

A generalle description of Ulster, Richard Bartlett (1602-3); facsimile [of Public Record Office, London MPF 1/35] published by Ordnance Survey, Southampton (1861).

A map of the county of Donegal, drawn from actual survey by William McCrea 1796; 4 sheets (1801).

Appendix 1 – Previous Archaeological Investigations

Licence	Townland	ITM	Description (excavations.ie)
01E0120	Fanaghans	580824 877541	Testing was carried out in the townland of Fanaghans, Inver, Co. Donegal, on 17 February 2001. The proposed development entails the construction of three detached dwelling-houses and associated services and access road. The site is on a south-west-facing hillside to the west of Inver village, overlooking Inver Bay. A 'modernised' holy well is located at the foot of the hill. Excavation of eighteen test-trenches was carried out at the location of the proposed houses, access road and percolation areas. Topsoil and sod overlay a compact yellow brown sand and bedrock. Nothing of archaeological significance was noted during the course of monitoring.
09D11; 09R31	Port	580040 877039	Consulting on behalf of Donegal County Council to carry out an underwater impact assessment on a proposed pier development and dredging scheme at Port, Inver, Co. Donegal. The underwater site survey was carried out in January 2009. It recorded that the current Inver Pier was a stone and concrete structure extending north-easterly from the shore. It was bounded immediately to the north and west by a long, sweeping sandy beach. This uniformly flat sandy substrate extended from the coastal fringe to the northern side of the pier. The seabed to the east, south and west of the pier was markedly different to the northern area. Extending south from the eastern terminus of the existing pier was a north—south-orientated pier approach channel. This exclusively sandy passage was bounded both to the east and the west by a rocky, gravel seabed which had moderate coverage of kelp. The underwater visual survey did not record the presence of any archaeological features or deposits in the survey area. The metal-detector survey recorded twelve metal detector contacts for the seabed area. None were archaeological.
10E0204	Kilmacreddan	579254 876875	Test-trenching took place as part of site assessment because of a supposed archaeological monument on the site. No evidence was found of the recorded monument or any archaeological remains.