

Environmental Impact Assessment Report

Chapter 16

Cultural Heritage (including Archaeological, Architectural & Industrial)

Volume 2 Part 5



16 CULTURAL HERITAGE (INCLUDING ARCHAEOLOGICAL, ARCHITECTURAL & INDUSTRIAL)

16.1 Introduction

This chapter of the EIAR presents the appraisal undertaken of the potential effects of the 3FM project on cultural heritage assets, which was conducted to identify and record the location, nature and dimensions of any archaeological, architectural and industrial heritage features, fabric or artefacts that may be impacted by the 3FM 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 3FM project on cultural heritage (including architectural, 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 3FM project.

The archaeological aspects of the cultural heritage assessment were undertaken by Dr Niall Brady and Rex Bangerter of the Archaeological Diving Company Ltd (ADCO). This work was supplemented by a conservation architectural and industrial heritage appraisal that was undertaken by Gráinne Shaffrey of Shaffrey Architects, RIAI Grade 1 Conservation Architect, Chris Southgate of Southgate Associates and Seán Ó Laoire and Kieran Fitzgerald of MOLA Architecture.

The same team, in conjunction with Port Heritage and Communications, has produced the Dublin Port Heritage Conservation Strategy (2024), which is an over-arching consideration of the cultural heritage assets across the Port estate and adjoining lands. It identifies a series of conservation policies to assist in the management of cultural heritage, and has been adopted by Dublin Port Company (DPC).

The cultural heritage team has also liaised with Darmody Architects, who were tasked by DPC with preparing an integrated design vision for the 3FM project within Dublin Port Company's lands of the south port area that respects the Historic Urban Landscape and the linearity of the Great South Wall (GSW), in accordance with the *Dublin Port Heritage Conservation Strategy (2024)* (hereafter *Conservation Strategy 2024*).

The cultural heritage appraisal establishes the context of the 3FM project within that of the *Dublin Port Masterplan 2040* (hereafter *Masterplan 2024*). It includes a comprehensive review of existing records and maps. It describes the undertaking of project-related site inspections above and below the waterline, under licence from the Department of Housing, Local Government and Heritage's (DHLGH) National Monuments Service (NMS). It provides a cultural heritage impact assessment, based on an assessment of significance, and sets out a mitigation strategy and addresses cumulative impacts.

The results and observations are described in the present chapter, and a descriptive and illustrated catalogue of the cultural heritage sites is provided in Appendix 16-1.

The cultural heritage survey area includes the North Port area along East Wall Road and the North Wall Quay Extension at East Link Bridge / Tom Clarke Bridge, to a point east of the Poolbeg Oil Storage Terminal on the south side of the River Liffey (Figures 16.1 and 16.2). The survey area includes the active river channel and its associated built structures, and the land area on Poolbeg Peninsula within and adjacent to the proposed 3FM project area.

16.2 Context

The 3FM project is a key component of DPC's *Masterplan 2040* and can be seen as the articulation of another layer of human intervention on the palimpsest of the historic port, as described in this chapter.

The other component elements of the Masterplan are the Alexandra Basin Redevelopment (ABR) project and the Masterplan 2 (MP2) project, both of which have secured planning permission. These are primarily focused on underpinning the efficacy and sustainability of the North Port.

In the context of the 3FM project, and its cumulative impacts on its receiving environment, it is pertinent and relevant to note projects in progress or in planning that will contribute significantly to the evolving and changing perception, image and experience of the Port in the City, and which celebrate intrinsic historic linkages, culture and heritage.

These projects, notably the Liffey-Tolka Project (planning reference 3220/21), The Tolka Estuary Greenway (PL29N.312692), and the Flour Mill Project (Masterplan 2020, and Memorandum of Understanding with the Arts Council to repurpose buildings into and Artist campus and workspace, 2022), build on recent Heritage related projects such as the Diving Bell on Sir John Rogerson's Quay (2015), the reconfigured and publicly accessible Port Centre (2021), the rehabilitated Graving Dock precinct as the Pumphouse (2022) and the recently restored Substation on Alexandra Road (2023).

Supplementing these physical projects are other cultural heritage initiatives and programmes, not least of which is the ongoing digitisation of the nationally significant Dublin Port archive and several oral history, visual art and theatre projects established and supported by DPC.

These projects testify to DPC's commitment to promote and enhance Port-City integration, as does the adoption of the *Conservation Strategy 2024*, referenced in this chapter and which has informed the approach to this chapter.

The *Conservation Strategy 2024* and *Masterplan 2040* reinforce DPC's commitment to ensuring that development is socially and culturally sustainable, and in line with the Sustainable Development Goals (SDG) also supported through DPC's active participation with AIVP Agenda 2030.

This commitment has resulted in a Historic Urban Landscape (HUL) approach that not only recognises distinct heritage assets but, critically, recognises the landscape setting and context of these assets, thereby underpinning the concept, integral to the Conservation Strategy of the 'Maritime City'. HUL is a UNESCO concept established through a framework approach (2011).¹ It provides a framework which recognises that the

¹ HUL is described as: *the historic urban landscape is the urban area understood as the result of a historic layering of cultural and natural values and attributes, extending beyond the notion of 'historic centre' or 'ensemble' to include the broader urban context and its geographical setting* (UNESCO, Recommendation on the Historic Urban Landscape, 2011, p. 3). This wider context includes notably the site's topography, geomorphology, hydrology and natural features, its built environment, both historic and contemporary, its infrastructures above and below ground, its open spaces and gardens, its land-use patterns and spatial organisation, perceptions and visual relationships, as well as all other elements of the urban structure. It also includes social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity. This definition provides the basis for a comprehensive and integrated approach for the identification, assessment, conservation and management of historic urban landscapes within an overall sustainable development framework.

cultural significance of a place can be seen, not only as a collection of discrete assets, but as the result of layers and dimensions, tangible and intangible, natural and cultural, which interact in a continuous process. It provides a mechanism to describe, analyse and manage complex cultural places such as cities and urban quarters that are continually evolving. It enables a way to articulate and protect the *Genius Loci* —the spirit of a place. Analysis by Norberg Schulz explores ways of discovering the *Genius Loci* by looking at boundaries and repeating patterns.²

Framed by this approach, the ‘Maritime City’ as a concept and framework, includes the Liffey and its 1300-year-old association with engineering innovation and achievement in providing deepwater berthage for the economic sustainability of Ireland, besides the generational layers of geophysical, social, and cultural history.

Integral to the ‘Maritime City’ framework is the concept of a ‘Distributed Museum’, which is a collection of buildings, structures and landscapes in the Port Estate, adjacent lands and historic former port landscapes that are accessible to the public.

These include the aforementioned Diving Bell, the Pumphouse and the restored Substation.

The Flour Mill project at the Odlums Mill on Alexandra Rd, when realised, will offer a major cultural destination in the heart of the North Port. The initial phase of this proposes the provision of artists’ studios with facilities for a diverse range of artistic practices.

The recently granted permission (P3019) to redevelop the ground area to the north of Alexandra Quay West will see the heritage-led initial conservation protection measures of the R&H Hall grain silo, a protected structure, in advance of a sustainable masterplan to integrate the project with The Flour Mill. The work is in accordance with the Architectural Heritage Impact Assessment completed for the project, which commits to a masterplan for meanwhile usage with a long-term objective to review possible integration into the Flour Mill complex as a cultural centre.

In time, the elements of the Distributed Museum will be linked by active travel ways, prioritising pedestrian and bicycle access. One such project, the Tolka Estuary Greenway, is now partially completed and when finished will gift the city a spectacular 3.2km conduit into Dublin Bay, complementing the publicly accessible Great South Wall (GSW) in the South Port. It will terminate in the provisionally titled Aeolian Harp/Sea Organ. This project, conceived to ameliorate the impacts of MP2, integrates the remnants of an historic light house in a structure that will offer a platform from which the landscapes and daily operations of the North and South Port can be viewed.

The foregoing is offered to contextualise the approach to the appraisal of the impacts of the 3FM project on the Heritage and Cultural assets of its receiving environment, which has a complex and rich history intrinsically linked to the history of the city and the port.

DPC is the linear successor to the Ballast Board (officially the ‘Corporation for Preserving and Improving the Port of Dublin’), which initiated the construction of the early stages of the GSW, large portions of which have

² Christian Norberg-Schulz, *Genius-Loci-Towards-Phenomenology-Architecture*. Rizzoli, 1979.

been subsumed and buried in reclaimed lands over time. In contrast to the North Port, the Poolbeg Peninsula, whose current form was enabled by the GSW, has a diverse and complex ownership structure.

The peninsula contains some highly significant heritage assets, outside the ownership of DPC. The use, access to and maintenance of the GSW, for example, is influenced by several entities.

Over time the Peninsula has evolved as a utility hub, serving the city and the Dublin Metropolitan Region.

Historically associated with coal and latterly both diesel and gas-generated electricity, the peninsula's most recent utility is the Covanta Waste to Energy Plant.

The city's major wastewater treatment is carried out on the peninsula, and involved the partial infilling of the original harbour at Pigeon House Harbour in the late nineteenth century to accommodate the settlement tanks of a large treatment plant that is currently being upgraded to deal with the city's growing population and obligations to meet water quality standards within Dublin Bay.

At the time of writing, a proposed step-down facility for a major offshore wind energy project is expected to seek planning approval in the near future.

Significantly, on lands formerly owned by the Irish Glass Bottle Company Limited, a large-scale, predominantly residential, development, situated at the west end of the peninsula on Sean Moore Road, is evolving in stages. The Poolbeg West Strategic Development Zone (SDZ) envisages the development ultimately housing a population of approximately 8,000 people with associated community facilities and transport links.

Dublin City Council envisages the provision of dedicated public transport to this project, besides active travel access. Inevitably this provision will be required to coexist and integrate with DPC's transportation infrastructure network.

Central to the 3FM project is the proposed SPAR bridge designed to link the North and South Ports operationally with a dedicated transport and movement framework that would remove port traffic from public roads while integrating active travel.

16.3 Policy Context

The principal legislative, guidance and policy context that operates across the land and marine environment in Ireland is governed archaeologically by the requirements of the National Monuments Act 1930-2004, the Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 and the Planning and Sustainable Development Acts 2000-2022, and is supported by policies governing built heritage nationally and locally. The assessment is conducted in line with the following legislative procedures and guidelines listed in Table 16.1.

Table 16.1: Legislation, policy and guidance documents relevant to Cultural Heritage (including Archaeological, Industrial & Architectural).

Legislation / Policy / Guidance	Reference	Geographic Coverage
The National Monuments Act 1930-2004	Govt. of Ireland, 1930 - 2004	Ireland, Republic of
Historic and Archaeological Heritage and Miscellaneous Provisions Act	Govt. of Ireland, 2023	Ireland, Republic of
Planning and Development Acts 2000-2022	Govt. of Ireland, 2000-2022	Ireland, Republic of
Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act	Govt. of Ireland, 1999	Ireland, Republic of
Marine Area Planning Act 2021	Govt. of Ireland, 2021	Ireland, Republic of
The Foreshore Act 1933 and 2014	Govt. of Ireland, 1933 updated 2014	Ireland, Republic of
Heritage Act, 1995	Govt. of Ireland, 1995	Ireland, Republic of
Architectural Heritage Protection Guidelines for Planning Authorities (2011)	Govt. of Ireland, 2011	Ireland, Republic of
Places for People – National Policy on Architecture	Govt of Ireland, 2021	Ireland, Republic of
Dublin City Development Plan 2022-2028	Dublin City Council	Local
European Convention on the Protection of the Archaeological Heritage (Valetta Convention)	EU, 1992	EU
The Convention for the Protection of the Architectural Heritage (the Grenada Convention)	EU, 1985	EU
European Landscape Convention (Florence Convention)	Council of Europe, 2004	CoE member states
Department of Arts, Heritage, Gaeltacht and the Islands (DAHGI) Framework and Principles for the Protection of the Archaeological Heritage	DAHGI, 1999a	Ireland, Republic of
DAHGI Policy and Guidelines on Archaeological Excavation	DAHGI, 1999b	Ireland, Republic of
International Council on Monuments and Sites (ICOMOS) guidance, non-governmental international organisation dedicated to the conservation of the world's monuments and sites – several charters and related reference texts	ICOMOS, 1964 to 2023	Global
United Nations Educational, Scientific and Cultural Organization (UNESCO) guidance, to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity	UNESCO, 1972	Global
United Nations Educational, Scientific and Cultural Organization (UNESCO) Recommendation on the Historic Urban Landscape (HUL)	UNESCO, 2011	Global
United Nations Educational, Scientific and Cultural Organization (UNESCO) Convention on the Safeguarding of Intangible Cultural Heritage	UNESCO, 2005	Global

16.4 Assessment Methodology

16.4.1 Significance

The *Conservation Strategy 2024* is a multi-layered archaeological, architectural and industrial heritage appraisal that includes the proposed 3FM area and extends beyond that to include the wider port area. Prepared by the project's Heritage Team, the *Conservation Strategy 2024* is included within the application for consent submission as a standalone report. It addresses the cultural heritage significance of Dublin Port in two ways. Initially a thematic appraisal is applied that responds to Dublin Port as both a historic and contemporary place of cultural heritage significance, which has developed over time, continues to do so and contains a complex layering of interventions of variable scale, type, purpose and influence. Following this, an elemental approach is taken, identifying the archaeological and built structures and sites of particular significance within the Conservation Strategy area. Existing tools for assessing significance, e.g. the National Monuments Act in relation of archaeological sites and the National Inventory of Architectural Heritage appraisal methodology in relation to built heritage, are used to guide this elemental approach. The dual approach to assessing significance – thematic and elemental – informs the current EIAR chapter, which sets out the elemental aspects associated with 3FM; describes impacts on such locations and employs the wider thematic context to inform mitigation strategy that is in line with the policies set out in the *Conservation Strategy 2024*.

16.4.2 Desktop Review

Information on cultural heritage assets within the study area was collected through a detailed desktop review of existing studies and datasets. The following key data sources are indicated in Table 16.2 as gathered from an examination that included a review of existing cartographic sources; the archival records maintained by the National Monuments Service (NMS) that deal with pre-1750 sources and post-1750 sources; Dublin City Council's Record of Protected Structures (RPS); Dublin City Council's designated Conservation Areas; the Dublin City Industrial Heritage Record (non-statutory) (DCIHR) and other Dublin City heritage records; Dublin Port's accessible archives, and the Heritage team's own records from previous work conducted in the Port area since 2014.

