

16 CULTURAL HERITAGE

16.1 Introduction

John Cronin & Associates has been commissioned by RPS, to assess the cultural heritage impact of the proposed Carlingford Ferry between Greenore, Co. Louth and Greencastle, Co. Down. The Archaeological Diving Company Ltd. (ADCO) was appointed to conduct an underwater/foreshore archaeological assessment of the landing stages for the Greenore-Greencastle Ferry Project, by John Cronin & Associates. The landing stages are located in Greenore townland, Co. Louth, and Greencastle, Co. Down, at ING 322473E 311019N and ING 324887E 311569N respectively.

Frazer Ferries Ltd proposes to construct facilities at both Greenore in Co. Louth and Greencastle in Co. Down to allow operation of a vehicular ferry across the mouth of Carlingford Lough.

The proposals are fully described in Chapter 3 Project Description

For purposes of this report, the term 'Cultural Heritage' encompasses the archaeological, architectural and local heritage (placenames, folklore etc.) resources.

16.2 Methodology

16.2.1 Desk Study

A desktop survey of archaeological and cultural heritage sites within approximately 1km of the area of the proposed development at both Greenore and Greencastle was carried out in order to assess heritage constraints. The Sites and Monuments Record (SMR) of County Down and the Record of Monuments and Places (RMP) for County Louth, were the principal sources for identifying archaeological constraints. In addition the following sources were consulted:

- Shipwreck inventory of Ireland (Louth, Meath, Dublin & Wicklow);
- Various articles published in local and national journals;
- Irish Excavation database;
- Northern Ireland Industrial Archaeological Record;
- Northern Ireland Defence Heritage Record;
- Northern Ireland Historic Buildings Register;
- Northern Ireland Register of Historic Parks, Gardens and Demesnes;
- Northern Ireland Heritage Gardens Inventory;
- Northern Ireland Buildings at Risk Register and
- County Louth Development Plan 2009-2015.

Following the desktop survey, a terrestrial field survey of the sites of the proposed development at both Greenore and Greencastle was carried out by a suitably qualified archaeologist. An underwater survey of the proposed slipways and landward foreshores was also undertaken.

16.2.2 Field Investigations

16.2.2.1 *Terrestrial field survey*

An archaeological inspection of the proposed development sites was undertaken on the 19th January 2012 by a suitably qualified archaeologist. Weather conditions were good, providing good landscape visibility. The overall area was assessed in terms of landscape, land use, vegetation cover, presence or lack of archaeological sites and potential for undetected archaeological sites/features.

16.2.2.2 *Maritime archaeology survey*

On-site work was carried out in March 2012 at both Greenore and Greencastle. The maritime archaeology survey combined intertidal survey and sub-tidal survey. The intertidal element was conducted on a rising tide, and permitted full access to both locations at Low Water. Systematic field-walking of the intertidal foreshore areas of the development were inspected and a photographic archive was made to support the written record.

The sub-tidal portion of each inspection area was assessed at High Water slack tide. A team of commercially-certified archaeological divers carried out the work, operating in accordance with *Safety in Industry (Diving Operations) Regulations (Ireland), 1981: SI 422 of 1981*, and *2010 SI (Draft), HSA Diving Standards 2010*. In each location, the work was conducted by diving along the centreline of the proposed slipway, and conducting a series of zig-zag searches on either side of the centreline, extending to include the full development footprint. In addition, a buffer zone was inspected that comfortably reached 20m beyond the proposed terminal of each slipway. Visual inspection was supported by a written log of the observations made, and by underwater photography. Positioning of underwater observations was recorded using a Garmin Etrex™ hand-held GPS receiver, with positioning accurate to 6m.

16.3 Existing Environment

16.3.1 Environmental Context

The proposed development aims to establish a vehicular ferry crossing at the mouth of Carlingford Lough, at a suitable narrow location between Greenore in Co. Louth and Greencastle in Co. Down.

The proposed site of the ferry terminal at Greenore is located at the north-eastern tip of Greenore head adjacent to Greenore Port. The proposed location of the concrete slipway is currently a natural shingle beach to the rear (east) of the weigh bridge office at the existing entrance to Greenore Port. The proposed landward area of the planning application site is currently an existing carpark and footpath located south of the weigh bridge office at the entrance to Greenore Port. Ground levels at both of these locations have been heavily disturbed in the past.

The proposed site of the ferry terminal at Greencastle is located to the east of Greencastle village. The location of the landward side of the planning application is currently a greenfield site, comprising a flat medium sized field of moderate pasture. The location of the proposed concrete slipway is a stony beach to the southwest of the landward site. Both the greenfield site and beach appear to have remained undeveloped in the past. The site is accessed by the Greencastle Pier Road to the north, for which plans include upgrade and widening of verges associated with same.

16.3.2 Cultural Heritage Context

16.3.2.1 Archaeology

Legal and Policy Framework for the Protection of Cultural Heritage: Northern Ireland

The principal basis for the protection of archaeological sites in Northern Ireland is the 1995 Historic Monuments and Archaeological Objects (Northern Ireland) Order. The law provides for historic monuments and archaeological sites to be protected in a variety of ways, including taking into state care and scheduling. In the former case, monuments are owned, leased or are placed in the guardianship of the Northern Ireland Environment Agency (NIEA) of the Department of the Environment for Northern Ireland (DOENI). When sites and monuments are scheduled, they remain in private ownership but are protected from damage and unauthorised development. Sites are scheduled in accordance with quality and rarity criteria.

The NIEA are also concerned with the survival of other sites not protected under the 1995 Order and it is automatically consulted by Planning NI about every new development likely to affect a site or its setting (Source: NIEA). Furthermore, a licence is required to search for archaeological objects, or to carry out an excavation, and any archaeological object found must be reported. All archaeological excavations must be carried out under the direction of a qualified archaeologist, licensed by the NIEA. A licence application must be submitted for every excavation, by the archaeologist who will direct the work, at least three weeks before the date on which work is due to begin.

Legal and Policy Framework for the Protection of Cultural Heritage: Republic of Ireland

The *National Monuments Acts 1930 to 2004*, the *Heritage Act 1995* and relevant provisions of the *National Cultural Institutions Act 1997* are the primary means of ensuring the satisfactory protection of archaeological remains, which are deemed to include all man-made structures, of whatever form or date, except buildings habitually used for ecclesiastical purposes. A National Monument is described as 'a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto' (Section 2, National Monument Act, 1930).

There are a number of mechanisms under the National Monuments Act that are applied to secure the protection of archaeological monuments. These include the Register of Historic Monuments, the Record of Monuments and Places (formerly the Sites and Monuments Record) (RMP), and the placing of Preservation Orders and Temporary Preservation Orders on endangered sites. Since April 2011, the administration of national policy in relation to archaeological heritage management has been undertaken by the Department of Arts, Heritage and Gaeltacht.

The State may acquire or assume guardianship of national monuments by agreement with site owners or under compulsory order. Once the site is in ownership or guardianship of the State it may not be interfered with without the written consent of the Minister. There are no national monuments located within 100m of the proposed scheme area.

Sites deemed to be in danger of injury or destruction can be allocated Preservation Orders under the 1930 Act. Preservation Orders make any interference to the site illegal. Temporary Preservation Orders can be attached under the 1954 Act. These perform the same function as a Preservation Order but have a time limit of six months, after which the situation surrounding the site must be reviewed. Work may only be undertaken on or in the vicinity of sites under Preservation Orders by the written consent, and at the discretion, of the Minister. There are no sites subject to preservation orders located within 100m of the proposed scheme area.

Section 12 (1) of the National Monuments (Amendment) Act, 1994 made provision for the establishment and maintenance of a Record of Monuments and Places (RMP) deemed to have cultural heritage potential. Superseding the Register of Historic Monuments, which was established under the 1987 Amendment to the Act, the RMP comprises of a list and maps of monuments and relevant places in respect of each county in the State. All sites recorded on the RMP receive statutory protection under the National Monuments Act 1994 and any work undertaken at these sites must be done so under licence (Section 12 (3)).

Recorded archaeological sites

A total of three archaeological sites were identified in the RMP within approximately 1km of the development at Greenore. None of these sites will be directly impacted upon by the proposed development (see Figure 12.1 & Table 12.1).



Figure 16.1: Archaeological Constraints within Approx. 1km of Greenore Proposed Development Site (Red)

Table 16.1: Archaeological Constraints within Approx. 1km of Greenore Proposed Development Site

MAP ID	RMP No.	National Grid	Townland	Site Type
1	LH 009-012---	322600/ 310550	Greenore	Prehistoric lithic scatter
2	LH 009-001---	321394/ 309855	Mullatee	Unclassified Castle
3	LH 009-002001- LH 009-002002- LH 009-002003-	321690/ 309400	Muchgrange	Church Holy well Graveyard

There are a total of six archaeological sites identified in the SMR within approximately 1km of the development at Greencastle. Two of these sites are SMR sites, two are scheduled sites and one site, Greencastle castle (and holy well) are in state care, whilst the remaining SMR site at Cranfield is unlocated. None of these sites will be directly impacted upon by the proposed development (see Figure 16.2 & Table 16.2). There are no Areas of Significant Archaeological Interest or Historic Parks and Gardens located within approximately 1km of the proposed development site at Greencastle.

