Table 9.2 Magnitude of Landscape / Seascape Impacts

Magnitude of Impact	Description
Very High	Change that would be large in extent and scale with the loss of critically important landscape / seascape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the landscape / seascape in terms of character, value and quality.
High	Change that would be more limited in extent and scale with the loss of important landscape / seascape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the landscape / seascape in terms of character, value and quality.
Medium	Changes that are modest in extent and scale involving the loss of landscape / seascape characteristics or elements that may also involve the introduction of new uncharacteristic elements or features that would lead to changes in landscape / seascape character, and quality.
Low	Changes affecting small areas of landscape / seascape character and quality, together with the loss of some less characteristic landscape / seascape elements or the addition of new features or elements.
Negligible	Changes affecting small or very restricted areas of landscape / seascape character. This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape / seascape or are hardly perceivable.

The significance of a landscape / seascape impact is based on a balance between the sensitivity of the landscape / seascape receptor and the magnitude of the impact. The significance of landscape / seascape impacts is arrived at using the following matrix, which is derived from the GLVIA:

Table 9.3 Landscape / Seascape Impact Significance Matrix

	Sensitivity of Receptor				
Scale/Magnitude	*Very High*	*High*	*Medium*	*Low*	*Negligible*
Very High	Profound	Profound-substantial	Substantial	Moderate	Minor
High	Profound-substantial	Substantial	Substantial-moderate	Moderate-slight	Slight-imperceptible
Medium	Substantial	Substantial-moderate	Moderate	Slight	Imperceptible
Low	Moderate	Moderate-slight	Slight	Slight-imperceptible	Imperceptible
Negligible	Slight	Slight-imperceptible	Imperceptible	Imperceptible	Imperceptible

Note: those categories indicated in mustard are considered to be equivalent to 'Significant' impacts in EIA Report terms.

9.1.5.2 Visual Impacts

As with the landscape / seascape impact, the visual impact of the proposed reclamation works will be assessed as a function of sensitivity versus magnitude. In this instance the sensitivity of the visual receptor (viewer), weighed against the magnitude of the visual effect.

Sensitivity of Visual Receptors

Unlike landscape sensitivity, the sensitivity of visual receptors has an anthropocentric basis. It considers factors such as the perceived quality and values associated with the view, the landscape context of the viewer, the likely activity they are engaged in and whether this heightens their awareness of the surrounding landscape. A list of the factors considered by the assessor in estimating the level of sensitivity for a particular visual receptor is outlined below and used in **Table 9.5** to establish visual receptor sensitivity at each VRP:

1. **Susceptibility of Receptors** - In accordance with the Institute of Environmental Management and Assessment ("IEMA") Guidelines for Landscape and Visual Assessment (3rd edition 2013) visual receptors most susceptible to changes in views and visual amenity are;
    - *"Residents at home;*
    - *People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focussed on the landscape and on particular views;*
    - *Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;*
    - *Communities where views contribute to the landscape setting enjoyed by residents in the area; and*
    - *Travellers on road rail or other transport routes where such travel involves recognised scenic routes and awareness of views is likely to be heightened".*

Visual receptors that are less susceptible to changes in views and visual amenity include;

- *"People engaged in outdoor sport or recreation, which does not involve or depend upon appreciation of views of the landscape; and*
- *People at their place of work whose attention may be focussed on their work or activity, not their surroundings and where the setting is not important to the quality of working life".*

2. **Recognised scenic value of the view** (County Development Plan designations, guidebooks, touring maps, postcards etc). These represent a consensus in terms of which scenic views and routes within an area are strongly valued by the population because in the case of County Developments Plans, for example, a public consultation process is required;

3. **Views from within highly sensitive landscape areas**. Again, highly sensitive landscape designations are usually part of a county's Landscape Character Assessment, which is then incorporated within the County Development Plan and is therefore subject to the public consultation process. Viewers within such areas are likely to be highly attuned to the landscape around them;

4. **Primary views from dwellings**. A proposed development might be seen from anywhere within a particular residential property with varying degrees of sensitivity. Therefore, this category is reserved for those instances in which the design of dwellings or housing estates, has been influenced by the desire to take in a particular view. This might involve the use of a slope or the specific orientation of a house and/or its internal social rooms and exterior spaces;

5. **Intensity of use, popularity**. This relates to the number of viewers likely to experience a view on a regular basis and whether this is significant at county or regional scale;

6. **Connection with the landscape**. This considers whether or not receptors are likely to be highly attuned to views of the landscape i.e. commuters hurriedly driving on busy national route versus hill walkers directly engaged with the landscape enjoying changing sequential views over it;

7. **Provision of elevated panoramic views**. This relates to the extent of the view on offer and the tendency for receptors to become more attuned to the surrounding landscape at locations that afford broad vistas;

8. **Sense of remoteness and/or tranquillity.** Receptors taking in a remote and tranquil scene, which is likely to be fairly static, are likely to be more receptive to changes in the view than those taking in the view of a busy street scene, for example;

9. **Degree of perceived naturalness**. Where a view is valued for the sense of naturalness of the surrounding landscape it is likely to be highly sensitive to visual intrusion by distinctly manmade features;

10. **Presence of striking or noteworthy features.** A view might be strongly valued because it contains a distinctive and memorable landscape feature such as a promontory headland, lough or castle;

11. **Historical, cultural and / or spiritual significance.** Such attributes may be evident or sensed by receptors at certain viewing locations, which may attract visitors for the purposes of contemplation or reflection heightening the sense of their surroundings;

12. **Rarity or uniqueness of the view**. This might include the noteworthy representativeness of a certain landscape type and considers whether the receptor could take in similar views anywhere in the broader region or the country;

13. **Integrity of the landscape character**. This looks at the condition and intactness of the landscape in view and whether the landscape pattern is a regular one of few strongly related components or an irregular one containing a variety of disparate components;

14. **Sense of place**. This considers whether there is special sense of wholeness and harmony at the viewing location; and

15. **Sense of awe**. This considers whether the view inspires an overwhelming sense of scale or the power of nature.

Those locations which are deemed to satisfy many of the above criteria are likely to be of higher sensitivity. No relative importance is inferred by the order of listing in the **Table 9.4** below. Overall sensitivity may be a result of a number of these factors or, alternatively, a strong association with one or two in particular.

9.2 EXISTING ENVIRONMENT

9.2.1 Landscape/Seascape Baseline

The Landscape / Seascape baseline represents the existing context and is the scenario against which any changes brought about by the proposal will be assessed.

9.2.1.1 Coastline characteristics

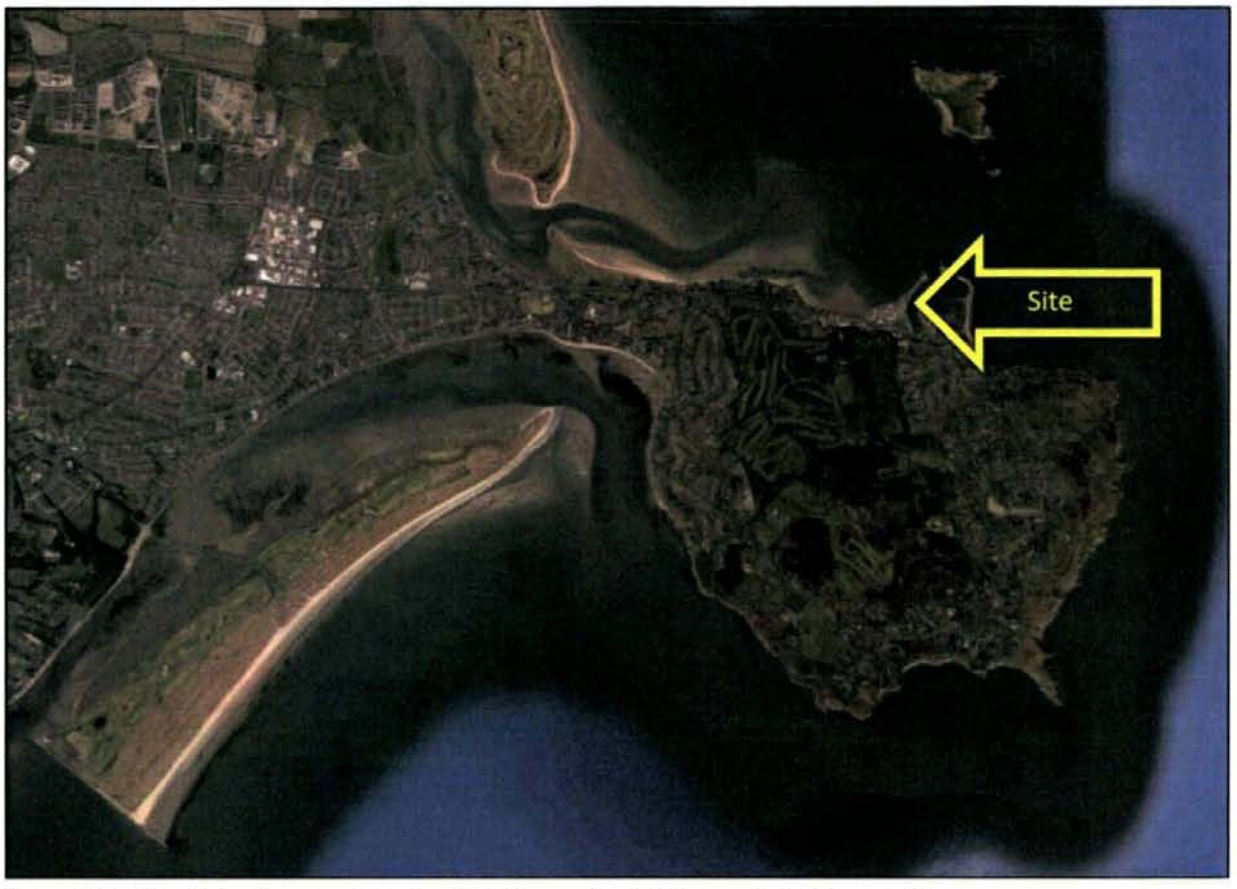

Figure 9.2 – Howth harbour and peninsula in the context of the north Dublin coastline

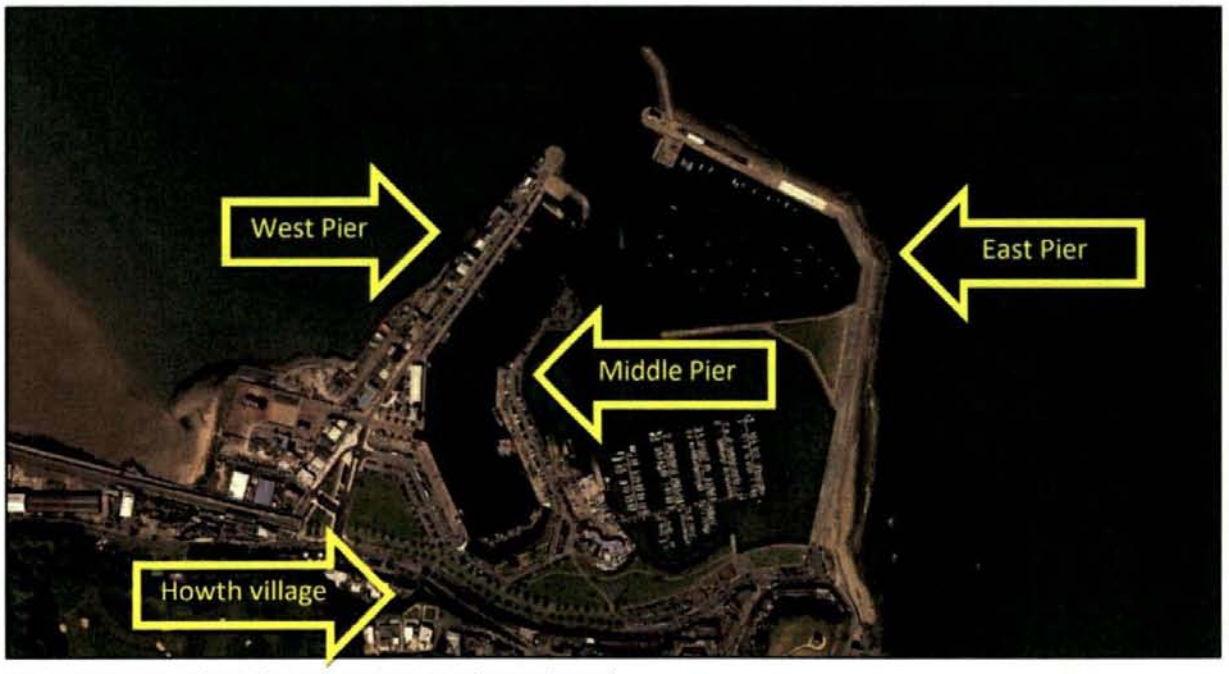

Figure 9.3 – Howth Harbour (Source: Google Earth Pro)

The coastal setting of Howth peninsula consists of a series of cliffs, deep inlets, stony coves and rocky caves and outcrops (see **Figure 9.2,** above). The shoreline generally rises in high and steep cliffs and coastal spurs, before climbing to 171m at Black Linn, by the Ben of Howth. Approx. 1km north of Howth Harbour Ireland's Eye is located, a 21.5 ha uninhabited island. The coastline along the northeast of the peninsula, however, is defined by four long, sandy beaches (Burrow, Claremont,

Quarry and Hole-in-the-wall beaches) that run consecutively from Howth harbour's west pier for approx. 2.5km until reaching Sutton, a tombolo where both coastline and topography remain predominantly flat and low-lying.

Howth Harbour may be best described as a harbour of three piers (see **Figure 9.3,** above), all of which have a different identity and function. At over 400m length, the West Pier is the industrial, retail and restaurant hub of the harbour, serving not just as a pier in which fishing fleets land their catch, a location where they have their boats serviced or repaired, and the site of a fish processing plant, but also the location of numerous very popular cafes, restaurants and shops that focus on fresh seafood and cuisine.

Providing a major buttress against the full force of easterly winds and the Irish Sea, the scenic East Pier serves as a well-known destination for walkers and runners. South/southeast of the East Pier is the short and stony Balscadden Beach. Both East and West Piers were constructed in the first quarter of the 19th Century, but the Middle Pier is a much later addition. This is because the current harbour layout was developed in the early 1980s with the construction of the 180m-long Middle Pier and c. 235m-long East Pier breakwater. These works provided segregated areas for fisheries and leisure users i.e. western trawler basin, swing mooring area and marina area.

9.2.1.2 Centres of Population and Houses

Located at the start of the West Pier, Howth Village is the nearest centre of population to the harbour. Howth Electoral Division supports of residential population of just over 8,000. The residential houses are mostly detached and semi-detached, with a small concentration of apartment living along the peninsula's north coast. A fishing and trading settlement since at least the 14th century, Howth village has the highest population density on the peninsula. Low-density housing estates overlooking the harbour are located within 800m south of the harbour. The spread of settlement 1.8km south from the village towards Howth Head has resulted in a number of large, detached properties showcasing views across the harbour to Ireland's Eye. Elsewhere across the peninsula, there are a small number of linear housing clusters mostly consisting of large, detached properties exhibiting views across Dublin Bay and/or the Irish Sea. However, owing to the conservation status across areas of the peninsula, settlement and development is, for the most part, constricted and localised, while one-off housing is rare. Approximately 3km west of the harbour is Sutton, a suburb containing approx. 6000 residents.

9.2.1.3 Transport Routes

The principal transport route in this area is the R105, which originates along the north Dublin Bay coast road, before looping around the peninsula, to and from Sutton Cross. The R105 runs to within 50m of the southern end of the harbour, along which Dublin Bus services connect Howth to the city centre. A myriad of smaller, residential roads extends from this regional road. The DART rail service terminates at Howth station, near the southern end of the West Pier, and is particularly busy during April - October. A ferry service operates from near the northern end of the West Pier between Dublin City, Dun Laoghaire and Howth Harbour, seven days a week between April and October.

9.2.1.4 Public Amenities and Facilities

Howth village is located 15 kilometres from Dublin city centre and is a very popular coastal destination for day-trippers, in particular; both those resident in Dublin and tourists visiting Dublin. Howth harbour is a popular visitor location owing to its scenic setting, its wildlife (including

numerous harbour seals) and the range of cafes, restaurants and bars the village and West Pier offer. There is a mix of a working fishing fleet with multiple recreational or sailing craft, including Howth Yacht Club at the base of the harbour's middle pier. The village is often used by day-trippers as the start and end point for cliff-top and hillside walks across the peninsula, which provide panoramic views of Dublin Bay, the Leinster coastline and the Irish sea. Year-round, the peninsula is a popular destination for cyclists, joggers, walkers, sailors and kayakers alike.

Figure 9.4 – View of the West Pier, looking southwest

Figure 9.5 – View of the West Pier, from base of Middle Pier

Figure 9.6 – View of the East Pier, viewed from near the tip of the West Pier

Figure 9.7 – View of the east side of the Middle Pier in Howth Harbour

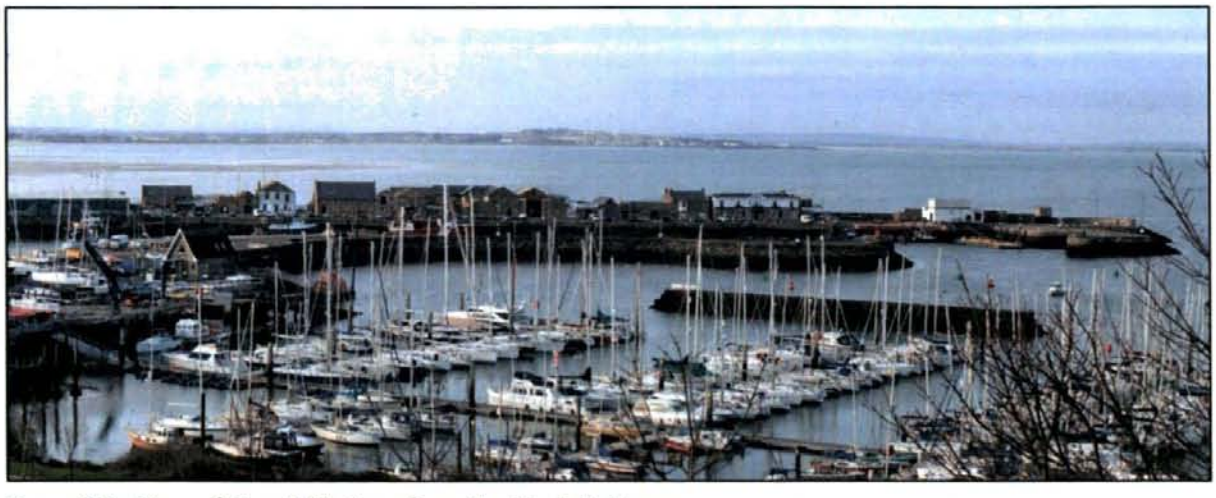

Figure 9.8 – View of Howth Harbour from the Martello Tower

Figure 9.9 – View of tip of West Pier, from tip of East Pier

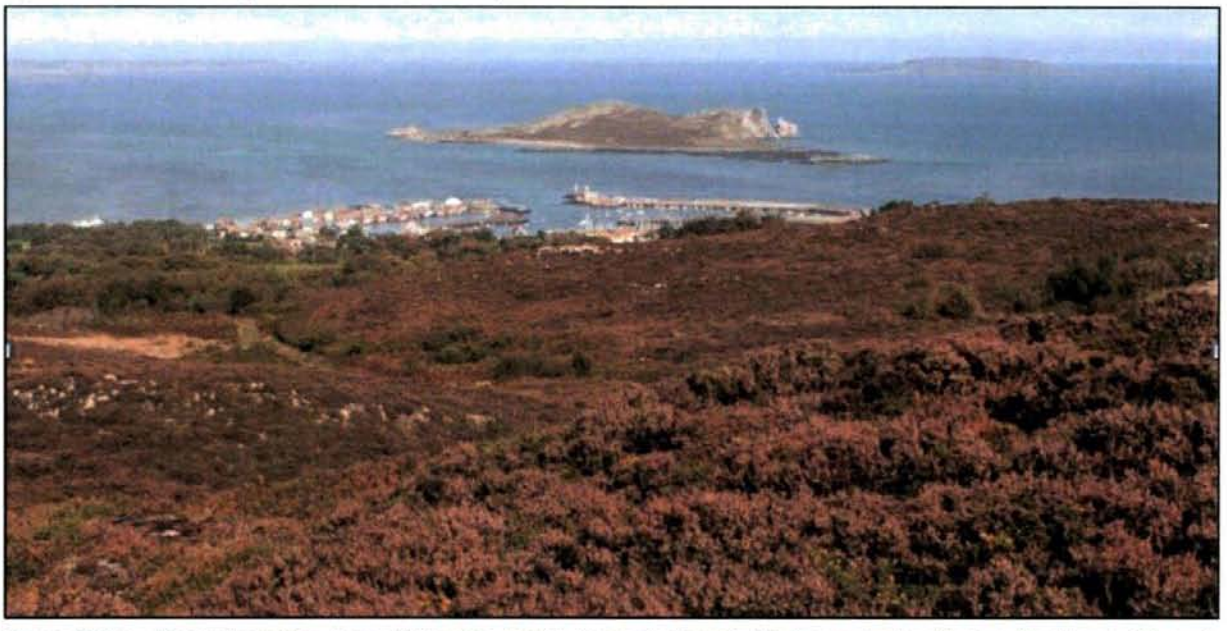

Figure 9.10 – View from the Ben of Howth, north towards Howth Harbour, Ireland's Eye (to its north) and Lambay Island (in the distance, further north)

9.2.2 Landscape/Seascape Policy Context and Designations

9.2.2.1 International Policy

A Biosphere is a special designation awarded by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) but managed in partnership by communities, NGOs and local and national governments. The UNESCO Dublin Bay Biosphere extends from Portmarnock, in north County Dublin, to south of Killiney in south County Dublin. Expanded in 2015, it reflects the environmental, economic, cultural and tourism importance of the Bay, and extends to over 300 km². Dublin Bay Biosphere contains three different zones, which are managed in different ways:

- The core zone of Dublin Bay Biosphere comprises 50km² of areas of high natural value, and includes Howth Head and Ireland's Eye;
- The buffer zone comprises 82km² of public and private green spaces such as parks, greenbelts and golf courses, which surround and adjoin the core zones;

- The transition zone comprises 173km² and forms the outer part of the Biosphere. It includes residential areas, harbours, ports and industrial and commercial areas.