Table 16.2: Principal sources to inform known Cultural Heritage (including Archaeological, Industrial & Architectural)

Data Source	Topic Focus
Historic Maps, Ordnance Survey and Admiralty Charts	Landscape and Seascape
Register of Monuments and Places (RMP), also known as the Sites and Monuments Record (SMR)	Terrestrial Archaeology
Dublin City Council Record of Protected Structures (RPS)	Built Heritage
National Inventory of Architectural Heritage (NIAH)	Terrestrial Archaeology
Dublin City Industrial Heritage Record	Industrial Archaeology
National Civil Engineering Database (NCEHD)	Engineering & Industrial sites
Topographical Files, National Museum of Ireland	Terrestrial Archaeology
Historic Shipwreck Inventory maintained by the National Monuments Service (NMS) at the Department of Housing, Local Government and Heritage.	Shipwreck, recorded and known
Integrated Mapping for the Sustainable Development of Ireland's Marine Resource' (INFOMAR) project.	Shipwreck, known
Dublin Port Archives	Port Heritage
Excavations database	Licensed archaeological interventions

The Historic Shipwreck Inventory maintained by the National Monuments Service (NMS) at the Department of Housing, Local Government and Heritage (DHLGH) is the principal resource for understanding the history of shipwreck off Ireland's coastline, and the Dublin Bay coastline was published by the NMS in 2008.³ The inventory includes recorded shipwreck events as well as the locations of known shipwreck sites. The locations of known shipwreck sites older than 100 years carry statutory protection.

Reports of shipwreck events in Ireland begin to be written down systematically from the mid-1700s and this body of information is an information source for understanding the pattern of historic wrecking from the eighteenth century through to the modern period. The history of shipwreck before the eighteenth century is not well documented.

The records of shipwreck are numerous, but the locations of known shipwreck are fewer. The Historic Shipwreck Inventory maintains its own register of known shipwreck sites that can be consulted online and is updated to 2023.⁴ This is complemented by observations of shipwreck sites made by the Irish National Seabed Survey, INFOMAR, whose online register is updated to 2021.⁵ The INFOMAR survey can provide accurate positioning information of known wreck sites that were recorded using older survey techniques.

The Record of Monuments and Places (RMP) archive, also maintained by the NMS and accessible with summary descriptions online, is the principal archaeological record information relating to the terrestrial sites.⁶ The RMP, also known as the Sites and Monuments Record (SMR), focuses on sites that pre-date 1750 AD and all sites form part of the statutory record of protected sites.

The Dublin City Development Plan 2022-2028 maintains the Record of Protected Structures (RPS). These are structures with statutory protections provided for under the Planning and Development Acts, 2000-2022. This protection provides statutory responsibilities for safeguarding the structures from risk and measures to ensure the special interest values are maintained and protected.

Sites that are younger than c. 1750 AD are recorded in the National Inventory of Architectural Heritage (NIAH), maintained by the Built Heritage section at the DHLGH. The purpose of the NIAH is to identify, record and evaluate the post-1700 architectural heritage of Ireland. The NIAH provides assessment of importance, ranging from International, National, Regional, Local and Record Only. Buildings are recorded for their special interest and there are eight categories (Architectural, Historical, Archaeological, Artistic, Cultural, Scientific, Technical and Social). Not all NIAH recorded sites have statutory protection status. The NIAH, while a national survey, is incomplete and the area of south county Dublin that includes Ringsend, Sandymount and the Poolbeg Peninsula has not yet been surveyed.

³ Karl Brady, *Shipwreck inventory of Ireland: Louth, Meath, Dublin and Wicklow* (Dublin: Stationary Office, 2008).

⁴ Brady, *Shipwreck inventory of Ireland*, pp 448–496;
<https://dahg.maps.arcgis.com/apps/webappviewer/index.html?id=89e50518e5f4437abfa6284ff39fd640>

⁵ www.infomar.ie

⁶ <https://webgis.archaeology.ie/historicenvironment/>

Dublin City Council maintains the Dublin City Industrial Heritage Record (DCIHR) that focuses on sites of industrial heritage. The DCIHR does not provide statutory protection.

The National Civil Engineering Database (NCEHD) is a further non-statutory resource that maintains a list of sites that retain industrial and engineering interest.

Artefact discoveries reported to the National Museum of Ireland (NMI) are recorded in that institution's Topographical Files archive.

Dublin Port Archives retains a large collection of port-related historical material that includes maps, plans, photographs and text-based sources that can be particularly useful in understanding the historic development of the Port Estate since the mid-1800s.

The final archaeological resource that informs desk-based reviews is the database of previous archaeological interventions licensed by the DHLGH.⁷ Accessible online, the resource focuses on archaeological excavations and is not required to include the results of non-excavation interventions, such as marine geophysical surveys and intertidal inspections.

16.4.3 New Survey

Despite the comprehensive archives that exist for archaeological and cultural heritage sites at sea and on land, the intertidal foreshore and the sub-tidal zone are two areas that have not been considered systematically and it is only in recent years that archaeologists have considered their potential and begun to include the foreshore and the sub-tidal zone in national surveys.

Walkover inspections were completed in 2022 by the Heritage team, and extended along Pigeon House Road from upstream at the Dodder confluence to the White Bank wharf on the GSW, and included Pigeon House Harbour and precinct. The inspections allowed for confirmation of recorded features and provided the opportunity to make new observations that have been absorbed into the Catalogue of Cultural Heritage Assets presented in Appendix 16-1.

A marine geophysical survey was commissioned separately to include the sea area of the 3FM Project that extends beyond that of the survey completed in 2014 for the Alexandra Basin Redevelopment (ABR) Project and in 2018 for the MP2 project. The specification required a similar set of comprehensive data acquisition, to maintain consistency between data sets and to ensure similar high standards of outputs, updated to take account of new survey technologies. The survey was completed in 2022 by Hydromaster under licence from the DHLGH (reference 22R0287), and the report is included in Appendix 16-2. An archaeological interpretation of the data sets is included in Appendix 16-3.

Marine geotechnical investigations were conducted in 2022-23, to inform the engineering design. The works were monitored archaeologically by ADCO under licensed consent from the DHLGH (reference 22E0007) to ascertain the nature of the buried stratigraphy at the locations investigated. The Site Investigations work is reported on in Appendix 8 of this EIAR, and an archaeological interpretation of the data sets is included in Appendix 16-4.

⁷ www.excavations.ie

An Underwater Archaeological Impact Assessment (UAIA) was conducted by ADCO as a follow-up measure to the marine surveys. The UAIA was conducted under licensed consent from the DHLGH (reference 23D0037, 23R0148) to inspect a number of the marine geophysical survey targets recorded, and to inspect the general nature of the riverbed and associated quayside structures within the proposed development area. In addition, measured archaeological topographic survey was completed at the North Wall Quay Extension and along sections of Pigeon House Harbour and the Great South Wall that form part of the perimeter of the ESB generating station. The UAIA report is included as Appendix 16-5.

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 3FM project.

16.5 Receiving Environment

16.5.1 Cartographic sources

The history of Dublin Bay and the development of the city and its port are well documented by series of historic maps and sea charts. As the city grew, the wide channel of the River Liffey's estuary was the subject of attempts to improve navigation and access to the commercial centre. The Port moved downriver and eastwards from its origins in the Wood Quay area. The present location of the Port remained open water for many centuries in Dublin's development. As charted by the Dutch military engineer, Bernard de Gomme, in his map of the City and Suburbs of Dublin in 1673, much of the estuary remained hazardous to shipping, as indicated by complex sand flats. As described by de Courcy,⁸ the South Bull was seamed by rivulets and creeks that changed over time, the best known of which is Cock Lake. Cock Lake is thought to have been a second channel of the Liffey that facilitated the passage of small fishing vessels through most stages of the tide.

Various attempts to overcome these restrictions are recorded but it was the establishment of the Ballast Board in 1707 that marked an important point of departure from small-scale and localised projects to a more coordinated approach to engineering and reclamation works along the Liffey. The board was established by an act of Parliament and was a committee of Dublin Corporation.

When the cartographer John Rocque prepared his map of the City Harbour and Environs in 1757, he provided a detailed perspective on the various sand flats and constraints on shipping, which suggests the extent to which the prosperous city was expanding, and it shows some of the outputs of the Ballast Board's works (Appendix 16-5, Figure 6). Rocque records a series of navigation markers that highlight the shallows on the north and south sides of the navigation channel. The markers appear to be constructed on a basic timber tripod frame, with a more substantial construction shown with a heap of stone at its base, which may highlight the former tip of the Ringsend Spit that was mapped by de Gomme eighty years earlier. The channel at this location in 1757 was much straighter, which suggests a programme of extensive dredging had occurred in the intervening time. A formal buoy, the 'West Buoy' marks the port side of the harbour entrance further to the east, while a floating

⁸ John de Courcy, *The Liffey in Dublin* (Dublin 1996), p. 372.

buoy or 'Light Ship' marks the starboard side; both of which foreshadow the North Bull light and Poolbeg light house respectively today.

The eighteenth-century work also blocked the junction of Cock Lake with the main river. Cock Lake consequently ceased to be able to provide passage for boats, but it has retained a wide shallow channel that meanders across the South Bull.⁹

The site of the future port on the north side of the channel remained an undeveloped wedge-shaped sandflat to the east of the newly reclaimed lands of the North Lotts, while further east Rocque's map records the names of individual sand banks, such as 'Brown's Patch', and highlights the extensive footprint of the Clontarf oysterbeds.

In contrast, the south side was much more developed, with construction of the South Wall well underway. As described more fully in section 16.5.2, what has become known today as the GSW was constructed in stages. Dublin Corporation's first attempt (completed in 1731) to secure the shipping channel was achieved by building a timber breakwater eastwards from an islet known as the Green Patch. The islet would later serve as the basis for Pigeon House Harbour. The timber breakwater reaching out into the bay along the south bank of the River Liffey was recorded by Rocque as a parallel line of timber-post couplets known as 'The Piles'. The second stage was to build a stone wall that reached inland from the Piles to make landfall at Ringsend Point. The 'South Wall', as it is recorded by Rocque, was also known as the Ballast Office Wall, and is today incorporated into Pigeon House Road. The South Wall had two slipways: Macarel's Slip gave access north into the channel and seems to be on the same location of the later Coastguard slip, east of the present-day Poolbeg Yacht Club; while George's Slip gave access south of the wall on to Sandymount. The Piles would soon be replaced during the 1760s by a solid wall completed in 1796. The GSW today includes the contiguous whole of the South Wall, Pigeon House Harbour and Fort, and breakwater that runs east to Poolbeg Light House. The ships recorded by Rocque are substantial three-masted ocean-going vessels, as one might expect to service the city. The ships are shown within the area of the Piles, but do not reach substantially further upriver. This is in contrast to Rocque's 1756 map of the City and Suburbs of Dublin, which shows a wealth of shipping along the city's quays but does not map the area downriver of North Wall Quay and Rogerson's Quay. The point to take from this variation is that on the 1757 map Rocque conveys an indication of the constraints on shipping, insofar as the deepwater vessels did not extend to the shallower waters upriver and west of the Clontarf Pool. In their place, smaller vessels and ferries were used to convey merchandise into and out of the city. Rocque's representation is a cartographic convention, used to indicate variation in seabed levels and consequently factors that affect navigation.

As indicated on Appendix 16-5 Figure 6, which shows an overlay of the present-day port on top of Rocque's 1757 map, the development area for the 3FM project touches on a location referred to as The Pacquet Moorings, where cross-channel ships would lie at anchor.

The mapping of the harbour and Dublin Bay attracted a host of different hydrographers, many of whom were commissioned to assist in developing measures to improve navigation along the Liffey. George Semple's charts of 1762 may be cited in this regard, as can the map of Dublin Bay by Captain Bligh in 1800, who was appointed by the Admiralty to report on the bay, the harbours within it and the problems of shallowness in the approaches

⁹ Ibid., pp 82–83.

to Dublin.¹⁰ By 1837, the Ordnance Survey produced the first metrically accurate maps at 6-inch-to-the-mile scales, and established a new standard for mapping the landscape (Appendix 16-5, Figures 9-10, showing overlays of the 3FM surveys). Reclamation works had begun on the seaward side of East Wall road, extending the port onto the mudflats and heralding the advance of the deepwater basin. The developments on the south side of the river were also much in evidence, and the map shows the extension of the GSW eastwards, replacing the timber Piles and terminating at Poolbeg light house. Pigeon House Fort (completed by 1800) is also constructed, along with its harbour (completed by 1793) on the north side (Appendix 16-5, Figure 10).

From this point on, it is possible to see the developing port emerge. The blocky rectangular form of the deepwater port is recorded on Admiralty Chart 1468, which also provides accurate soundings along the channel, reaching out across Dublin Bar to the east of Poolbeg (Appendix 16-5, Figure 8).

By 1907, many of the principal features of the deepwater port were established. On the south side of the channel, Pigeon House Harbour had been infilled to serve as an Outfall Works for Dublin Corporation (Appendix 16-5, Figure 13), while further east a slipway is indicated on the GSW along with a series of buildings that are not yet recorded as those of the former lifeboat complex they would become.

The historic cartographic information available for the project area helps to convey the consistent process of development and the maps that survive make them a useful set of archives to work with.

16.5.2 Recorded Monuments, Protected Structures, Industrial Heritage Sites and Other Features

The existing tangible cultural heritage assets speak to the development of the port area and in the present context are principally related to buildings and structures in the South Port area. A small selection of relevant features is included on the north side of the channel. The recorded sites and features identified in the desktop review are summarised in Table 16.3 and presented in Figures 16.1 and 16.2. Detailed descriptions are provided in a corresponding Catalogue of Cultural Heritage Assets as Appendix 16-1.

¹⁰ Gerard Daly, 'Captain Bligh in Dublin, 1800-1801', *Dublin Historical Record* 44.1 (1991): 20-33, at p. 23.