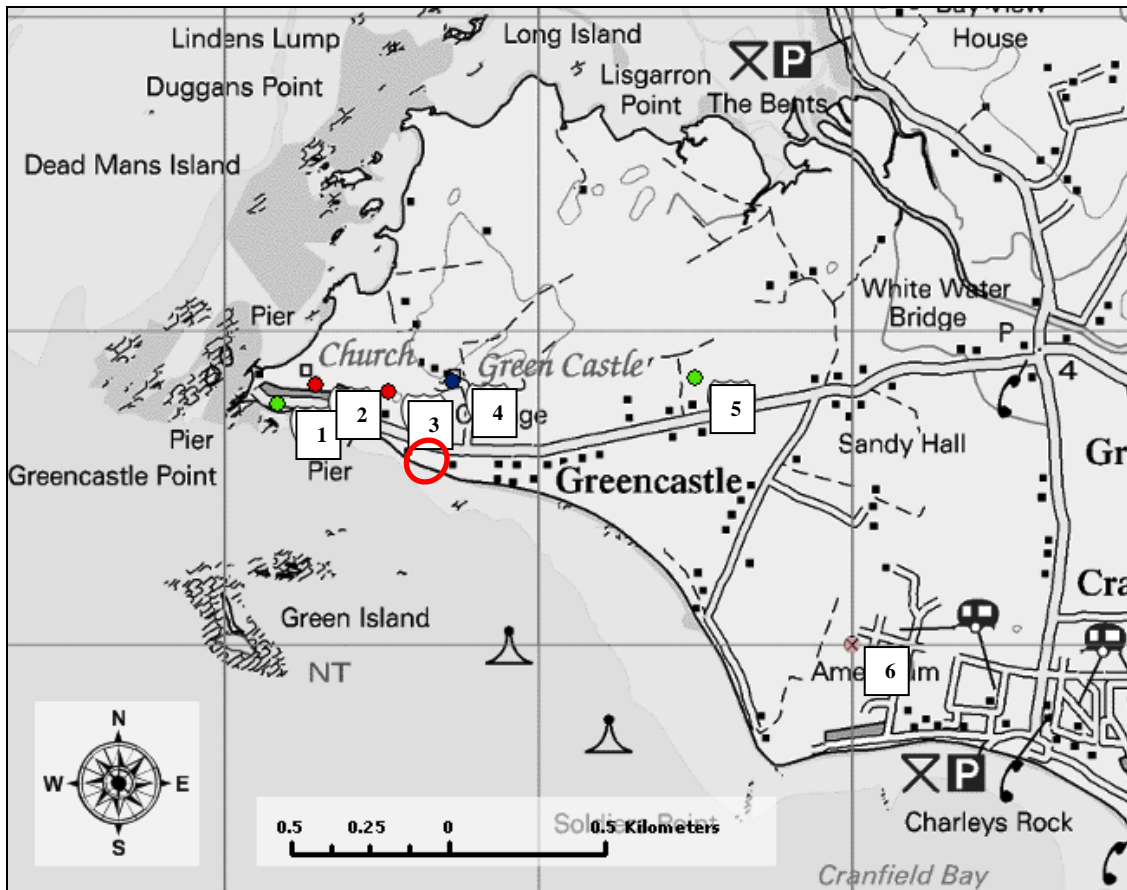


Figure 16.2: Archaeological Constraints within Approx. 1km of Greencastle Proposed Development Location (Red)

Table 16.2: Archaeological Constraints within Approx. 1km of Greencastle Proposed Development Location

MAP ID	SMR No.	National Grid	Townland	Site Type
1	DOW057:017	J2417011770	Greencastle	Burials (undated) (SMR)
2	DOW057:001	J2429011830	Greencastle	Medieval Motte (scheduled)
3	DOW057:002	J2452511810	Greencastle	Late Medieval Church (scheduled)
4	DOW057:003	J2473011840	Greencastle	Medieval Castle & well (state care)
5	DOW057:016	J2550011850	Greencastle	A.P. Site - circular cropmark (SMR)
6	DOW057:013	J2600011000	Cranfield	Medieval Church & Graveyard (unlocated)

Historic Shipwrecks

The national inventory of Historic Shipwrecks is published for Carlingford Lough (Brady, 2008). The Inventory represents a significant resource for recording the pattern of shipwrecking events since the mid-eighteenth century, when local observers around the coast sent in reports. The Inventory is therefore most useful for charting shipwrecks during the floruit of shipping in the days of sail and steam. The Inventory seeks to include all wrecks of historic date; namely those events which are 100 years or older. It cannot however claim to be an accurate record of events which occurred by the mid-1700s, as accurate record keeping was not maintained before this time.

There are 114 recorded events of wreckings in the Inventory for Carlingford Lough. The majority of these cannot be located with certainty, and the records refer to the vessel coming into distress in relation to a known feature on or close to the shoreline. The *Tarbolton*, for instance (Wreck W00088) struck Blockhouse Rock in 1829, but little else is known of the event. This pattern of recording has nevertheless permitted some assessment of the spatial occurrence of wrecking events. As one might expect, the main body of the Lough

away from the coastline saw few such events. The situation was different at the Lough's mouth, and the zone east of Greenore and Greencastle is determined to be one of increased wreck density, with a particularly high concentration of events recorded between Ballagan Point in Co. Louth and Soldier's Point or Cranfield Point, Co. Down. It was off Soldier's Point that the *Connemara* and the *Retriever* sank after colliding in stormy weather in 1916, with the loss of 94 lives.

Four wreck sites have been identified within the general vicinity of the project area, as indicated on Figure 16.4 and Table 16.3. The locations highlight the treacherous nature of the Lough between these two points, but none are positioned close to either slipway location. Table 16.3 also includes reference to five other wrecking events which are recorded in the same general area, but their positions on the seabed, if they survive, are not known.

Carlingford cut is a dredged channel at the mouth of the Lough, while a further dredged area lies off Greenore, to ease traffic across the sandbars, spits and shoals that otherwise characterise the entrance area to the Lough.

Table 16.3: Known Shipwreck Location and Shipwrecking Events in The Vicinity of Greenore and Greencastle (Source: Brady, 2008 *Shipwreck Inventory Of Ireland*)

Name:	<i>C.S. Parnell</i>
Historic Shipwreck Inventory:	W00024
UK Wreck no.:	None
Date of Loss:	15/03/1905
Location:	Greenore Point
Position:	Unknown
Description:	3-ton wooden yawl, wrecked while beached.
Distance to nearest slipway location:	Unknown
Name:	<i>Frances</i>
Historic Shipwreck Inventory:	W00038
UK Wreck no.:	None
Date of Loss:	Unknown
Location:	0.75 miles NW of Greenore Pier
Position:	Unknown
Description:	53-ton wooden smack with cargo of slates, stranded and lost.
Distance to nearest slipway location:	Unknown
Name:	<i>James Postlethwaite</i>
Historic Shipwreck Inventory:	W00051
UK Wreck no.:	007600082
Date of Loss:	Unknown
Location:	Fairway, Carlingford Lough
Position:	54 03 02N, 006 09 10W
Description:	This schooner has an unknown date of loss, and sank opposite Carlingford mast. She was surveyed in 1929.
Distance to nearest slipway location:	2.3 km NW of Greenore
Name:	<i>Kikeel</i>
Historic Shipwreck Inventory:	W00059
UK Wreck no.:	None
Date of Loss:	02/02/1892
Location:	Below the coastguard boathouse, Greenore
Position:	Unknown
Description:	Steamer with cargo of oats, beached, total loss feared.
Distance to nearest slipway location:	Unknown
Name:	<i>Pine</i>
Historic Shipwreck Inventory:	W00077
UK Wreck no.:	007600070
Date of Loss:	12/11/1936
Location:	Carlingford Lough, across channel Fairway, 11 cables of Carlingford Pier
Position:	54 02 50N, 06 09 12W
Description:	328-ton steamer with a cargo of coal was anchored in the Lough but was run down and sunk by the steamer <i>Olive</i> . The wreck was reported to have been moved in 1970.
Distance to nearest slipway location:	2 km NW of Greenore

Name:	<i>St. Mary</i>
Historic Shipwreck Inventory:	W00083
UK Wreck no.:	None
Date of Loss:	15/03/1905
Location:	Greenore Point to Ballagan
Position:	Unknown
Description:	2-ton wooden fishing yawl, stranded and lost.
Distance to nearest slipway location:	Unknown
Name:	<i>Woods</i>
Historic Shipwreck Inventory:	W00094
UK Wreck no.:	None
Date of Loss:	10/12/1874
Location:	Greenore
Position:	Unknown
Description:	Brigantine, laden with wheat, sank.
Distance to nearest slipway location:	Unknown
Name:	<i>Unknown</i>
Historic Shipwreck Inventory:	W00112
UK Wreck no.:	007600069
Date of Loss:	Unknown
Location:	Haulbowline Rocks Light
Position:	54 01 20N, 06 05 12W
Description:	Stranded wreck
Distance to nearest slipway location:	2 km SE of Greencastle
Name:	<i>Unknown</i>
Historic Shipwreck Inventory:	W00114
UK Wreck no.:	007600136
Date of Loss:	Unknown
Location:	Carlingford Bar
Position:	54 01 19.86N, 06 04 38.33W
Description:	Wreckage discovered during dredging operations in 1993, depth of 7m. The 1994 remains marked on chart as foul.
Distance to nearest slipway location:	3.3 km SE of Greencastle

Industrial Heritage

The NIEA's Industrial Heritage Record (IHR) provides a comprehensive catalogue of sites, features and buildings of industrial archaeological interest in Northern Ireland. There are four Industrial Heritage sites recorded within 1km of the proposed development site (see Table 12.4 & Figure 12.3).