However, it should be noted while the core zone of Dublin Bay Biosphere includes Howth Head and Ireland's Eye, this zone does not extend inside Howth Harbour, which is designated as a Transition Zone.

9.2.2.2 EU Policy

A Special Amenity Area Order for Howth was enacted in 1999, and sets out a framework for the conservation and protection of the area designated in accordance with the Planning Act and Planning Regulations. The Howth Special Amenity Area covers a total of 547ha. It includes Ireland's Eye (28ha) as well as heathland, woods, cliffs and wooded residential areas of the south-eastern half of the peninsula (519ha). The proposed site is situated in proximity to several Special Protection Areas (SPA) and Special Areas of Conservation (SAC), the closest of which are Howth Head SAC, Baldoyle SAC, Ireland's Eye SPA and Howth Head Coast SPA. There are a total of eighteen designated Natura 2000 within 15km of the proposed works. Please refer to Chapter 5 Biodiversity, for more information on these habitats and designations.

9.2.2.3 Local Policy - Fingal County Development Plan 2017 – 2023

Landscape Character

The Fingal CDP (2017 - 2023) incorporates a Landscape Character Assessment for Fingal, which identifies a range of six landscape character types. Each landscape type is assigned a 'value' through the consideration of such elements as aesthetics, ecology, historical, cultural, religious or mythological. Value categories range from low to exceptional. Following the assessment of value, the sensitivity of each character type is defined. This is considered to be its overall ability to sustain its character in the face of change. Sensitivity is evaluated using criteria ranging from high to low. However, as the plan states:

> *"It is important to note that it does not necessarily follow that an exceptional value landscape will be highly sensitive to change or similarly a low value landscape will have a low sensitivity to change."*

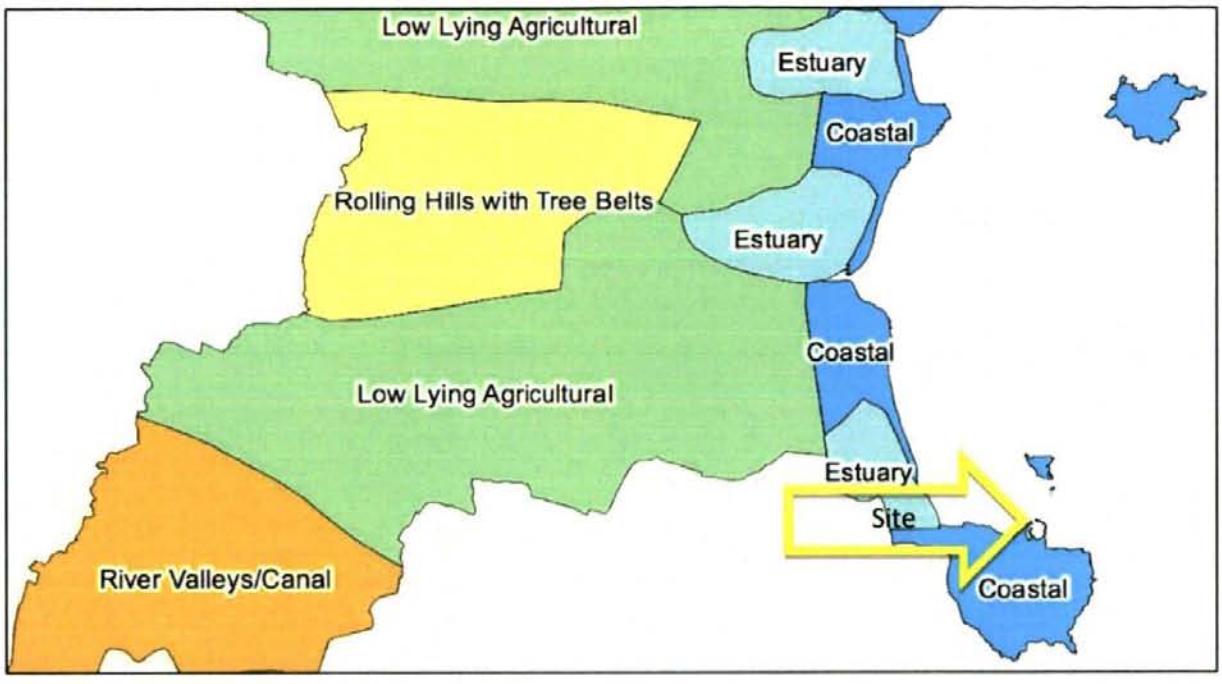

Figure 9.11 – Landscape Character Types of southern Fingal (map extract from fingalco.co.ie)

According to the Fingal CDP, the Landscape Character Type for the Howth peninsula is designated 'coastal' (see Figure 9.11, above), which includes the following descriptions:

> *"A number of important settlements are located within this area, including Balbriggan, Skerries, Rush, Malahide, Portmarnock and Howth. The land is generally low lying, with the exception of some prominent headlands and hills in the northern part of the area, Howth and the off shore islands. Most of the Howth peninsula is covered by the 1999 Special Amenity Area Order (SAAO) ... The Coastal Character Type is categorised as having an exceptional landscape value. This value is arrived at due to the combination of visual, ecological, recreational and historical attributes. The area has magnificent views out to sea, to the islands and to the Mourne and Wicklow mountains and contains numerous beaches and harbours. The area's importance is highlighted by the High Amenity zoning covering substantial parts of the area. The area is rich in archaeological, architectural and natural heritage and is of high ecological value."*

Table LC01: Landscape Character Assessment Summary - Character, Value and Sensitivity

Landscape Character Types	Landscape Value	Landscape Sensitivity
Rolling Hills Type	Modest	Medium
High Lying Type	High	High
Low Lying Type	Modest	Low
Estuary Type	Exceptional	High
Coastal Type	Exceptional	High
River Valley and Canal Type	High	High

Figure 9.12 Summary of Landscape Character Assessment

As can be seen in **Figure 9.12** above, Coastal Character Type is attributed to an "Exceptional" Landscape Value and a "High" Landscape Sensitivity.

For high sensitivity landscapes, the following statement and principles for development, which should be adhered to and which are relevant to the proposal, are:

- *"The special character of the coast should be protected by preventing inappropriate development on the seaward side of coastal roads.*
- *The character of the coastal visual compartments should be retained by preventing intrusive developments on headlands, promontories and coastal lands within the compartments. The coastal skyline should be protected from intrusive development."*

Natural Heritage

The following specific landscape character objectives are also included within the CDP:

Objective NH33

"Ensure the preservation of the uniqueness of a landscape character type by having regard to the character, value and sensitivity of a landscape when determining a planning application."

Objective NH34

"Ensure development reflects and, where possible, reinforces the distinctiveness and sense of place of the landscape character types, including the retention of important features or characteristics, taking into account the various elements which contribute to their distinctiveness such as geology and landform, habitats, scenic quality, settlement pattern, historic heritage, local vernacular heritage, land-use and tranquillity."

Objective NH36

"Ensure that new development does not impinge in any significant way on the character, integrity and distinctiveness of highly sensitive areas and does not detract from the scenic value of the area. New development in highly sensitive areas shall not be permitted if it:

- *Causes unacceptable visual harm*
- *Introduces incongruous landscape elements*
- *Causes the disturbance or loss of (i) landscape elements that contribute to local distinctiveness, (ii) historic elements that contribute significantly to landscape character and quality such as field or road patterns, (iii) vegetation which is a characteristic of that landscape type and (iv) the visual condition of landscape elements."*

Objective NH37

"Ensure that new development meets high standards of siting and design."

Objective NH39

"Require any necessary assessments, including visual impact assessments, to be prepared prior to approving development in highly sensitive areas."

According to the Fingal CDP and evidenced in Figure 9.13 (below), the only designated zoning for the West Pier is that of 'GE – General Employment,' which covers most of the pier. To the immediate southwest and south of the pier, it is zoned 'TC – Town and District Centre' and to the southeast it is zoned 'OS – Open Space.' However, along the north and northwest tip of the West Pier, there are preserved views positioned in what appears to be partly the site of the proposed reclamation area. It should also be noted that there are seven separate protected structures located along the West Pier. However, the West Pier and its hinterland are outside the Howth SAAO (Special amenity Area Order).

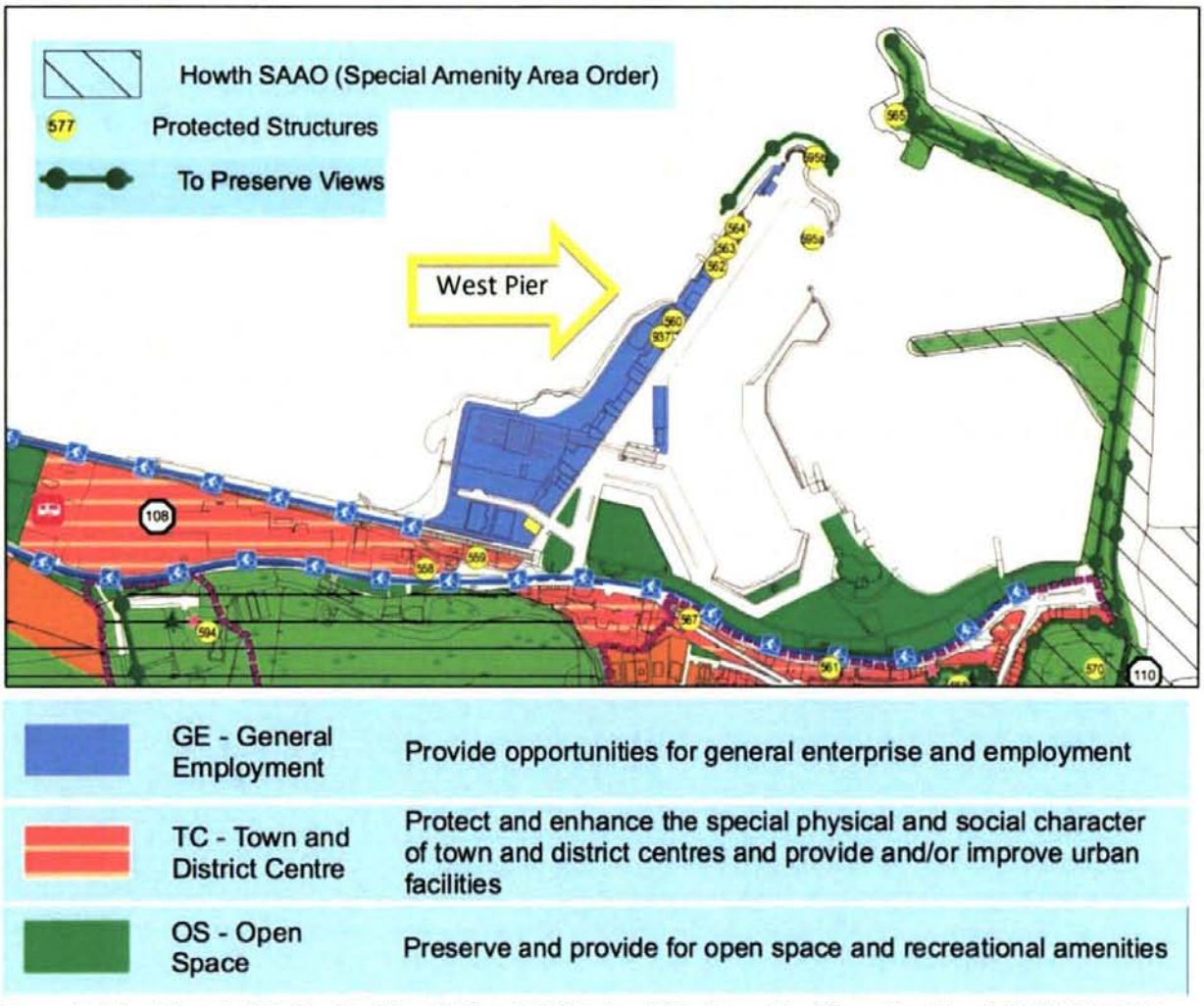

Figure 9.13 – Extract of Baldoyle - Howth Sheet 10 (Zoning Objectives Map) from the Fingal CDP 2017-2023.

Green Infrastructure

Objective GI02

"Create an integrated and coherent green infrastructure for the County by requiring the retention of substantial networks of green space in urban, urban fringe and adjacent countryside areas to serve the needs of communities now and in the future including the need to adapt to climate change."

Objective GI03

"Develop the green infrastructure network to ensure the conservation and enhancement of biodiversity, including the protection of European Sites, the provision of accessible parks,

open spaces and recreational facilities (including allotments and community gardens), the sustainable management of water, the maintenance of landscape character including historic landscape character and the protection and enhancement of the architectural and archaeological heritage."

Objective GI04

"Seek a net gain in green infrastructure through the protection and enhancement of existing assets, through the provision of new green infrastructure as an integral part of the planning process, and by taking forward priority projects including those indicated on the Development Plan green infrastructure maps during the lifetime of the Development Plan."

Objective GI08

"Integrate the provision of green infrastructure with infrastructure provision and replacement, including walking and cycling routes, as appropriate, while protecting biodiversity and other landscape resources."

Objective GI20

"Require all new development to contribute to the protection and enhancement of existing green infrastructure and the delivery of new green infrastructure, as appropriate."

Objective GI25

"Integrate provision for biodiversity with public open space provision and sustainable water management measures (including SuDS) where possible and appropriate."

Objective GI27

"Provide a range of accessible new parks, open spaces and recreational facilities accommodating a wide variety of uses (both passive and active), use intensities and interests."

Objective GI28

"Provide attractive and safe routes linking key green space sites, parks and open spaces and other foci such as cultural sites and heritage assets as an integral part of new green infrastructure provision, where appropriate and feasible."

Objective GI36

"Ensure green infrastructure provision responds to and reflects landscape character including historic landscape character, conserving, enhancing and augmenting the existing landscapes and townscapes of Fingal which contribute to a distinctive sense of place."

Views & Prospects

According to 'Views and Prospects' (Page 333 of the CDP):

"...the County contains many vantage points from which views and prospects of great natural beauty may be obtained over both seascape and rural landscape. The scenery and landscape of the County are of enormous amenity value to residents and tourists and constitute a valuable economic asset. The protection of this asset is therefore of primary importance in developing the potential of the County. Given the high rates of economic and population growth, the challenge the County faces is to manage the landscape so that any change is positive in its effects, such that the landscapes we value are protected. There is a need, therefore, to protect and conserve views and prospects throughout the County for future

generations. In assessing views and prospects it is notproposed that this should give rise to the prohibition of development along these routes, but development, where permitted, should not hinder or obstruct these views and prospects and should be designed and located to minimise their impact."

Objective NH40

"Protect views and prospects that contribute to the character of the landscape, particularly those identified in the Development Plan, from inappropriate development."

9.2.3 Visual Baseline

The visual baseline for the proposed development establishes both the nature of visibility within the study area and the important receptor locations from which the development might be visible.

It should be noted from the outset of this section, that owing to the nature of the proposed dredging works for Howth Harbour (i.e. with the seabed being, by nature, beneath water), there will be no residual visual impact relating to those dredging activities. The proposed dredging works are estimated to take approx. 24 months to complete (from commencement on site). Thus, they are short-term in duration (according to the EPA's definition, as per its aforementioned 2017 draft EAIR Guidelines) and are neither residual nor permanent. In that regard, the visual baseline pertains solely to the proposed West Pier Reclamation Area, which will be located along the western edge and northern tip of the West Pier.

The most salient visual receptors are those people visiting or working along the popular West Pier. Aside from walkers and sightseers, these include the numerous people visiting or working in the variety of seafood wholesale processors/retail shops, cafes/restaurants along the West Pier, along with those servicing or working on fishing vessels docked along that pier. However, other important visual receptors are those numerous people regularly frequenting Claremont Beach, particularly when it is at or near low tide, which is within 200-600m west/southwest of the proposed development, as well as Quarry Beach a little further west. There are also a number of sailors, recreational fisher folk, kayakers and paddle boarders who enjoy the waters directly west and north of the West Pier. This also includes those visitors on board the aforementioned seasonal ferry service (operating from near the northern end of the West Pier between Dublin City, Dun Laoghaire and Howth Harbour, seven days a week between April and October), as well as sailors/boat crew accessing the marina at Howth Yacht Club.

There are numerous residents further west and south of Claremont Beach, in residences that are located more than 500m from the site of the proposed development, as well as those members of the public using the popular DART service to/from the Howth station. Walkers, runners, and cyclists reaching the most northern end of the East Pier must also be considered, as they are likely to have open views of the proposed development at the northern tip of the West Pier. Owing to the sharply ascending terrain, southwards from Howth village, there are more distant receptors, south and southeast of the proposed development, from elevated, sensitive locations.

9.2.3.1 Views of Recognised Scenic Value

Views of recognised scenic value are primarily indicated within County Development Plans in the context of scenic views/routes designations, but they might also be indicated on touring maps, guidebooks, tourist-centred websites or post cards of the area.

As identified above on Figure 9.13, there are several views of recognised scenic value within both the site and the study area. There is the designated need to preserve views along:

- Northern & north-western tip of the West Pier;
- All of the East Pier;
- Within and south of Howth village;
- Within the grounds of Howth Castle and Deerpark Golf Course;
- Between Howth village and the Nose of Howth (i.e. ≥1km east of the village).

Owing to the proximity and openness of view, combined with their frequency of use, the most prescient of these protected views are those from the northern and north-western tip of the West Pier, as well as those from the most northern sections of the East Pier.

9.2.3.2 Views from other designations

Views of the proposed reclamation area are likely to be visible from other designations in the study area. These include the:

- Howth Special Amenity Area Order (SAAO), the nearest point of which to the proposed development is along the East Pier.
- Architectural Conservation Area (ACA) within and adjacent to Howth village;
- Highly Sensitive Landscape that follows a broad northwest-southeast corridor from Howth village to the Summit Inn, approx. 1.8km south of the village;
- Several protected structures within and adjacent to Howth Harbour and Howth village.

9.2.3.3 Viewpoint Outline Description

The Viewpoints selected in this instance are set out below in Table 9.4 and on Figure 9.14.

Table 9.4 Outline Description of Selected Viewpoints

VRP No.	***Location***	***Direction of view***
VP1	Quarry Bay Beach	E/NE
VP2	Claremont Beach	NE
VP3	Muck Rock	NE

VP4	Howth Cliff Walk	NW
VP5	Martello Tower, Howth Village	NW
VP6	Northern tip of East Pier	SW
VP7	North-Eastern tip of West Pier	SW
VP8	R105 at base of West Pier	N
VP9	Base of Middle Pier at Howth Yacht Club	NW
VP10	Ireland's Eye Ferry	S

Viewpoint Locations

Figure 9.14 – Viewpoint location map

9.3 MITIGATION

9.3.1 Proposed Dredging Works

Owing to the nature of the proposed dredging works for Howth Harbour (i.e. with the seabed being, by nature, beneath water), proposed mitigation measures are not recommended in this instance. While the machinery, equipment and labour force required for the proposed dredging works are likely to be visible from the surrounding receptors (e.g. from the three piers within the harbour), such mechanised/industrial works will be highly localised (i.e. working within one small section of the harbour at a time) and are estimated to take approx. 24 months to complete (from commencement on site). Thus, they are short-term in duration (according to the EPA's definition, as per its 2017 draft EIAR Guidelines) and are neither residual nor permanent. In addition, they are unlikely to be out of character for a busy and highly mechanised modern-day fishing port.

9.3.2 Proposed Reclamation Works

The proposed reclamation area will align and extend towards the seaward side of the West Pier, with its form, alignment and orientation remaining compatible with the existing pier. This locational attribute is considered to be the main landscape / seascape and visual mitigation measure in this instance. As an extension of an existing harbour facility, the proposed reclamation works are much less likely to give rise to significant landscape / seascape and visual impacts than a separate harbour facility. The proposed works cannot and need not be screened from view, nor is this considered necessary or advisable in the context of a working harbour complex.

Aside from the physical protection provided by the armourstone placed along the western and northern faces of the West Pier, the asymmetrical surface and high porosity of the armourstone will help to soften the more overt geometry of the West Pier. Furthermore, within five years the armourstone is likely to adopt a similar and more compatible tone and visual texture to the existing western edge of the West Pier, through natural weathering. Visual assimilation will be further increased as seaweed and flotsam accumulate and seabirds or other wildlife forage upon the armourstone, much as they do upon the rocky shoreline in and around Howth Harbour, particularly on the large quarry-stone coastal protection currently in place where the West Pier meets Claremont Beach (i.e. along western margins of shipyard) and that which is already present on the northern tip of the pier.

Furthermore, the expansion of green open space proposed for along the West Pier reclamation area, is consistent and compatible with similar areas of such green open space, between the harbour and the R105 (see Figure 9.13, above). This landscaped open space will likely be viewed as a 'natural' extension of such green open space in the wider harbour; as will other proposed land uses along the reclamation area (i.e. hard surfacing for footpaths, roadways and parking areas; a slipway for access to the water; storage areas for harbour activities etc.), all of which are common and highly-visible land uses elsewhere along the existing West Pier and/or wider Howth Harbour. Such a 'natural' extension of existing land uses within the harbour serve to further eliminate the need for any further mitigation measures.