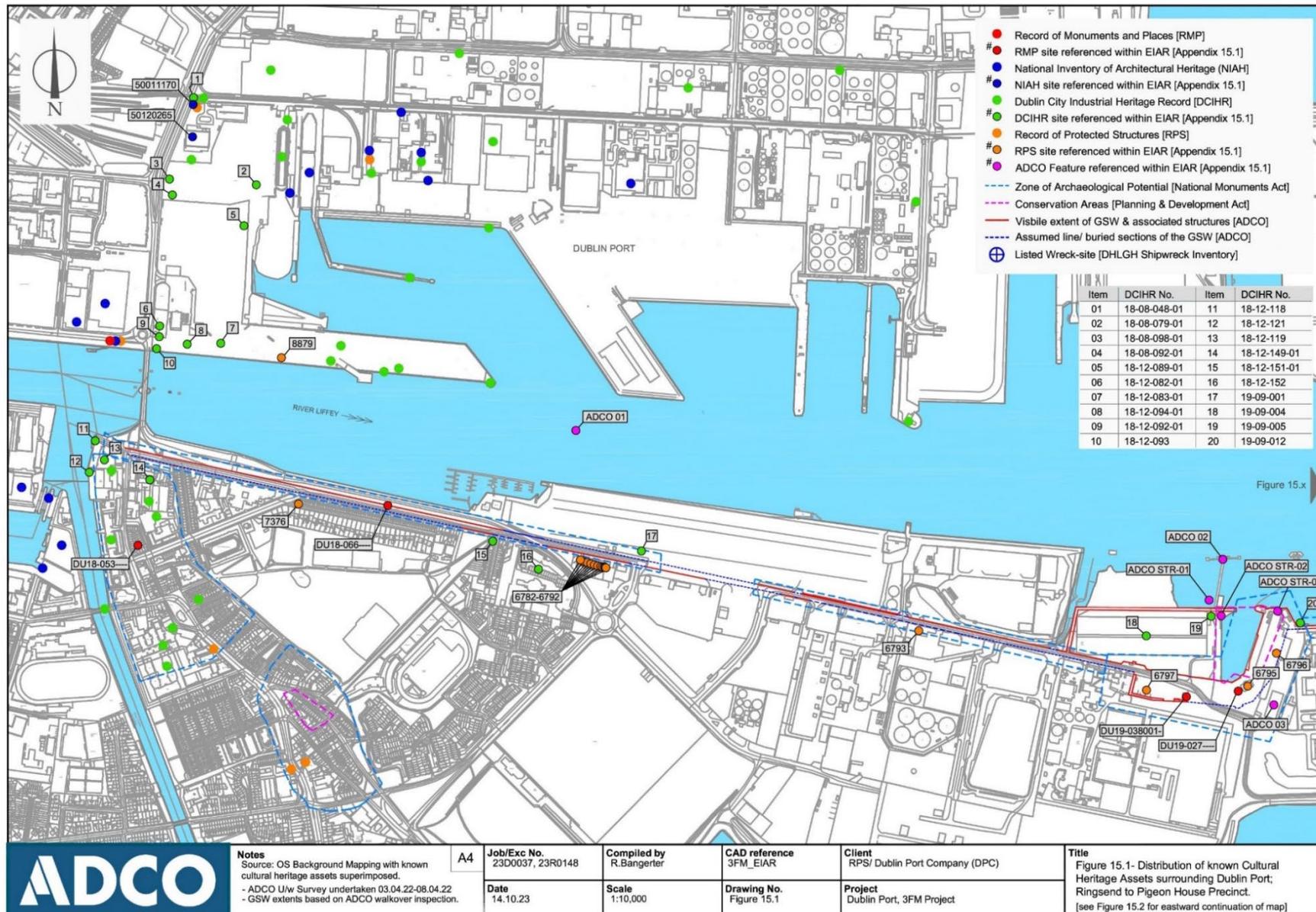


Figure 16.1 Cultural Heritage Assets within and in proximity to the 3FM project to Pigeon House Precinct (including Archaeological, Industrial & Architectural)

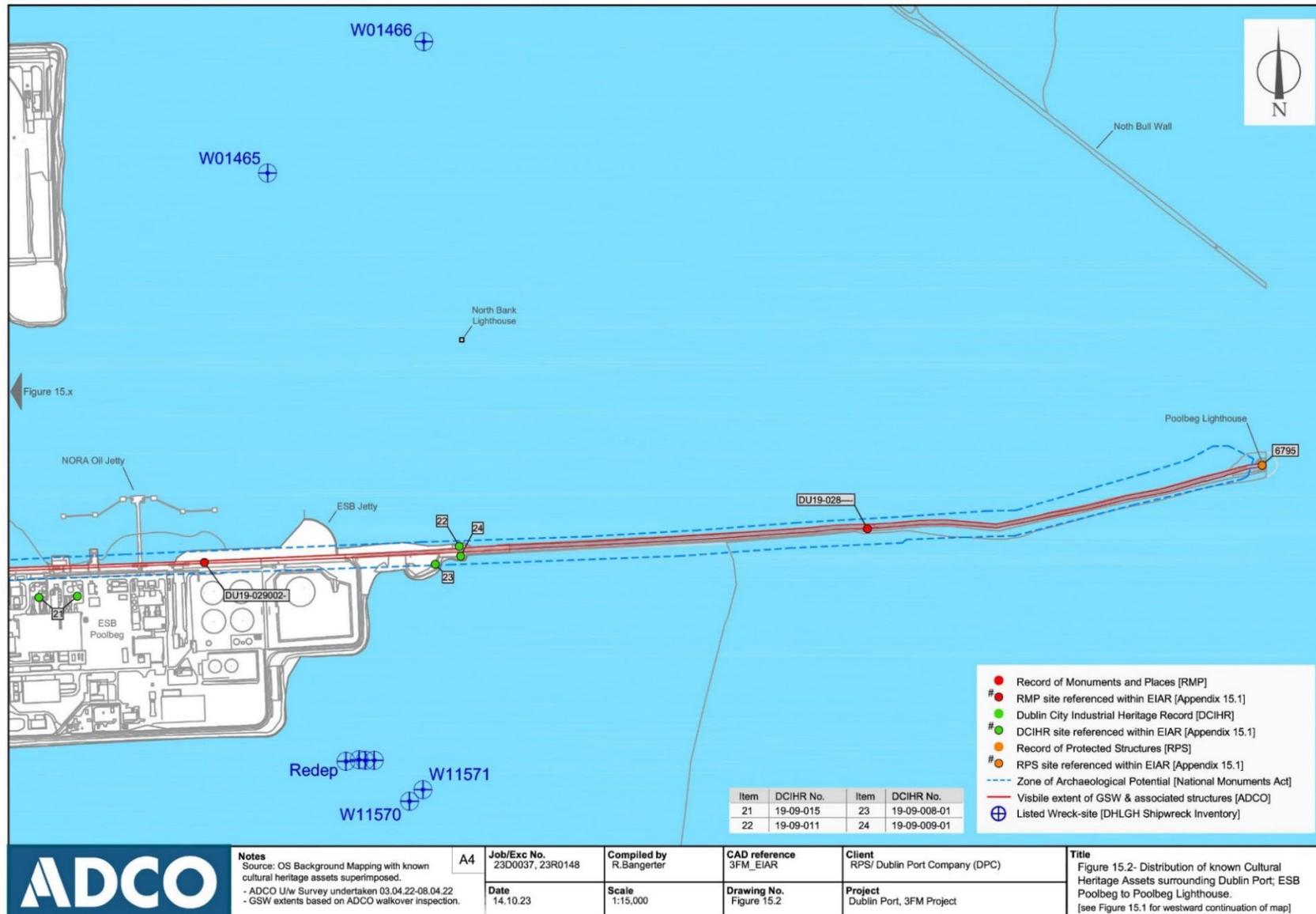


Figure 16.2 Cultural Heritage Assets within and in proximity to the 3FM project along the GSW east of Pigeon House Precinct (including Archaeological, Industrial & Architectural)

Table 16.3 Cultural Heritage Assets within and in proximity to the 3FM project (including Archaeological, Industrial & Architectural).

Notes: The ratings are informed by existing inventories/registers where they exist. The NIAH has not yet surveyed the Southern lands, the heritage consultant team have proposed ratings based on assessments set out in the Conservation Strategy 2024.

RMP-Record of Monuments and Places; RPS-Record of Protected Structures; DCIHR-Dublin City Industrial Heritage Record; DDIAS Dublin Docklands Industrial Archaeology Survey; NCEHD-National Civil Engineering Database; W-Historic Shipwreck Inventory; ADCO-Observations made by ADCO that are not already entered on to a register

Reference	Site type	Status	Impacts from 3FM project	Rating
North side of Channel				
DCIHR 18-08-048-01	Level Crossing	Standing	None	Local
NIAH 50011170	Substation	Standing	None	Regional
NIAH 50120265	Port Centre	Standing	None	Regional
DCIHR 18-08-079_01	Port and Docks Depot	Building, site of	None	Local
DCIHR 18-08-098_01	Light House	Light House, site of	None	Regional
DCIHR 18-08-092_01	Gasometer	Building, site of	None	Local
DCIHR 18-12-089_01	Patent Slip No 2	Slip	None	Record
DCIHR 18-12-082-01	Harbour Master's Office	Removed	None	Record
DCIHR 18-12-083-01	Goods Shed	Removed	SPAR will cross over site	Record
DCIHR 18-12-094-01	Landing Stage	Removed	None	Record
DCIHR 18-12-092-01	Lighthouse	Removed	None	Record
DCIHR 18-12-093-01	Lighthouse	Removed	None	Record
RPS 8879; DCIHR 18-12-084-01	North Wall Quay Extension	Standing	SPAR Bridge will spring from NWQE	International

Reference	Site type	Status	Impacts from 3FM project	Rating
Channel				
ADCO 01	Riverbed	n/a	<p>SPAR Bridge will cross over the channel</p> <p>SPAR Road will run along the foreshore supported on piles</p> <p>Temporary relocation of Poolbeg Yacht and Boat Club Marina moorings will be secured by a series of weighted blocks off the NWQE, with no impacts into the riverbed and no impacts to NWQE</p> <p>Capital dredging works will take place to facilitate new berths associated with the Maritime village</p> <p>Turning Circle to be created in front of Pigeon House Harbour will require a series of impacts:</p> <ul style="list-style-type: none"> • Removal of Sludge Jetty (ADCO 02) • Removal of Timber Structure (ADCO_STR-01) • Capital dredging to –10m CD • Reclamation of 47a Hardstand and Pigeon House Harbour Wall • Temporary works bank seat and pontoon <p>Area N will require the removal of the NORA jetty, and will be constructed above riverbed on piles. The works will require capital dredging to –13m CD along future berthing pockets</p>	n/a
NCEHD 3251	Liffey Services Tunnel	In use	None. SPAR will pass downstream of the tunnel	Local
South side of Channel: Great South Wall and Pigeon House Fort and Precinct				
1. GSW to Pigeon House Harbour				
RMP DU018-066; RPS 6797	Sea Wall / Ballast Office Wall (GSW to Pigeon House Harbour)	Under Pigeon House Road	<p>Existing breach where R131 crosses to be upgraded</p> <p>New breach of northern parapet location where Vehicular access to Maritime Village is proposed</p> <p>New breaches where SPAR will cross MTL Yard; Murphy's Yard</p> <p>Widening of junction of access road into EcoCem will require demolition of short length of north parapet wall and may encounter buried levels of GSW</p> <p>Widening of junction of Shellybanks Road with Pigeon House Road may encounter buried levels of GSW</p>	International
DCIHR 18-12-118-01	Boat slip	Standing	None	National
DCIHR 18-12-121-01	Landing stage	Partial remains	None	Record
DCIHR 18-12-119-01	Bottle works	Site of	None	Record
DCIHR 18-12-149-01	Rope walk	Site of	None	Record

Reference	Site type	Status	Impacts from 3FM project	Rating
RMP DU018-053	Settlement cluster	Not precisely located	None	National
RPS 7376	Drinking fountain	Standing	None	Record
ADCO 04	Landing Slip	Buried	None	Record
DCIHR 18-12-151-01	Syphon house	Standing	None	Record
DCIHR 18-12-152-01	Pumping station	Replaced with modern pumping station	None	Record
DCIHR 19-09-001-01	Boat slip	Buried	Adjacent to proposed SPAR in Area K	Record
RPS 6782	House	Standing	Anticipated reduction in noise due to changed use profile of DPC container area opposite. Likely increase in recreational traffic using new maritime centre. No physical impacts	Record
RPS 6783	House	Standing	As above	Record
RPS 6784	House	Standing	As above	Record
RPS 6785	House	Standing	As above	Record
RPS 6786	House	Standing	As above	Record
RPS 6787	House	Standing	As above	Record
RPS 6788	House	Standing	As above	Record
RPS 6789	House	Standing	As above	Record
RPS 6790	House	Standing	As above	Record
RPS 6791	House	Standing	As above	Record
RPS 6792	House	Standing	As above	Record
RPS 6793	Fever Hospital, former	Standing	None. No physical impact. Anticipated increase in HGV traffic along Pigeon House Road	Record
2. Pigeon House Harbour, Fort and Precinct				
RPS 6797; DDIAS 181.1	Pigeon House Harbour walls	Standing	Removal of Sludge Jetty that abuts harbour wall Reclamation of foreshore at base of harbour wall to facilitate Turning Circle	International
RPS 6797; DDIAS 181.1	Pigeon House Harbour basin	Standing	Constraints imposed by proposed turning circle and Area N on its use as a harbour	National
RMP DU019-027, RPS 6794	Blockhouse	Site of	No physical impacts to the Blockhouse Road and traffic use will alter character	National

Reference	Site type	Status	Impacts from 3FM project	Rating
RPS 6795	Former Pigeon House Hotel, Pigeon House Rd	Standing	No physical impacts, New perimeter boundary treatment between hotel and public road.	National
RMP DU019-027; RPS 6794; ADCO STR-03	Pigeon House Fort	Standing and buried	Landscaping to verge of existing road with new perimeter boundaries New road markings and surfacing with proposed roundabout on location of SE perimeter of fort Interventions to provide for road safety measures will alter character SPAR road to access proposed Area N at eastern entrance to Fort Active travel connection to Area N will traverse along eastern perimeter of fort Ground and underground disturbances for proposed road ways	National
RMP DU019-038001	Signal Tower	Location approximate	No physical impacts. Road and traffic use will alter character	National
DCIHR 19-09-004	Outfall works, Pigeon House Rd	Standing	None	Local
RPS 6796; DCIHR 19-09-006; NCEHD 3271	Electricity works/Power Station	Standing	Loss of open area to east of former Electricity Generating Station Proximity of Area N requires protective mitigation measures during construction and operation due to poor condition of former Power Station building Change in character of area Loss of curtilage to former Power Station	National; Regional; Local elements
DCIHR 19-09-005; ADCO STR-02	Lifeboat House, Pigeon House Rd	Site of	None	Local
ADCO 03	Buildings (GSI Laboratories)	Upstanding	To be demolished	Local
ADCO 02	Jetty ('Sludge Jetty')	Upstanding	To be demolished	None
ADCO STR-01	Timber structure	Upstanding	To be demolished	None
DCC Development Plan Land Use Zoning Objective	N75 Conservation Area		Use character will be altered. Severance and loss of coherence of historic Fort and Harbour area will be reinforced.	