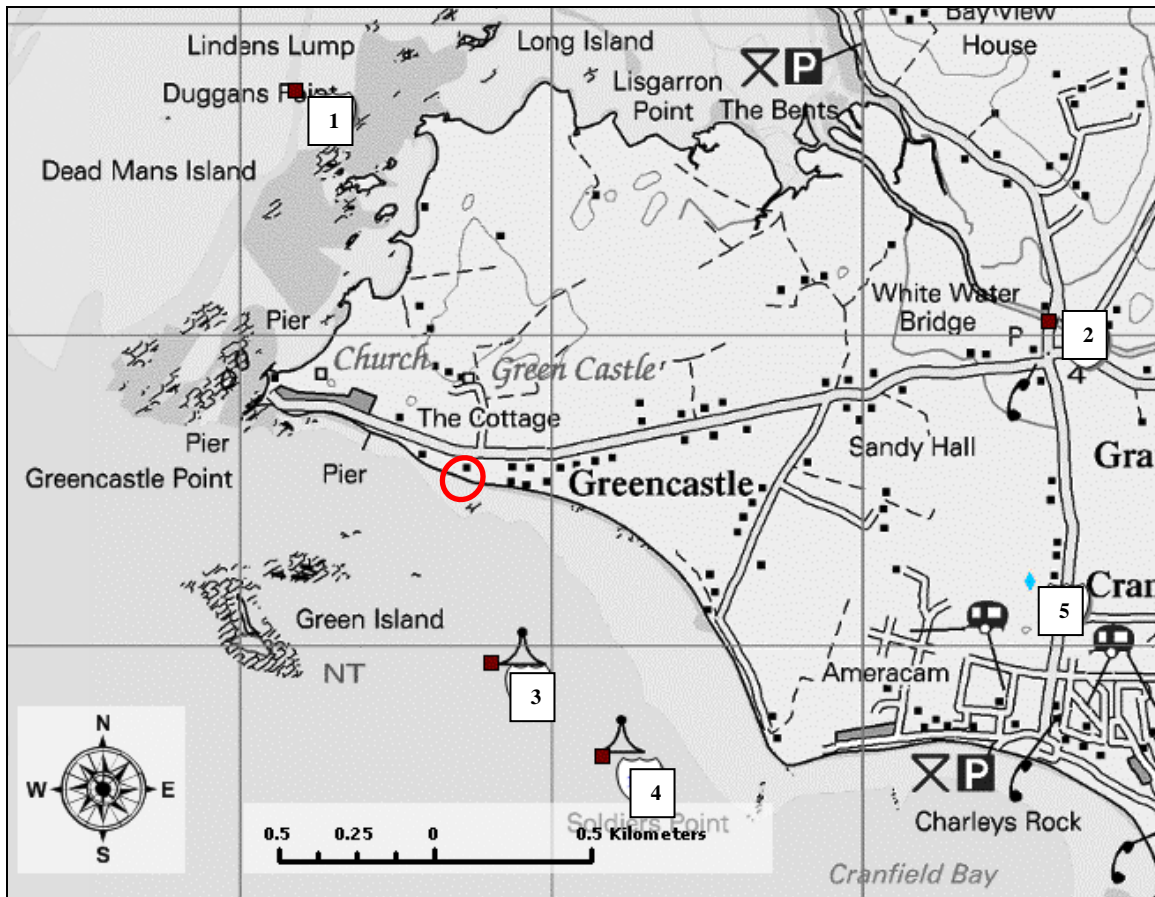


Figure 16.3: Industrial Heritage Sites & Defence Heritage Sites Within Approx. 1km the Proposed Development Site at Greencastle (Red)

Table 16.4: Industrial Heritage Sites Located Within Approximately 1km of the Proposed Development Site at Greencastle

Map ID	IHR	Townland	Grid Reference	Description
1	03634:000:00	Lurganreagh	J26601205	White Water Bridge
2	03636:000:00	Greencastle	J24181279	Coastguard Station; Light Keepers Dwellings
3	03637:000:00	Greencastle (off)	J24811095	Beacon - Lighthouse
4	03638:000:00	Greencastle (off)	J25171065	Beacon - Lighthouse

Defence Heritage

There is one Defence Heritage site located within 1km of the proposed development site at Greencastle (see Table 16.5 & Figure 16.3: Site Map ID No. 5).

Table 16.5: Defence Heritage Sites Located Within Approximately 1km of the Proposed Development Site at Greencastle

Map ID	Description	Townland	Grid reference
5	Airfield	Cranfield; Grange; Greencastle	J270112

Excavations Database

The Database of Irish Excavation Reports contains summary accounts of all the excavations carried out in Ireland – North and South – from 1970 to 2003. It has been compiled from the published Excavations

Bulletins from those years, with a similar format. The database gives access to almost 6000 reports and can be browsed or searched using multiple fields, including year, county, site type, grid reference, licence number, Sites and Monuments Record number and author.

A series of archaeological licensed work has taken place at Greenore previously (see Figure 16.4 & Table 16.6). Much of this is associated with works for the Port. No material of archaeological significance was observed. In addition, excavations have taken place at Greencastle adjacent the castle and motte sites (see Appendix 16.1).

Table 16.6: Licensed Archaeological Work Reported in Proximity to the Project Areas

Licence Number	Townland	Observations	Distance to nearest slipway
02E784	Mullatee	Five trenches excavated revealed the line of a 19th-century culvert and an organic-rich feature with similar pottery as well as shell and bone was exposed.	1.6km SW of Greenore
01D56	Greenore	Refurbishment of quay wall constructed between 1870-1873. Indentations, timber beams and iron hooks were identified.	Adjacent and N of Greenore
01E988	Greenore	Quay wall assessment revealed original features to protect berthing vessels.	250m W of Greenore
05E1344	Greenore	Testing in a greenfield site for a residential development close to a church and graveyard and holy well, SMR LH009:002. Several Late Mesolithic flint artefacts were recovered from the topsoil together with an area of burning and an area of metallated surfacing was also present. Two irregular features were present beside the metallated surface contained animal bone, a flint blade and a mortar/daub incorporating shell fragments.	c. 1km SW of Greenore
07D16	Greenore	Non-disturbance assessment of foreshore, was unable to see any indication of the flint scatter LH009-012.	660m SE of Greenore

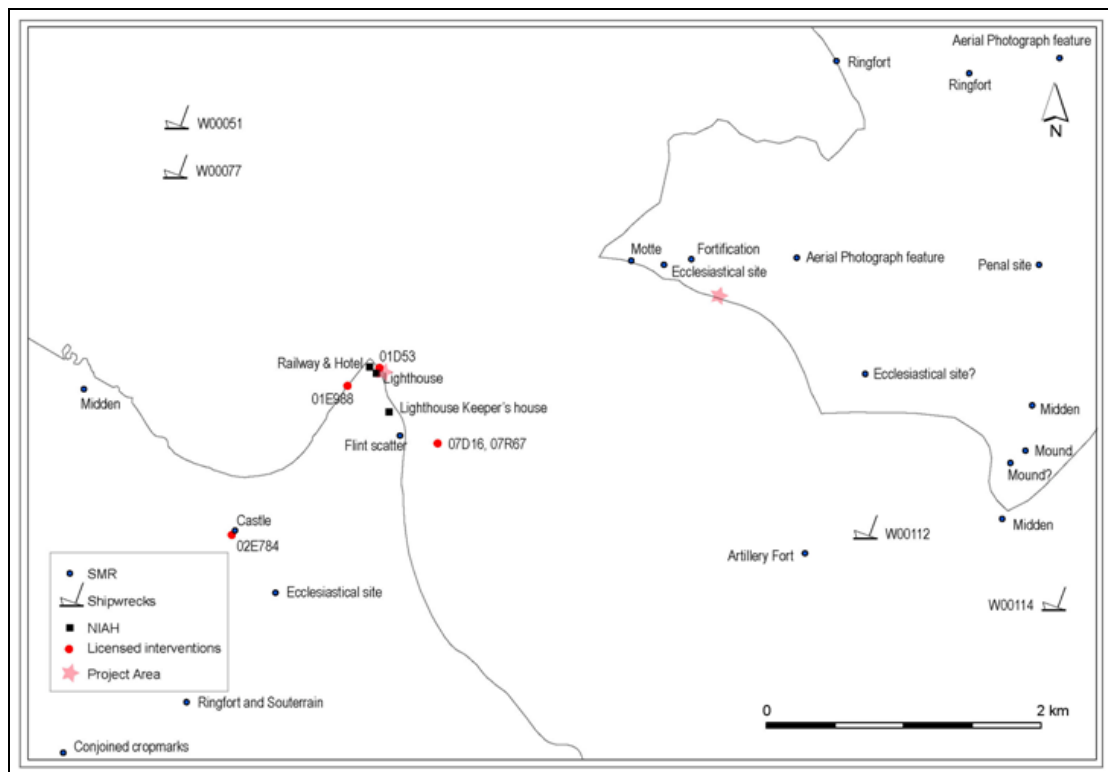


Figure 16.4: Map of Known Heritage Features Located at Greenore and Greencastle

16.3.2.2 Architectural Heritage

Legal and Policy Framework for the Protection of Architectural Heritage: Northern Ireland

In addition to archaeological sites, the NIEA also has the responsibility under the Planning (Northern Ireland) Order 1991 for the protection of post-medieval buildings and structures. The Department of Environment has a programme of area plans for Northern Ireland. Area plans provide the primary means of reconciling conflicts between the need for development and the need to protect the natural and man-made heritage. There are more than 8,500 listed buildings/structures in Northern Ireland (currently under review); varying from fine churches and country houses to thatched cottages and post boxes. To be selected for listing, a building must be assessed and evaluated against established criteria. Key elements include the age of a building, its condition, style, aesthetic quality, structure and any innovatory qualities (Source: NIEA).

Legal and Policy Framework for the Protection of Architectural Heritage: Republic of Ireland

Protection of architectural or built heritage is provided for through a range of legal instruments that include the Heritage Act, 1995, the Architectural Heritage (National Inventory) and National Monuments (Misc. Provisions) Act, 1999, and the Local Government (Planning and Development) Act 2000. Part IV of 2000 Act deals with architectural heritage and incorporates the provisions of the Local Government (Planning and Development) Act, 1999.

Section 2.1 of the Heritage Act, 1995, describes architectural heritage as 'all structures, buildings, traditional and designed, and groups of buildings including streetscapes and urban vistas, which are of historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents, and, without prejudice to the generality of the foregoing, includes railways and related buildings and structures and any place comprising the remains or traces of any such railway, building or structure'.

Under the Local Government (Planning and Development) Act, 2000, all Planning Authorities are obliged to keep a 'Record of Protected Structures' of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. As of the 1st January 2000, all structures listed for protection in current Development Plans, have become 'protected structures'.

Since the introduction of this legislation, planning permission is required for any works to a protected structure that would affect its character. If a protected structure is endangered, planning authorities may issue a notice to the owner or occupier requiring works to be carried out. The Act contains comprehensive powers for local authorities to require the owners and occupiers to do works on a protected structure if it is endangered, or a protected structure or a townscape of special character that ought to be restored.

National Inventory of Architectural Heritage

The Architectural Heritage Act, 1999, requires the Minister to establish a survey to identify, record and evaluate the architectural heritage of the country. The function of the National Inventory of Architectural Heritage (NIAH) is to record all built heritage structures within the Republic of Ireland. Inclusion in an NIAH inventory does not provide statutory protection; the document is used to advise local authorities on compilation of a Record of Protected Structures as required by the Local Government (Planning and Development) Act, 2000.

Listed Historic Buildings/Protected Structures

There are a total of 14 listed Buildings recorded within approximately 500m of the proposed development site at Greencastle (see Table 12.6 & Figure 12.5). Three of these structures are located within the proposed development site area.