9.3.3 Mitigation Summary

Due to the reasons outlined in sections 9.3.1 and 9.3.2, specific landscape and visual mitigation measures are not considered necessary. Instead, the carefully considered siting and design of the proposed reclamation works are inherent to the appraisal of landscape / seascape and visual impacts herein. Thus, the predicted impacts (pre-mitigation) are the same as residual impacts (post-mitigation) in this instance.

9.4 RESIDUAL IMPACTS

9.4.1 Residual Landscape effects

9.4.1.1 Landscape/Seascape Value & Sensitivity

Landscape / Seascape value and sensitivity are considered in relation to a number of factors set out in the Guidelines for Landscape and Visual Impact Assessment 2013, which are set out below and discussed relative to the proposed development and wider study area.

It should be noted from the outset of this section, that owing to the nature of the proposed dredging works for Howth Harbour (i.e. with the seabed being, by nature, beneath water), any potential residual impacts relating to those dredging activities are not required to be assessed, according to the aforementioned Guidelines for Landscape and Visual Impact Assessment 2013. In that regard, the assessment of any potential residual landscape effects pertains solely to the proposed West Pier Reclamation Area.

Landscape / Seascape quality (condition)

The coastal landscape is relatively densely settled along the Sutton-Howth village axis. This provides, in effect, a coastal landscape of two-halves. Between Sutton and Howth Harbour, three long, sandy beaches that are more characteristic of Portmarnock Beach to their immediate northwest, than the wider Howth peninsula, distinguish the coast. Large, detached, period houses and sizeable gardens abound much of this coastline, as well as the DART line for the last 500m before terminating at Howth station. The second coastal landscape category is that of Howth Harbour itself. In recent decades, it has achieved a sustainable identity between its environmental, recreational and commercial interests. Consequently, there is a healthy interdependence between the coastal landscape and the vibrant community it supports through the marine industry, tourism and water-based recreation.

Scenic quality

The study area and the wider Howth peninsula have a strong scenic characteristic of a hillside peninsula quality. Deeper within the peninsula, aside from limited residential development, there are several small streams, heath, scrub and woodland, golf courses and pasture, as well as a small peat bog. Close to the centre of the peninsula, several angular quartzite crags are visible for several kilometres from the north and west, in particular.

The scenic quality has been reinforced and protected by limited accessibility to the peninsula, with all land traffic having to access it via the narrow Sutton tombolo, as well as limited residential development across its centre, east and southeast. The scenic quality of the harbour is a further reason why people chose to visit it or live close-by. The mix of recreational and small or moderate-sized fishing boat, moored between two 19th Century stone piers, creates an added, more localised aesthetic to the peninsula.

Rarity and Representativeness

The landscape of low-lying north County Dublin is characterised by extensive housing developments, arterial roads, parkland and, further north, intensive fruit, vegetable and crop production. For these reasons, the landscape of Howth peninsula represents somewhat of an anomaly along Leinster's east-facing coastline. Howth's seascape of high, dramatic and dangerous cliffs and spurs is geologically and scenically less tame and consistent than Dublin's coastline to the north. Consequently, sizeable areas of the peninsula and its surrounding waters have been protected by the county, State and the EU by multiple designations and distinctions.

This vivid quality is both enriched and compounded by Howth being located within 15km of Dublin City Centre. Its proximity to the nation's capital has bestowed the landscape and seascape with what is frequently perceived as being the closest raw, rugged "escape to nature" experience to Dublin city centre, and tourists visiting Dublin often decide to visit Howth for this very reason. On a commercial

level, Howth harbour remains one of the largest fishing harbours in the Republic of Ireland, and the largest on the east coast of the country.

Conservation interests

As referred to in Section 9.2.2, aside from its own Howth SAAO (Special Amenity Area Order), the peninsula and its surrounding waters contain Special Areas of Conservation (SAC), Special Protection Areas (SPA) and a proposed Natural Heritage Area (pNHA).

Recreation Value

The surrounding coastline has a high recreation value as a result of its popularity among residents, Dublin day-trippers and international tourists. The coastline of the peninsula, between its road network and cliff-top walkways, is popular with cyclists, joggers and walkers, as well as sea swimmers during the summer months. The use of the harbour is also a highly treasured amenity for fishermen, sailors and boat lovers alike, being one of very few marinas in north Dublin.

Perceptual Aspects

A strong sense of the 'wild Ireland' brand typifies Howth, for Dubliner and tourists alike. Along with the Dublin Mountains, this more exposed, rugged, tranquillity is less associated with the wider east coast. For this reason, there is a long-established perception of the peninsula - much like the mountains that dominate the southern rim of the county - as a much-cherished and picturesque antidote to the urban clutter and pace of the city's heart.

Summary of Landscape / seascape Value and Sensitivity

It is considered that whilst the landscape / seascape contained within the study area has a relatively high degree of uniqueness and sensitivity, Howth harbour and its immediate environs are much more robust. On balance, the landscape sensitivity is judged to be **High-medium**.

9.4.1.2 Magnitude of Landscape/Seascape Effects

Physical Landscape/Seascape Effects

The proposed reclamation works of the West Pier will affect over 400m of coastline and seabed, widening over 110m, further into the sea than the existing pier, reclaiming an additional c. 4.8ha of land on the pier's west side during the process. It will, therefore, have a conspicuous physical impact on the current, man-made, shoreline and this impact will be permanent and irreversible. Construction of the extension works is expected to take approx. 24 months to complete and will include earth moving machinery/excavators, a mobile crane, a floating pontoon barge, delivery trucks and safety boat.

With regards to the proposed land reclamation, the works of stabilisation, solidification and placement within the reclamation area will be undertaken in parallel. When the reclaimed area is filled to the required formation level, works can commence on the surface finishings. These works will include landscaping, pathways, parking, surface water drainage, mains water supply, electricity supply, viewing areas and water access points. Landscaping works will involve importing and depositing topsoil with grass seeding, while the pedestrian pathways will be constructed on a base of stone fill. A concrete slipway will be constructed at the water sports access area, with viewing

areas constructed onto two roundheads to each side of the water sports access area. However, there will be no removal or demolition of buildings required to the existing West Pier. For a more comprehensive account of the proposed works, please refer to Chapter 2 Description of the Proposed Development.

Ancillary construction stage features will also include armourstone storage areas, temporary car parking and welfare facilities for up to 67 workers during any one phase of the construction works. Including up to 55 truck deliveries per day, all of these construction-stage features and activities will add significantly to the intensity and scale of activities associated with the existing harbour facility and are likely to reduce the overall sense of scenic and recreational value associated with the harbour and its adjacent village. However, at an approx. 24-month duration, these construction stage works and associated impacts are 'short-term' in duration (1-7 years in accordance with EPA definitions), which substantially reduces their potential consequence. They also take place in the context of a busy, highly mechanised harbour facility where almost constant daylight activity occurs.

Effects on Landscape/Seascape Character

The proposed reclamation works represent an intensification of the built development at Howth Harbour. Once completed, the vastly broadened and diversified West Pier will reflect the alignment and orientation of the existing pier, to the extent that, with sufficient time, both the existing pier and its upgrade works will appear as if originally constructed as one. However, the proposed reclamation works represent a far more consistent extension of functionality, land use and aesthetics of the wider Howth Harbour than it does for the existing West Pier alone.

In that context, the proposed development helps to solidify and coalesce the broader multi-functional identity and appeal of the harbour, introducing a large and more tangible sense of recreation and seaward aesthetics to the West Pier. Indeed, the proposed development helps to 'open' the harbour-facing West Pier onto the sea, rather than keeping its back to that sea, and rather than remaining mostly commercial and/or industrial in nature. In doing so, it also strengthens the sense of place of the Claremont Beach area, as the harbour is now patently opened up and accessible to it, rather than being hitherto "stonewalled" by the non-aesthetic rear of West Pier buildings and it's unappealing ship yards and west-facing sea wall.

Approx. half of its c.4.8ha of reclaimed land will consist of green open space, which is strongly reminiscent of and consistent with the several hectares of green open space located between Howth Harbour and R105, within 200-300m southwest of the proposed reclaimed area. This will further develop and diversify the green infrastructure network in and around the harbour. The West Pier Reclamation Area will provide new open spaces and recreational facilities that will accommodate a diversity of uses (both passive and active), use intensities and interests. Indeed, upon the completion of construction, the extended pier will not appear incongruous in the context of the surrounding harbour, which comprises of various man-made piers, slipways and breakwaters, as well as pathways, hardstand and landscape areas. In addition, the angular-boulder appearance of the armourstone will reflect an aesthetic already commonly found in the harbour, and that is already present on the northern and south-western tip of the West Pier. These features will serve to underline and reinforce the distinctive sense of place that the harbour has offered generations of locals, Dubliners and tourists alike.

Indeed, all of these proposed measures along the West Pier are consistent with normal activity associated with a busy, contemporary harbour facility and will not appear as novel or incongruous to anyone visiting the harbour for the first time. Furthermore, a harbour facility can be an important hub for coastal communities such as this one, providing direct and indirect employment; a recreational nucleus for the coastline and a seasonal terminal attracting additional visitors and tourists to the village. A certain degree of local pride is often felt towards bustling harbours, which makes the intensification of development and associated activities more acceptable, or even welcomed.

Thus, the proposed reclamation works along the West Pier represent a consolidation, reaffirmation and strengthening of the prevailing and much-valued landscape character long associated with Howth Harbour.

Summary of Magnitude of Landscape/Seascape Effects

Overall, it is considered that the proposed pier reclamation works represent a manifest and sizeable physical change to the broader harbour context, but only a modest physical change to the wider northern coastline of the peninsula. However, in terms of landscape/seascape character, it represents a compatible and consistent extension of an established, contemporary harbour facility that has been systematically evolving over several centuries; an extension that will serve to strengthen the popularity, functionality and future of the harbour itself.

On balance of these reasons, the magnitude of landscape/seascape impact is deemed to be **Medium-low.** When the magnitude judgement of Low is coupled with the earlier sensitivity judgement of 'High-medium,' the overall significance of landscape / seascape impact is deemed to be **Moderate-slight.**

9.4.2 Residual Visual effects

9.4.2.1 Visual Impact Assessment

Table 9.5 Analysis of Visual Receptor Sensitivity at Viewpoints (VPs)

Strong association	Moderate association	Mild association	Negligible association

Assessment Criteria	VP1	VP2	VP3	VP4	VP5	VP6	VP7	VP8	VP9	VP10
Recognised scenic value of the view										
Views from within highly sensitive landscape areas										
Primary views from residences										
Intensity of use, popularity (number of viewers)										
Viewer connection with the landscape / seascape										
Provision of vast, elevated panoramic views										
Sense of remoteness / tranquillity at the viewing location										
Degree of perceived naturalness										
Presence of striking or noteworthy features										
Sense of Historical, cultural and / or spiritual significance										
Rarity or uniqueness of the view										
Integrity of the landscape/ seascape character within view										
Sense of place at the viewing location										
Sense of awe										
Overall sensitivity assessment	**M**	**M**	**HM**	**HM**	**HM**	**M**	**M**	**ML**	**ML**	**M**

N = Negligible; **L** = low sensitivity; **ML** = medium-low sensitivity **M** = medium sensitivity; **HM** = High-medium sensitivity; **H** = high sensitivity; **VH** = very high sensitivity

9.4.2.2 Visual Impact Magnitude

The magnitude of visual effects is determined on the basis of two factors: the visual presence (relative visual dominance) of the proposed development, as well as its effect on visual amenity. The magnitude of visual impacts is classified in the following table, which is derived from the aforementioned *Guidelines for Landscape and Visual Impact Assessment* (2013).

Table 9.6 Magnitude of Visual Impact

Criteria	Description
Very High	The proposal intrudes into a large proportion or critical part of the available vista and is without question the most noticeable element. A high degree of visual clutter or disharmony is also generated, strongly reducing the visual amenity of the scene
High	The proposal intrudes into a significant proportion or important part of the available vista and is one of the most noticeable elements. A considerable degree of visual clutter or disharmony is also likely to be generated, appreciably reducing the visual amenity of the scene
Medium	The proposal represents a moderate intrusion into the available vista, is a readily noticeable element and/or it may generate a degree of visual clutter or disharmony, thereby reducing the visual amenity of the scene. Alternatively, it may represent a balance of higher and lower order estimates in relation to visual presence and visual amenity
Low	The proposal intrudes to a minor extent into the available vista and may not be noticed by a casual observer and/or the proposal would not have a marked effect on the visual amenity of the scene
Negligible	The proposal would be barely discernible within the available vista and/or it would not detract from, and may even enhance, the visual amenity of the scene

9.4.2.3 Visual Impact Significance

As stated above, the significance of visual impacts is a function of visual receptor sensitivity and visual impact magnitude. This relationship is expressed in the same significance matrix and applies the same definitions of significance as used earlier in respect of landscape impacts (Tables 9.1-9.4).

Viewshed Reference Point		View Direction
VP1	Quarry Bay Beach	E/NE

Representative of:

- Local Community View
- Centres of Population
- Amenity & Heritage feature

Receptor Sensitivity **Medium**

Existing View The context of this view is that tidal sands that stretch over 2.5km west from the West Pier, across Claremont Beach, Quarry Beach, Hole-in-the-

Wall Beach and Burrow Beach, terminating at Sutton Golf Club. Unless at high tide, this strand is entirely dry/accessible and is particularly popular with local residents on regular walks/runs. Inshore along this strand are numerous large residences, and some apartment complexes, positioned to enjoy sea and/or harbour views and/or access.

Located 685m from the West Pier Reclamation Area, this location at Quarry Bay is overlooked by an apartment complex, and looks across the low-tided shoreline towards Howth Harbour. The foreground and mid-distance view offers little distinction, being more representative of East Coast shorelines at large. Over half a kilometre away, the relatively low profile of the rear of the West Pier, as well as the northern end of the East Pier, can be comfortably seen. Sea walls (e.g. a coastal embankment of armourstone) and a period lighthouse are apparent (on East Pier), as well as the dark, unappealing profile of two-storey building rears along the West Pier, while further south (to the right) are industrial-sized harbour facilities/buildings and boats in the boat yard, above more armourstone. Further south is the ascent of Howth Village and the more distant cliffs and rock faces near the nose of Howth.

Visual Impact of West Pier Reclamation Area

As the reclamation area is almost 700m away, and does not alter the profile/skyline of the West Pier, while not entailing the removal of any of the pre-existing buildings within or alongside the harbour, the proposed development will be challenging to discern for the passing walker/runner/beach user.

Upon closer inspection, the sea wall of the West Pier will have moved marginally closer to this location, while there is a more consistent spread of armourstone throughout, which will visually assimilate with that previously present at either end of the West Pier. Two roundheads and a slipway will also be discernible, but the general nature of the visual change is not urgent or obvious. More presciently, the visual impact of the introduction of commonplace and modest harbour-friendly elements into this harbour setting will not appear as either novel or incongruous and will have little bearing on the inherent visual amenity available from this location.

Thus, the magnitude of visual impact is deemed to be **Low-negligible**.

Summary

Based on the assessment criteria and matrices outlined at section 1.4, the significance of visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Medium	Low-negligible	**Slight-imperceptible**

Viewshed Reference Point		View Direction
VP2	Claremont Beach	NE

Representative of:

- Local Community View
- Centres of Population
- Amenity & Heritage features

Receptor Sensitivity **Medium**

Existing View

Located 252m southwest of the West Pier Reclamation Area, this viewpoint is along Claremont beach, besides a footpath (connecting the beach to the base of the West Pier) and the DART rail line. Behind the rail line, there is a vacant/derelict and former-industrial site, which is largely precluding views of this coastline from the R105, further south of it.

In this view, the rock armour/armourstone at the base of the West Pier, along with the boats within the boat/ship yard, tend to draw the eye. The relatively low, stone-based profile of the rear of the West Pier, as well as the northern end of the East Pier, is apparent. The dark, unappealing profile of two-storey building rears along the West Pier does not engender an inviting or inclusive *genius loci*, and neither is it representative of the otherwise aesthetic coastline surrounding the harbour and peninsula. Consequently, the eye tends to drift towards Ireland's Eye (to the left/north of the view) or other attractive coastal features.

Visual Impact of West Pier Reclamation Area

The western expanse of the West Pier will have shifted considerably, resulting in seaward expansion out from the original pier, which will marginally reduce the visibility of the sea horizon beyond. This will partially redefine the still-low skyline at the north/north-west end of the West Pier, while not entailing the removal of any of the pre-existing buildings within or alongside the harbour. Two roundheads and a slipway will be apparent, but not as much as the rock armour/armourstone now fronting the sea wall in a more consistent and visible manner, as well as the green open space within the reclaimed area. From this location, the form of the proposed development will be noticeably geometric and robust.

This conspicuous visual change, however, will have little bearing on the visual amenity of this setting. It will introduce a number of (aforementioned) regular and modest harbour-friendly elements into this harbour setting, which will not appear as surprising or unsuitable, and neither will they detract from more appealing seaward views to the north and northwest. Furthermore, whereas the West Pier previously had its "back" to Claremont Beach, these two key coastal features (i.e. the beach

and the pier) will now be more visually integrated, thus instigating a more inviting and coalescent sense of place that is more consistent with the wider harbour and northern coastline of the peninsula.

Thus, the magnitude of visual impact is deemed to be **Medium-low.**

Summary

Based on the assessment criteria and matrices outlined at section 1.4, the significance of visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Medium	Medium-low	**Moderate-slight**

Viewshed Reference Point		**View Direction**
VP3	Muck Rock	NE

Representative of:

- Local Community View
- Designated View
- Amenity & Heritage features

Receptor Sensitivity **High-medium**

Existing View

Located 1.4km south of the West Pier Reclamation Area, the context of this highly picturesque view is from the elevated and publicly accessible interior of the Howth peninsula, which has been enjoyed by generations of local residents and Dubliners for generations. This is from within the Howth Special Amenity Area Order (SAAO), which is particularly popular with walkers/hikers, golfers, horse riders and joggers, and tends to offer a challenging craggy terrain in a highly scenic setting, in tandem with more distant spectacular panoramic scenes. Within the SAAO, Muck Rock is an elevated rock face, accessible by a gentle pathway, and a popular look-out and abseiling micro-location, with views from the rock being protected, according to the Fingal CDP.

Deerpark Golf club and course occupy much of the mid-distance view, as does Howth Castle and its scenic, centuries-old, parkland demesne, which together contribute to a robust green infrastructure on the northern side of the peninsula. Beyond the demesne, and mature woodland surrounding it, Howth harbour is visible (please note: this is not the case further north, upon the lower elevations of the aforementioned gold club/course and demesne, owing to the intervening trees screening Howth Harbour). The West Pier takes the form of a number of relatively low, terraced buildings with some industrial-scale building(s) towards its southern base, while a

large commercial fishing boat can be seen within the boat yard to the rear of the pier. The harbour's east pier is also evident, along with the marina, Ireland's Eye and Lambay Island beyond it.

Visual Impact of West Pier Reclamation Area

However, such a visual change will have a non-discernible bearing on the visual amenity of this setting. It will introduce a number of (aforementioned) regular and modest harbour-friendly elements that one will expect to see in such a coastal scene, and neither will these elements detract from the appealing views in most directions on offer from this location. Furthermore, the green open space across the reclamation area will extend and integrate with the aforementioned robust green infrastructure on the northern side of the peninsula. In turn, this will help to coalesce an integrated and inviting sense of place that is more consistent with the wider harbour and northern coastline of the peninsula.

Thus, the magnitude of visual impact is deemed to be **Low**.

Summary

Based on the assessment criteria and matrices outlined at section 1.4, the significance of visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
High-medium	Low	**Slight**

Viewshed Reference Point		**View Direction**
VP4	Howth Cliff Walk	NW

Representative of:

- Local Community View
- Designated View
- Amenity & Heritage features

Receptor Sensitivity **High-medium**

Existing View

Located 1.3km from the West Pier Reclamation Area, this is a relatively open view from a public car park towards the end of Balscadden Road, to the southeast of Howth harbour (please note: for many, the car park serves as the start/end point for a walk or run along the Howth Cliff Walk). The terrain in the foreground sharply drops off until it reaches the rocks and waterline below. Stunning, 1800 degree, seaward views are on offer from this location, stretching for over 100km up the east coast of the country. In this particular scene, the Irish Sea occupies most of the fore-to-middle ground context of the scene, while the harbour and its attendant boat masts and buildings draws the eye to the mid-far distance. The low,

timeworn profile of the West Pier is discernible beyond the east pier and sailing boat masts, with the Balydoyle-Portmarnock estuary visible beyond it. To the left (i.e.west) of the view is a Martello Tower upon a promontory above Balscadden Bay. Upon the horizon, the coastline of Portmarnock and north county Dublin can be made out.

Visual Impact of West Pier Reclamation Area

A particularly low amount of the proposed development will be visible from this location. While distance plays a role in this (being more than 1km away), the main factor is how flat and low-lying the reclamation area will be, resulting in it being largely screened by the existing buildings along the West Pier. Aside from small snippets where it will be visible between buildings towards the centre and south of the West Pier, the main window of visibility will be towards the north end of the pier. Here, there will be visible expanses of open green space, dissected in one location by a pathway. The other distinct element of the proposed development that will be visible from this location will be the northwards extension of the West Pier, with similar northern extensions of new rock armour/armourstone fronting the sea wall. However, this is a modest northern extension, and is unlikely to be noticed by the casual observer.

In the context of the stunning seawards views on offer from this location and elsewhere along the Cliff Walk, the proposed development is highly unlikely to be noticed by any receptors other than nearby residents of this location. Even within the visible spectrum of Howth Harbour, which itself only constitutes the tight margins of the 180 degree views on offer, the proposed development will be a minor element, and one which the viewer will not find incongruous or ill-fitting to any such contemporary harbour setting. Even if noticed, from this location the proposed development will in no way detract from the visual amenity of the scene.