Reference	Site type	Status	Impacts from 3FM project	Rating
3. GSW from Pigeon House Precinct to Poolbeg Lighthouse				
RMP DU019-029002, DCIHR 19-09-010, RPS 6797, RPS 6798	Sea wall. Great South Wall to Poolbeg Lighthouse	Standing	Proposed signal junction at Pigeon House Rd and Shelly Banks Rd 3 No. proposed crossings above GSW at proposed Area N. These will restrict potential for future access from Pigeon House Fort to eastern section of GSW (currently inaccessible) Area N wharf to be constructed alongside and separate to GSW in river channel	International
DCIHR 19-09-012	Landing Slip	Standing	Area N Main Access Bridge will traverse above site	National
DCIHR 19-09-015	Poolbeg Generating Station chimneys, Pigeon House	Standing	None	Regional (unregistered asset)
DCIHR 19-09-011	Slip, White Bank Wharf	Standing	None	Regional
DCIHR 19-09-008	Lifeboat House	Ruined	None	Regional
DCIHR 19-09-009	Sluice House, South Wall	Standing	None	Regional
RMP DU019-028	Battery (Half Moon)	Standing, Swimming pool and slipway	None	Regional
RPS 7379	Lighthouse (Poolbeg)	Standing	None	National
South side of Poolbeg Peninsula				
W11566	Unknown	Buried	None	National
W11567	Unknown	Buried	None	National
W11568	Unknown	Buried	None	National
W11569	Unknown	Buried	None	National
W01734	'Ringsend Wreck'	Buried	None	National
W11570	Unknown	Buried	None	National
W11571	'Ringsend Wreck'	Buried	None	National
W18522	Unknown	Buried	None	National

There has yet to be a discovery of material within the project area that might attest to the use of the sandflats for fishing or related activities in early prehistory. The discovery of a Mesolithic fish trap on Spencer Dock, North Wall Quay, some 800m upriver from the 3FM project area highlights the potential for such remains to occur.¹¹ As Bernard de Gomme's 1673 map of the 'City and Suburbs of Dublin' indicates, the area that is the Poolbeg Peninsula today was far removed from the shoreline and was recorded as 'hart sands dry at ½ ebb'.¹² Islets existed within the delta in the seventeenth century, and the former site of the Green Patch is relevant in the current context as this underlies the location of the Pigeon House precinct.

On foot of the establishment of the Ballast Board in 1707, as introduced in Section 16.4.1 above, an early attempt to improve the navigation began in 1716/17 on the sands east of Ringsend at Poolbeg, when timber piling operations got under way to construct a breakwater. The breakwater would run between the natural shallows known as the Green Patch and Poolbeg Light. By 1731 the breakwater was complete and was known simply as 'The Piles', reaching 3,109m in length.

To connect the Piles with the shoreline, an initial suggestion was to build a stone wall from the west end of the timber breakwater south towards Sandymount. Construction was started in 1731 and was under way in 1733 but it appears to have fallen into disrepair and was abandoned.¹³ It is thought that the wall extended in a line that lay to the west of Cock Lake.

In 1748, the Ballast Board announced plans to construct a double wall in stone that would extend 2,100m from the west end of the Piles to Ringsend Point. The wall was completed in 1759 and was known as the Ballast Office Wall. Rocque's 'Survey of the City, Harbour, Bay and Environs of Dublin' (1757) records both The Piles and the stone wall, which he refers to as the South Wall (Appendix 16-5, Figure 6). The wall was built with two parallel rubble walls and the intervening space (varying between 37 and 48 feet in width) filled with sand. The wall was furnished with parapets above the road surface that served as a barrier between the road and the sea for those who travelled along the wall to and from Pigeon House harbour. Today this length of wall lies under Pigeon House Road.

A third stage of development was started in 1761 with the construction of a stone wall to the north side of The Piles. The wall was built westwards from Poolbeg and would take thirty years to complete. The main wall length has a different construction to that of the Ballast Office Wall, comprising a dry rubble core with granite ashlar in distinctive linear-shaped blocks that form the two façades of the wall and has a 24-foot wide deck surface. This wall length did not have parapets, presumably because it was not constructed as a protected roadway but as an operational breakwater. The final configuration has lent its name to the whole length that runs from Ringsend out to the Poolbeg Lighthouse as the Great South Wall (GSW). At the time it was completed it was the longest constructed breakwater in the world. The GSW runs as a spine right along the Poolbeg Peninsula (Figures 16.2 and 16.3).

¹¹ Excavation licence 06E0668 directed by Melanie McQuade, www.excavations.ie/report/2007/Dublin/0017470/

¹² Map reproduced in Colm Lennon, *Dublin Part II, 1610 to 1756*, Irish Historic Towns Atlas No. 19 (Dublin, 2008), Map 6.

¹³ De Courcy, *Liffey in Dublin*, pp 376–377.

On its own, the GSW does not appear to have produced much beneficial influence on reducing or scouring Dublin Bar, but it did protect the river channel from further deposition of the sands from the South Bull. These sands now build up to form the foreshore along the peninsula.

The GSW also acted as a training wall that directed the tidal currents in a more defined channel. When serving in conjunction with the North Bull Wall (1819-1824), the two great walls were then able to induce tidal scour on the Bar. The GSW is a registered archaeological monument and a protected structure. It is entered in the Register of Monuments and Places (RMP) as two entries: RMP DU018-066 refers to that section of the wall lying west of Pigeon House Fort, most of which lies under Pigeon House Road; and DU019-029002 refers to that portion lying east of the Fort and is upstanding, extending to where it terminates and on top of which Poolbeg Light House is constructed. The wall is also listed in the Record of Protected Structures (RPS), where it is ascribed two references: RPS 6927 and RPS 6928. The GSW still serves a vital role to Dublin Port as one of its two principal breakwaters.

The presence of the GSW breakwater offered opportunities along what would become the Poolbeg peninsula. Rocque's map of 1757 records 'The Pacquet Moorings' that served the cross-channel ferry service of the eighteenth century. Ringsend village provided passengers with lodgings from where they would make the journey to the moorings, at first by tender and then along the GSW. It was not long before attention was directed towards making this location an accommodating haven. The Green Patch had served as a depot during the construction of the Great South Wall, and John Pidgeon was its first caretaker. The location became a refuge in times of bad weather and became known locally as 'Pidgeon's House'. Pigeon House harbour was constructed there in 1793, along with Pigeon House Hotel, which remains today and is a protected structure (RMP DU019-027, RPS 6794) (see Figure 16.2 for location and Appendix 16-1 for description).

In c. 1770, a slipway was added to the GSW to the east of the harbour at White Bank, giving access to the Liffey channel. The slipway is registered in the Dublin City Industrial Heritage Record (DCIHR) as 19_09_011_01 (Figure 16.3).

In 1793, the Half-Moon Battery (RMP DU019-028), a three-gun platform battery, was built further east along the GSW to protect ships from privateer attacks (Figure 16.3, see Appendix 16-1 for description). The 1798 Rebellion in turn led the government to requisition the Pigeon House Precinct as a temporary military fort that lasted until 1897. The army's presence led to the construction of defensive walls and gateways and a series of buildings within the fortified enclosure. The fort is not a registered archaeological monument although elements within it are listed (Figure 16.2, see Appendix 16-1 for description). The site is however protected and is registered in the Record of Protected Places maintained by Dublin City Council: RPS 6794.

Throughout the first half of the nineteenth century, the sea area to the south of the GSW remained undeveloped. In 1897, the precinct was sold to Dublin Corporation and is still in the ownership of Dublin City Council. The site served as a base for utilities' operations. The first operation upgraded the metropolitan sewerage scheme, which was discharging raw sewerage into the Liffey at the Sluice House (DCIHR 19_09_009_01) next to the White Bank slipway (DCIHR 19-09-011) to the east of the fort. The Sluice House was built c. 1881 and stands beside a cluster of ruined buildings within a walled enclosure that is associated with a former Lifeboat House complex recorded c. 1850 (DCIHR 19_09_008_01) (Figure 16.3).

The decision was taken to fill in much of the Pigeon House Harbour with a series of sludge beds that were opened in 1906 and which operate today as storm overflows and are registered in the DCIHR (19_09_004_01). The use of the peninsula for waste-water processing continues, and the footprint of those operations has expanded to the south and are being managed by Irish Water.

Pigeon House Precinct also served power generation, and the three-storey monumental redbrick building that was built along the east side of the harbour in 1902 became the first electricity generating plant in the world to generate three-phase electricity (DCIHR 19_09_006_01) (Figure 16.2, see Appendix 16-1 for description). Although decommissioned in 1976, the Poolbeg Electricity Station was built to its east as an oil-fired station and the site continues to serve the network. The station includes the now-decommissioned twin concrete towers that are an iconic symbol of Dublin today (DCIHR 19-09-015).

The wider South Port area has been developed along Poolbeg peninsula as further reclamation works occurred. Early reclamation to the south of the GSW provided a narrow strip of land to the west of Pigeon House harbour and it is here that the Allan R Ryan Hospital for Consumption was officially opened in 1910 for the treatment of tuberculosis (Figure 16.2, RPS 6793). Also known as St Catherine's Hospital, it was under the care of the Sisters of Charity of St Vincent de Paul by 1918, who had a chapel added to the complex.¹⁴ The hospital site is currently occupied by a commercial facility, All Away Waste. The chapel site no longer survives above ground.

The second half of the twentieth century saw significant development on the peninsula, with the construction of new quaysides on the north side of the peninsula and the expansion of water treatment and power generation on the south side and eastwards. The Ordnance Survey maps dating back to the First Edition six-inch series in the late 1830s show this area as open water, with the only terrestrial element being the GSW. Aerial photographs from the 1930s and slightly later show the GSW before the development of the south quays. In 1937, Dublin Corporation began to develop a dump for domestic waste adjoining Ringsend Park.¹⁵ In 1950, development also began on the foreshore north and south of the GSW with the reclamation of two blocks of land. The lands on the south side were further reclaimed in the late 1950s when the Corporation's dump outgrew its original allocated size and moved eastwards along the peninsula. A five-year development plan by Dublin Port between 1966 and 1971 saw the completion of reclamation on the south side of the GSW, and the development of Berths 41 to 47 on the north side, establishing the new South Quay. Ramp 3 was constructed in 1974 as an addition to Berth 44.

In the 1980s, photographs recording the construction of the East Link Bridge / Tom Clarke Bridge (opened 1984) indicate the extent of ground disturbance that occurred in advance of the R131 and toll booths, and the reclamation of the foreshore in this area (see Appendix 16-1, ADCO 01). The current configuration of Poolbeg Yacht and Boat Club Marina was created in the early 2000s, and archaeological monitoring of the associated dredging activities conducted in 2004 did not reveal any material of archaeological significance.¹⁶

¹⁴ Alan Carthy, 'The treatment of tuberculosis in Ireland from the 1890s to the 1970s, a case study of medical care in Leinster', PhD thesis, NUI Maynooth, 2015, pp 167–173.

¹⁵ H.A. Gilligan, *A history of the port of Dublin* (Dublin, 1988), pp 187-188.

¹⁶ Jacinta Kiely, 04E0470, report access via www.heritagemaps.ie/WebApps/DublinCuntyheritage/

There are, however, significant numbers of recorded shipwreck events in the approaches to Dublin, and some 77 events are associated with the South Bull area in the vicinity of The Piles, White Bank, Poolbeg Harbour and Poolbeg Lighthouse.¹⁷ A smaller number of known wreck sites have been located within this area. There are eight entries that lie close to the shoreline of the peninsula, five of which occur in the intertidal zone, and three entries are in the sub-tidal zone close to the Low Water Mark (Table 16.3, Figures 16.2 and 16.3).

Of the sites within the intertidal zone, site W01734 retains high archaeological potential. It is a wooden wreck that was exposed during dredging operations in 2001 and is known as the 'Ringsend wreck'. The vessel is oriented east-west and is a composite construction of timber and metal. A keelson was observed in 2001, and it is of carvel construction. Musket balls and bullets were recovered from the area, indicating that a debris field should be considered associated with the site that extends some distance away from the vessel's remains. There are two other locations associated with wreckage from the same site: W11570 and W11571.

The other sites within the intertidal zone lie 120m northwest of W01734 the 'Ringsend wreck' and are locations where ships' timbers that were recovered during marine dredging associated with the Cross Bay Sewer project have been reburied for archaeological storage (W11566, W11567, W11568, W11569). The timbers are located in four locations that are spaced some 15m apart over a 50m-wide area. The sites must be regarded as artefact repository locations.

Site W18522 lies in the sub-tidal zone and c.350m south of the GSW. It was recorded during a marine geophysical survey completed in 2010 as a clearly defined linear shape with both ends intact and perhaps the bow section facing southeast. Short linear elements distinguishable on the side of the vessel may indicate timbering. Dive inspection of the site in 2014 recorded 1m visibility, soft seabed with 60-100mm penetration, and light rippling evident on covering sand.¹⁸ Two metal brackets were observed standing proud of the seabed and some 10m apart. The remains support the presence of a wreck at this location, but there was much less exposed during the dive survey than was imaged in the geophysical survey.

Licensed archaeological interventions have taken place across the survey area in recent years, and this information is absorbed into the site descriptions presented in Appendix 16-1 where relevant.

16.5.3 New Observations

16.5.3.1 Walkover Survey

The heritage team conducted a walkover inspection of the project area in 2021 and this was followed by a more detailed walkover in June 2022. The inspection considered the south port area and proceeded from the Dodder confluence upstream of the Tom Clarke Bridge to the Sluice House on the GSW. The inspection identified a previously un-recorded section of the GSW on York Road, and used the opportunity to acquire current photographs of the various furnishings that are still visible along the length of the GSW and within the Pigeon House precinct. The results are absorbed into the site descriptions presented in Appendix 16-1, and summarised on Figures 16.2 and 16.3.

¹⁷ Karl Brady, *Shipwreck inventory of Ireland: Louth, Meath, Dublin and Wicklow* (Dublin, 2008), pp 314-327.

¹⁸ Niall Brady, 'Alexandra Basin Redevelopment Project, Dublin Port. Dive Inspections, 13D019', ADCO report for Dublin Port Company, 2014.