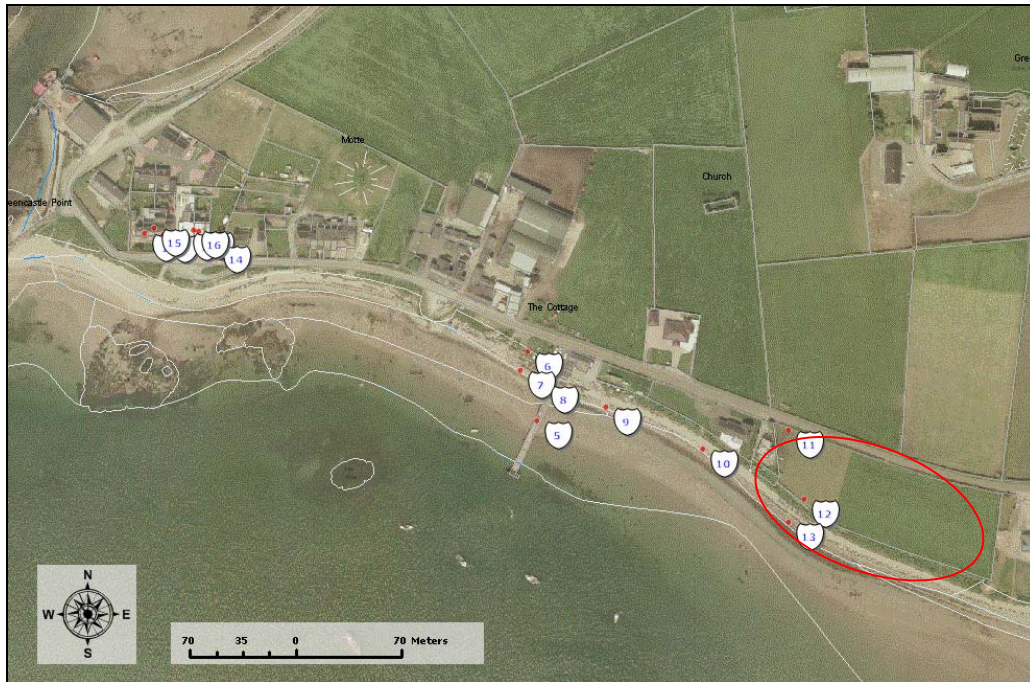


Figure 16.5: Listed Buildings Located Within Approximately 500m of the Proposed Development Site at Greencastle

Table 16.6: Listed Buildings Located Within Approximately 500m of the Proposed Development Site at Greencastle

Map ID	Listed Building No.	Address	Use	Grade
1	HB16/04/014 B	123 Greencastle Pier Road Greencastle Kilkeel Newry Co Down BT34 4LR	House	B2
2	HB16/04/014 A	121 Greencastle Pier Road Kilkeel Newry Co Down BT34 4LR	House	B2
3	HB16/04/013 B	119 Greencastle Pier Road Greencastle Kilkeel Newry Co Down BT34 4LR	House	B2
4	HB16/04/013 A	117 Greencastle Pier Road Greencastle Kilkeel Newry Co Down BT34 4LR	Coastguard House - Terrace	B2
5	HB16/04/021	The Pier Greencastle Pier Road Kilkeel Newry Co Down BT34 4LR	Harbour/ Pier	B2
6	HB16/04/020	Boundary markers near 88-92 Greencastle Pier Road Greencastle Kilkeel Newry Co Down BT34 4LR	Boundary Marker	B2
7	HB16/04/020	Boundary markers near 88-92 Greencastle Pier Road Greencastle Kilkeel Newry Co Down BT34 4LR	Boundary Marker	B2
8	HB16/04/020	Boundary markers near 88-92 Greencastle Pier Road Greencastle Kilkeel Newry Co Down BT34 4LR	Boundary Marker	B2
9	HB16/04/020	Boundary markers near 88-92 Greencastle Pier Road Greencastle Kilkeel Newry Co Down BT34 4LR	Boundary Marker	B2
10	HB16/04/020	Boundary markers near 88-92 Greencastle Pier Road Greencastle Kilkeel Newry Co Down BT34 4LR	Boundary Marker	B2
11	HB16/04/020	Boundary markers near 88-92 Greencastle Pier Road Greencastle Kilkeel Newry Co Down BT34 4LR	Boundary Marker	B2
12	HB16/04/020	Boundary markers near 88-92 Greencastle Pier Road Greencastle Kilkeel Newry Co	Boundary Marker	B2

Map ID	Listed Building No.	Address	Use	Grade
		Down BT34 4LR		
13	HB16/04/020	Boundary markers near 88-92 Greencastle Pier Road Greencastle Kilkeel Newry Co Down BT34 4LR	Boundary Marker	B2
14	HB16/04/014 C	Boat house adjacent to 117 Greencastle Pier Road Kilkeel Newry Co Down BT34 4LR	Boat House	B2
15	HB16/04/014	Not allocated	n/a	n/a
16	HB16/04/013	Not allocated	n/a	n/a

There are a total of nine protected structures located within 500m of the proposed Greenore development site (see Figure 16.6 and Table 16.7). None of these structures are located within the proposed development area.

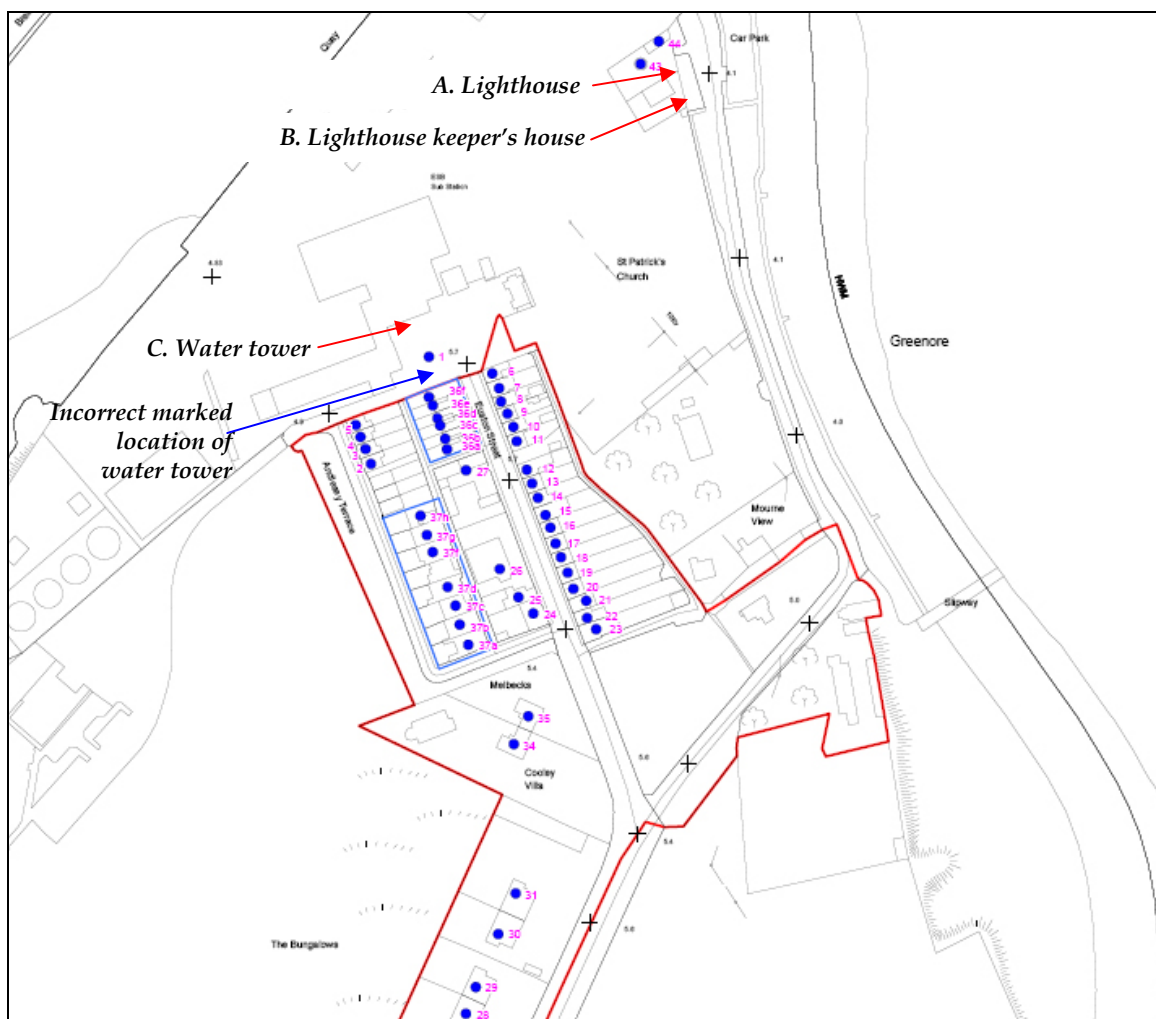


Figure 16.6: Map of Protected Structures Within 500m of The Proposed Development At Greenore

Extract from the County Louth Development Plan 2009-2015; the red line indicates the extent of the Architectural Conservation Area (ACA) and individual blue dots represent protected structures. However there are apparent errors in the local authority's mapping (stemming from inaccuracies in mapping generated by the NIAH) and the red arrowheads indicate the correct locations for (a) the lighthouse, (b) the lighthouse keeper's house and (c) the water tower. Proposed development site area at Greenore is located north of the lighthouse.