Thus, the magnitude of visual impact is deemed to be **Negligible**.

Summary

Based on the assessment criteria and matrices outlined at section 1.4, the significance of visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
High-medium	Negligible	**Imperceptible**

Viewshed Reference Point		View Direction
VP5	Martello Tower, Howth Village	NW

Representative of:

- Local Community View
- Designated View
- Amenity & Heritage features
- Centre of Population

Receptor Sensitivity **High-medium**

Existing View

This viewpoint is located 585m from the West Pier Reclamation Area, and is from an elevated knoll-like promontory in Howth village. The site of a Martello Tower (home to the Ye Olde Hurdy Gurdy Museum of Vintage Radio) and a flat green open space, it offers very appealing 180-degree seaward views that stretch from the Baldoyle-Portmarnock estuary in the west, to the 'Nose of Howth' in the east. This takes in views not just of the Irish Sea, north Leinster coastline, Ireland's Eye and Lambay Island, but also of Howth harbour in the foreground. Within the harbour, the marina and the three harbour walls are highly evident from this location, as is the green open space south of the harbour. The low, timeworn, stone-based profile of the West Pier is apparent also, with the diversity of low, stone buildings across its approx. 400m length. In places, the pier itself is difficult to differentiate from the Middle Pier, set before it.

Visual Impact of West Pier Reclamation Area

A notably small amount of the proposed development will be visible from this location, primarily because of how flat and low-lying the reclamation area will be, resulting in it being largely screened by the existing buildings along the West Pier. Aside from small snippets where it will be visible between buildings towards the centre and south of the West Pier, the main window of visibility will be towards the north end of the pier. Here, there will be visible expanses of open green space, dissected by pathways. The other distinct element of the proposed development that will be visible from this location will be the northwards extension of the West Pier. However, this is a modest northern extension, and is unlikely to be noticed by the casual observer.

In the context of the highly scenic seawards views on offer from this location, the proposed development may not be noticed by any receptors other than residents and workers near this location. Even within the visible spectrum of Howth Harbour, which itself only constitutes the foreground of less than half of the 180 degree views on offer, the proposed development will be a minor element, and one which the viewer will not find incongruous or ill-fitting to any such contemporary harbour setting. Furthermore, the green open space across the reclamation area will extend and integrate with the visible green infrastructure of the wider harbour. In turn, this will help

to coalesce an integrated and inviting sense of place. However, even if noticed, from this location the proposed development will not have a marked effect on the visual amenity of the scene, and may even enhance it.

Thus, the magnitude of visual impact is deemed to be **Low-negligible**.

Summary

Based on the assessment criteria and matrices outlined at section 1.4, the significance of visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
High-medium	Low-negligible	**Slight-imperceptible**

Viewshed Reference Point		**View Direction**
VP6	Northern tip of East Pier	SW

Representative of:

- Local Community View
- Designated View
- Amenity & Heritage features

Receptor Sensitivity **Medium**

Existing View

This pedestrian perspective from the northern tip of the East Pier, approx. 153m from the West Pier Reclamation Area, which effectively serves as a breakwater protecting the harbour mouth from strong easterly swells and/or waves. Being a designated protected view, from this location, there are highly valued panoramic views that are mostly concentrated to the north (i.e. Ireland's Eye, Lambay Island, the north Leinster coastline and the broader Irish Sea), but there are also scenic views back towards the harbour and the broader peninsula. Large rocks and boulders buttress the pier in the foreground, being that of the East Pier. Over 100m away, the northern tip of the West Pier is also visible, with rock armour/armourstone being a prominent feature about its protective seas wall. Land use upon the northern tip of the pier is a mix of recreational, commercial and industrial. Beyond the West Pier, the sandy coastline of Claremont Beach and Quarry Beach (i.e. the location of VP2 and VP1, respectively), while the skyline south of the harbour and village reveals the abrupt profile of Muck rock (i.e. location of VP3).

Visual Impact of West Pier Reclamation Area

The proposed development will be a highly visible, and relatively close, element in views from this location. The expanse of the West Pier will have shifted considerably, resulting in a westward and northern seaward expansion out from the original pier, while not entailing the removal of any

of the pre-existing buildings within or alongside the harbour. The armourstone fronting the sea wall will be the most visible element of the proposed development, followed by the green open space across the visible areas of the reclamation area. From this location, the form of the proposed development will be noticeably geometric and robust, but in profile it will be low and relatively even.

This conspicuous visual change, however, will have limited impact on the visual amenity of this setting. It will introduce a number of commonplace and publicly welcome elements into this harbour setting, which will not appear as surprising or unsuitable, and neither will they detract from more appealing seaward views. The armourstone will serve to visually assimilate with the pre-existing rock armour/armourstone south along the pier. The proposed development will obscure views of the waters and sands of Claremont and Quarry Beach, but not the land itself. Regardless, there remain vastly more appealing views on offer from this panoramic sea setting. The visual change is consistent in nature to the existing harbour and is not considered to be of excessive scale or intensity in the context of this busy and much-visited harbour facility. When kept in the context of the highly valued panoramic views that are mostly concentrated to the north, the proposal will not have a noticeable effect on the visual amenity of the scene.

Thus, the magnitude of visual impact is deemed to be **Medium-low.**

Summary

Based on the assessment criteria and matrices outlined at section 1.4, the significance of visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Medium	Medium-low	**Moderate-slight**

Viewshed Reference Point		**View Direction**
VP7	North-Eastern tip of West Pier	SW

Representative of:

- Local Community View
- Designated View
- Amenity & Heritage features

Receptor Sensitivity **Medium**

Existing View

The location of this view is from a small breakwater, at the north-eastern tip of the West Pier; a breakwater that juts east into the harbour mouth

for approx. 70m. Unlike the East Pier and the eastern half of the harbour, it is a micro-locale that is characterised by commercial and industrial uses relating directly and indirectly to its maritime setting. It is also the point from where the Howth Harbour - Ireland's Eye passenger ferry departs/arrives. This does not negate visual amenity at this location, as this busy fishing pier and accompanying row of aged (and often protected) low character buildings accommodate fish-themed shops, cafes and restaurants, adding richness and character to the setting. From this location, there are extensive and more scenic views around the harbour, the looming profile of the peninsula to the south, as well as seaward views out through the harbour mouth. Owing to buildings and walls along the West Pier, no further views west are attainable.

Visual Impact of West Pier Reclamation Area

At only 96m from the West Pier Reclamation Area, the only aspect or element of the proposed development that will be visible from this location will be a marginally elevated area of very gently sloping green open space. This landscaped domain will be dissected by pathways and contained on its western margin by a sea wall, which will not inhibit westward views from the proposed green open space. To allow for this visual and physical access into the proposed reclamation area, two stonewalls will be demolished. As a result of the open and permeable reclamation area, the east and west sides of this pier will be more visually integrated, thus instigating a more inviting and coalescent sense of place that is more consistent with the wider harbour and northern coastline of the peninsula. In addition, such measures will have very limited bearing on the inherent visual amenity of this setting; an amenity mostly derived from views in most other directions.

Thus, the magnitude of visual impact is deemed to be **Low.**

Summary

Based on the assessment criteria and matrices outlined at section 1.4, the significance of visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Medium	Low	**Slight**

Viewshed Reference Point		**View Direction**
VP8	R105 at base of West Pier	N

Representative of:

- Local Community View
- Major Route
- Centre of Population

Receptor Sensitivity **Medium-low**

Existing View

The context of this view, located 156m from the West Pier Reclamation Area, is the junction of the (base of the) West Pier and the R105, in Howth village. The R105 is colloquially known as the 'Howth Road' and runs from Fairview to Howth, where it loops around the peninsula to/from Sutton Cross. This location is approx. 100m from the Howth DART station, and is in close proximity to a number of commercial and retail properties, including pubs and restaurants, as well as being adjacent to the green open space between the R105 and Howth Harbour, and a popular car park. In this view, a veritable 'wall' of two-storey commercial/retail properties aligns the West Pier, screening out all views beyond.

Visual Impact of West Pier Reclamation Area

Owing to aforementioned two-storey commercial/retail properties along the West Pier, no aspect or element of the proposed development will be visible from this location.

Thus, the magnitude of visual impact is deemed to be **negligible.**

Summary

Based on the assessment criteria and matrices outlined at section 1.4, the significance of visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Medium-low	Negligible	**Imperceptible**

Viewshed Reference Point		**View Direction**
VP9	Base of Middle Pier at Howth Yacht Club	NW

Representative of:

- Local Community View
- Amenity & Heritage features

Receptor Sensitivity **Medium-low**

Existing View

The context of this view, located 289m from the West Pier Reclamation Area, is the base of the Middle Pier, adjacent to the Howth Yacht Club and marina. The Middle Pier is more commonly used by commercial fisherman (on its west side), as well as recreational boaters (accessing its public slipway, on the pier's east side), as well as the Howth RNLI station. This heavily used location is also beside a car park, as well as being adjacent to the green open space between the R105 and Howth Harbour. In this view, a veritable 'wall' of two-storey commercial/retail properties aligns the West Pier, screening out all views beyond.

Visual Impact of West Pier Reclamation Area

Owing to the aforementioned two-storey commercial/retail properties along the West Pier, no aspect or element of the proposed development will be visible from this location.

Thus, the magnitude of visual impact is deemed to be **Negligible.**

Summary

Based on the assessment criteria and matrices outlined at section 1.4, the significance of visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Medium-low	Negligible	**Imperceptible**

Viewshed Reference Point		**View Direction**
VP10	Ireland's Eye Ferry	S

Representative of: Amenity & Heritage feature

Receptor Sensitivity **Medium**

Existing View

Located between Howth Harbour and Ireland's Eye, while this is not a land-based location, it is nonetheless the domain of several visual receptors. A ferry service operates from near the northern end of the West Pier between Dublin City, Dun Laoghaire and Howth Harbour, seven days a week between April and October. There are also a number of sailors, recreational fisher folk, kayakers and paddle boarders who enjoy these waters, as well as sailors/boat crew accessing the marina at Howth Yacht Club. From these waters, there are panoramic views to the north, east and west (i.e. Ireland's Eye, Lambay Island, the north Leinster coastline and the broader Irish Sea), but there are also scenic views back towards the harbour and the broader peninsula.

In this coastal scene, located 442m from the proposed West Pier Reclamation Area, the low profile of Howth Harbour is back-dropped by the elevating landform behind Howth village, and then the larger, looming skyline of Howth Head and the Ben of Howth. The relatively low, stone-based profile of the West Pier, as well as the northern end of the East Pier, is apparent. The dark, unappealing profile of two-storey building rears along the West Pier does not engender an inviting or inclusive *genius loci*, and neither is it representative of the otherwise aesthetic coastline surrounding the harbour and peninsula.

Visual Impact of West

The proposed development will be an apparent element in views from this

Pier Reclamation Area

location. The expanse of the West Pier will have shifted considerably, resulting in a westward and northern seaward expansion out from the original pier, while not entailing the removal of any of the pre-existing buildings within or alongside the harbour. The armourstone fronting the sea wall will be the most visible element of the proposed development, followed by the two roundheads jutting seawards, which will serve as viewing points. Owing to this sea level view, their lower storey/ground floor of the buildings upon the West Pier will be less visible.

From this location, the form of the proposed development will be noticeably robust, but in profile it will be relatively low and even. The proposed armourstone will be visually well assimilated with pre-existing armourstone/rock armour elsewhere on the West Pier, as well as the northern tip of the East Pier. In that regard, the proposed development is likely to strike the viewer as being original to the harbour setting. Such visual change will have little bearing on the visual amenity of this setting. It will introduce a number of (aforementioned) regular and modest harbour-friendly elements into this harbour setting, which will not appear as surprising or unsuitable, and neither will they detract from more appealing seaward views. Furthermore, whereas the West Pier previously had its "back" to the west, it will now be more visually integrated, thus instigating a more inviting and coalescent sense of place that is more consistent with the wider harbour and northern coastline of the peninsula.

Thus, the magnitude of visual impact is deemed to be **Low.**

Summary

Based on the assessment criteria and matrices outlined at section 1.4, the significance of visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Medium	Low	**Slight**

9.4.3 Residual cumulative effects

The main considerations in terms of cumulative impacts of the proposed development are the form, function, aesthetics and integrity of the existing Howth Harbour. The relationship with the wider harbour has been a key consideration throughout this landscape/seascape and visual impact appraisal. Thus, cumulative impacts have been addressed, in relation to the existing/inherent built environment.

In summary, it is considered that the proposed reclamation represents an expansive but compatible escalation in the level of built development, intensity of activity and perceived visual envelope associated with the overall Howth Harbour activities and aesthetics. Furthermore, the nature,

character and sense of place of the proposed development reflect that of the wider existing harbour and the peninsula's appealing northern coastline.

Other cumulative impact considerations entail those proposed or permitted developments within general proximity to the West Pier; developments that are of a sufficient nature or scale to potentially generate cumulative impacts, in tandem with the proposed development.

Planning permission (ref. no. F15A/0362) has been granted for 178 residential units and 2,756sq m of commercial space at Project Pier located approximately 190m south west of the reclamation area, immediately west of the Dart Station. This location also has planning permission from an Bord Planála (ref SHD/009/19) for 512 residential units (including parking for 439 cars). There is no known date for construction works to start at this site.

Planning permission (F19A/0296) has been granted by Fingal County Council for development works to the Middle Pier, located approximately 130-250m east/southeast of the reclamation area. The Middle pier development includes dredging, land reclamation and a new 134m length of quayside. These works are proposed to allow the Howth Fishery Harbour Centre to comply with future requirements with regards to fish discards and allow the greater separation of amenity, leisure and commercial fishing and fishing related activities. The middle pier will provide a new area for berthage, taking craft away from their present position on the West Pier with the aim of improving amenity value of the West Pier. It will also provide a new hard standing working area for repairing netting. The construction timeline for this project is earlier than the harbour dredge project and there will be no overlap of construction works. These works commenced in late 2020 and are scheduled to finish in March 2022. There i=will be no overlap of construction works between this project and the proposed project.

Overall, it is not considered that the proposed development will contribute significant cumulative impacts in this landscape / seascape and visual context.

9.5 CONCLUSION

9.5.1 Landscape/seascape Impacts

This is a long celebrated and richly varied landscape/seascape area with multiple designations, strong recreational influences and a long and cherished connection with residents, visitors and tourists alike. The landscape of Howth peninsula is somewhat of a geographical and geological anomaly along Leinster's east-facing coastline. Combined to its proximity to the centre of the nation's capital, the Howth landscape and seascape is frequently perceived as being the closest "escape to nature" experience to Dublin city centre. Consequently, it's protection, amenity value and integrity is of considerable importance to a large multiple of people, most of whom do not live on the peninsula.

All of these factors were weighed-up in the consideration of landscape/seascape sensitivity. On balance, a classification of 'High' sensitivity is determined for Howth peninsula, while a classification

of 'Medium' sensitivity is more appropriate for the landscape/seascape of Howth Harbour. The study area was deemed, therefore, to have a High-medium landscape sensitivity, on balance.

Determining the magnitude of landscape/seascape impact was a matter of balancing the considerable extension of a large and permanent coastal structure against the fact that this is the proposed broadening of an existing structure that has been appreciably evolving over centuries. As the proposal entails the reclamation of an additional c. 4.8ha of land on the pier's west side, it will undoubtedly have a conspicuous physical impact on the current, man-made, shoreline and this impact will be permanent and irreversible. However, the proposed reclamation works represent a far more consistent extension of functionality, land use and aesthetics of the wider Howth Harbour than it does for the existing West Pier alone. The proposed development helps to solidify and coalesce the broader multi-functional identity and appeal of the harbour, introducing a large and more tangible sense of recreation and seaward aesthetics to the West Pier. In addition, its abundance of green open space will further develop and diversify the green infrastructure network in and around the harbour and will serve to underline and reinforce the distinctive sense of place that the harbour has offered generations of locals, Dubliners and tourists alike.

In summary, the proposed development will not detract from the salient landscape/seascape character of the coastline in the vicinity of Howth Harbour. For these reasons the magnitude of landscape/seascape impact is deemed to be 'Medium-Low.' Thus, the overall significance of landscape/ seascape impact is deemed to be **Moderate-slight.**

9.5.2 Visual Impacts

The sensitivity of the six visual receptors (people and groups of people at particular locations) ranged from Medium-low to High-medium.

Though the existing harbour facility at Howth hosts an array of commercial and/or retail fishing buildings and infrastructure and almost constant movement of vessels, machinery and people (being locals, workers and visitors), overall, the proposed development is not considered to detract from visual amenity. Indeed, it adds to the richness, diversity and vibrancy of this settled and productive coastal area. Whereas the West Pier previously had its "back" to Claremont Beach and Quarry Beach, the proposed development will create a more visually integrated, inviting and coalescent sense of place that is more consistent with the wider harbour and northern coastline of the peninsula.

The proposed development generated a notable degree of visual change from most of the selected viewpoint. However, visual change is not tantamount to visual impact, as the proposed development, while very much visible from multiple receptors, is likely to have little or no bearing on the inherent visual amenity of the setting. This is chiefly a result of how low-lying the proposed development is – especially from all land-based receptors – combined with the proposed recreational-focused land use for the area.

The highest significance of visual impact (Moderate-slight) was attributed to VP2 & VP6, which are both less than 300m from the proposed reclamation area, and from locations where the existing buildings upon the West Pier were not obscuring the proposed development; a rarity from within the harbour, along the R105 and around the commercial heart of Howth Village. However, eight of

out the ten receptors were deemed to have a significance of visual impact of 'Slight' or less, with three receptors having an 'Imperceptible' impact upon the inherent visual amenity.

Overall, even if noticed, the proposal would not have a marked effect on the visual amenity of the scene. This is partly owing to the design and siting of the proposal, but more so the long cherished and much visited competing panorama of the peninsula, the harbour and the sea that surrounds both.

9.5.3 Overall Significance of Impact

In summary, it is not considered that the proposed development will give rise to any significant landscape / seascape or visual impacts, in EIA terms.

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10 CULTURAL HERITAGE

10.1 INTRODUCTION

This chapter of the EIAR presents the appraisal undertaken of the potential effects of the Howth Fishery Harbour Centre (FHC) dredge project on cultural heritage assets, which was conducted to identify and record the location, nature and dimensions of any archaeological and industrial heritage features, fabric or artefacts that may be impacted by the Howth FHC project. The appraisal includes an examination of existing sources and the acquisition of new data arising from site inspections and surveys. The appraisal gauges the likely significant effects of the proposed development on cultural heritage (including industrial and archaeological heritage) and, where necessary, includes detailed recommendations for the mitigation of any effects on cultural heritage assets potentially impacted upon within the area of the proposed development.

The cultural heritage assessment was undertaken by Dr Niall Brady of the Archaeological Diving Company Ltd (ADCO).

The cultural heritage appraisal includes a comprehensive review of existing records and maps and the undertaking of project-related site inspections above and below the waterline, under licence from the Department of Housing, Local Government and Heritage (DHLGH) (formerly the Department of Culture, Heritage and the Gaeltacht's (DCHG)) of the National Monuments Service (NMS).

The results and observations are described in the present chapter, and detailed descriptions are provided in **Appendices 3.1–3.2 of Volume 3 of this EIAR**

The archaeological survey area extends across the extent of Howth Harbour, to a point west of the proposed reclamation area to the west of the West Pier (**Figures 10.1, 10.2**). The survey area includes the harbour area and its associated built structures.

A separate and standalone Architectural Heritage Impact Assessment is presented in **Appendix 11 Volume 3 of the EIAR.**

Figure 10.1: OS Map showing location of Howth Harbour

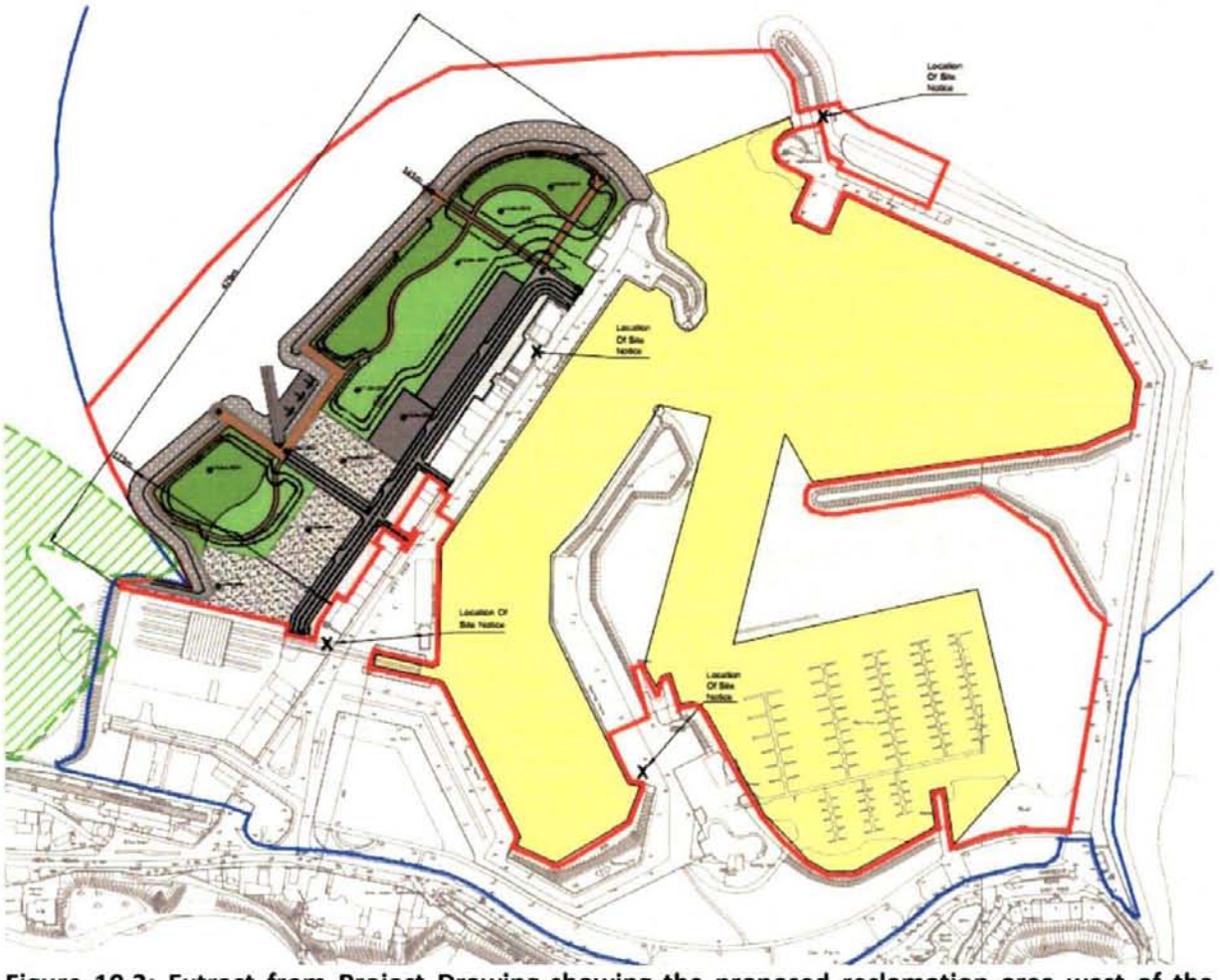

Figure 10.2: Extract from Project Drawing showing the proposed reclamation area west of the West Pier and the dredge area in yellow. Drawing no. 19934-5002 Site Layout Plan.