16.5.3.2 Marine Geophysical Survey

Marine geophysical survey was conducted by Hydromaster Ltd for Dublin Port Company under consent granted by the Department of Housing, Local Government and Heritage, licence number 22R0287 to inform the 3FM project. The survey, which is reported on in Appendix 16-2, covered four locations, as indicated in Table 16.4 with supporting maps in Appendix 16-2.

Table 16.4: Project Centrepoint positions coordinates in ITM.

Site	ITM Easting	ITM Northing
East Link Moorings Area	718327	734153
Poolbeg Yacht Club Marina Area	718740	734108
Sludge Jetty Area	720499	733933
Pigeon House Harbour/Dock Area	720325	733778

The survey was a comprehensive geophysical campaign, aimed at:

- Identifying and mapping potential geohazards
- Identifying and mapping potential archaeological sites and features
- Providing data and information in support of Environmental Impact Assessment

A suite of instruments was deployed, comprising:

- Multibeam echosounder, to acquire bathymetric data
- Side-scan sonar, to acquire seabed surface data
- Magnetometer, to acquire data focused on ferrous metal identification
- Sub-bottom profiler, to acquire seismic data that will inform the nature of the buried strata of the seabed

16.5.3.3 Archaeological Data Interpretation

The primary data files and report were reviewed by ADCO in accordance with the requirements of the Department, to facilitate an independent archaeological interpretation (see Appendix 16-3). The multibeam bathymetry achieved 100% coverage of the survey area. Side-scan sonar, magnetometer and sub-bottom profile were deployed along main survey lines at 10m intervals, which provided over 100% coverage in what are shallow water depths. The data shows a predominately sand /silt seabed surface with coarser material downstream of Pigeon House Harbour. The sub bottom profile data did not record any obvious features indicative of palaeo coastlines that are considered to have existed offshore. A large number of contacts were recorded by the side scan sonar and by the magnetometer but the majority of these are associated with moorings in Poolbeg Marina. The remains of possible boats were recorded that are likely to have been lost at their moorings in the marina.

Archaeological review of the survey data did not identify any locations within the data sets acquired that may indicate high archaeological risk, and informed the underwater inspections that have taken place in 2023 to provide an additional layer of baseline information to inform the project.

16.5.3.4 Site Investigations

The Marine Site Investigations (SI) was undertaken by Fugro and comprised the gathering of geotechnical data from 32 marine boreholes, taken from a series of locations along the southern side of the navigation channel, extending from the downstream side of Tom Clarke (East-link) Bridge to the NORA Oil Jetty at Poolbeg. Land-based site investigations were also conducted across the Poolbeg peninsula and included the excavation of SI trenches at seven locations between the Marine Terminals (MTL) Yard and the NORA Oil Storage Terminal.

Both aspects of the monitoring work were conducted under licence from the DHLGH; licence numbers 22E0007, 22D0001, and 22R0003. The land-based SI works observed the line of the GSW in one instance, as anticipated, but otherwise no material/deposits of archaeological or historic significance, or any distinct layers of archaeological potential, were observed as part of the monitoring process. A detailed report is presented as Appendix 16-4.

16.5.3.5 Underwater Archaeological Impact Assessment

An Underwater Archaeological Impact Assessment (UAIA) was undertaken by ADCO, following review of the data gathered from the marine geophysical survey. The UAIA, conducted under licensed consent from the DHLGH (reference 23D0037, 23R0148), inspected a number of the recorded marine geophysical survey targets and assessed the general nature of the riverbed and any associated quayside features /structures located within the proposed development area. In addition, measured archaeological topographic survey was completed at the North Wall Quay Extension (NWQE) and along sections of Pigeon House Harbour and the Great South Wall that form part of the perimeter of the ESB generating station. The resulting underwater archaeological assessment report is included in Appendix 16-5.¹⁹

16.5.4 Conclusions

The baseline information arising from desktop review and new survey reveals a series of cultural heritage features within the proposed development area, the foremost of which is the GSW, as it extends along the full length of the Poolbeg Peninsula. In addition, Pigeon House Harbour, Fort and Precinct are placed centrally along the north side of the peninsula. Informed by the *Dublin Port Heritage Conservation Strategy (2024)*, the 3FM conservation strategy provides mitigation measures to address the project design where development adjoins heritage assets, avoiding adverse impacts wherever possible.

16.6 Description of Impacts

16.6.1 Heritage Strategy for Assessing Impact

An EIAR is required to look at the impacts of the development on the cultural heritage assets within the scheme and promote mitigation measures. Impact/effect categories devised by the Environmental Protection Agency (EPA) are categorised as having a direct impact, an indirect impact or as having no predicted impact, and each impact is qualified in terms of significance by being considered profound, significant, moderate, slight or

¹⁹ Rex Bangerter, 'Underwater Archaeological Impact Assessment, ADCO Areas 1-4, River Liffey, Dublin Port 3FM Project. 23S0037, 23R0148', ADCO report for Dublin Port Company 2023.

imperceptible. The duration of impacts is also assessed in terms of a scale ranging from temporary to permanent.²⁰ This approach is reflected in the UAIA, included as Appendix 16-5, and in Table 16.7 below. The *Conservation Strategy 2024* for the Port Estate absorbs these essential elements, and goes further because the cumulative effect of many interventions and mitigations may miss the opportunities for enhancement promoted by the *Conservation Strategy 2024*. It suggests that the 2011 UNESCO Historic Urban Landscape (HUL) approach offers a nuance that recognises how the cultural significance of a place can be seen and assessed not only as a collection of discreet assets, but can be considered more holistically as a *Genius Loci* – the spirit of a place. It recognises the many layers which contribute to the cultural heritage and the dynamic nature of such Historic urban landscapes.

Informed by this holistic definition and approach, the *Conservation Strategy 2024* has identified a critical landscape that is called ‘The Maritime City’. The approach recognises that opportunities exist not only to preserve but also to enhance the *Genius Loci*, and layered heritage, while also recognising the constraints associated with the trade and economic drivers for development within Dublin Port, and the complex matrix of ownerships and responsibilities particularly within the Poolbeg Peninsula lands.

Within a site area of 262ha, Dublin Port is possibly the most dense port in Europe in terms of Tonnage per Hectare and therefore robust policies are recommended to protect a small area of the Port Estate for retaining the significance of the Maritime City.

This landscape can be seen as:

The Liffey – representing a 1300-year-old association with the river and the engineering innovation over centuries to provide a Deep-Water Port for the economic sustainability of Ireland. *Masterplan 2040* preserves this significance.

The Distributed Museum – a collection of connected buildings and places mostly in the North Port lands but reaching throughout the Port Estate and related urban realm that provide for interpretation of the port, that are available to the public and give focus to the Flour Mill project at the former Odlums silo, which is being redeveloped by DPC as a new artist campus as part of the Odlums site masterplan, in conjunction with the Arts Council.

The Liffey-Tolka Project and Greenway – partially implemented this represents a new layer of cultural heritage within the Port. As an active travel route joining with the proposed Sea Organ/Aeolian Harp, celebrating and interpreting the natural heritage of the Port Estate, dematerialising the boundaries between Port and City and providing, through the 3FM project, for the future continuous active travel route into the southern Port lands connecting ultimately with the Poolbeg Light House at the termination of the GSW.

The Great South Wall (GSW) – the longest breakwater in the world when it was completed in the eighteenth century; a structure of international significance that is seen in its original exposed state in its final section only from Pigeon House Harbour to Poolbeg Light House, while much of the original

²⁰ EPA ‘Guidelines for Information to be Contained in EIAR’ 2022, ‘Guidelines on the information to be contained in Environmental Impact Statements’, 2002; ‘Advice notes on Current Practice (in preparation of Environmental Impact Statements)’, 2003 and Revised Draft 2015, EPA; and Guidelines for the Assessment of Archaeological Heritage Impacts of National Road Schemes, 2006, National Roads Authority

wall lies under Pigeon House Road and is trapped within the post-1950s infill either side of the road, making it difficult to discern and unknown to most users, with two significant and many smaller breaches along its length.

Pigeon House Precinct – a natural islet that was developed from the seventeenth century to be a defined harbour integral to and part of the GSW, that went on to become a fortified citadel until it was bought back by Dublin Corporation in 1897 and became a focus for utilities, first to serve the city drainage system and then to create the world's first three-phase electricity generating station, and was further developed by the ESB during the twentieth century as a key component of the regional electricity network. Today, the precinct remains an essential component of the wastewater treatment infrastructure. The Precinct, which includes the Harbour, the Fort and the utilities services, presents itself today in a largely ruinous condition but it retains substantial surviving remains from all these significant layers of development, above and below ground, and above and below the waterline.

Policies recommended in the *Conservation Strategy 2024* involving minimum impact, minimum intervention, reversibility, legibility and opportunities for recovery and enhancing cultural heritage have been proposed by the Heritage Team during the design development phase of 3FM, and options have been developed with due regard to heritage constraints in relation to cultural heritage including archaeological, industrial and architectural assets.

This stage has been negotiated against a demanding brief on a restrictive site. There are therefore necessary impacts to consider. There have been previous breaches to the GSW and the current design option has achieved the objectives of *Masterplan 2040* with the minimum physical intervention feasible to meet the brief.

The ideal long-term heritage objective of restoring the GSW as a walking route through Poolbeg Harbour to the Poolbeg Light House is not possible within the constraints of the existing brief and disparate ownerships. Interventions adjoining the GSW have been designed with potential for long-term reversibility, and the 3FM route and associated development infrastructure has been designed to avoid, where feasible, engagement with the GSW. However, the development will directly impact in locations, most significantly within the Pigeon House Precinct area.

A large, seven acre, portion of the Pigeon House Precinct area owned by Dublin City Council is designated as Opportunity Site 14 Former Power Station and Pigeon House Hotel, Poolbeg, of SDRA (Special Development Regeneration Area) 6, Docklands, of the Dublin City Development Plan 2022-2028. This seeks the regeneration of these protected structures with associated lands/structures on this site. The extent to which the 3FM project impacts on this objective has been considered by the Heritage Team in their assessment of impacts on cultural heritage significance.

16.6.2 Impact Assessment of 3FM

In general, the following impacts are assessed for 3FM:

- General diminution of the Great South Wall/Pigeon House Precinct and overall cultural heritage coherence and legibility, exacerbating an already challenged presentation of this significant cultural heritage ensemble.
- Landscape alterations to the GSW/Pigeon House road involving new road surfacing and road markings that formalise/emphasise the 'highway' character of this historic breakwater/access route.
- Overall character changes to the Poolbeg Peninsula and the setting of the GSW/Pigeon House Precinct
- Works in proximity to an assemblage of monuments, protected structures and structures of heritage significance/value.
- Abutting of domestic and industrial scale measures.
- Additional physical breaches along the line of the GSW and at the Pigeon House Precinct both above and below ground.

Figure 16.3 shows the overlay of the 3FM General Arrangement drawing on to the known cultural heritage assets.

Table 16.7 identifies site-specific impacts. It is based on the known cultural heritage assets listed in Table 16.3 and described in the catalogue of assets, Appendix 16-1. The locations presented in Table 16.7 are addressed in more detail below, and inform the mitigation strategy presented in Section 16.8.

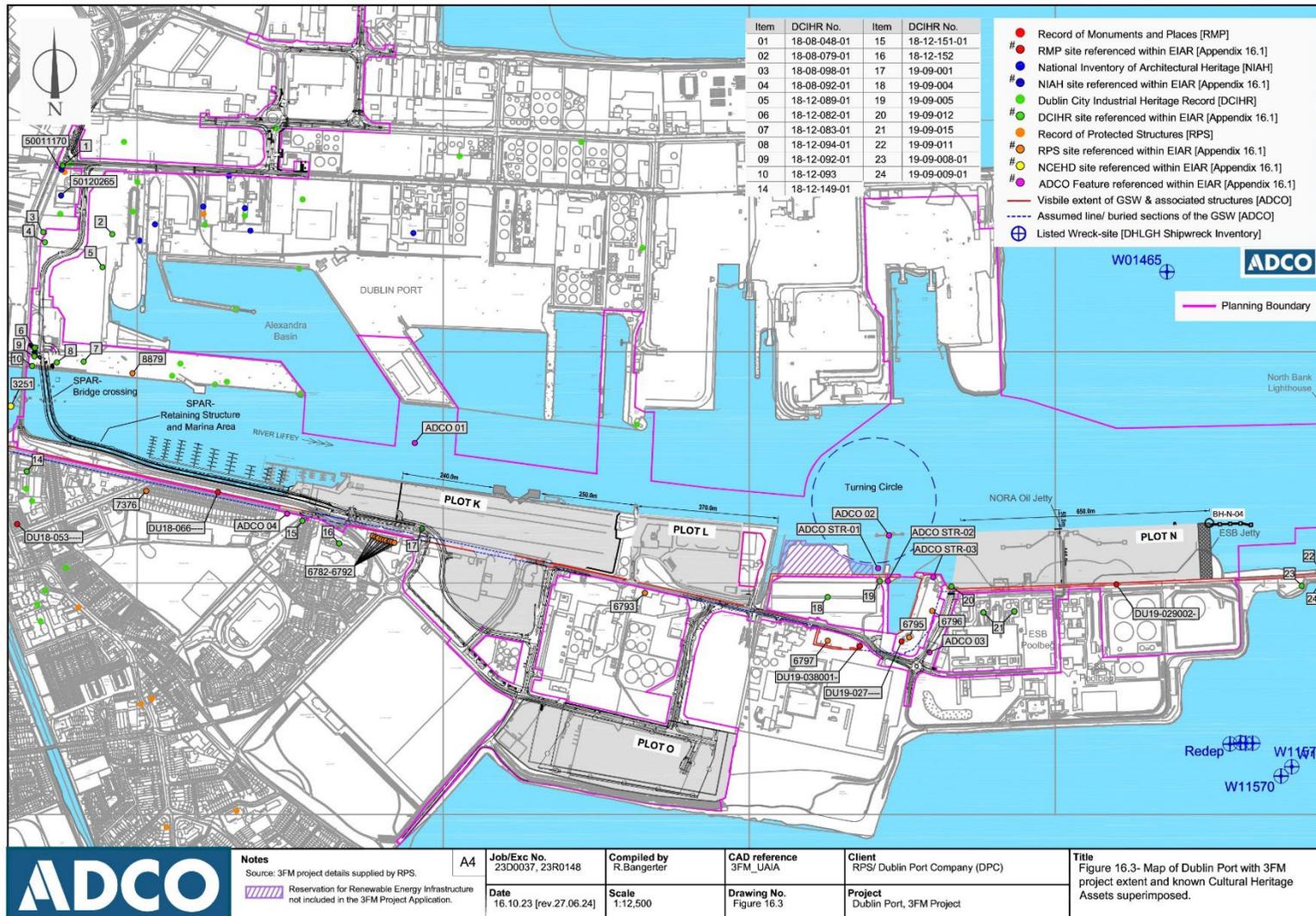


Figure 16.3 3FM Project footprint overlaid on to known Cultural Heritage Assets and locations (including Archaeological, Industrial & Architectural) within and adjacent to the project area.