Table 16.7: List Of Protected Structures Within 500m of the Proposed Development at Greenore

Reference Number	Address/Location	Description
LHS009-001	Water Tower	Attached three-stage stone water tower, built c. 1840, ground floor converted to office lobby with office buildings attached to east and west. Square-plan, steel tank on yellow brick corbel course.
LHS009-006	1 Euston Street, Greenore	End of terrace two-bay two-storey former railway worker's house, built 1872, now in private domestic use. Extension to east. Dark rock face limestone with brick dressing.
LHS009-007	2 Euston Street, Greenore	Terraced two-bay two-storey former railway worker's house, built 1872, now in private domestic use. Two-storey flat-roofed extension to east. Dark rock face limestone with brick dressing.
LHS009-008	3 Euston Street, Greenore	Terraced two-bay two-storey former railway worker's house, built 1872, now in private domestic use. Two-storey flat-roofed extension to east. Dark rock face limestone with brick dressing.
LHS009-009	4 Euston Street, Greenore	Terraced two-bay two-storey former railway worker's house, built 1872, now in private domestic use. Dark rock face limestone with brick dressing.
LHS009-010	5 Euston Street, Greenore	Terraced two-bay two-storey former railway worker's house, built 1872, now in private domestic use. Single-storey extension to east. Dark rock face limestone with brick dressing.
LHS009-011	6 Euston Street, Greenore	Terraced two-bay two-storey former railway worker's house, built 1872, now in private domestic use. Extension to east. Dark rock face limestone with brick dressing.
LHS009-043	Greenore Lighthouse	Freestanding two-stage lighthouse, built 1830, now disused. Circular-plan, tapered profile.
LHS009-044	Greenore Lighthouse Keeper's House	Detached three-bay single-storey with attic former lighthouse keeper's house, built c. 1830, now disused. Rectangular-plan, porch with lean-to roof projecting from north and south elevations, lean-to flanking bay to east.

The National Inventory of Architectural Heritage also includes the lighthouse (13831043), lighthouse keeper's house (13831044), the coastguard house (13831042) and former railway station and hotel (13831026) in its listings. The circular-planned Lighthouse retains a tapered profile and the Lighthouse Keeper's house, were both built c. 1830 and are located within a discrete courtyard, as indicated on the First Edition Ordnance Survey map. The lighthouse was built by George Halpin senior, and is regarded as an important example that retains a level of regional importance.

A coastguard house built c. 1870 is located to the south, while the former railway station and hotel stands to the West, on land reclaimed from the sea at Greenore Point. The building was constructed in 1875 for the Great Northern Railway and highlights an important period in the development of Greenore in the late nineteenth century as a rail and harbour hub.

16.3.2.3 *Historical and Cultural Heritage Overview*

Carlingford Lough forms a significant boundary between Ulster and Leinster and comes to a pinch point between Greenore and Greencastle. Not only does this natural formation constrain water flow creating strong tidal currents, but the opposing points of land extend out to each other and act as natural points in which to control access into and out of the Lough. The range of archaeological monuments seen on both sides

demonstrates the conscious appreciation of this coastal route since early times, while the presence of known shipwrecks in the vicinity elevates the sense of archaeological importance.

Maritime Cartographic Evidence

The relationship of various site-specific points to each other within the study areas at Greenore and Greencastle is given added insight when they are considered spatially. The Ordnance Survey (OS) First Edition mapping from the mid-nineteenth century presents the earliest useful cartographic record from the perspective of charting the actual landscape and associated features in a detailed measured view. The maps are designed at the scale of six inches to the mile and became the base standard of later OS mapping. This facility makes it possible to compare the representation of the same land area over time since the mid-1800s. The map showing Greenore records the lighthouse complex which survives today (Figure 12.7A). At this time, the lighthouse lay at the very north end of Greenore Point, just slightly removed from the High Water Mark (HWM), and representing the tip of the natural foreshore. No features are indicated on the shoreline, which is shown as an uninterrupted expanse of shingle. Later mapping shows how land to the north of the lighthouse has been reclaimed. The west-facing shoreline of Greenore Point was infilled to accommodate the construction of the railway station and associated harbour (Figure 12.7B). These works included the extension of shoreline protection measures around Greenore Point. The area was subsequently reclaimed further and much of this earlier detail was covered over by the growth of Greenore Port. Further reclamation is evident extending seaward to absorb the former HWM in front of the lighthouse (Figure 12.7C). The area is now a car park. One may conclude that the proposed landing area for the new slipway is in a location that combines reclaimed land and a foreshore that has not had material of archaeological interest recorded previously.

The map showing Greencastle records an undeveloped green-field area adjacent to a natural sandy beach which extends seawards (Figure 12.8). There is no suggestion of change through the years, and there is no indication of features or structures of archaeological interest in the location of the proposed slipway, despite the relative proximity of the medieval church and castle features to the northwest.

Admiralty Chart 2800, 'Carlingford Lough', highlights the sub-tidal contours and indicates the route of the navigation channel approaching Greenore, but does not provide additional insight to either of the proposed slipway locations.

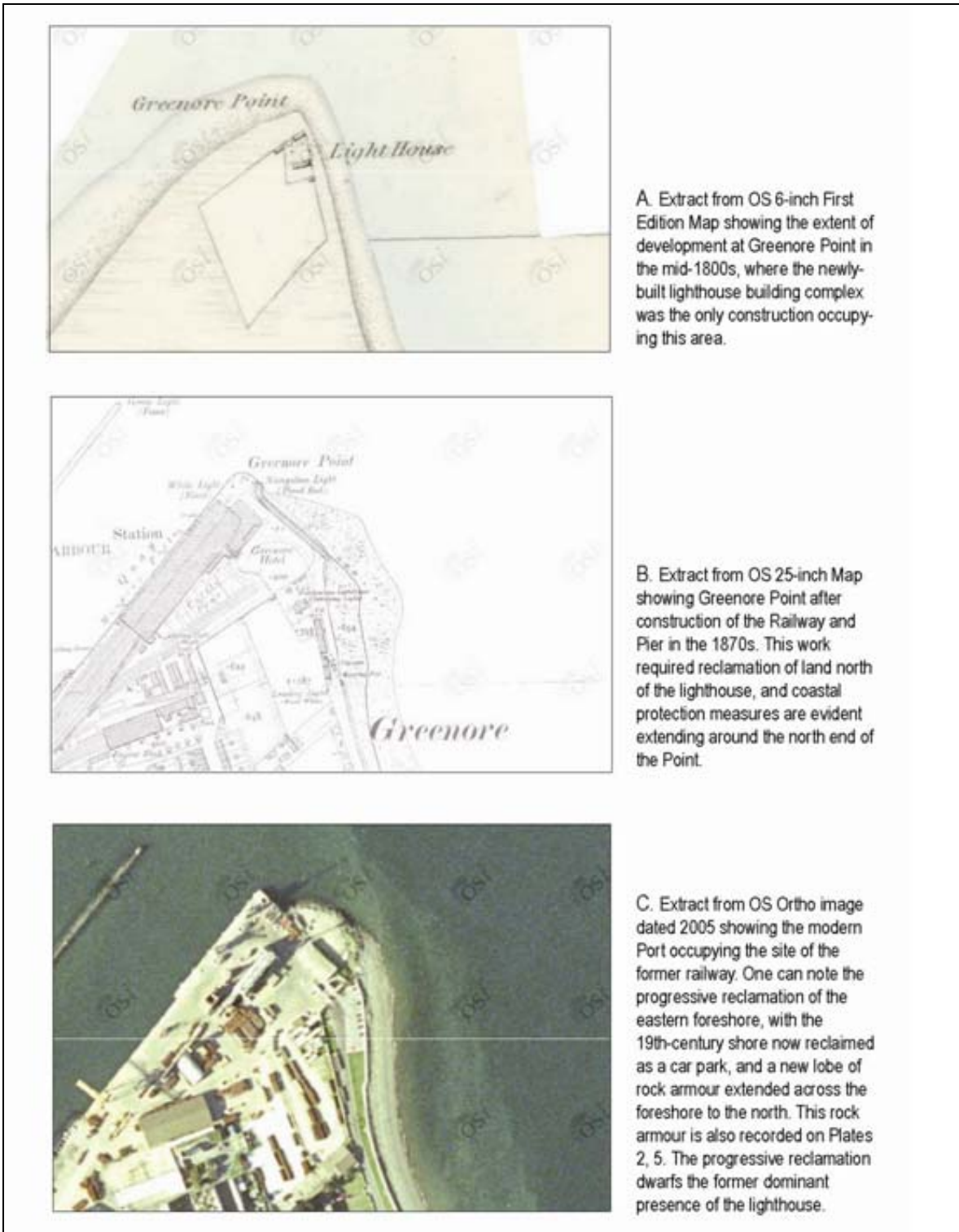


Figure 16.7: Cartographic Regression at Greenore (www.osi.e)



A. Extract from OS 6-inch First Edition map showing the shoreline at Greencastle in the mid-1800s. The site of the motte (Fort), the church and the castle are clearly recorded, as is the undeveloped nature of the foreshore at the proposed slipway location.



B. Extract from OS Ortho image dated 2005 showing the present-day shoreline at Greencastle. One can appreciate the development of a short jetty to the west but the shoreline remains largely unchanged from its portrayal in the 1800s.

Figure 16.8: Cartographic Regression at Greencastle (www.osi.ie)

Greenore

There are three recorded archaeological sites located within the environs of Greenore (1km) (see Figure 16.1): a prehistoric lithic scatter (LH009-012---; an unclassified castle (LH009-001---) and an ecclesiastical site (LH009-002001-, LH009-002002- & LH009-002003-). The lithic scatter is described in the Co. Louth Inventory (Buckley, 1986) as *'large quantities of flint have been noted on the raised beaches at Greenore. Most of the flint has been heavily rolled though some diagnostic 'Larnian' and Neolithic material is recorded*

(Woodman 1978, 306). Owing to the rolling the interpretation of some implements by Liversage (JRSAI 1961, 109-16) and Hodgers (CLAI 1973, 46-60) is dubious, and in general the industry would appear to be comparatively light'.

The castle is recorded as 'site of 'Paid na Farrell's Castle'. Now only surviving as some pieces of mortared masonry. Possible souterrain in the vicinity (LH009-016---)' (Buckley, 1986). The site is said to have been largely removed during the construction of the nearby Presbytery where the stone was re-used.

The ecclesiastical site (church, holy well & graveyard) is described as 'foundations of rectangular structure (max. dims. 11m by 5m), situated on top of slight flat-topped mound. 'St. James' Well' (LH009-00202-) to NW of church site (CLAJ 1929, 68; CLAI 1941, 12)' (Buckley, 1986). The graveyard is mentioned in the OS memoirs as being in dis-use, situated southeast of Carlingford at the crossroads towards Greenore Point.

None of these sites shall be impacted by the proposed development but are indicative of prehistoric coastal activity (including possible settlement) and medieval settlement within the wider study area.