10.1.2 Scope of Archaeological and Cultural Heritage Section

Desk-based assessment included a review of existing cartographic sources and the archival records maintained by the National Monuments Service that deal with pre-1750 sources and post-1750 sources.

Site investigations were conducted in December 2019, to inform the engineering design, and the logs were presented to ADCO to ascertain the nature of the buried stratigraphy at the locations investigated. The Site Investigations work is presented in **Appendix 2 Volume 3 of this EIAR**. The results indicate surface levels of sand that extend to depths in the order of –5.34m, overlying boulder clay till that reaches to –6.64m and overlies limestone bedrock.

A marine geophysical survey was commissioned separately to include the sea area of the Howth FHC Project. The specification required met and exceeded the guidelines for archaeological marine geophysical survey set by the NMS, and was completed in 2020 by Hydrographic Surveys Ltd, working under licence 20R0027 granted to ADCO by the DCHG. The geophysical survey report is included in **Appendix 3.1 Volume 3 of this EIAR.**

Walkover inspections were completed on 13 March 2020 by Niall Brady. The work focussed on the standing remains of cultural heritage interest; namely the harbour breakwaters and associated buildings, particularly those of the West Pier.

Underwater inspections licensed by the NMS (20D0018, 20R0076) were completed on 18 June 2020 by ADCO, and the illustrated report is included as Appendix 10.2. The work focussed on a list of anomalies detected in the marine geophysical survey and on the proposed reclamation area to the west of the West Pier.

The results of these elements are brought together in this chapter to understand the cultural heritage environment, to appraise the potential impacts and to present appropriate mitigation within the context of the Howth FHC Project.

This chapter was undertaken with due regard to: (1) the 1992 Valetta Treaty (2) the conservation principles as produced by ICOMOS in the Venice and Burra Charters. (3) the publication in 2004 of the Architectural Heritage Protection-Guidelines for Planners by the DEHLG, (now DHLGH); (4) the heritage objectives (5) the Original (2002) and Revised Guidelines (2017) on Information to be Contained in EISs/EIARs and the Original (1995) and Revised (2015) Advice Notes for undertaking an environmental impact statement (EIA) issued by the Environmental Protection Agency.

10.2 EXISTING ENVIRONMENT

10.2.1 Cartographic sources and historical development

The development of Howth and its harbour is well documented. Its location on the north side of the Howth peninsula provided shallow-water access along a coastline whose more easterly and southerly sections are dominated by sea cliffs. The name is derived from *Hofuð*–headland which, like Dalkey (*Deilginis*–Thorn Island) on the south side of Dublin Bay, is a Scandinavian word and reflects a strong Viking influence.[1] There is little archaeological evidence so far for Viking settlement in Howth but, with Scandinavian-influenced placenames extending to the north (for example Holmpatrick, Lambay and Skerries) and to the south, it is clear that the eastern littoral was part of the wider Scandinavian settlement across Dublin's hinterland. Later sources begin to record the settlement in Howth. Following the arrival of the Anglo-Normans in 1169, Strongbow granted Howth to Almeric de St Lawrence, and this enabled the St Lawrence's to become one of the established families of north Co. Dublin.[2] Almeric St Lawrence is considered to have erected the former motte castle in Howth (Sites and Monuments Record [SMR] DU016-002001), which was later levelled and was subsequently replaced by the Martello tower that stands today (DU016-002002).[3] In 1235, a new church was built in Howth to replace that on Ireland's Eye.[4] There are similarities again with Dalkey to the south, where the twelfth-century church on Dalkey Island was replaced with a new church (St

[1] Margaret Murphy and Michael Potterton, *The Dublin regions in the middle ages. Settlement, land-use and economy* (Dublin 2010), p. 61.
[2] Ibid, p. 91.
[3] Ibid, p. 129.
[4] Ibid, p. 233.

Begnet's) constructed in the emerging manorial centre in the present-day village. The new church in Howth (St Mary's, DU015-29001) is located within a short distance (*c.* 150m) of the motte castle and retains a fine double effigial tomb (DU015-29003) of Christopher St Lawrence, thirteenth baron of Howth, and his wife Anne Plunkett. As a manor centre on the coast, Howth's later medieval importance was closely associated with fishing, where the settlement served as one of several landing places for the catch that would supply Dublin.[5] At a time when navigation into Dublin across the sandflats of the Liffey's delta proved troublesome to the ever-larger vessels employed in the fifteenth and sixteenth centuries, the small havens up and down the coast served as places where the herring and other fish could be landed.

[5] Niall Brady, 'Dublin's maritime setting and the archaeology of its medieval harbours', in J. Bradley, R. Fletcher and A. Simms (eds), *Dublin the medieval world* (2009), pp 295–315.

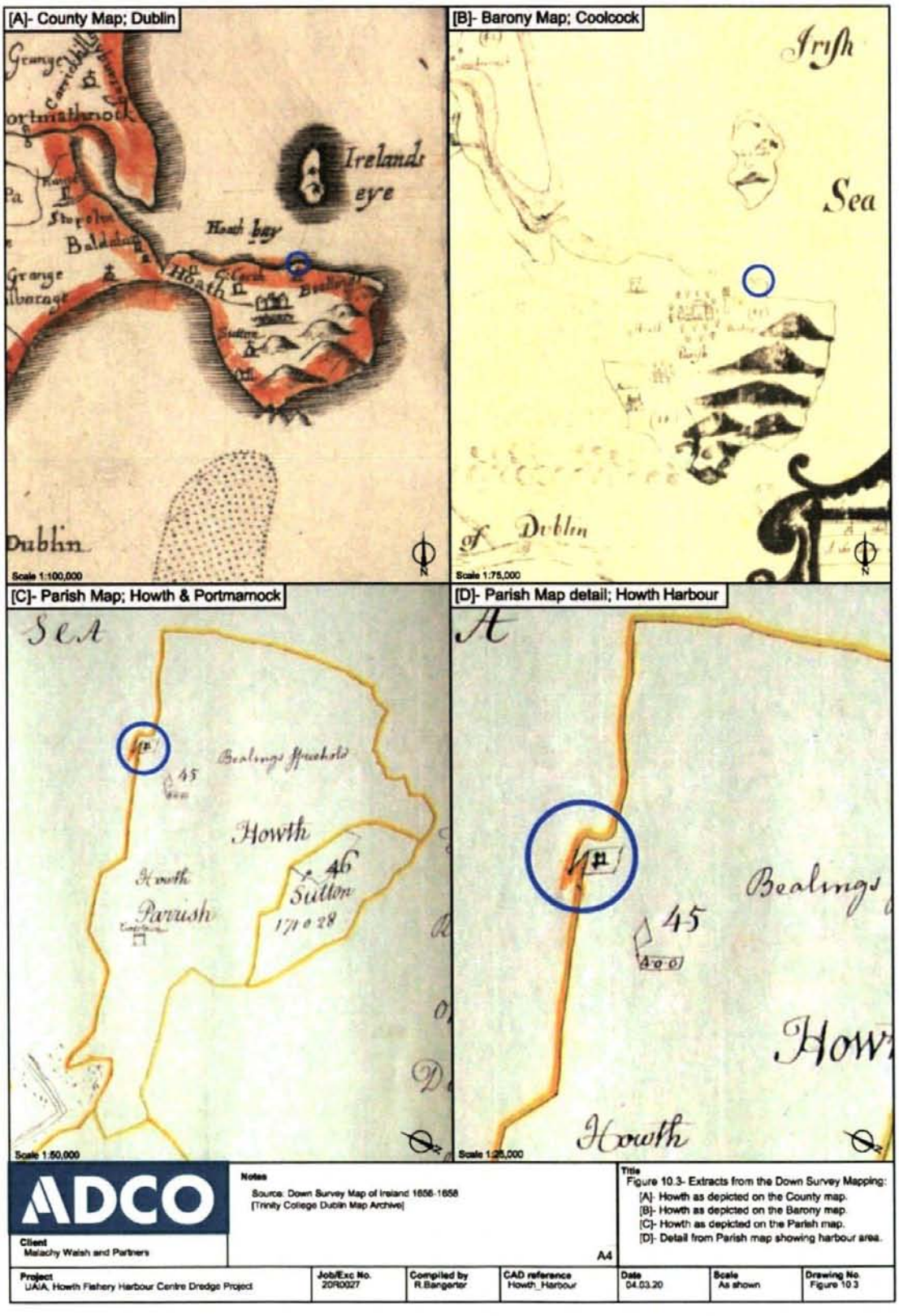

Figure 10.3: Extracts from the Down Survey mapping of Howth

The Down Survey of 1654[6] and its accompanying Civil Survey, derived to provide a census of lands available to Cromwell for redistribution and income, presents a useful series of maps at county, barony and parish level that highlight settlement across the Howth peninsula (Figure 10.3). The county map records a church and a principal house; the barony map adds further detail that includes a slight loop feature on the coastline, indicative of a landing area; while the most detailed map in the series, the parish map, shows a small castle located next to the looped feature. This is the strongest indication of the association of a castle feature next to the coastline where Howth Harbour sits today.

When the cartographer John Rocque prepared his map of Dublin's 'City Harbour and Environs in 1757', he provided a more detailed perspective (Figure 10.4A). Rocque's map records the developing town, which occupied an L-shaped street pattern beneath the motte castle and east of the principal residence of Lord Howth. It also records 'The Harbour' to the north of the town. The maps does not show a quay *per se*, but rather the caption follows a curvature that recalls Beranger's map, and suggests the existence of an eastern breakwater of sorts. The small stream that empties into the sea at this point is the Coolouur Brook (as referenced in later Ordnance Survey maps). Within the protective enclave of the caption, the map records a small vessel. The map also clearly highlights the shallow nature of the water, as 'The Harbour' and the boat are both within the intertidal zone, where the Low Water Mark is defined seawards.

Gabriel Beranger's antiquarian drawing of Howth in 1775 is a perspective looking seawards from behind (south) the motte castle and towards Ireland's Eye in the north (Figure 10.4B). The image records a quay wall on the seashore that extends out and curves around to the northwest, recalling Rocque's 'Harbour' caption and providing the first clear suggestion of a pier structure in Howth. The opening of the quay is out of sight, hidden behind the looming ruined church complex of St Mary's in the foreground, but a line of five masts rises above the church's enclosure, and the accompanying stern of a wooden vessel is included in the view. This would indicate that a large sea-going vessel was able to berth within the harbour on its seaward side.

[6] www.downsurvey.tcd.ie

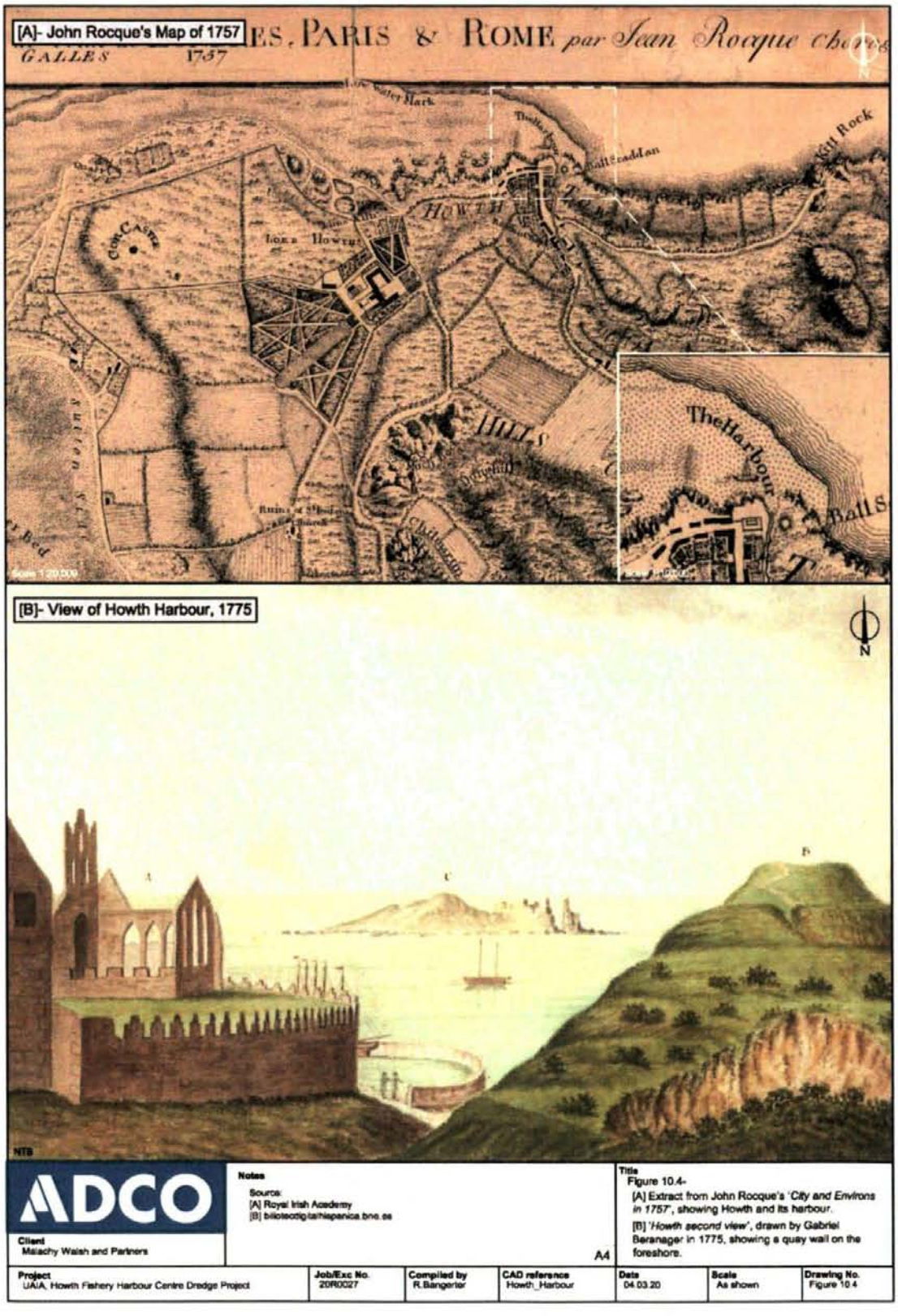

Figure 10.4: Extracts from eighteenth-century illuminations showing Howth harbour

The shallow nature of the sea levels at Howth were well known but this did not deter the identification of Howth as the candidate site for a new harbour that would provide safe haven for

the mail packet ships to transit between Dublin and Holyhead.[7] In 1805 parliament sanctioned a grant of £10,000 to improve the existing harbour. Work began in 1807 under Captain George Taylor, who advocated one pier, perhaps emulating that which existed already. However, and after only constructing a short length, Taylor's work ended early following a devastation wrought by a gale that destroyed some 240 feet of the pier end. The Scottish engineer, John Rennie, whose portfolio of work included Holyhead Harbour and the dockyards at Sheerness and Chatham, was consulted in 1809 and he proposed two piers. The angled north section of the East Pier was apparently constructed on the collapsed rubble of Taylor's design. Rennie appointed John Aird as resident engineer and superintendent of the works, and Aird continued in this role to its completion. Aird's relationship with Rennie lasted until Rennie's death and the two engineers would work together on Kingstown Harbour. John Rennie the younger succeeded his father as chief engineer in Kingstown, and Aird continued as resident engineer there until his death in 1832.[8]

The construction of Howth Harbour is regarded as a project that was innovative in its design and its use of construction technology. The harbour was completed in 1813 and was formally established as a packet station in 1818 when a three-storey lighthouse of ashlar granite was built at the end of the East Pier (Figure 10.5). A significant archive of the correspondences and associated documents is retained in the National Archives (reference OPW/8/HOW/), and there are also other correspondences held privately that have been published.[9] Much of the stone used in the harbour's construction was obtained from the quarry at Kilrock, overlooking Balscadden Bay, to the east of the harbour. Granite facings from Dalkey and Killiney were also used in the piers. In 1811 there was a great dispute, when the Howth quarrymen vied with those from Dalkey. Bernadine Ruddy's paper outlines an issue with non-payment of monies to the Lord of Howth for the quarried stone, which resulted in the quarrying work being halted. Some 91,000 tonnes of local rock went into the construction of the harbour. Time passed and the teams of labourers who had been working the quarry were without income. As the issues over payment were being sorted out, stone from Dalkey and Killiney was sourced and this led to quarriers from Dalkey coming across the Bay. The 'disturbance' in 1811 was a fight between both factions.

[7] Bernadine Ruddy, 'The 1811 Disturbance at Howth Harbour', in *Dublin Historical Record*, vol. 65.1/2 (2012), pp 47–52.

[8] www.dia.ie/architects/

[9] Arnold Horner, 'Letters of John Rennie, and John Rennie Jnr, Engineers on the building of Howth Harbour', in *Dublin Historical Record*, vol. 61.1 (2008), pp 2–4.

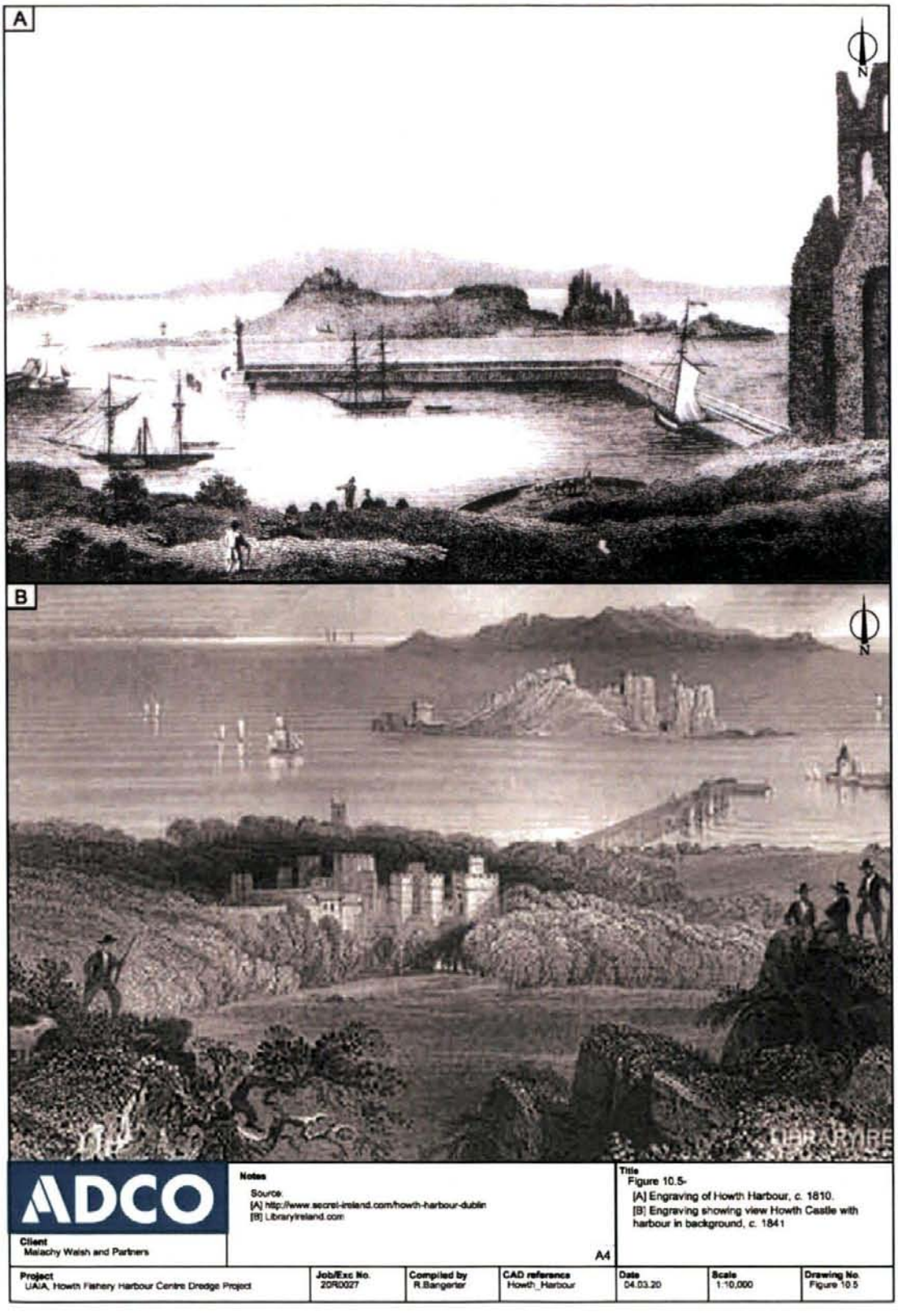

Figure 10.5: Extracts from nineteenth-century illuminations of Howth Harbour

Already by 1809, however, it was clear that Howth would be a dry harbour at low water, filled with mud and sand. In addition, easterly gales caused swell at the harbour entrance, making the entrance

hazardous to navigate in such conditions. Coupled with the building of bigger ships and the change from sail to steam, these elements combined to make Kingstown (present-day Dun Laoghaire) the more attractive option for the mail boats. In 1834, Kingstown became the official packet station. Howth Harbour was no longer in contention for this market. Instead the harbour reverted to its late medieval forté as an important fishery harbour. It has also become a leisure sailing centre.