Table 16.7 Impact assessment on Cultural Heritage Assets and locations within the 3FM project (including Archaeological, Industrial & Architectural).

Reference	Site type	Status	Impacts from 3FM Project	Impact Magnitude	Impact Significance ²¹
North Side of Channel					
DCIHR 18-12-083-01	Goods Shed	Removed	SPAR will cross over site	Unknown	Direct, Negative, Imperceptible, Permanent
DCIHR 18-12-094-01	Landing Stage	Removed	SPAR will cross over site	Unknown	Direct, Negative, Imperceptible, Permanent
RPS 8879; DCIHR 18-12-084-01	North Wall Quay Extension	Standing	<p>SPAR Bridge will spring from NWQE</p> <p>Works to North Wall Quay extension walling and buried elements associated with SPAR bridge landing point and control room</p> <p>Visual Impact of new bridge and its associated elements</p> <p>Impact of new guarding rail on coping stones</p> <p>Modification of ABR Interpretation Zone</p> <p>Modification of ABR works along North Wall Quay Extension</p>	High	Direct, Negative, Moderate, Permanent

²¹ Following impact/effect categories devised by the EPA; see note 20 above.

Channel					
ADCO 01	Riverbed	n/a	<p>SPAR Bridge will cross over the channel</p> <p>SPAR Road will run along the foreshore supported on piles</p> <p>Temporary relocation of Poolbeg Yacht and Boat Club Marina moorings will be secured by a series of weighted blocks off the NWQE, with no impacts into the riverbed and no impacts to NWQE</p> <p>Capital dredging works will take place to facilitate new berths associated with the Maritime village</p> <p>Turning Circle to be created in front of Pigeon House Harbour will require a series of impacts:</p> <ul style="list-style-type: none"> • Removal of Sludge Jetty (ADCO 02) • Removal of Timber Structure (ADCO_STR-01) • Capital dredging to –10m CD • Reclamation of 47a Hardstand and Pigeon House Harbour Wall • Temporary works bank seat and pontoon <p>Area N will require the removal of the NORA jetty, and will be constructed above riverbed on piles. The works will require capital dredging to –13m CD along future berthing pockets</p>	High	Direct, Negative, Moderate, Permanent

South side of Channel: Great South Wall and Pigeon House Fort and Precinct					
1. GSW to Pigeon House Harbour					
RMP DU018-066; RPS 6797	Sea Wall / Ballast Office Wall (GSW to Pigeon House Harbour)	Under Pigeon House Road	Existing breach of GSW where R131 crosses to be upgraded to provide pedestrian access across R131 from Ringsend Park to Maritime Village New breach of northern parapet location where Vehicular access to Maritime Village is proposed New breaches where SPAR will cross MTL Yard; Murphy's Yard Widening of junction of access road into EcoCem will require demolition of short length of north parapet wall and may encounter buried levels of GSW Widening of junction of Shellybanks Road with Pigeon House Road may encounter buried levels of GSW Below ground impacts associated with removal of redundant services and upgrades to finishing surfaces	High	Direct, Negative, Profound, Permanent
DCIHR 19-09-001-01	Boat slip	Buried	Adjacent to SPAR in Area K	Unknown as it is an historic feature now buried	Unknown
RPS 6782	House	Standing	Anticipated reduction in noise due to changed use profile of DPC container area opposite. Likely increase in recreational traffic using new maritime centre. No physical impacts	Low	Indirect, Positive, Moderate, Permanent
RPS 6783	House	Standing	As above	Low	Indirect, Positive, Moderate, Permanent
RPS 6784	House	Standing	As above	Low	Indirect, Positive, Moderate, Permanent
RPS 6785	House	Standing	As above	Low	Indirect, Positive, Moderate, Permanent
RPS 6786	House	Standing	As above	Low	Indirect, Positive, Moderate, Permanent

RPS 6787	House	Standing	As above	Low	Indirect, Positive, Moderate, Permanent
RPS 6788	House	Standing	As above	Low	Indirect, Positive, Moderate, Permanent
RPS 6789	House	Standing	As above	Low	Indirect, Positive, Moderate, Permanent
RPS 6790	House	Standing	As above	Low	Indirect, Positive, Moderate, Permanent
RPS 6791	House	Standing	As above	Low	Indirect, Positive, Moderate, Permanent
RPS 6792	House	Standing	As above	Low	Indirect, Positive, Moderate, Permanent
RPS 6793	Fever Hospital, former	Standing	None. No physical impact. Anticipated increase in HGV traffic along Pigeon House Road.	Low	Indirect, Negative, Moderate, Permanent
2. Pigeon House Precinct					
RPS 6797; DDIAS 181.1	Pigeon House Harbour walls	Standing	Removal of Sludge Jetty that abuts harbour wall Reclamation of foreshore at base of harbour wall to facilitate Turning Circle	Low	Direct, Neutral, Moderate, Permanent
RPS 6797; DDIAS 181.1	Pigeon House Harbour basin	Standing	Constraints imposed by proposed turning circle and Area N on its use as a harbour	Medium	Indirect, Negative, Moderate, Reversible
RMP DU019-027, RPS 6794	Blockhouse	Site of	No physical impacts. Road and traffic use will alter character	Low	Indirect, Neutral, Moderate, Permanent
RPS 6795	Former Pigeon House Hotel, Pigeon House Rd	Standing	No physical impacts, New perimeter boundary treatment between hotel and public road.	Low	Indirect, Neutral, Moderate, Permanent

RMP DU019-027; RPS 6794; ADCO STR-03	Pigeon House Fort	Standing and buried	Landscaping to verge of existing road with new perimeter boundaries New road markings and surfacing with proposed roundabout on location of SE perimeter of fort Interventions to provide for road safety measures will alter character SPAR to access proposed Area N at eastern entrance to Fort Active travel connection to Area N will traverse along eastern perimeter of fort Ground and underground disturbances for proposed road ways	High	Direct, Neutral - Negative, Significant, Permanent
RMP DU019- 038001	Signal Tower	Location approximate	No physical impacts. Road and traffic use will alter character	Low	Indirect, Neutral, Moderate, Permanent
RPS 6796; DCIHR 19-09-006; NCEHD 3271	Electricity works/ Power Station	Standing	Loss of open area to east of former Electricity Generating Station Proximity of proposed Area N requires protective mitigation measures during construction and operation due to poor condition of former Power Station building Change in character of area Loss of curtilage to former Power Station	High	Indirect, Negative, Profound, Permanent
ADCO 03	Buildings (GSI Laboratories)	Upstanding	To be demolished	High	Direct, Negative, Profound, Permanent
ADCO 02	Jetty ('Sludge Jetty')	Upstanding	To be demolished	High	Direct, Positive, Profound, Permanent
ADCO STR-01	Timber structure	Upstanding	To be demolished	High	Direct, Negative, Profound, Permanent
DCC Development Plan Land Use Zoning Objective	N75 Conservation Area		Use character will be altered. Severance and loss of coherence of historic Fort and Harbour area will be reinforced.	High	Direct and Indirect, Negative, Profound, Permanent

3. GSW from Pigeon House Precinct to Poolbeg Lighthouse					
RMP DU019-029002, DCIHR 19-09-010, RPS 6797, RPS 6798	Sea wall. Great South Wall to Poolbeg Lighthouse	Standing	Proposed signal junction at Pigeon House Rd and Shelly Banks Rd 3 No. proposed crossings above GSW at proposed Area N. These will restrict potential for future access from Pigeon House Fort to eastern section of GSW (currently inaccessible) Area N – large new wharf to be constructed alongside and separate to GSW in river channel	High	Direct and Indirect, Negative, Significant, Reversible
DCIHR 19-09-012	Landing Slip	Standing	None. Area N Main Access Bridge will traverse above site	High	Indirect, Negative, Significant, Reversible

16.6.2.1 North Side of Channel

The South Port Access Road (SPAR) will commence in the North Port and proceed south from Alexandra Road to North Wall Quay Extension (NWQE) (Figure 16-3; Table 16-7). The route will follow existing roadways for the most part and associated works are limited to upgrades to same. The route south from Alexandra Road to NWQE will follow a length of road already constructed to the east of Port Centre. The route south of Port Centre will be constructed and will avoid all known upstanding cultural heritage sites. The route will cross over the location of a goods shed (DCIHR 18-12-083-01) that was demolished in the c. 1990s, and may encounter buried levels associated with its demolition.

The SPAR bridge will carry the road across to the South Port. The new bridge will spring from NWQE (RPS 8879; DCIHR 18-12-084-01). Construction of the NWQE from 1869 removed an existing landing stage (DCIHR 18-12-094-01). Should any elements survive from the landing stage, they will be buried below the NWQE. Construction of the SPAR bridge and its associated control room are designed to minimise impact on the NWQE. Works, however, will impact the upper levels of the NWQE across the bridge footprint. The impacts will require the removal of the capstones and upper courses of granite ashlar; excavation of the NWQE may impact a recessed mooring ring and associated cut stonework frame.

16.6.2.2 Channel, west end

The SPAR bridge will be supported by six in-water piers; three for the south approach, two for the northern approach and one main moving space over the navigation channel (*South Port Access Road Opening Bridge*, COWI for Dublin Port Company, 2023). The bridge will carry the SPAR across the channel onto an in-water piled revetment that will run alongside the existing R131. An Active Travel Corridor will be included alongside the SPAR to link in with the proposed Maritime Village, located where the Poolbeg Yacht and Sail Club and Berth 41 are currently stationed. The in-water works required to facilitate the construction represent direct impacts into the Liffey Channel (ADCO 01).

Temporary works associated with the construction programme at this location will include the temporary relocation of the Poolbeg Yacht and Marine moorings, which will be moved to the north side of the channel, lying off the NWQE and secured by a series of weighted blocks that will lie on the surface of the riverbed, and will neither penetrate into the riverbed deposits nor require impacts or fastenings to the NWQE.

Capital dredging works will take place to facilitate new berths associated with the Maritime village within the southern half of the river channel.

16.6.2.3 South Side of Channel

On the landside on the south side of the channel, a new crossing of the R131 will provide safe pedestrian access from Ringsend Park to the Maritime Village. The new crossing will traverse the line of the GSW (RMP DU018-066; RPS 6797), and is designed to minimise impact on the GSW by using the existing breach created by construction of the R131, and by carrying out landscaping and related works to create a strong visual link with the historical narrative of the GSW where the alignment is interrupted (*3FM Project – Great South Wall Overview of Impacts, Mitigation & Interpretation*, Darmody Architecture for Dublin Port Company, 2024, p. 22) (hereafter, Darmody 2024).

Continuation of the SPAR eastwards along Pigeon House Road may impact the GSW below current ground level where works will include construction of a new entrance to provide access to the Maritime Village.

As the SPAR route will pass north of the protected structures RPS 6782–RPS 6792 (coastguard cottages, 70–79 Pigeon House Road), the indirect impacts associated with noise reduction due to the changes use profile of the DPC contained area will result in a positive impact.

Reconfiguration of Berths 42–45 and the MTL Yard to Area K will see the SPAR and internal vehicle routes crossing the line of the GSW. The SPAR will cross the line of the GSW at one location where it may encounter the former boat slip, Macerals Slip (DCIHR 19-09-001), which was buried when the current berths were built. This location may also impact the GSW below current ground level, and will impact the western part of the upstanding southern parapet wall of the GSW where it forms part of a grass verge today (Appendix 16-1, p. 21 for image of parapet at this location).

The SPAR will turn south at this location to follow the southern boundary of Area K to where it meets Whitebank Road, and will continue south at this point to link with Area O. A new access road will continue north from the junction on Whitebank Road to return into Area K at Berth 44. In doing so, the access road will reach into Murphy's Yard and will cross over the GSW. The crossing point requires the demolition of an extent of the southern parapet wall over a length of c. 32m, and may impact with buried levels of the GSW.

Widening of the junction of the access road from Pigeon House Road into EcoCem will require demolition of a short length of northern parapet wall of the GSW and may encounter buried levels of the GSW.

There will be no physical impact on the site of the Fever Hospital (RPS 6793). An indirect impact can be anticipated with the increase in HGV traffic along Pigeon House Road.

Widening of the junction of the of Shellybanks Road and Pigeon House Road may encounter buried levels of the GSW.

16.6.2.4 Channel, east end

The 325m-diameter Ship Turning Circle to be created in front of Pigeon House Harbour, to facilitate the ferry services who berth on the north side of the channel at Berth 50, will require a number of impacts. The removal of the Sludge Jetty (ADCO 02), which was built in the 1980s to facilitate the disposal of municipal waste generated by the Outfall Works that would be transported on to the *Sir Joseph Basilgate* at the jetty for disposal at sea, will take place. So too, the timber structure ADCO STR-01, which appears to be associated with the original culvert through the harbour wall to enable the water treatment works, will be removed. Removal of the Sludge Jetty will have an associated impact on the Pigeon House Harbour walls where it currently abuts the harbour wall.

Capital dredging will be required of some 300,000-340,000 m³ to achieve the Turning Circle design depth of –10m CD (see Project Drawing CP1901-3FM-RPS-S45-05-DR-C-0500). The northern part of the Turning Circle has been subject to capital dredging as part of the permitted MP2 project. That work was monitored archaeologically and did not result in new archaeological discovery. The dredging to take place for 3FM at this location will reach further south towards Pigeon House Harbour and will include areas that have not been monitored archaeologically previously, presenting the opportunity for new archaeological observation.

The southern perimeter of the Turning Circle runs against the land reclaimed north of the harbour wall, Berth 47A hardstand. In addition to removing a portion of the reclaimed soils and extending excavation to the design depth of –10m CD, it will be necessary to construct a sheet-piled combi wall with tie rod and anchor design that is offset 5m from the edge of the Turning Circle.