A series of archaeological licensed work has taken place at Greenore previously (see Figure 16.4 & Table 16.6). However, much of this is associated with works for the Port itself and no material of archaeological significance was observed.

Although a lighthouse, lightkeeper's house and coastguard station are indicated on the 1st edition OS map (see Appendix 16.2, Plate 16.1), settlement at Greenore was largely due to a 19th century commercial venture by the London & North-Western Railway Company (LNWR) who identified the area as a suitable location for a cross-channel ferry service to Holyhead (Wales). The SS Connemara - which was wrecked in 1916 after a collision with the Retriever - was one of the ferries operating this service, which at the time was described as "*The Direct and Most Comfortable Route Between London, Belfast and the North of Ireland*" (Greenore Greencastle Community Association & Kilkeel Development Association booklet). Works began in 1863 and plans included a deepwater port facility with railway connection (passenger terminus, a goods shed, cattle pens, signal box and posts etc.) (see Figure 16.9). The route was also envisaged as being attractive to the wealthier classes and in this respect a hotel was built, together with accommodation and facilities for personnel (terraced housing (Euston Street), gasworks, reservoir, shop and school).

Amenity resources were added during the following decades including a golf course, holiday bungalows, tennis courts and a croquet lawn. The Greenore rail and cross-channel ferry services ceased in 1951 and although the railway line closed the commercial port continued to operate (see Appendix 16.2, Plate 16.2).

The built nineteenth century structures at Greenore are protected in the County Louth Development Plan (see Table 16.9) and none shall be directly impacted by the proposed development.



Figure 16.9: Extract from 2nd ed. 25-inch OS map 1890-1900 of Greenore

Greencastle

There are six recorded archaeological SMR sites located within 1km of the proposed Greencastle development area. These include undated burials (DOW057:017); a scheduled motte site (DOW057:001); a scheduled late medieval church (DOW057:002); a castle and well in state care (DOW057:003); an AP circular cropmark site (DOW057:016) and an unlocated medieval church and graveyard (DOW057:013).

The undated burials are described ‘workmen digging trenches for cables along the seaward side of the Greencastle Pier road reported these burials. When first revealed, they stated that the skeleton appeared to be in a crouched or foetal position. The grave seems to have consisted of a subcircular pit, 1-1.5m in diam and up to 1m deep. There were no grave goods or grave furniture and the bones appear to be almost totally degraded. Another possible burial pit protruded from the N section of the trench, but heavy rains made further investigation impossible. The disturbance to the burials and lack of artefacts make dating the burials very difficult. The orientation of the head to W could indicate a medieval date however the very degraded nature of the bones might imply a much earlier date’ (NIEA MapViewer database).

The motte site is described *'on level ground with commanding views all round, particularly to S across the mouth of Carlingford Lough. Greencastle Castle [DOW 057:003] is visible close by to E. The site consists of a roughly circular mound, c.45m diam at base & 15m on the badly disturbed summit. The mound stands to a max. height of 7m. There is no sign of any surrounding ditch or bailey, or indeed any associated earthworks. It appears to be in a stable condition. Topsoil stripping was carried out under archaeological supervision in a field c.60m W of the motte, after it was surveyed by metal detectorists, who found nothing earlier than C19th artefacts. A series of test pits were also dug across the development area, but nothing of an archaeological nature was uncovered [NAC, Jan. 01]. An archaeological evaluation was carried out on a site SW of the motte, prior to development. Three test trenches were excavated across the proposed area. No finds or features of archaeological significance were uncovered [CAF, Dec 05] (NIEA MapViewer database).*

The medieval church is described as *'on flat ground surrounded by improved grassland, with fine views all round & the castle of Greencastle close by to NE. The building consists of a long rectangle, aligned with its long axis E-W measuring 19.5m x 5m with battered walls on average 0.9m thick. The church is presently ivy-covered. The present doorway is at the W end of the N wall & there is evidence here of timber framing. A small light, with stone lintels & a wall cupboard are also in this wall. Openings in the S wall may be part of the C16th or C17th renovations which saw the rebuilding of the W end. Here there is a window some 2m high' (NIEA MapViewer database).*

The castle is described *'this royal castle, commanding the mouth of Carlingford Lough has an eventful history. It was built in C13th, taken by Edward Bruce in 1316, attacked at least twice by the Irish in late C14th and maintained as a garrison up to 1590. It is approached across a rock-cut ditch, which excavations revealed to be 7m wide at top, 3m at base & 3.5m deep. The curtain wall had 4 corner towers, of which only the bases of 2 remain. The 4 storey keep, 18m x 8.5m internally, is C13th with later alterations' (NIEA MapViewer database) (see Appendix 16.2, Plate 16.12).*

The AP cropmark is described as being *'in an area of locally low improved grassland surrounded on all sides by gradually rising ground despite the proximity of the coastline. The site consists of a low, flattened hummock, roughly circular, which is the reason for the cropmark which appeared on an AP. It is not clear on the ground if there is an archaeological component to the site, but benefit of the doubt must fall on the archaeological side' (NIEA MapViewer database).*

For the unlocated church and graveyard it is stated that *'there is no local tradition of an old church in the area, with the exception of DOW 057:002, the church at Greencastle. Not clear exactly where "Kilnagreinan" is; one or two informants suggested it to be an old name for the church Greencastle' (NIEA MapViewer database).*

All of the recorded archaeological sites within the environs of the proposed development site at Greencastle indicate an established settlement during the medieval period, some with particular elements of defence given the strategic location of the lough. Carlingford was the Lough's principal town and port, some 4-5km from Greenore, but access to it was controlled by the opposing nodal points at Greenore and Greencastle. The tower house castle of Greencastle retains a sentinel appearance and is a later form of fortification on the site, replacing the earthen motte, which would have originally been built perhaps in the late twelfth century. The stone castle was a royal fortification, built in the thirteenth century. A sense of the continued importance of the Lough from a strategic perspective is referenced by the presence of a sixteenth-century artillery fort (DOW057:010) on the Greencastle side of the main water channel. Although now largely ruined, the fort represents a more active engagement in the marine traffic, by being positioned alongside the main navigation channel. None of the recorded archaeological sites located within the environs of the Greencastle site shall be directly impacted by the proposed development.

The post-medieval period as depicted by the 1st and 2nd edition OS maps for Greencastle indicate the location of the motte, church (marked 'chapel in ruins') and castle together with some road networks and dispersed settlement evidence.

There are a number of Industrial Heritage features, a Defence Heritage feature and listed buildings located within the environs of the proposed development site (see Figs. 16.3, 16.5; Tables 16.4, 16.5 & 16.6 and Appendix 16.2, Plate 16.13). Of these, 3 listed structures (boundary markers) are located within the proposed development site at Greencastle. There are eight posts that formerly marked the boundary of the land owned by the Dundalk, Newry & Greenore Railway Company around Greencastle pier. They are described: *'only two of these posts are now visible, and may be the only ones to survive. One is just west of the pier, on the seaward side of the road, and the other is on the foreshore between the pier and the first house to its east. Both piers now protrude only 20cm above the ground. They are of cast-iron, of T cross-*

section, and measure 18cm across and 10cm front to back. Each face reads 'D.N. & G. Ry. Co./ Boundary Post' in 3cm high letters. Despite the salt-laden atmosphere, the two posts survive in good condition' (NIEA: Listed Buildings database). Dating to 1880-1899, the pier associated with these boundary markers was opened by the Dundalk, Newry and Greenore Railway Company in 1880 to service the Greenore terminus of the Holyhead ferry. Services were discontinued in 1926. From the NIEA description it appears that those markers said to be located within the proposed development site at Greencastle are currently unlocated (a term used by NIEA to state that they are no longer to be found at their assumed location).

16.4 Site Surveys

16.4.1 Terrestrial Heritage

An archaeological inspection of the proposed development sites was undertaken and the overall area was assessed in terms of landscape, land use, vegetation cover, presence or lack of archaeological sites and potential for undetected archaeological sites/features.

At Greenore, the proposed location of the concrete slipway is currently a natural shingle beach to the rear (east) of the weigh bridge office at the entrance to Greenore Port (see Figure 16.10 and Appendix 16.2, Plate 16.3). The proposed location of the landward application site is currently an existing carpark and footpath located to the south of the weigh bridge office (see Appendix 16.2, Plates 16.4 – 16.7). Ground levels at both of these locations have been heavily disturbed in the past by virtue of the presence of the backfilling, weigh bridge, carpark etc. As such archaeological potential for survival of sub-surface archaeological remains is deemed low at this location.