Lewis's *Topographical Dictionary of Ireland* adds that while the piers are constructed mainly from rock quarried from the hill above the town, they rest on foundation blocks of red grit-stone, or sandstone, from the Runcorn quarries in Cheshire, with granite from Dalkey/Killiney used as facing stone.[10] A study of the harbour walls has assessed their structural integrity by considering issues around stone decay.[11] The 91,000 tonnes of rock from Kilrock quarry comprised quartzite and schist. Rennie documented the mortar used as comprising one-part Aberthaw lime from Wales, one-part pozzolan and two-parts sand.

Two main methods were used to build the piers.[12] Initially, construction involved depositing large rubble stones onto the sea floor *à pierre perdue*, allowing the stone to achieve its natural slope by consolidation and wave action. The stones, transported by railway from the nearby Kilrock quarry above Balscadden Road, adjusted themselves to the natural slope by the motion of the waves. When consolidated in their position, the surface of the slope was paved with large stones wedged and cemented together, giving a sloped profile in cross-section. The inner faces of the piers were finished in ashlar granite from Dalkey and ferried across the bay to Howth. The underwater constructions were firstly built using 4-tonne blocks of Runcorn sandstone (red-brown in colour), which were laid in front of each other, inclined sideways. Header and stretcher courses were laid on top in mortar, while the backing was grouted in a similar mortar. Later, Rennie would employ the first diving bell to be used in Ireland to build the pier head foundations and increase the depth of the harbour. Underwater blasting was also used. The diving bell was of cast iron construction weighing some 5 tonnes. A double air pump supplied the bell with air and a system of ropes and pulleys fixed to a timber frame on the surface manoeuvred the bell underwater. Rennie noted that the slanted angle of the piers, built *à pierre perdue* before the introduction of the diving-bell, improved the breaking of the swell when compared to the vertical walls built with the bell. However, he also concluded that the pier heads, circular in plan and nearly vertical in section, along with the articulation of the harbour entrance and jetties provided better accessibility for vessels arriving and departing the harbour.

Scientific study of the mortar used to bind the granite indicates the use of a good hydraulic lime, with locally sourced aggregate.[13] Study of the stone, based on samples from the East Pier, revealed that the quartzite is in good condition, while the schist showed the strongest weathering of all the rocks in the harbour owing to its clayey composition and its cleavage. For its part, the granite also

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[10] Lewis, *A topographical history of Ireland* , 2 vols (London, 1837), vol. 2, pp 10–11.

[11] S. O'Flanagan and S. Pavia, 'A study of the construction and building materials of Howth Harbour, Co. Dublin', *Civil Engineering Research in Ireland 2016* (conference Galway) < http://www.tara.tcd.ie/bitstream/handle/2262/79421/CERI%202016-SOF%20SP%20Howth.pdf?sequence=1&isAllowed=y><accessed 03/03/2020>.

[12] Ibid.

[13] Ibid.

has signs of weathering (scaling, flaking and staining) but the elemental chemical composition of samples taken at a depth of *c.* 10mm shows no signs of weathering and suggests that the weathering is superficial.

The historic Ordnance Survey maps record the harbour after it was completed and since *c.* 1840. The First Edition six-inch map shows the two piers extending seawards to terminate in the northwest-facing harbour entrance (Figure 10.6A). The terminal of each pier was furnished with a rectangular-shaped 'landing place', and a light house was positioned on the terminus of the east pier. The west pier had a 'parapet' along its western façade and a small number of buildings constructed close to the pier head. The map also records the shallow nature of the enclosed harbour, with not only sand filling the interior at low water but a large shoal of rock outcrop extended across much of the harbour from the east.

One of the correspondences retained in the National Archives is a memorandum dated 1848 from J. Walker, secretary, Office of Public Works, Custom House, Dublin to A. Stewart, solicitor, stating that a legal argument should be prepared regarding the proposed railway place at Howth harbour to be constructed by the Dublin and Drogheda Railway Company. It also contains a copy of a letter from [John] Walker to [C.E. Trevelyan] seeking the approval for the construction of a bathing space behind the West pier by the Dublin and Drogheda Railway Company and permission for the letting of the ground required at a nominal rent of one shilling *per annum*. The memorandum contains a copy of the reply to Walker's letter from C.E. Trevelyan, Treasury Chambers, to the Commissioners of Public Works granting permission for the leasing of ground at Howth to the Dublin and Drogheda Railway Company for the construction of the bathing place, provided it does not interfere with the convenience of the public.[14]

[14] NA/OPW/8/HOW/3564.

Figure 10.6: Extracts from historic Ordnance Survey maps showing Howth Harbour c. 1840 and c. 1911

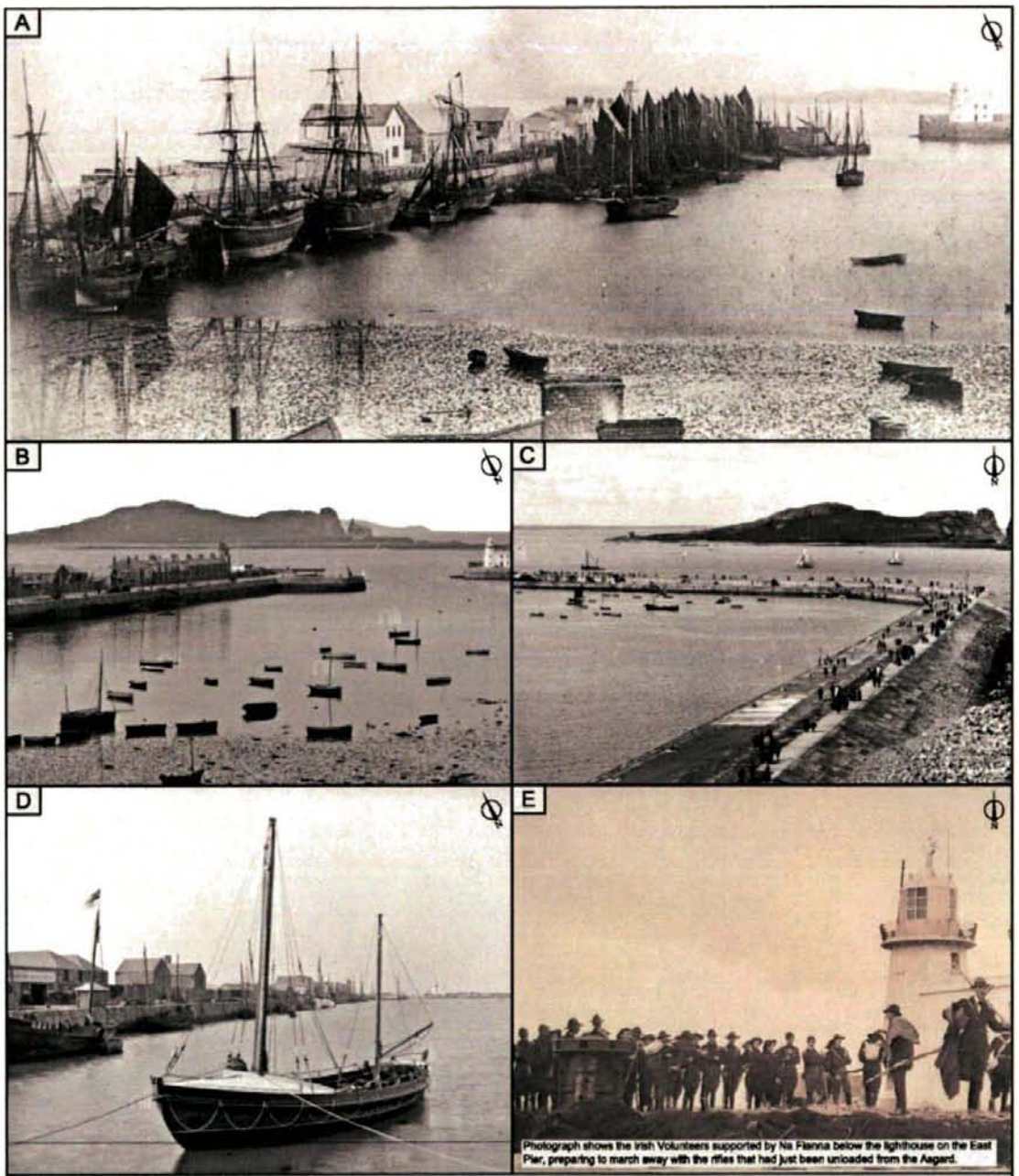
When the twenty-five inch map series was produced in 1911, building on the harbour had developed further (Figure 10.6B). Construction of the railway at the head of the West Pier had been completed,

which formalised this section of the coastline, but there is no recording of a formal bathing place. There appears to be less bedrock recorded across the harbour's interior, suggesting works were ongoing to progressively remove the rock, while the West Pier had become populated with a significant number of buildings along its length. A clear sense of this detail is provided by an historical photograph taken by Robert French, published in 1880 (Figure 10.7B).[15] French's photograph was taken at Low Water. It shows the exposed foreshore at the head of the harbour, and an orderly line of buildings on the West Pier that are set back from the active quayside. A number of small cranes are evident on the quay, along with a series of small work boats tied up alongside. Other historic photographs also show the busy nature of the harbour in the late nineteenth century (Figure 10.7A-D).

In 1821, King George IV landed in Howth on his visit to Ireland. Howth harbour is however perhaps remembered more for the shipment of arms landed there in July 1914 by the *Asgard*, captained by Erskine Childers (Figure 10.7E). The 'Howth gun-running' was one of two arms shipments sourced by the Irish Volunteers in reaction to the arms landed in Larne in April 1914 to service the Ulster Volunteers. The landing of these arms is viewed as the first military operation in Ireland's twentieth-century fight for independence and was a significant event in the lead-up to the Easter Rising of 1916. The *Asgard* was acquired by the state in 1961 and served as a sail training ship until 1974. It is now on permanent display in the National Museum of Ireland's Collin's Barracks facility.

In more recent times, the harbour was dried out in 1979 and excavated in the early 1980s with the construction of the Middle Pier and the East Pier breakwater. These concrete constructions created the fishing harbour to the west and the marina to the east. Reclamation work has also occurred, including an area of foreshore to the west of the West Pier that is currently used for vessel maintenance, and the intertidal area within the harbour identified on the twenty-five inch OS map, which is currently used for vehicle parking and open recreational space (Figure 10.8). The latest development of the harbour includes the insertion of a floating pontoon in the fishery harbour, and a smaller one next to the RNLI station in the marina. These works create the harbour footprint that exists today.

[15] www.nli.ie/record/vtls000040816



[A]- Historic News Print of Howth Harbour, entitled '*Boomtime for Howth as Fishing Port in 1860*'.
[B]- Historic Photograph of the West Pier, *c.* 1880-1900
[C]- Historic Photograph of the Est Pier, *c.* 1865-1914
[D]- Historic Photograph of the west side of Howth Harbour, *c.* 1865-1914
[E]- Historic Photograph showing the '*Howth gun-running*' episode in Howth Harbour, July 1914.

ADCO Client: Malachy Walsh and Partners	Notes: Source: Image A, https://www.pinterest.co.uk/pin/355854806030643134 Images B-D, National Library of Ireland [Lawrence Photographic Collection] Image E, National Museum of Ireland A4			Title: Figure 10.7- Collection of historic photographs of Howth Harbour, dating from 1860-1914.		
Project: UAIA, Howth Fishery Harbour Centre Dredge Project	Job/Exc No.: 20R0027	Compiled by: R.Bangerter	CAD reference: Howth_Harbour	Date: 04.03.20	Scale: NTS	Drawing No.: Figure 10.7

Figure 10.7: Collection of historic photographs of Howth Harbour, 1860–1914

Figure 10.8: Orthoimagery of Howth Harbour with twentieth-century reclamation works highlighted

10.2.2 Recorded Archaeological Monuments in the Study Area

Howth Harbour is not a registered archaeological monument, although the harbour and its nineteenth-century structures are registered in the National Inventory of Architectural Heritage (NIAH) and are protected structures.

The registered terrestrial archaeological sites that exist in Howth all lie to the south of the harbour and outside the proposed development area for the Howth FHC project. The sites illustrate the historical development of the settlement as described in section 10.2.1 above (Table 10.1, Figure 10.9).

Registration	ITM E	ITM N	Site type
DU015-028001-	728271	739307	Cist
DU015-029001-	728652	739226	Church
DU015-029002-	728621	739242	Ritual site - holy well
DU015-029003-	728663	739221	Tomb - effigial
DU015-029004-	728645	739224	Graveslab
DU015-029005-	728622	739206	Graveslab
DU015-029006-	728641	739211	Graveyard
DU015-030----	728668	739188	House - fortified house
DU015-094----	728652	739192	Building
DU015-138----	728682	739261	House - medieval
DU016-002001-	728803	739245	Castle - motte
DU016-002002-	728803	739247	Martello tower

Table 10.1 Registered terrestrial archaeological sites in the vicinity of Howth Harbour

With the exception of a cist burial identified during construction works in 1897 (DU015-028001), at a location close to the St Lawrence Hotel, all the other archaeological sites are situated around the headland to the east that overlooks the East Pier. It is on the headland that the medieval period earthen motte castle was constructed (DU016-002001), before being replaced in the nineteenth century by the Napoleonic era coastal defence Martello Tower (DU016-002002). Geophysical survey on the site in 2015 informed a subsequent archaeological investigation that confirmed the presence of medieval pottery and post-medieval wares. The excavation (E004620) also indicated that a period of time elapsed between the levelling of the motte and the construction of the Martello Tower during which the surface soils were cultivated.

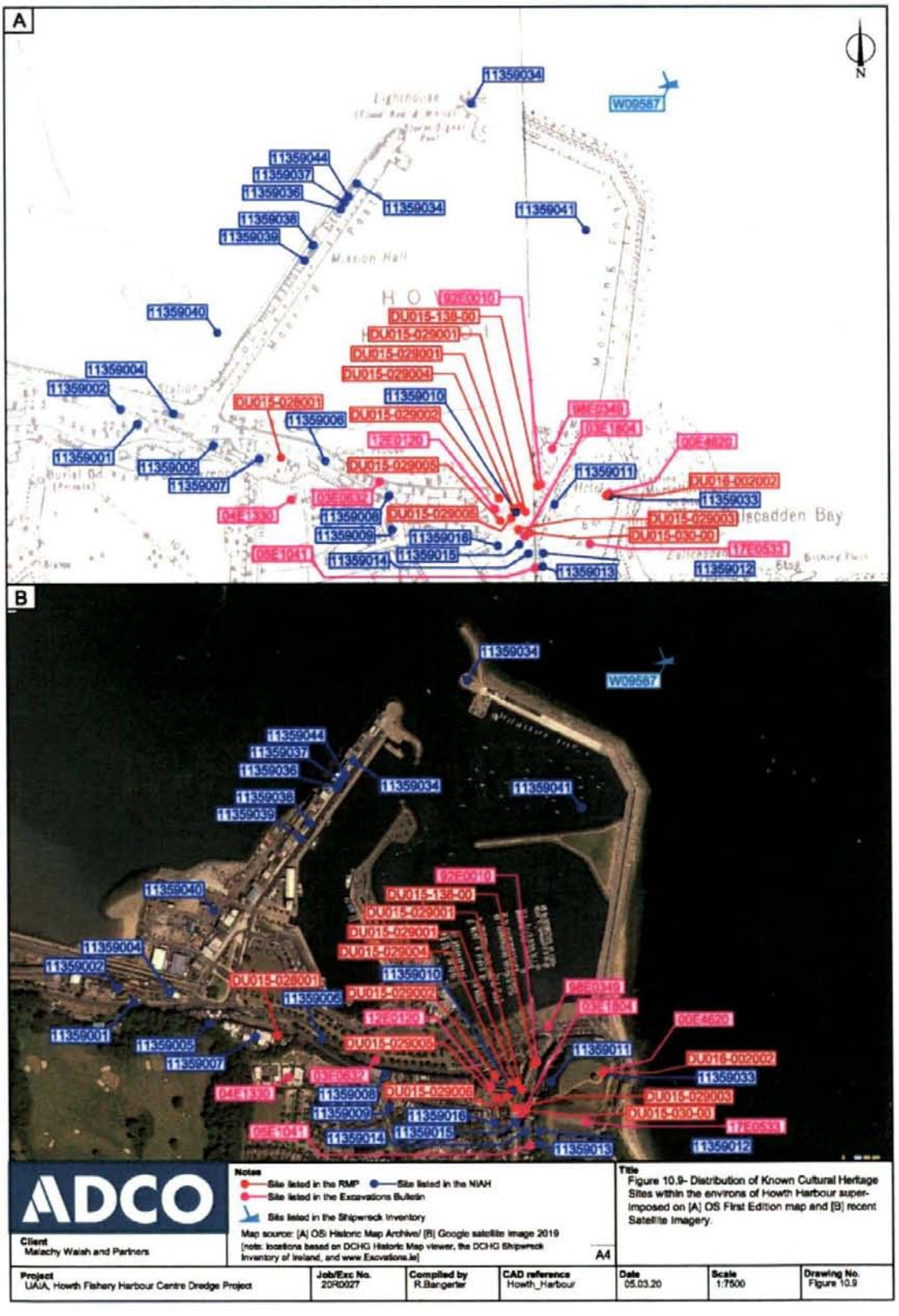


Figure 10.9: Distribution of known cultural heritage sites within the environs of Howth Harbour

10.2.3 Previous archaeological excavations in the wider study area.

The recorded archaeological excavations in Howth all lie to the south of the harbour and outside the proposed development area for the Howth FHC project. The sites illustrate further the historical development of the settlement as described in section 10.2.1 and as mentioned in section 10.2.2 above (Table 10.2, Figure 10.9). Excavations associated with the laying of the sewer pipeline through the village included work along Howth Road and Harbour Road, as well as works associated with a combined sewer outflow and storm tank within Howth carpark in the vicinity of the harbour (Licence E2028). The archaeological observations indicated that the area appears to have been beach or foreshore up until the period when the harbour was developed. Evidence for rubbish deposition was also identified and this was thought to date to the early modern period, after the time when the area was inundated with sand. Tram tracks were exposed and these were associated with a route to the East Pier area. A subsequent phase of excavation completed in 2007 revealed fill material employed in the reclamation of the foreshore. The fill material included quarried granite. A section of old sea wall constructed using granite blocks, and formerly included in historic photographs of the harbour area, was also recorded.

Registration	ITM E	ITM N	Site type
E004620	728801	739245	Medieval and post-medieval finds from trench cut close to former motte and later Martello tower
E2028	715826	734698	Beach material with post-medieval refuse deposits, and later tram tracks to service the pier
92E0010	728682	739261	DU015-138, Medieval stone building, 'Howth House'
98E0349	728707	739321	Medieval activity associated with quarry and 16th-century tower
03E0632	728430	739268	No archaeological significance
03E1804	728664	739185	Medieval deposits
04E1330	728287	739240	No archaeological significance
05E1041	728678	739131	No archaeological significance
17E0533	728766	739169	Medieval pits, probably associated with St Mary's Church and the 'College of Howth'

Table 10.2: Licensed archaeological interventions in the vicinity of Howth Harbour

10.2.4 National Museum of Ireland Finds Dataset

Due to the closure of the National Museum of Ireland over the Covid period to researchers, searching this dataset was not possible as part of the desktop survey.

10.2.5 Historic Shipwreck Inventory

There are approximately 110 recorded shipwreck events associated with Howth.[16] A recorded shipwrecking event is an historic reference (usually post-1750 in date) to an incident that was observed mostly from land and in relation to the nearest landmark. It is not necessarily an accurate location of wrecking. The record generally refers to the vessel's distress on the surface. If the vessel subsequently sank, the exact position of wreckage is not necessarily known. On other occasions, the records might add that the vessel was subsequently refloated or towed away. The association with Howth in many instances is not more specific, and could in fact refer to wreckings off the north, east or south sides of the peninsula, or indeed to any point within these large sea areas. The entries nevertheless provide a guide to the archaeological potential of shipwreck to be uncovered in the course of seabed disturbance activities.