It will also be necessary to reclaim the area of shoreline that lies east of the reclaimed hardstand as far as the western entrance to the harbour. This work will employ rock armour at a gradient of 1:1.5 and will impact directly against the exposed portion of the harbour wall (Appendix 16-1, page 49; Appendix 16-5, Figure 22. See also Project Drawing CP1901-3FM-RPS-S45-05-DR-C-0502 for proposed works). Current bed level at the harbour wall is +4.08m CD. The works will extend across a 40m-wide footprint reaching seaward of the harbour wall, with excavation progressing seaward to below the dredge depth of –10m CD at its outermost point.

Temporary works to facilitate construction of the new wharf in Area N will require the construction of a bank seat in front of the entrance to Pigeon House Harbour within the footprint that will be occupied by the rock armour protection. The bank seat in turn will facilitate a pontoon that is required to service the construction of the new wharf. These elements will be removed once the new wharf is built.

Construction of the new wharf at Area N will require in-water impacts. The 8.7ha wharf site will extend approximately 650m long running parallel to the GSW and will extend seawards, to accommodate the 125m-wide wharf and a berthing pocket that will require dredging to –13m CD with a 500mm over-dredge allowance.

The current NORA jetty will be removed.

Capital dredging will be required of some 430,000 m³ to achieve the design depth.

The open-piled construction will be set back from the GSW, to allow separation from it.

The jetty will be accessed via three new bridges that will cross above the GSW to the new wharf.

The jetty will accommodate a number of structures and a perimeter security fence. It will have lighting and road safety elements to facilitate the safe access and egress of HGVs to and from Area N.

16.6.2.5 Pigeon House Harbour, Fort and Precinct

The SPAR will continue east along Pigeon House Road to a new roundabout to be located on Pigeon House Road in front of the ESB complex and Pigeon House Precinct. While the SPAR will use the existing road, the attendant works may encounter the GSW and elements of the Fort below ground.

The roundabout will lead north across Pigeon House Precinct where the SPAR will terminate by providing a new main access bridge onto the new wharf, Area N, to be located on the channel side of the GSW east of Pigeon House Precinct. The works will require the demolition of the former Geological Survey of Ireland laboratories (ADCO 03) that were originally constructed post-1945 as sheds for the generating station, and excavation across the present-day concrete pad that was laid over now-demolished buildings of the generating station. The new main access bridge will be three lanes wide and will cross above the eastern entrance to the fort, the GSW and its attendant stone slipway, DCIHR 19-09-12. A new boundary fence will be constructed between the new access road and the former Power Station (protected structure), and a new access control structure with overhead signage will be erected along this new access road.

An Active Travel path will be developed from the new roundabout westwards to provide pedestrian access into the Precinct via the Fort. These works will avoid the known standing heritage elements within the Precinct but may encounter the GSW and elements of the former fort below ground.

16.7 A Conservation Policy for 3FM

The 3FM heritage team together with DPC's own heritage team have devised a robust set of heritage proposals which not only aim to mitigate the impact of the 3FM project but serve to restore the linear character of the Great South Wall, one of the port's most significant assets.

The policies that guide the Conservation Strategy for 3FM are set out in the *Conservation Strategy 2024*. They aim to:

- Observe exemplary standards of conservation practice, both in terms of understanding the site and maintaining, repairing and using its heritage assets. This includes established and emerging national guidance and international conservation principles (UNESCO, ICOMOS and European (EU/CoE)).
- Enhance the historic character and visual qualities of the Port Estate and, where feasible, improve the condition and setting of its heritage assets.
- Ensure best quality architectural and engineering design of interventions.
- Encourage public understanding and enjoyment of the Port Estate and promote access to it while maintaining its operational capacity.
- Ensure compliance with best practice conservation policy.

The policies are informed by the thematic approach and, in turn, inform the strategy to manage elemental detail set out in the mitigation plan in section 16.8.

16.7.1 Policy 1 – Policy for integrated management of cultural heritage within the Dublin Port areas

Dublin Port Company is the principal landholder across the Port Estate and has appointed its own Heritage team to manage the heritage on the estate. The proposals for 3FM have been drawn up in collaboration with the Port's team.

Further work resolving the management of the cultural heritage assets outside the ownership of DPC is required but is outside the scope of the 3FM proposal. This is primarily an issue on the Poolbeg Peninsula around Pigeon House Precinct and also the Fever Hospital.

16.7.2 Policy 2 – Policies for protection of Dublin Port as a cultural (historic, urban, maritime, industrial) landscape combined with policies of Port-City integration - The Port City Concept

The concept of the 'Port City' aims to preserve the significance of the Port Estate following the 3FM project. The proposals provide a carefully designed balance from the development pressures of the South Port estate and give a greater understanding and enjoyment of the cultural heritage assets of the South Port, in particular the Great South Wall.

The Port City concept promotes the following policy objectives:

- The 3FM project promotes Port-City integration and draws attention to the maritime heritage and character of Dublin through the development of the Maritime village.
- The 3FM project provides an active travel route to the Great South Wall to Poolbeg lighthouse.
- The 3FM project provides a maritime village and a park as public amenities as a balance to the commercial environment of the Port Estate, maintaining and enhancing cultural activities.
- The 3FM project includes conservation and restoration of sections of the GSW, along with establishing a heritage-led linear character area for the entire GSW.

16.7.3 Policy 3 – Policies relating to retention, recovery, adaptation and use

The 3FM project aims to conserve upstanding areas of the Great South Wall to best practice standards and to reconstruct missing areas of parapets on a like-for-like basis.

16.7.4 Policy 4 – Policies which support awareness of cultural heritage, improved access and engagement

The 3FM project recognises the robust policies in place to support public awareness of the rich cultural heritage of Dublin Port that are managed in-house by the Port Heritage and Communications department. Access provisions and the policy of Port City integration have informed the design of the 3FM project from the outset.

16.7.5 Policy 5 – Policies relating to intervention and development affecting significant cultural heritage

The ICOMOS European Quality Principles include seven key quality principles and selection criteria for interventions on cultural heritage. These can provide a useful framework for a range of interventions required by 3FM and arising from the policies and actions of the Conservation Strategy.

- Knowledge-based: The Heritage team has conducted extensive surveys and a Conservation Strategy prior to design. The team has been presented to guide the engineering process from inception of the project.
- Public Benefit: A careful approach has been made to future-proof the sites at Pigeon House Precinct and the former Electricity Generation station which, although outside DPC's control, have informed development and access to avoid any future constraints.
- Compatibility: The 3FM project establishes the Great South Wall landscape character area and maintains or enhances the 'spirit of the place' or *genius loci*, and serves to interpret the length of the wall which at the time of construction was the longest of its type in the world.
- Sustainability: Consideration has been given to future maintenance implications and impacts on the environment, and the project is developed as a heritage-led sustainable development strategy.
- Discernment – call upon skills and experience.
- Proportionality - 'do as much as necessary but as little as possible.
- Good governance – the process is part of the possible success.

16.7.5.1 Recording prior to works

The GSW and the NWQE are structures of international technical significance, and relevant extents have been recorded in accordance with guidelines.

16.7.5.2 Policies of minimum intervention

Best practice follows the principal of doing what is necessary while ensuring that impacts are as limited as possible. This aligns with Policy 5 principles and helps to ensure that the original fabric/s of a structure is retained in situ where possible. The Heritage team has served to promote a policy of minimum intervention of the engineering proposals during design development.

16.7.5.3 Policies for legibility in the case of intervention

Interventions to Area N required by the 3FM project have been designed with a setback to assist legibility. Other interventions in terms of pedestrian paths and the road network to be treated in such a way as to make legible the path of the original Great South Wall.

16.7.5.4 Policies for adaptive reuse of buildings that become redundant.

It is outside the scope of 3FM to address the redundancy of structures of cultural heritage importance adjacent to the 3FM route (e.g. the former Fever Hospital, and former Dublin Generating Station), There are no redundant buildings within the 3FM site area, however, where they are adjacent, mitigation measures propose advance condition surveys and appropriate monitoring and protections during the works, as well as ensuring the 3FM proposals do not restrict access to carry out the necessary refurbishment works necessary to adapt these buildings for new uses in the future.

16.7.5.5 Policies for reversibility of interventions

The conservation principle of reversibility has been adopted wherever possible. In particular, Area N and its access bridges has been designed to be totally reversible.

16.7.5.6 Competence and advice from heritage professionals for preservation of tangible and intangible heritage

The design of 3FM has been monitored by an expert heritage team.

16.7.6 Policy 6 – Policies for buildings and structures of heritage significance not protected by heritage legislation

The former GSI laboratory building which adjoins the former Power Station, a protected structure, in the Pigeon House Precinct is to be demolished to facilitate the access route to Area N. While the structure lies within the curtilage of the protected structure. It has been rated by the Heritage Team of local importance, The building, its history and contents will be recorded in advance of demolition so that it forms part of the recorded history and narrative of the Pigeon House Precinct, and in particular the story of power generation on this site.

16.7.7 Policy 7 – Policies for works to buildings or structures which are of local or record only importance

Refer to Policy 6 above, which addresses the proposed approach to demolition of the former GSI chemical laboratory building which abuts the former Power Station in the Pigeon House Precinct area.

16.7.8 Policy 8 – Policies relating to management plans

The *Conservation Strategy 2024* will be updated following the completion of the project.

16.7.9 Policy 9 – Policies for sustainable development

Proposals integral to the 3FM project such as, *inter-alia*, rail intermodal facilities, active travel routes and greenways, the Maritime village, expanded tern colonies and augmented recreation, interpretive and conservation measures, testify in practice to DPC's commitment to sustainable development.

In this regard, DPC's Policies and actions are framed in the first instance by the *Dublin Port Masterplan (2040)* and statutory instruments such as the *Dublin City Development Plan*.

While not a statutory document, DPC's *Conservative Strategy (2024)* provides planning and strategic guidance. The *Conservation Strategy* records the myriad of essentially voluntary international Charters, Conventions, principles and guidance principles to which DPC is committed.

16.7.10 Policy 10 – Policies to address the intangible cultural heritage of the Port

Policies of interpretation and delivering the cultural story of the development of the port are adopted in Darmody's proposals presented in *3FM Project – Great South Wall Overview of Impacts, Mitigation & Interpretation*.

16.7.11 Policy 11 – Policies that support adding to knowledge & record

The design process and construction of 3FM is to be documented and lodged in the Port Archive in order to continue the story of engineering innovation for future generations.

16.7.12 Policy 12 – Dublin Port Heritage and Communications Policy

The resources of the Dublin Port Archive have provided invaluable historic information across the 3FM project area and will continue to be a primary conduit for disseminating information and knowledge gained from the development of the project.

16.8 Mitigation Measures

16.8.1 Mitigation Measures in general

In considering impacts and mitigation measures at specific known assets and across the 3FM project site, and informed by the Conservation Policy for 3FM, the Heritage team advances a project specific conservation strategy as an overall mitigation strategy for the 3FM project. The conservation strategy for 3FM is presented with reference to the *Conservation Strategy 2024* and its advancement of port-city integration by the development of the Maritime city concept through a distributed museum.

The assessment of impacts has indicated that some of the negative impacts of the 3FM project will be significant, profound and permanent. Some of these will also be reversible, although this is likely to be in the mid-to longer term – post 2040. The mitigation strategy and measures set out in this chapter aim to resolve these directly where feasible. As it will not be possible to implement the *Masterplan 2040* objectives with no direct negative impacts on tangible heritage assets, 3FM proposes to supplement local mitigation measures with an overall conservation strategy that proposes a new cultural heritage landscape vision for the 3FM project. This is more specifically relevant to the Southern Port lands and the relationship between the 3FM project and the SPAR road, with the GSW and Pigeon House Precinct. This strategy presents the 3FM project in its wider context. The strategy includes proposals that form part of the 3FM project, as well as proposals that could be carried out in the context of this wider vision. To achieve this will require cooperation and coordination of several parties who own/have responsibility for the relevant lands covered by this vision. However, the vision aligns with the stated policies within the *Conservation Strategy 2024* which seek to recover legibility and coherence of the GSW through a coordinated, planned approach.

The 3FM conservation strategy recognises that there is a rich non-tangible cultural heritage aspect to the Port that can be enhanced by interpretation, placemaking, activities, sculpture and related social activities. While Cultural Heritage assets are distributed across the 3FM project area, the 3FM conservation strategy has grouped the mitigation measures into five HUL areas such that a coherent interpretation can be developed as part of the mitigation strategy.

- **North Port Area**
- **The Liffey Channel**
- **GSW to Poolbeg Lighthouse**
- **Pigeon House Precinct**

Stephen Daedalus' presence on the GSW in *Ulysses* (1904) is an example of the inherent richness of intangible assets embodied in the history of the port and reflected in the conservation strategy.

Acknowledgment of the richness of the intangible assets and continuing to support the social practices of intangible value which the port area has provided throughout its history is embedded in the policies of the conservation strategy for 3FM. The mitigation measures proposed to address the likely physical impacts of 3FM are intended to also assist the environment for walking, boating and swimming so that Dublin Port continues to be a place that can safely accommodate recreational activities alongside the primary functions of the port, a distinctive aspect of the cultural heritage values of Dublin Port. The overall cultural heritage mitigation measures for 3FM will comprise:

- Overall architectural heritage landscape vision for the 3FM project. (Darmody 2024, and *Conservation Strategy 2024*)
- Articulation of the line of the GSW along the length of the 3FM project with the creation of a view corridor marked with surfaces and texture changes along its length, at breaches and in accessible portions, including specific proposals at the Pigeon House Precinct and at the Fever hospital.
- Interpretive stations including wayfinding with content which describes the setting, function and importance of the GSW.
- Linkages to the north port area and the DPC distributed museum village and the maritime city concept of the DPC conservation strategy.

- Facilitation of access to restricted portions of the GSW by way of managed events and guided tours on particular days.
- Maritime village to include public draw/activation elements.
- Exemplar repair works to the GSW in DPC ownership.
- Streetscape design which reflects the distinctive cultural heritage character of the place.
- Record by survey prior to undertaking works.
- Archaeological monitoring of demolition and excavation of below ground elements.
- Architectural/Engineering conservation inputs into the design development of the works.
- Architectural/Engineering conservation supervision of the works.

The epoch-making nature of the 3FM project suggests that the significance of the magnificent engineering achievement of the GSW be celebrated in a memorable and enduring manner. This can also embrace the Harbour, former Fort and later industrial buildings (Pigeon House Precinct) which are significant historic layers of this maritime and industrial heritage landscape.

The overall architectural heritage landscape vision and interpretation strategy set out in the Darmody, 2024 document provides a concept and outline design proposals. Further detailed design development will be required to translate the concepts into the necessary excellence of quality design, materiality and craftsmanship which will ensure alignment with the relevant standards of best practice for places of such cultural heritage significance. This will also require coordination with all affected landowners and stakeholders and a suitably skilled multi-disciplinary process.