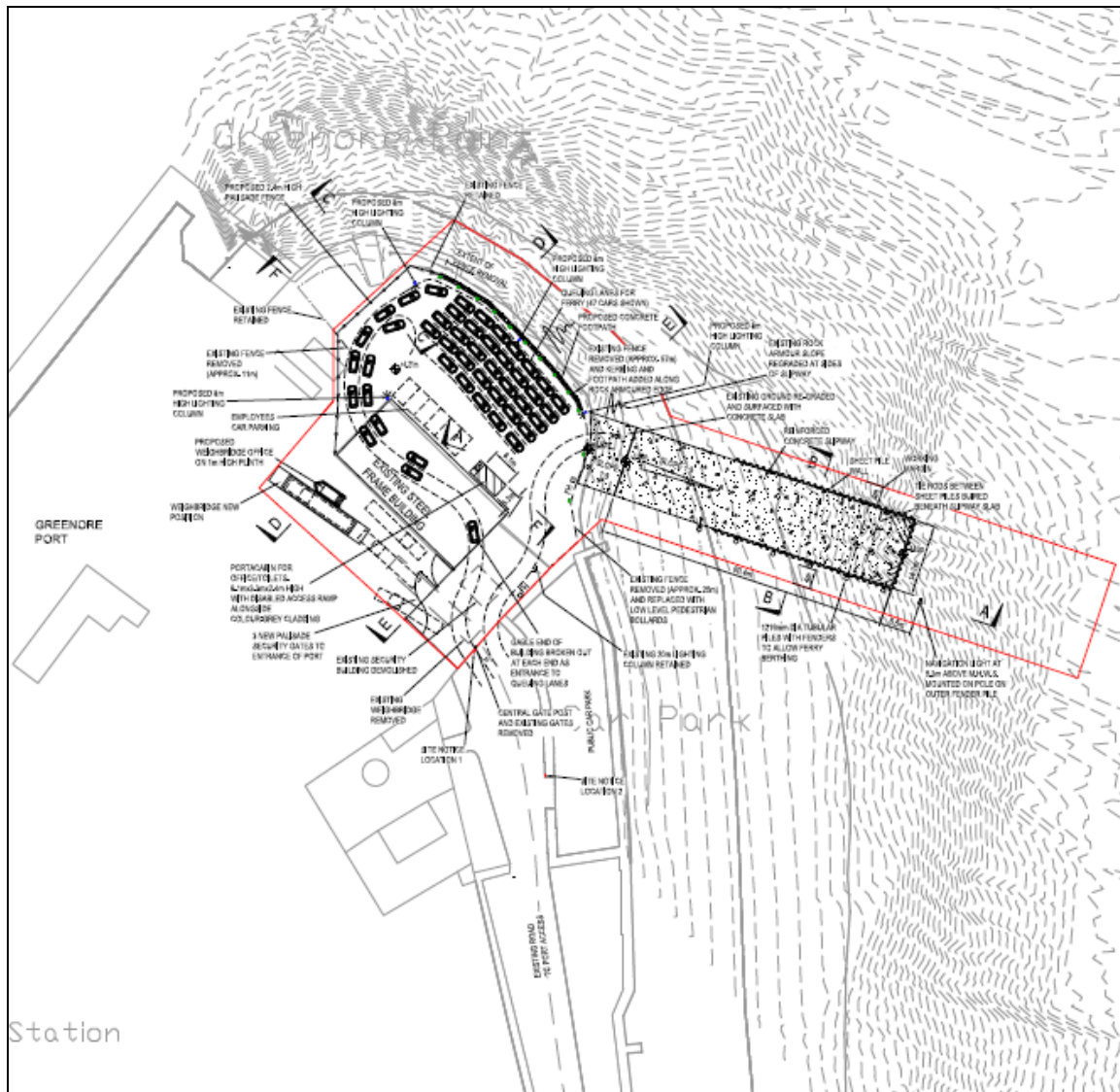


Figure 16.10: Plan of Proposed Development at Greenore Port, Co. Louth

At Greencastle, the location of the landward planning application site is currently a greenfield site, comprising a flat area of moderate pasture (see Figure 16.11 and Appendix 16.2, Plates 16.8 – 16.9). The location of the proposed concrete slipway is a stony beach to the southwest of the proposed landward site (see Appendix 16.2, Plates 16.10-16.11). Both the greenfield site and beach appear to have remained undeveloped in the past and have potential to retain sub-surface archaeological finds/features. The proposed upgrade and widening to parts of the Greencastle Pier Road is proposed to occur within the existing verges, which have been previously disturbed by virtue of road-building and on-going maintenance works and is deemed to be of no archaeological potential.

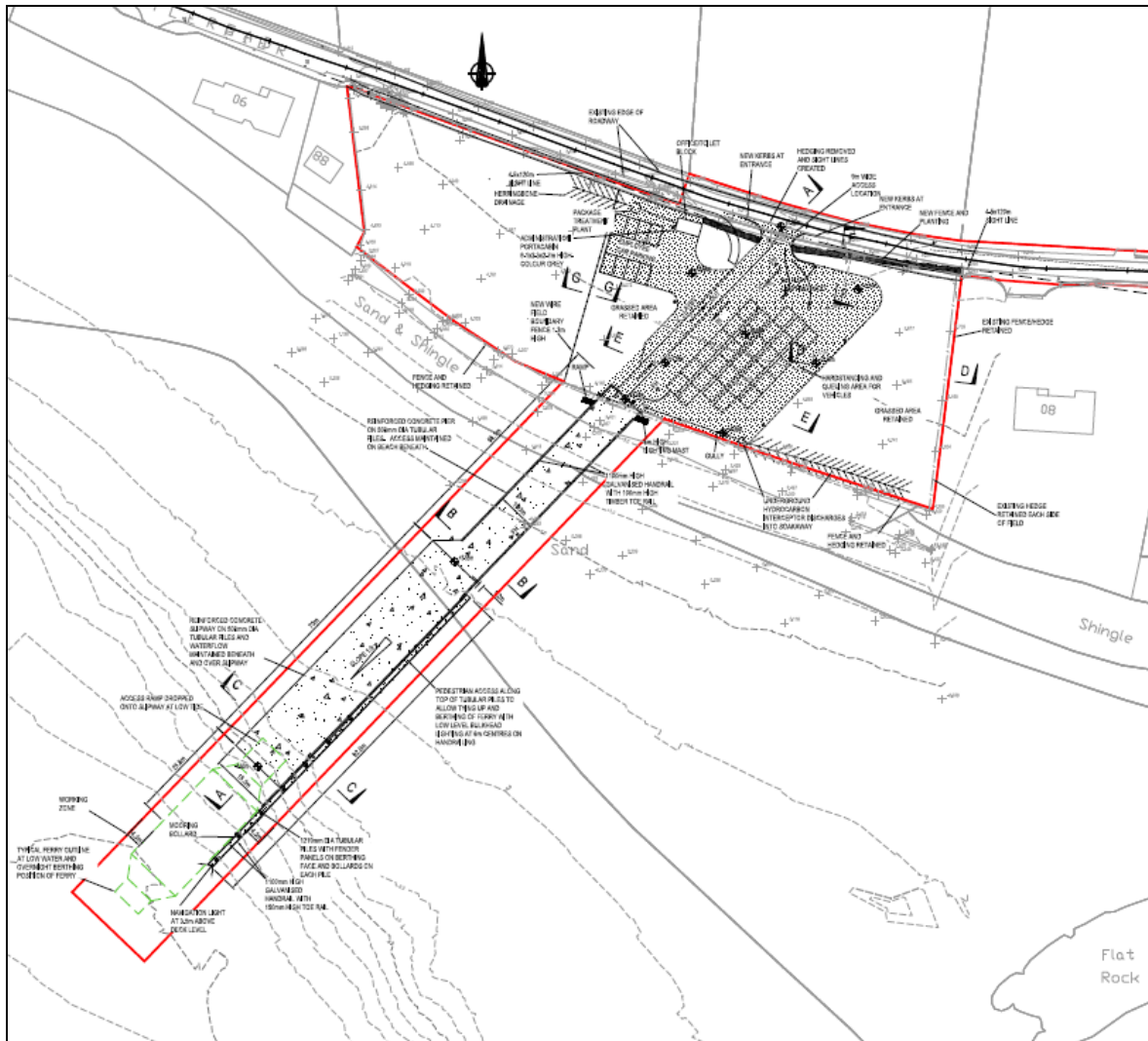


Figure 16.11: Plan of Proposed Development at Greencastle, Co. Down

16.4.2 Underwater/Maritime Heritage

16.4.2.1 Foreshore Topography

The foreshore at Greenore is a shelving shingle and cobble beach, with coarse sand apparent at the HWM to the south (see Appendix 16.2, Plate 16.14). Rock armour is placed above the HWM to protect the adjacent road that leads to Greenore Port. This defines the area reclaimed from the sea since the construction of the railway. The modern perimeter of the Port is constructed over the foreshore as a still later phase of reclamation. The proposed landing slip for the ferry is to be located against the modern rock armour that reaches onto the intertidal zone in this location (see Appendix 16.2, Plate 16.15). Much of the natural foreshore at the proposed development area is represented by shingle and cobble (see Appendix 16.2, Plate 16.16). A line of large roughly-cut stone blocks is placed along the shore at mid-tide level (see Appendix

16.2, Plate 16.17). The stone blocks are associated with an unmapped coastal protection measure.¹ A series of two concrete posts extending in a line seaward of this location attest to other modern coastal protection measures (see Appendix 16.2, Plate 16.18).

The foreshore at Greencastle is a more gently shelving beach. The location is relatively undeveloped, with a green field extending to the foreshore area (see Appendix 16.2, Plate 16.19). A narrow band of shingle and cobble represents the HWM (see Appendix 16.2, Plates 16.20 - 16.22). The cobbled foreshore gives way to a sandy beach (see Appendix 16.2, Plates 16.23 - 16.24). The intertidal zone is characterized by a broad sandy beach (see Appendix 16.2, Plates 16.25 - 16.27). No features of artificial construction were observed exposed on the foreshore of the proposed development area.

16.4.2.2 *Seabed Topography*

The seabed at Greenore is characterised by a steeply sloping inclination that quickly falls below 15m depth at High Water. The surface deposit is gravel and cobble (see Appendix 16.2, Plates 16.28 - 16.30). No features of archaeological significance were observed.

The seabed at Greencastle slopes perceptively below a narrow ledge at the Low Water Mark (LWM), where depths of 10m were encountered when the site was dived close to High Water. A series of shallows are encountered further seaward, and depths as shallow as 3m were experienced at the outer limit of the dive work. The seabed is predominantly of sand (see Appendix 16.2, Plates 16.31 - 16.32). Some sand rippling was observed, along with patches of cobble. Scar marks in the sand relate to the shellfish potting that exploits this location. A disused mooring was observed, but no material of archaeological significance was noted.

16.4.2.3 *Archaeological Observations*

A number of features observed at Greencastle include scar marks in the sand relating to modern fishing practices, and a disused mooring. No material of archaeological significance was observed at either Greenore or Greencastle.

The on-site archaeological assessment was comprehensive and extended beyond the site boundaries as projected. The on-site work bears out the desktop observation that the shoreline at Greenore bears witness to several phases of reclamation associated with the development of the site of what is now Greenore Port.

The seabed surfaces in both slipway locations do not contain material of archaeological significance, however it must be noted that the work constituted a non-disturbance inspection of the seabed, and consequently the potential remains for material of interest to lie buried beneath the accumulated sediments.