There are twenty-two recorded entries to wrecking events at Howth harbour (Table 10.3) which is the focus of the current development proposal. The wrecking events range over time between 1814 and 1915, with 1861 being a year when three vessels were wrecked on the same day (26th August), during a WNW force 9 wind. The *Corisande* (W00875) was a 15-ton iron steam yacht, and the *Mary Anne* (W00898) and *Mary Jane* (W00900) were both 1-ton wooden fishing yawls. All three were small vessels and the WNW wind must have hurtled ferociously through the harbour entrance, damaging all in its path. Earlier that same year, on 9th February 1861, three other entries record loss inside the harbour on the same day; the *Maid of the Mist* (W00895) was a three-masted schooner laden with salt that struck the pier and sank, while a large barque also struck the pier and sank (W00950), and a brig (W00951) was wrecked on sand. Given the size of the vessels and the similar detail of their loss, it is possible that the entries for W00895 and W00950 are duplications. A sense of the busy nature of the harbour is provided in the historical photographs from the period (Figure 10.7). Figure 10.7A shows a large number of vessels along the West Pier.

The records do not indicate whether any of the wreckings were subsequently recovered. One must allow for this possibility given the busy nature of the harbour, but the potential is also there for wreckage to remain *in situ*. Given that the harbour basin was drained and excavated in the 1980s, the potential for such remains to be still present is reduced within the footprint of the 1980s dredging.

The entry for the *James* (W00886) highlights the potential for wreckage outside the harbour walls, as it was wrecked 'outside the pier' in 1842. The *Emily* (W0880) was a fishing lugger from Peel that was driven on to stone 'at the back of the pier' when leaving the harbour and broke up in 1872. The tragic loss of the *Marie Ann* (W00897) also occurred outside but close to the harbour, on the same day as three vessels were lost inside the harbour (9th February 1861). The *Mary Ann* was a 91-ton brig from Drogheda that became stranded on Balscadden Rocks, within 50 yards of the harbour. The entry records very foul weather with a NE force 12 blowing. Five of the ship's crew were lost.

There were also wrecking events associated with the West Pier. The *Nannie* (W00903) 'was lying on a slip outside Howth harbour, in ballast' when she wrecked at the West Pier in 1903, while in 1907 Barge No. 619 (W00906) was being towed into the harbour when she was driven ashore on to rocks

[16] Karl Brady, *Shipwreck Inventory of Ireland* (Dublin, 2008), pp 196–209, at p. 196.

at the West Pier and wrecked. Both these entries have relevance in the current context given the proposal to reclaim an area beside and west of the West Pier. The southerly section of this western zone has already been reclaimed, which may reduce the potential for such remains to be uncovered in the course of the proposed works, but they nevertheless highlight the presence of potential wreckage in the development area.

Reference	Name	Date of Loss	Place of Loss	Description
W00865	*Alice/Alicia Maria*	10/12/1893	Howth Harbour	20-ton fishing lugger moored in ballast. Lost after collision with another lugger
W00870	*Bryan*	24/12/1819	Howth Harbour	A vessel of Dublin, totally wrecked
W00875	*Corisande*	26/08/1891	Howth Harbour	This iron steam yacht weighing 15 tons was owned by R.G. Nash, of Howth, Co. Dublin. It was lying in Howth Harbour, when it was wrecked in a WNW force 9 wind
W00876	*Dispatch*	06/11/1872	Howth Harbour	Smack of Pwillheli, sank *en route* to Pwihelli and wrecked.
W00880	*Emily*	16/10/1872	Howth, back of the pier	Fishing lugger of Peel, drifted onto stones during an easterly gale whilst leaving Howth Harbour and broke up
W00884	*Friendship*	14/02/1824	Howth Pier	Sloop of Bray *en route* from Whitehaven to Bray when she was wrecked at the back of the pier. The crew were saved
W00885	*Ino*	23/04/1866	Howth Harbour	Schooner of Liverpool with cargo of salt. Struck between the pier and sank
W00886	*James*	17/11/1842	Outside Howth Pier	Vessel, under Captain Metcalfe, was wrecked 'outside Howth pier'. The crew were saved
W00887	*James McCleary*	15/12/1814	Howth Pier	Brig, under Master William Crangle sank during a westerly storm
W00895	*Maid of the Mist*	09/02/1861	Howth Harbour	Three-masted schooner with cargo of coal, struck the pier and sank
W00897	*Mary Ann / Mary Anne*	09/02/1861	Balscadden Rocks, 50 yards from Howth Harbour	91-ton brig of Drogheda was carrying five crew and a cargo of coals when she stranded in NE force 12. The five crew were lost
W00898	*Mary Anne*	26/08/1891	Howth Harbour	Wooden fishing yawl, weighed one ton. It was owned by B. Murphy, of Howth, Co. Dublin. It was lying in Howth Harbour, when it was wrecked in a WNW force 9 wind

Reference	Name	Date of Loss	Place of Loss	Description
W00900	*Mary Jane*	26/08/1891	Howth Harbour	Wooden fishing yawl weighed 1 ton. It was owned by J. Vaughan, Howth, Co. Dublin. It was lying in Howth Harbour, when it was wrecked in a WNW force 9 wind
W00903	*Nannie*	26/02/1903	West Pier, Howth	Unregistered wooden lugsail used for fishing. She was 11 years old and weighed 1 ton. The master and owner was R. Harford of Howth. The vessel was lying on a slip outside Howth harbour, in ballast. There was no one aboard when she foundered and became a total loss in a WSW force 10
W00906	*No. 619*	24/12/1907	West Pier, Howth	Barge driven ashore on rocks while being towed to the harbour. Wrecked
W00909	*Peep of Day*	12/11/1902	Howth Harbour	Unregistered wooden yawl was used for fishing. She was laid up in Howth Harbour, in ballast. She collided with the unregistered fishing yawls *Maggie* and *Your Name* of Dublin in a NE force 10 and became a total loss
W00913	*St Catherine*	12/11/1915	Howth Harbour	30-tonne wooden fishing ketch, moored in ballast, went ashore, total wreck
W00950	Unknown	09/02/1861	Howth Harbour	Large barque, struck the pier and sank inside the harbour
W00951	Unknown	09/02/1861	Howth Harbour	Brig, wrecked on sand
W00953	Unknown	22/11/1865	Howth Harbour, close to the East Pier head	Board of Works lighter, capsized during violent squall, crew saved.
W00962	25/03/1933	Unknown	Howth Harbour	Large fishing vessel sank at its moorings during a storm
W00963	25/03/1933	Unknown	Howth Harbour	Small fishing vessel sank at its moorings during a storm

Table 10.3: Historic Shipwreck Inventory, Howth Harbour, recorded shipwreck events

There are only two entries in the Historic Shipwreck Inventory of confirmed wrecksite locations at Howth Harbour and both of these occur outside the Harbour to its northeast and east (Table 10.4, Figure 10.9). The Irish National Seabed Survey identified one location in its multi-beam surveys across the sound outside the harbour; wrecksite (W0966) is an anomaly measuring 35m long, 7m

wide and standing 1m off the seabed and is indicative of a shipwreck. It lies 0.5 miles northeast of the harbour entrance. W09587 was identified by the UK Hydrographic Office and is believed to the site of the *Dieter* (W09587), which is a recent loss (1989) and lies some 300m east of the East Pier lighthouse (Figure 10.9). Both locations lie outside the proposed development area.[17]

Reference	Name	Date of Loss	Place of Loss	Description
W00966	Unknown	Unknown	729454E 740101N	Possible wreck identified during National Seabed Survey (INSS wreck G140), measuring 35m long, 7m wide and standing 1m off the seabed. 0.5mile NE of Harbour entrance
W09587		*Dieter*	728898E 739912N	Lost in 1989

Table 10.4: Historic Shipwreck Inventory, Howth Harbour, known shipwreck locations

10.2.6 National Inventory of Architectural Heritage

There are nine sites of architectural heritage interest directly associated with the Harbour and these are protected structures (Table 10.5, Figure 10.9). There are also sites that are located close to the harbour but outside it (Table 10.6, Figure 10.9).

Registration	ITM E	ITM N	Site type
11359034	728579	739874	Howth Harbour Lighthouse
11359035	728397	739745	The Water Club, clubhouse
11359036	728383	739724	Howth Harbour, Building misc.
11359037	728370	739703	Howth Harbour, Boathouse
11359038	728325	739646	Mariner's Hall, Church
11359039	728311	739622	Howth Harbour, House
11359040	728170	739506	Howth Harbour
11359041	728763	739669	Howth Harbour
11359044	728376	739714	Howth Harbour, Boathouse
11359034	728579	739874	Howth Harbour Lighthouse

Table 10.5: National Inventory of Architectural Heritage sites at Howth Harbour

The nineteenth-century pier walls are protected structures, as are the nineteenth-century buildings that survive on the West Pier. As described above in section 10.2.1, it is likely that the East Pier absorbs the footprint of the pre-existing eighteenth-century structure, while the West Pier was built anew in the early 1800s.

[17] The *Dieter* is located at ITM 728898E 739912N.

Registration	ITM E	ITM N	Site type
11359001	728040	739361	Howth Railway Station Master's House
11359002	728013	739384	Bridge
11359004	728098	739377	Howth Railway Station
11359005	728162	739327	Saint Lawrence Hotel and Lounge Bar
11359006	728343	739302	Howth Court House (former church)
11359007	728236	739306	Saint Lawrence Hotel
11359008	728445	739246	Store/Warehouse, Asian Tandoori
11359009	728450	739192	Howth Garda Station, Barrack
11359010	728648	739220	Old Abbey Burial Ground
11359011	728710	739232	House, Abbey St
11359012	728691	739154	House, Abbey St
11359013	728691	739134	House, Abbey St
11359014	728668	739153	House, Abbey St
11359015	728653	739168	The Abbey Tavern, House
11359016	728619	739166	The Cock Tavern, Tavern
11359033	728803	739247	Howth Martello Tower
0	728538	739243	Harbour Road

Table 10.6: National Inventory of Architectural Heritage sites in proximity to Howth Harbour

10.2.7 Fieldwork Results

10.2.7.1 Walkover inspection

A walkover inspection conducted on 13 March 2020 was an opportunity to gather a photographic record of Howth Harbour and its cultural heritage features.

10.2.7.2 Marine geophysical survey

A marine geophysical survey was carried out by Hydrographic Surveys Ltd in 2020, working under archaeological licence 20R0027 (see **Appendix 3.1 volume 3 of this EIAR**). The work comprised magnetometry and side-scan sonar survey within the harbour basin and across the proposed reclamation area to the west of the West Pier. The survey was robust and comprehensive, with survey lines closely-spaced together to ensure multiple viewing of the same area of seabed from different angles (Figures 10.10–10.11).

The magnetometry survey recorded a series of targets within the harbour basin that are the internal navigation buoys and are not of archaeological interest. The side-scan sonar survey, in conjunction with the magnetometer survey recorded a series of targets in the area west of the West Pier and these were subsequently inspected by diving.

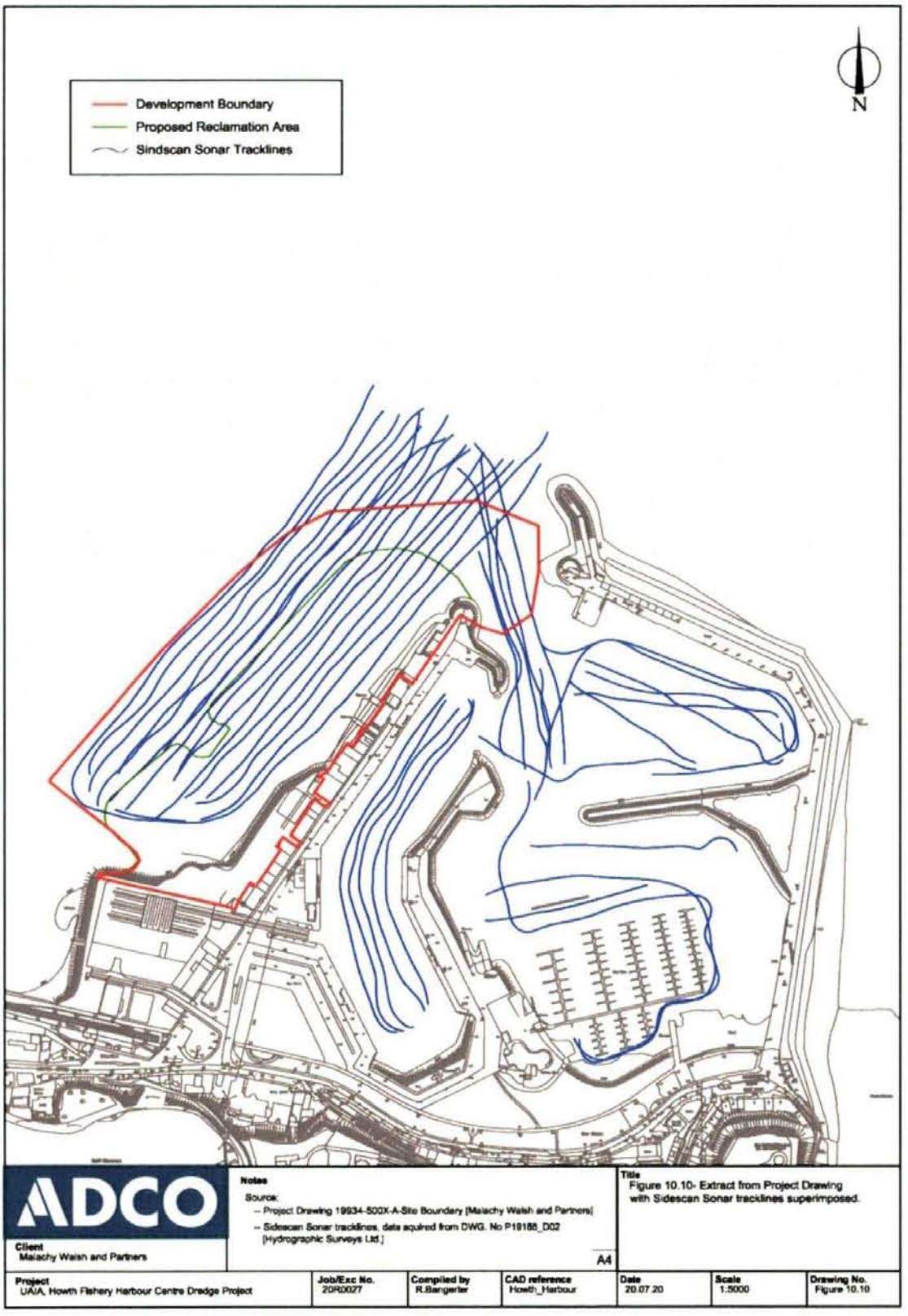


Figure 10.10: Extract from Project Drawing showing side-scan sonar survey tracklines

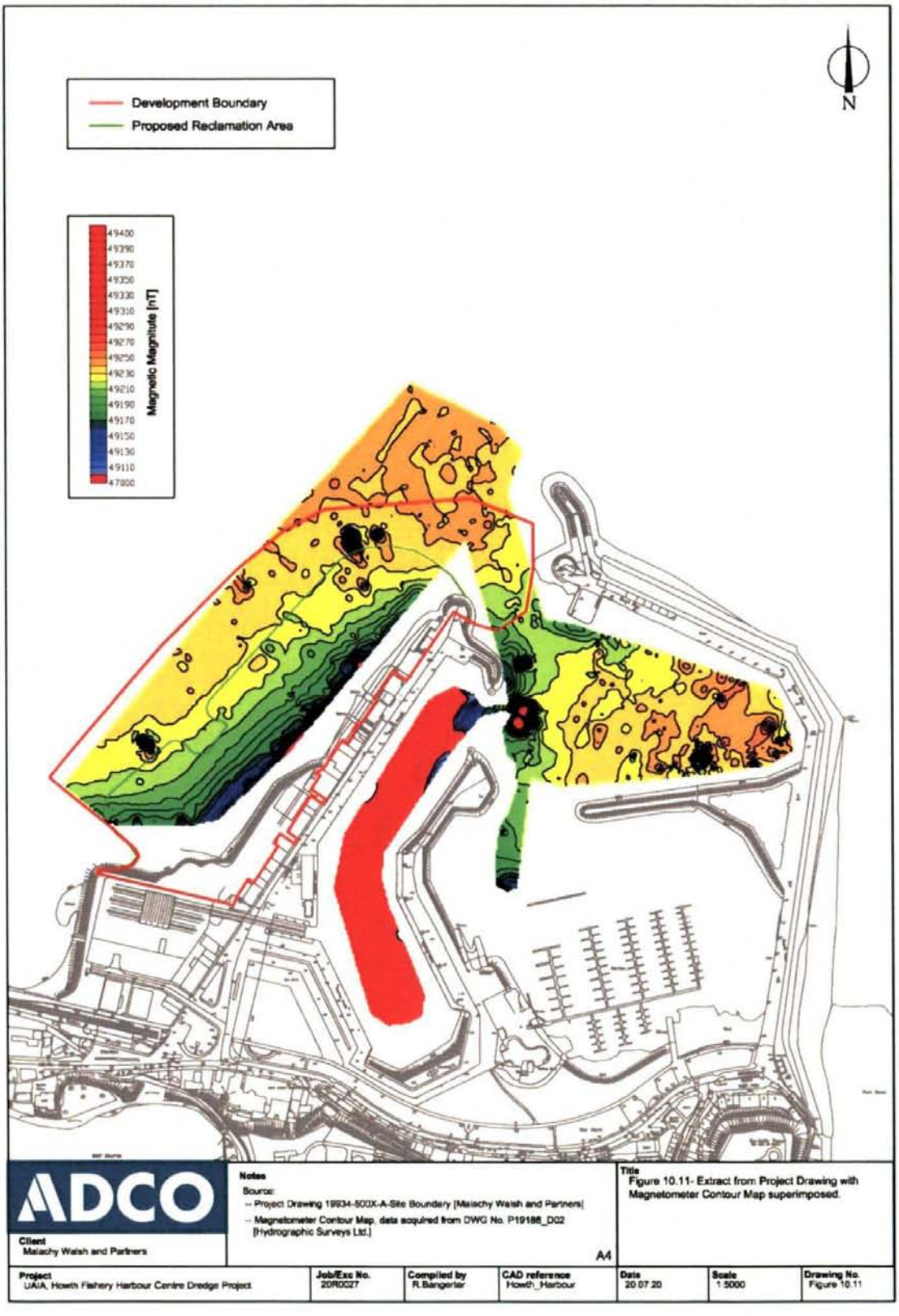
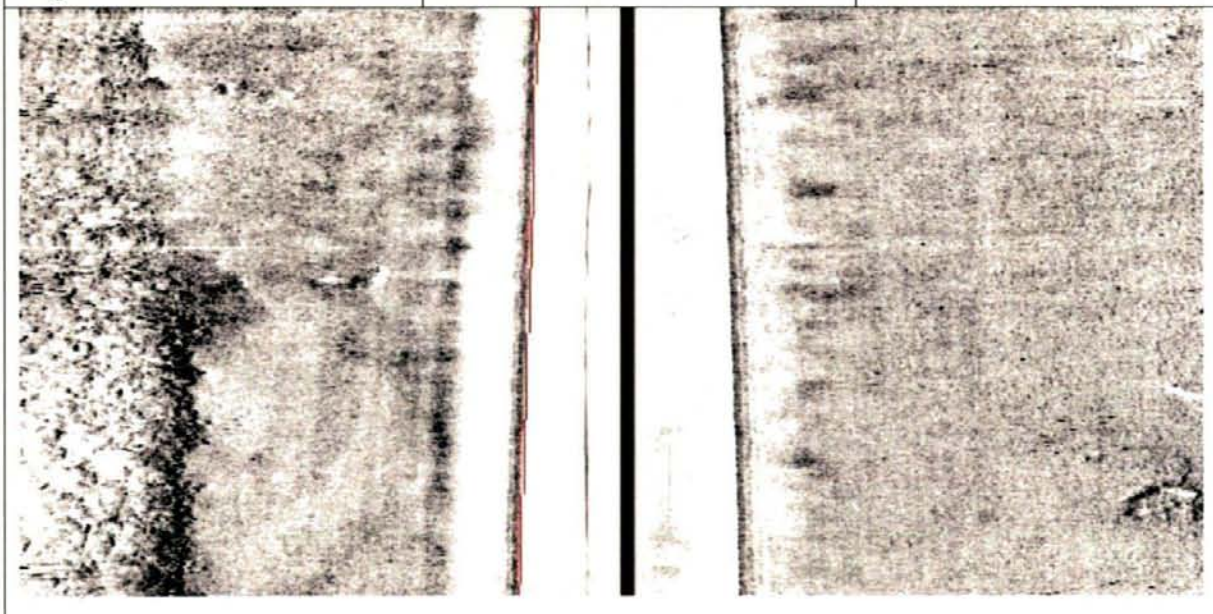


Figure 10.11: Extract from Project Drawing showing magnetometer contour map

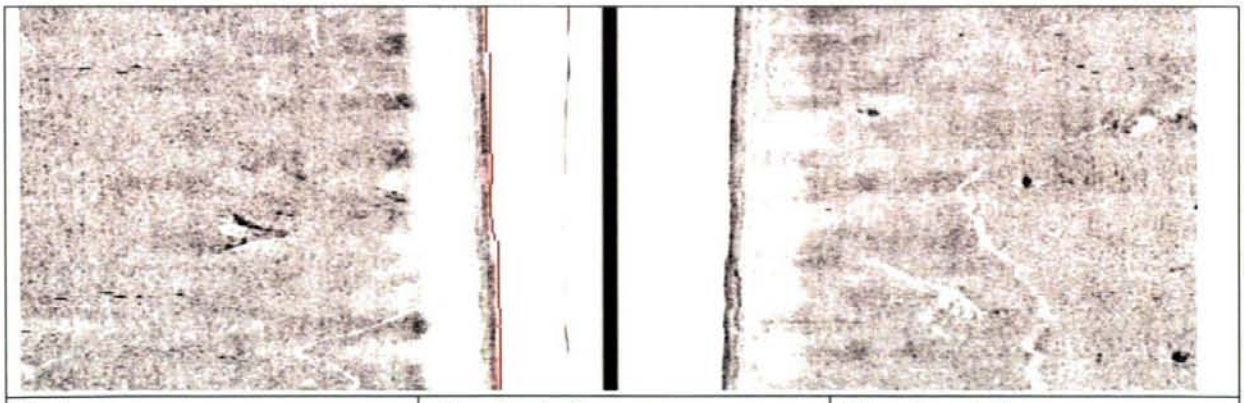
10.2.7.3 Underwater inspection

An underwater archaeological survey took place on 18 June 2020 and focused on the proposed reclamation area off the West Pier. The dive area extended beyond the footprint for the reclamation. The work included the inspection of the targets identified in the marine geophysical survey report, and the observations are recorded in Table 10.7 (Figure 10.12). No features of archaeological interest were observed on the seabed, and one of the targets, DT_03, was confirmed to be a large upstanding metal object that is modern in origin. A more accurate position was taken of the piece and it is recorded as Target 01. It is a composite steel piece that appears to be counter-weights of a steel crane, perhaps placed there as a temporary mooring. It outside the proposed footprint for the reclamation area and will remain exposed on the seabed. It should be considered a navigation hazard and be removed.