16.5 Impact Assessment

16.5.2 Identification of Terrestrial Heritage Impacts

16.5.2.1 *Greenore*

There are a total of nine cultural heritage constraints located within the wider study area for the proposed development at Greenore. These comprise three RMP sites and nine protected structures. Previous investigative archaeological works have found no remaining trace of a flint scatter site located south of the Port area. None of these sites are located within the proposed development area and therefore will not be directly affected by the proposed works. The dominance and context/setting of the protected structures of the lighthouse and light keeper's house located adjacent the site have been dwarfed by the progressive land reclamation works that have occurred at Greenore over the past century and any potential visual impacts in the protected structures are deemed negligible in this regard. The site itself has been heavily disturbed in the past and is unlikely to contain any previously unknown features of cultural heritage significance. However this does not negate a low possibility of encountering previously unknown stray finds and/or features within the proposed development area.

¹ This statement is qualified by the fact that the line of blocks is not recorded on the Ordnance Survey maps reproduced in Figure 16.7.

16.5.2.2 Greencastle

There are a total of twenty-five cultural heritage constraints located within the study area for the proposed development at Greencastle. These comprise six SMR sites; fourteen listed buildings; four Industrial Heritage sites and one Defence Heritage site. None of the SMR sites, Industrial Heritage sites or Defence Heritage sites will be directly impacted by the proposed development. Note that assessment of any potential indirect visual impacts of the proposed development on the castle site located to the north has been addressed in Chapter 13 Landscape and Visual assessment.

Three of the Listed Buildings entries are located within the development site at the location of the proposed landward planning application site. All three sites are boundary markers (HB 16/04/202) noted as currently being 'unlocated' in the NIEA records. However these may be encountered during the works and without appropriate mitigation measures in place, could be inadvertently directly impacted. The adjacent pier is also a listed structure and any potential indirect visual impact of the proposed development on same has been addressed in Chapter 13 Landscape and Visual assessment.

The proposed development site at Greencastle consists of a greenfield site and a stony beach area. Given the recorded archaeological medieval sites in these environs it is considered that there is a moderate potential for the sub-surface soils to retain hitherto unknown archaeological finds/features.

16.5.2.3 Cumulative Impacts

The cultural heritage impacts above have all been addressed both independently and with regards to any potential cumulative impacts resulting from potential interactions between the construction or operational phases of any ongoing developments, recently approved development and pre-application developments outlined in Chapter 3. Due to the small scale of the proposed Carlingford Ferry development and the distance from developments outlined in Chapter 3 no cumulative impacts on cultural heritage are predicted.

16.5.3 Identification of Underwater/Maritime Heritage Impacts

16.5.3.1 Greenore

The slipway at Greenore will extend 70m from the current shoreline. It will be of reinforced concrete construction built using tubular steel fender piles inserted into the seabed. The slipway is to be 15m in width and will be inclined seawards to 700mm below the Mean Low Water Springs level to facilitate drive-on/drive-off usage to and from the ferry. Vehicle queuing and parking will be accommodated within a c. 3537m² area of the existing reclaimed surfaces at Greenore Port.

The works will represent a direct impact on the existing seabed surfaces.

The reworking of ground surfaces at Greenore to facilitate the vehicle hardstanding will take place on reclaimed land within Greenore Port. It is possible that such work would include the area of earlier coastal protection associated with the railway station and associated features, as recorded on the Ordnance Survey maps.

No significant long term changes are anticipated with respect to erosion and/or deposition along this length of shoreline (Chapter 9 Coastal Processes), arising from the changes in the fluvio-dynamics that may occur as a result of the slipway constructions.

The absence of known archaeological remains in this development area suggests that the archaeological risk associated with the slipway constructions and use will be low. However it remains possible that material of archaeological interest remains buried in the undisturbed deposits below the surfaces.

16.5.3.2 Greencastle

A number of features observed at Greencastle include scar marks in the sand relating to modern fishing practices, and a disused mooring. The slipway at Greencastle will extend 152m from the current shoreline. It will be of reinforced concrete built on three parallel lines on tubular steel piles inserted into the seabed. A jetty will be included for overnight berthing of the ferry. The overall structure will vary in width from 19m at its widest to 8m wide at its seaward terminal. The jetty will be above the waterline, while the main slipway will be inclined seawards to 700mm below the Mean Low Water Springs level to facilitate drive-on/drive-off usage to and from the ferry. Off-road hard standing and vehicle queuing will be facilitated in a c. 7763m² area within what is currently the green-field site that runs to the shore.

The works will represent a direct impact on the existing seabed surfaces.

Preparation of the hardstanding and vehicle area at Greencastle would require the removal of topsoil in an area that has not been disturbed previously, and this would provide an opportunity for archaeological observations.

No significant long term changes are anticipated with respect to erosion and/or deposition along this length of shoreline (Chapter 9 Coastal Processes), arising from the changes in the fluvio-dynamics that may occur as a result of the slipway constructions.

The absence of known archaeological remains in this development area suggests that the archaeological risk associated with the slipway constructions and use will be low. However it remains possible that material of archaeological interest remains buried in the undisturbed deposits below the surfaces.

16.6 Pre-Construction Mitigation Measures

16.6.1 Terrestrial Heritage

The archaeological potential at Greenore has been deemed low based on both desk and site surveys, primarily due to the fact that the area has largely been reclaimed and infilled in the past. No pre-construction mitigation measures are deemed necessary at the proposed Greenore development site.

The proposed development site at Greencastle consists of a greenfield site and a stony beach area. Given the recorded archaeological medieval sites in these environs it is considered that there is a moderate potential for the sub-surface soils to retain hitherto unknown archaeological finds/features. As such, it is recommended that an archaeological evaluation (testing) be carried out across the site at pre-construction stage in order to resolve any features that may exist by means of full excavation/preservation *in situ* as required.

16.6.2 Underwater/Maritime Heritage

No ameliorative measures are recommended in advance of the construction works commencing.

16.7 Construction Phase Impacts & Mitigation Measures

16.7.1 Terrestrial Heritage

The archaeological potential at Greenore has been deemed low based on both desk and site surveys, primarily due to the fact that the area has largely been reclaimed and infilled in the past. However, this does not negate the possibility of encountering stray finds/features and as such it is recommended that archaeological monitoring be conducted during the initial topsoil ground works associated with the project.

There are records of three boundary markers located within the proposed development site at Greencastle. Should they be encountered during the works they may require removal and reinstatement elsewhere at a suitable location within the proposed development site. As such it is recommended that an archaeological watching brief (monitoring) be carried out (in agreement with NIEA) during the initial construction phase of the works at the proposed Greencastle site in order to identify the presence or otherwise of same and adopt appropriate rescue preservation measures as necessary.

16.7.2 Underwater/Maritime Heritage

No underwater material of archaeological significance was observed at either Greenore or Greencastle. The absence of known archaeological remains in these two development areas suggests that the archaeological risk associated with the slipway constructions and use will be low. However it remains possible that material of archaeological interest remains buried in the undisturbed deposits below the surfaces. A suitable mitigation strategy would be to conduct archaeological monitoring during construction, to resolve any material that may be revealed at that time.

Archaeological Monitoring

Archaeological monitoring is recommended during all ground and seabed disturbances associated with the slipway constructions. A suitably qualified archaeologist with experience in marine environments should undertake the archaeological monitoring. The archaeological monitoring should be undertaken with the

proviso for full excavation of any archaeologically significant material uncovered as part of the operation. Archaeological monitoring in Greenore would be licensed by the Department of Arts, Heritage and the Gaeltacht. Archaeological monitoring in Greencastle would be subject to the requirements of the Northern Ireland Environment Agency.

The following measures are also recommended:

- An archaeologist should be retained for the duration of the relevant works.
- Time scale for the construction phase should be made available to the archaeologist, with information on where and when ground disturbances and dredging will take place.
- It is essential for the developer to give sufficient notice to the archaeologist/s in advance of the construction works commencing. This will allow for prompt arrival on site to monitor the ground disturbances. As often happens, intervals may occur during the construction phase. In this case, it is also necessary to inform the archaeologist/s as to when ground disturbance works will recommence.
- In the event of archaeological features or material being uncovered during the construction phase, it is crucial that any machine work cease in the immediate area to allow the archaeologist/s to inspect any such material.
- Once the presence of archaeologically significant material is established, full archaeological recording of such material is recommended. If it is not possible for the construction works to avoid the material, full excavation would be recommended. The extent and duration of excavation would be a matter for discussion between the client and the licensing authorities.
- It is recommended that the core of a suitable archaeological team be on standby to deal with any such rescue excavation. This would be complimented in the event of a full excavation.
- In the event that underwater archaeological work is required, the team will conduct its work according to Safety in Industry (Diving Operations) Regulations 1981, SI 422.
- Secure site offices and facilities should be provided on or near those sites where excavation is required.
- Fencing/buoys of any such areas would be necessary once discovered and during excavation.
- Secure artefact storage including secure wet storage facilities should be provided with the site offices, to ensure the protection and preservation of artefacts recovered during the monitoring work. Such facilities should be maintained on site until the instructions issued by the regulatory authorities concerning their requirements of such material are carried out.
- Adequate funds to cover excavation, post-excavation analysis, and any testing or conservation work required should be made available.
- Machinery traffic during construction must be restricted as to avoid any of the selected sites and their environs.
- Spoil should not be dumped on any of the selected sites or their environs.

16.8 Residual Impacts

16.8.1 Terrestrial Heritage

No residual impacts are anticipated for the terrestrial heritage resource relating to the proposed ferry crossing project. Note that all potential indirect visual impacts relating to the project have been addressed in Chapter 13 Landscape and Visual assessment.

16.8.2 Underwater/Maritime Heritage

No residual impacts are anticipated for the underwater/maritime heritage resource relating to the proposed ferry crossing project.

16.9 References

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Buckley, V. (1986) Archaeological Inventory of Co. Louth. Dublin: Stationary office.

Planning Policy Statement 6 'Planning, Archaeology and the Built Heritage' (PPS6). Department of the Environment, Northern Ireland, March 1999.

Booklets

The SS Connemara and Retriever Disaster 3rd November 1916, Maritime Heritage Trail across Carlingford Lough. Published by Greenore Greencastle Community Association & Kilkeel Development Association

Online sources

RMP database and mapping: www.archaeology.ie

NIEA MapViewer: <http://maps.ehsni.gov.uk/MapView/Default.aspx>

Ordnance Survey of Ireland: <http://maps.osi.ie/publicviewer>

Excavations Database: www.excavations.ie

Co Louth Development Plan 2009-2015: <http://www.louthcoco.ie/en/Publications/Development-Plans>