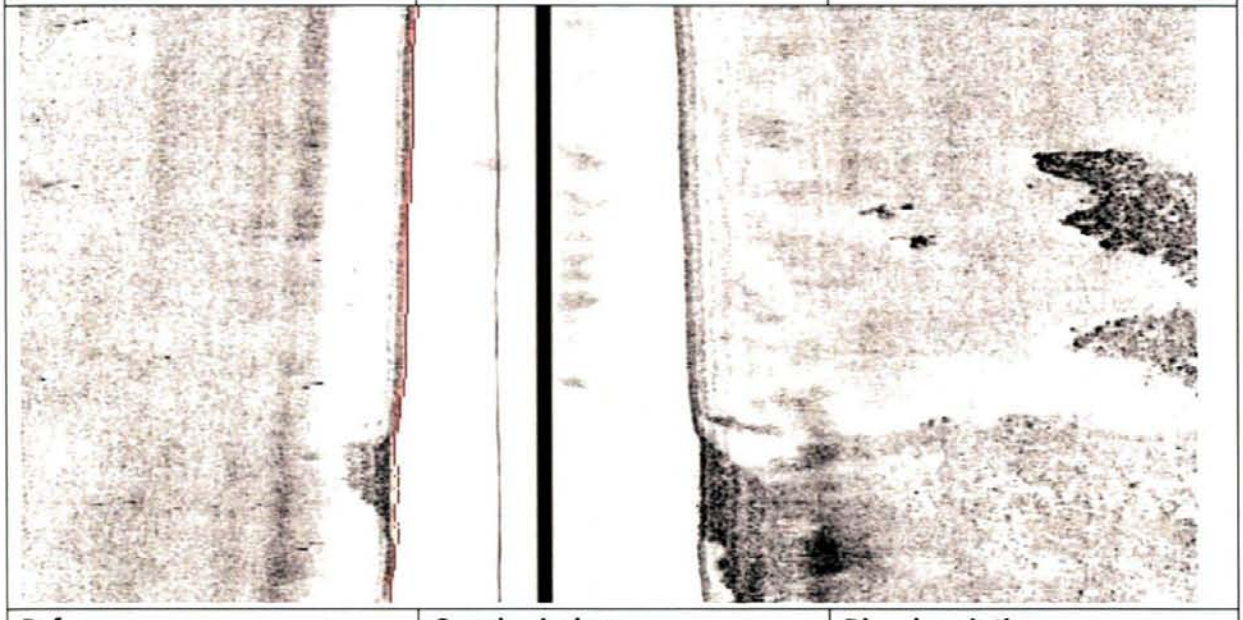
Reference	**Geophysical survey interpretation**	**Dive description**
DT_01, next to W pier base	Target off foot of rock armour	Collapse from rock armour
ITM	728388e	739811n
Lat/Long Deg Min Sec	53° 23' 34.184543"	-6° 04' 10.788311"
Decimal Degrees	53.392829	-6.069663
Degrees Minutes	53 23. 569742	-6 04. 179805



Reference	**Geophysical survey interpretation**	**Dive description**
DT_02	Single target	Boulder
ITM	728351e	739864n
Lat/Long Deg Min Sec	53° 23' 35.930626"	-6° 04' 12.712206"
Decimal Degrees	53.393314	-6.070198
Degrees Minutes	53 23. 598844	-6 04. 211870



Reference	Geophysical survey interpretation	Dive description
DT_03 with Mag target	Two targets close together	Counterweights, navigation hazard
ITM	728353e	739918n
Lat/Long Deg Min Sec	53° 23' 37.674929"	-6° 04' 12.525008"
Decimal Degrees	53. 393799	-6.070146
Degrees Minutes	53 23. 627915	-6 04. 208750



Reference	Geophysical survey interpretation	Dive description
DT_04 with Mag target	Single target	Nothing present on seabed
ITM	728130e	739686n
Lat/Long Deg Min Sec	53° 23' 30.368221"	-6° 04' 24.926883"
Decimal Degrees	53.391769	-6.073591

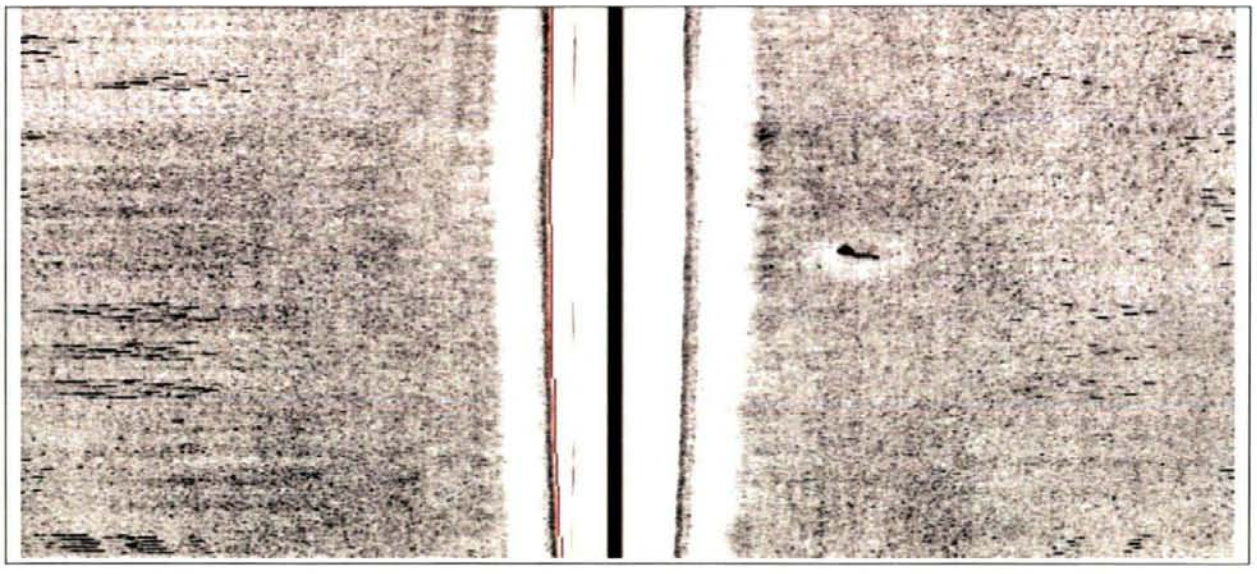


Table 10.7: Marine geophysical survey targets inspected

The opportunity was taken to consider the glacis (the slope or face) of the West Pier, which is to be buried as part of the reclamation area. Rock armour protection already populates sections of the glacis, obscuring it from view, but a large expanse of the glacis is exposed. The exposed area lies at the rear of the protected buildings that populate the West Pier. Two slipways survive *in situ*, and steps are cut into the glacis beside of the slipways to ease access to it. These represent historical features, as does the glacis itself, and warrant detailed recording prior to their burial at part of the reclamation works.

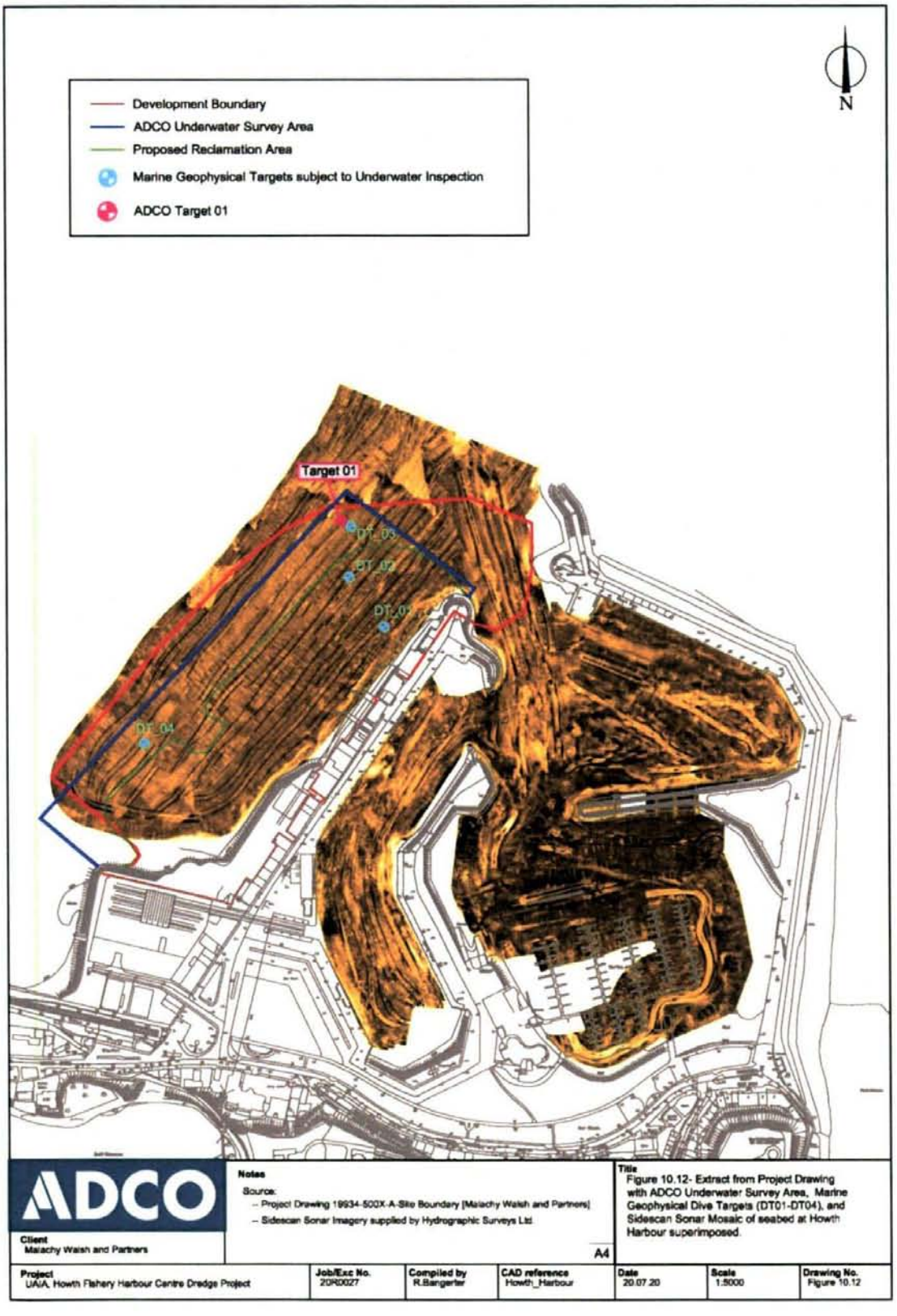


Figure 10.12: Extract from Project Drawing showing ADCO Underwater Survey Area, Marine Geophysical Survey dive targets, and side-scan sonar mosaic

10.2.8 Fieldwork Discussion

The fieldwork completed represents a multi-faceted and comprehensive approach to highlight the potential cultural heritage risks associated with the FHC project. Desktop review, field inspection, marine geophysical inspection and dive inspection combine to inform the narrative of the history of Howth Harbour and, within the context of the proposed works, highlight the West Pier as a location that is integral to the development of the harbour since its construction in 1813. The West Pier is a protected structure and is populated with a series of standing buildings that are individually registered as protected structures in the National Inventory of Architectural History. This status extends to the glacis of the West Pier, which is at the rear of the standing buildings, and it includes the historic features that are constructed into the glacis, namely the two slipways and attendant features. The West Pier to the north is largely enveloped by later rock armour protection, while the glacis of West Pier to the south of the standing buildings is also buried under rock armour and a significant part has been reclaimed. The central section where the historic elements are still exposed is part of the original construction and should be recorded in detail before it is buried by the new reclamation works.

10.3 LIKELY SIGNIFICANT IMPACTS

10.3.1 Likely Impacts on the known recorded archaeology, unknown archaeology or wider cultural heritage

10.3.1.1 Construction Phase

The dredging of the harbour basin represents a direct and permanent impact on the harbour silts. However, this area was substantially dredged in the 1980s after the harbour was dewatered in 1979 to facilitate those works. It is unlikely that archaeologically significant material will be present in those areas that were dredged previously. It remains possible that archaeological material is *in situ* in areas and depths that were not dredged previously, and archaeological monitoring should be conducted of such areas to ensure that any cultural heritage material that may be retained in those deposits are recovered.

The reclamation of the seabed area to the west of the West Pier is not to include active dredging but will require the deposition of dredged spoils from the basin onto the seabed and the glacis of the West Pier. There is no indication of *in situ* wreck sites on the seabed. However, the exposed length of glacis poses an archaeological constraint. As the glacis will be permanently buried, it is necessary to ensure that suitable archaeological record of the glacis is made prior to construction commencing. It is also necessary to ensure that there is a suitable barrier membrane laid down to separate the *in situ* remains from the reclaimed deposits to be laid above.

10.3.1.2 Operational Phase

No impacts on archaeological assets are anticipated during the Operational phase.

10.3.1.3 Do-Nothing Scenario

In a do-nothing scenario, the current situation will continue to prevail.

10.3.2 Cumulative Impacts

The cumulative impact was addressed and the following development was found to potentially impact on the Howth FHC dredge project:

Permission has been granted for the provision of a 134m long quay wall, associated deck and hard standing area, road access, dredging to the front of the new quay wall to provide berthing depth and land reclamation of an approximate area of 0.30ha on the east side of the Middle Pier at Howth Harbour (F19A/0296). These works commenced in late 2020 and should take a total of 12-15 months, including site set-up and demobilisation.

The middle pier dredging works are operating over a small area of the proposed Howth FHC dredge area. It is considered that they will not dredge the same material and will not operate in parallel. There are no identified significant cumulative impacts with the proposed development.

10.4 MITIGATION

10.4.1 Heritage gain proposals

Reclamation of the glacis of the West Pier has the potential to open-up this part of the harbour to the public, who can then access and enjoy the rear of the protected structures that populate the West Pier.

10.4.2 Pre-construction phase mitigation measures

A detailed archaeological survey will be completed of the glacis of the West Pier that will extend from the glacis toe to the rear of the buildings that populate the West Pier. The survey will ensure to include the glacis and the two historic slipways and their details that are built into the glacis. The survey will be to a high standard, capable of producing metrically accurate plan, section and profile drawings that capture the detail. If a laser-scan is to be deployed to achieve this, the work will meet the standards required for large building surveys and will produce modelled space and cloud-point data that is accessible and interpretable to non-specialist end-users.

10.4.3 Construction phase mitigation measures

Archaeological monitoring licensed by the Department of Housing, Local Government and Heritage through the National Monuments Service will be conducted of all terrestrial, inter-tidal/foreshore and seabed disturbances associated with the development, with the proviso to resolve fully any archaeological material observed at that point.

The level of monitoring of the dredging operation within the harbour basin should be limited to those areas and depths not achieved in the 1980s construction campaign.

10.4.4 Archaeological management mitigation measures

The following archaeological monitoring and management measures will be undertaken:

- Retaining a project archaeologist/s. An archaeologist experienced in maritime archaeology will be retained by the Department of Agriculture, Food and the Marine for the duration of the relevant works.
- Retaining a conservation engineer. A conservation engineer experienced in industrial and maritime architectural heritage will be retained by the Department of Agriculture, Food and the Marine for the duration of the relevant works, to advise specifically in relation to works associated with the West Pier.
- Archaeological licences will be required to conduct the on-site archaeological works. Licence applications require the inclusion of detailed method statements, which outline the rationale for the works, and the means by which the works will be resolved. Licence applications take a minimum of four weeks to process through the Department of Housing, Local Government and Heritage, and advance planning is required to ensure that the necessary permits are in place before site works commence. It is anticipated that the following licence types will be required: Excavation, to cover monitoring and investigations works; Detection, to cover the use of metal-detectors; and Dive Survey, to cover the possibility of having to conduct underwater inspections. Since 2017, Excavation licence applications must be accompanied by a letter from the client on their letterhead 'confirming that sufficient funds and other facilities are available to the archaeologist to complete the archaeological excavation, post-excavation, and preliminary and final reports (including specialist reports)'. The Department of Agriculture, Food and the Marine has confirmed that sufficient funds and other facilities as required will be made available to the project archaeologist to complete all reports required.
- Archaeological monitoring will be carried out by suitably qualified and experienced maritime archaeological personnel licensed by the Department of Housing, Local Government and Heritage. Archaeological monitoring is conducted during all terrestrial, inter-tidal/foreshore and seabed disturbances associated with the development. The level of monitoring of the dredging operation within the harbour basin should be limited to those areas and depths not achieved in the 1980s construction campaign. Archaeological monitoring will be undertaken in a safe working environment that will facilitate archaeological observation and the retrieval of objects that may be observed and that require consideration during the course of the works. The monitoring will include a finds retrieval strategy that is in compliance with the requirements of the National Museum of Ireland.
- The time scale for the construction phase will be made available to the archaeologist, with information on where and when ground disturbances will take place.
- Discovery of archaeological material. In the event of archaeologically significant features or material being uncovered during the construction phase, machine work will cease in the immediate area to allow the archaeologist/s to inspect any such material.
- Archaeological material. Once the presence of archaeologically significant material is established, full archaeological recording of such material will be recommended. If it is not possible for the construction works to avoid the material, full excavation will be recommended.

The extent and duration of excavation will be a matter for discussion between the client and the licensing authorities.

- Archaeological team. It is recommended that the core of a suitable archaeological team be on standby to deal with any such rescue excavation. This would be complemented in the event of a full excavation.
- Archaeological dive team. It is recommended that an archaeological dive team is retained on standby for the duration of any in-water disturbance works on the basis of a twenty-four or forty-eight hour call-out response schedule, to deal with any archaeologically significant/potential material that is identified in the course of the seabed disturbance activities.
- A site office and facilities will be provided by Department of Agriculture, Food and the Marine on site for use by archaeologists.
- Secure wet storage facilities will be provided on site by the Department of Agriculture, Food and the Marine to facilitate the temporary storage of artefacts that may be recorded during the course of the site work.
- Buoying/fencing of any such areas of discovery will be necessary if discovered and during excavation.
- Machinery traffic during construction will be restricted to avoid any identified archaeological site/s and their environs.
- Spoil will not be dumped on any of the selected sites or their environs.
- Post-construction project report and archive. It is a condition of archaeological licensing that a detailed project report is lodged with the DHLGH within 12 months of completion of site works. The report should be to publication standard and should include a full account, suitably illustrated, of all archaeological features, finds and stratigraphy, along with a discussion and specialist reports. Artefacts recovered during the works need to meet the requirements of the National Museum of Ireland.

These measures are subject to the approval of the National Monuments Service at the Department of Housing, Local Government and Heritage. The Department of Agriculture, Food and the Marine has and will continue to engage with the Department of Housing, Local Government and Heritage.

10.5 RESIDUAL IMPACTS

Residual impacts on archaeological assets will have a neutral effect.

10.6 REFERENCES

10.6.1 Online sources

Dictionary of Irish Architects, www.dia.ie/architets/

Down Survey, www.downsurvey.tcd.ie

National Library, www.nli.ie/record/vtls000040816

National Monuments Service, http://webgis.archaeology.ie/historicenvironment/

O'Flanagan, S. and Pavia, S., 'A study of the construction and building materials of Howth Harbour, Co. Dublin', *Civil Engineering Research in Ireland 2016* (conference Galway) <http://www.tara.tcd.ie/bitstream/handle/2262/79421/CERI%202016-SOF%20SP%20Howth.pdf?sequence=1&isAllowed=y> <accessed 24/02/2020>.

10.6.2 Published sources

Brady, Karl, *Shipwreck Inventory of Ireland* (Dublin, 2009).

Brady, Niall, 'Dublin's maritime setting and the archaeology of its medieval harbours', in J. Bradley, R. Fletcher and A. Simms (eds), *Dublin the medieval world* (2009), pp 295–315.

Horner, Arnold, 'Letters of John Rennie, and John Rennie Jnr, Engineers on the building of Howth Harbour', in *Dublin Historical Record*, vol. 61.1 (2008), pp 2–4.

Lewis, S., *A topographical history of Ireland*, 2 vols (London, 1837).

Murphy, Margaret and Potterton, Michael, *The Dublin regions in the middle ages. Settlement, land-use and economy* (Dublin 2010).

National Archives, NA/OPW/8/HOW/3564.

Ruddy, Bernadine, 'The 1811 Disturbance at Howth Harbour', in *Dublin Historical Record*, vol. 65.1/2 (2012), pp 47–52.