16.8.2 A Conservation Strategy for 3FM

16.8.2.1 North Port Area

The SPAR Bridge's unique central function is the facilitating of efficient operational efficiency and connectivity between the North and South Ports. As such, it will cater exclusively for port-generated and related traffic, albeit that it will integrate active travel provision. It is also designed to potentially accommodate an eastward expansion, which would house a possible Luas connection to the Poolbeg Peninsula.

The proposed location of the SPAR bridge, immediately east of the Tom Clarke Bridge, will inevitably impact on its westward visual presentation, which in turn could be compounded by the DCC-promoted active travel bridge that is being proposed to be built immediately west of the Tom Clarke Bridge. There is no equivalent cluster of bridges over the Liffey.

The SPAR bridge will connect to and spring from a new road to be formed inside the Port Estate and the southern confluence of the Port Estate with the Liffey-Tolka Project, enhancing the perception and experience of this long established Port/ City interface, while providing an active travel extension, connecting the Liffey-Tolka project, and the Tolka Estuary Greenway to the proposed active travel network on the Poolbeg Peninsula.

The proposed design presents an elegant functional form. It is noted that its span deviates from the traditional right-angle geometry of Liffey Bridges.

The proposed SPAR Bridge is a contemporary manifestation of the ever evolving Port/City relationship, while also being a catalyst for connectivity of a significant network of active travel routes, which will in time enhance the experience of the publicly accessible areas of the Maritime City.

16.8.2.2 The Liffey Channel

The Navigation channel, NWQE and the GSW chart the progressive imprint of the port city's reach eastwards into Dublin Bay. They represent significant and important engineering vision and still function to protect the port from tidal ingress and to provide all-tide access to the shipping that helps to drive the city and the country's growth.

Detailed survey of the NWQE that will absorb the footprint for the design of the SPAR Bridge ensures a comprehensive record of the quay that informs design of the bridge so the protected status of the NWQE is respected.

Detailed survey of the GSW including the frontage of Pigeon House Harbour and the extent that runs east ensures a comprehensive record of the breakwater that informs design of the proposed turning circle and Area N so that protected status of the GSW is respected.

Marine geophysical survey and underwater archaeological impact assessment has recorded in detail the seabed that will be impacted by 3FM, comprising works associated with the SPAR Bridge, capital dredging and associated works of the turning circle, and the piled wharfage construction of Area N (Appendices 16-2–16-5).

16.8.2.3 GSW to Poolbeg Lighthouse

The GSW route has been fractured in places. It is trusted that new roads and active travel routes will respect the covered route.

In addition to progressing a strategy to secure the future of the functioning portions of the GSW, it is recommended that, at very least, the buried route be creatively celebrated and communicated.

The route offers a number of distinct 'character areas' that could evoke a range of thematic responses in the context of the philosophy underpinning Historic Urban Landscapes (HUL).

The Heritage Team has developed specific mitigation measures relating to the GSW to concept stage. In turn, RPS and Darmody Architecture have developed the concepts to planning proposal stage.

With specific reference to exemplar repair are restoration works to the GSW, RPS's road engineering proposals denote the areas of the wall that are to be the subjects of repair/restoration (RPS 3FM Project drawing entitled: *Great South Wall Proposed Impacts and Mitigatory Works Overall, May 2024*) Appendix 16-6 describes the restoration specification to be employed. The lengths of impacts will be:

1. Length of parapet to be demolished	76.4m
2. Length of parapet to be rebuilt	138.7m
3. Length of parapet to be restored	633.7m
4. Length of GSW to be restored (north of Poolbeg Generating Station)	620m

While the 3FM proposal will impact (approximately) 80m of the line of the GSW, it will be seen that (approximately) 1400m will be the subject of the repair/restoration.

Areas of the GSW impacted by the 3FM road proposals will be articulated by differential surface treatments developed to design stage by Darmody Architecture. These proposals are contained in Darmody 2024, which forms an integral part of this submission.

Darmody 2024 develops the concept proposed by the Heritage Team for a visual corridor that would frame, signal, and articulate the route of the GSW. The concept centred on recognising the totality the GSW as a single 'Character Area'.

Darmody 2024 identifies seven interpretive zones (Character Areas) along its length. The Design strategy employs totems/markers of varying heights, at approximately 30m centres with integral interpretive panels. The location of the interpretive/totems is confined to DPC land and will be subject to future laser scan, wire frame modelling, and test trenching with archaeological supervision.

It is with respectfully submitted that the visual corridor design concept strategy will offer Dublin and Dublin Port an iconic testament to the significance of the GSW in the formation of the Port and the City.

16.8.2.4 Pigeon House Precinct

The Pigeon House Precinct is located approximately mid-length along the GSW. It is a highly significant place – site of the deep, grassy, area where ships could berth before the construction of the GSW; the site of the original Pigeon House Hotel, of which the eighteenth-century building remains; eighteenth-century harbour (original enclosing walls survive); nineteenth-century Fort complex (several structures survive upstanding and below ground, and the military associations extended into the twentieth century); twentieth-century industrial developments including the wastewater treatment tanks' partial infill of the Harbour and the former Dublin Electricity Generating Station, built in several phases.

This layered place currently exists in varying condition with limited accessibility. Ownership extends across several parties, making management and redevelopment complex. The conservation strategy for this part of the site is to extend the GSW linear design concept within this area, while also enabling the future creation of a distinctive character for the full Pigeon House Precinct area. The Heritage Team notes that this can only be achieved through collaboration and agreement with all landowners and is likely to be subject to future development. In the meantime, the 3FM project seeks to improve the landscape setting and boundary treatments within the 3FM site and avoid restricting access to carry out any future repairs and redevelopment of those parts of the Pigeon House Precinct outside DPC ownership. This is particularly critical where the new access route to Area N runs east of the former Power Station and crosses the GSW at the site of the East Gate entrance to the Fort complex where a new access bridge to Area N is to be constructed

The conservation strategy also highlights the need to manage and coordinate the construction works to avoid damage to the former Power Station building during the works and to maximise legibility and potential for future access of the GSW.

16.8.3 Mitigation, elemental

Mitigation measures to address the elemental aspects of 3FM are presented in Table 16.8.

Table 16.8 Mitigation Measures on Cultural Heritage Assets and locations within the 3FM Project (including Archaeological, Industrial & Architectural).

Reference	Site type	Status	Impacts from 3FM Project	Pre-construction Phase Measures	Construction Phase Measures
North Side of Channel					
DCIHR 18-12-094-01	Landing Stage	Removed	SPAR will cross over site	None	Archaeological monitoring and resolution
DCIHR 18-12-094-01	Landing Stage	Removed	SPAR will cross over site	None	Archaeological monitoring and resolution
RPS 8879; DCIHR 18-12-084-01	North Wall Quay Extension	Standing	<p>SPAR Bridge will spring from NWQE</p> <p>Works to North Wall Quay extension walling and buried elements associated with SPAR bridge landing point and control room</p> <p>Visual Impact of new bridge and its associated elements</p> <p>Impact of new guarding rail on coping stones</p> <p>Modification of ABR Interpretation Zone</p> <p>Modification of ABR works along North Wall Quay Extension</p>	Detailed supplementary archaeological survey prior to undertaking	<p>Interpretative station including wayfinding</p> <p>Adjustment of security fencing such that maximum transparency is achieved</p> <p>Legible intervention to be created at the bridge interaction with NWQE</p> <p>Bridge control room to be set back from the quay edge such that the visual corridor of the NWQE is maintained</p> <p>Architectural/ Engineering conservation inputs into the design development of the works</p> <p>Archaeological monitoring and resolution</p> <p>Architectural/ Engineering conservation of the works</p>

Reference	Site type	Status	Impacts from 3FM Project	Pre-construction Phase Measures	Construction Phase Measures
Channel					
ADCO 01	Riverbed	n/a	<p>SPAR Bridge will cross over the channel</p> <p>SPAR Road will run along the foreshore supported on piles</p> <p>Temporary relocation of Poolbeg Yacht and Boat Club Marina moorings will be secured by a series of weighted blocks off the NWQE, with no impacts into the riverbed and no impacts to NWQE</p> <p>Capital dredging works will take place to facilitate new berths associated with the Maritime village</p> <p>Turning Circle to be created in front of Pigeon House Harbour will require a series of impacts:</p> <ul style="list-style-type: none"> • Removal of Sludge Jetty (ADCO 02) • Removal of Timber Structure (ADCO_STR-01) • Capital dredging to –10m CD • Reclamation of 47a Hardstand and Pigeon House Harbour Wall • Temporary works bank seat and pontoon <p>Area N will require the removal of the NORA jetty, and will be constructed above riverbed on piles. The works will require capital dredging to –13m CD along future berthing pockets</p>	<p>Detailed archaeological survey has been carried out to inform the EIAR (Appendices 16-2, 16-3, 16-4, 16-5). No additional pre-construction measures should be required</p>	<p>Archaeological monitoring and resolution</p>

Reference	Site type	Status	Impacts from 3FM Project	Pre-construction Phase Measures	Construction Phase Measures
South side of Channel: Great South Wall and Pigeon House Fort and Precinct					
1. GSW to Pigeon House Harbour					
RMP DU018-066; RPS 6797	Sea Wall / Ballast Office Wall (GSW to Pigeon House Harbour)	Under Pigeon House Road	<p>Existing breach of GSW where R131 crosses to be upgraded to provide pedestrian access across R131 from Ringsend Park to Maritime Village</p> <p>New breach of northern parapet location where Vehicular access to Maritime Village is proposed</p> <p>New breaches where SPAR will cross MTL Yard; Murphy's Yard</p> <p>Widening of junction of access road into EcoCem will require demolition of short length of north parapet wall and may encounter buried levels of GSW</p> <p>Widening of junction of Shellybanks Road with Pigeon House Road may encounter buried levels of GSW</p> <p>Below ground impacts associated with removal of redundant services and upgrades to finishing surfaces</p>	<p>Detailed supplementary archaeological survey prior to undertaking.</p> <p>All survey data to be lodged in the Dublin Port Archives</p> <p>Sample panel for conservation pointing, grouting and reconstruction works to be approved by Heritage team and DCC</p>	<p>Design of access point to incorporate surfacing to allow for legibility and interpretation of the line of the GSW</p> <p>Interpretive/ wayfinding proposal to be provided in Area K</p> <p>View corridor to be incorporated through Area K that includes changes to surfacing and visual indicators to mark line of GSW</p> <p>Archaeological monitoring and resolution of demolition and excavation of above and below ground elements</p> <p>Re-use of demolition stone to rebuild/ rehabilitate the north parapet wall opposite Murphy's Yard</p>
DCIHR 19-09-001-01	Boat slip	Buried	Adjacent to SPAR in Area K	None	Archaeological monitoring and resolution
RPS 6782	House	Standing	Anticipated reduction in noise due to changed use profile of DPC container area opposite. Likely increase in recreational traffic using new maritime centre. No physical impacts	None	None
RPS 6783	House	Standing	As above	None	None
RPS 6784	House	Standing	As above	None	None

Reference	Site type	Status	Impacts from 3FM Project	Pre-construction Phase Measures	Construction Phase Measures
RPS 6785	House	Standing	As above	None	None
RPS 6786	House	Standing	As above	None	None
RPS 6787	House	Standing	As above	None	None
RPS 6788	House	Standing	As above	None	None
RPS 6789	House	Standing	As above	None	None
RPS 6790	House	Standing	As above	None	None
RPS 6791	House	Standing	As above	None	None
RPS 6792	House	Standing	As above	None	None
RPS 6793	Fever Hospital, former	Standing	None. No physical impact. Anticipated increase in HGV traffic along Pigeon House Road	None	None
2. Pigeon House Precinct					
RPS 6797; DDIAS 181.1	Pigeon House Harbour walls	Standing	Demolition of Sludge Jetty that abuts harbour wall Reclamation of 47A Hardstand will abut harbour wall; design detail to show neutral impact on harbour wall	Detailed supplementary archaeological survey prior to undertaking	Archaeological monitoring and resolution of demolition and excavation of ground and seabed elements Architect/ Engineering conservation inputs into the design elements of the project for reinstatement of GSW/ Harbour wall Architect/ Engineering conservation supervision of the reinstatement of GSW/ Harbour wall
RPS 6797; DDIAS 181.1	Pigeon House Harbour basin	Standing	Constraints imposed by proposed turning circle and Area N on its use as a harbour	None	None

Reference	Site type	Status	Impacts from 3FM Project	Pre-construction Phase Measures	Construction Phase Measures
RMP DU019-027, RPS 6794	Blockhouse	Site of	No physical impacts. Road and traffic use will alter character	None	Archaeological monitoring and resolution of all ground works in the vicinity
RPS 6795	Former Pigeon House Hotel, Pigeon House Rd	Standing	No physical impacts, New perimeter boundary treatment between hotel and pubic road.	None	Archaeological monitoring and resolution of all ground works in the vicinity
RMP DU019-027; RPS 6794; ADCO STR-03	Pigeon House Fort	Standing and buried	<p>Landscaping to verge of existing road with new perimeter boundaries</p> <p>New road markings and surfacing with proposed roundabout on location of SE perimeter of fort</p> <p>Interventions to provide for road safety measures will alter character</p> <p>SPAR to access proposed Area N at eastern entrance to Fort</p> <p>Active travel connection to Area N will traverse along eastern perimeter of fort</p> <p>Ground and underground disturbances for proposed road ways</p>	<p>Detailed archaeological survey prior to undertaking</p> <p>Appropriately scaled and detailed drawings of proposed Area N bridge interaction with quay wall</p>	<p>Designed to avoid direct and indirect impacts with all standing elements of the Fort</p> <p><u>At Western Gate:</u></p> <p>Change in surface and creation of raised table at location of western gate to mark entry into the precinct.</p> <p>Interpretive/ wayfinding proposal to be provided in this location</p> <p>Archaeological monitoring of demolition and excavation of below ground elements</p> <p>General repair works to the GSW in DPC ownership</p> <p>Site specific boundary treatments which recognize the character of this location</p> <p><u>At Eastern Gate:</u></p> <p>Change in surface and creation of raised table (bridge) at location of eastern gate to mark entry into the precinct.</p> <p>Interpretive station including wayfinding, consideration to be given totem element</p> <p>Archaeological monitoring of demolition and excavation of ground and seabed works</p> <p>General repair works to the GSW in DPC ownership</p>

Reference	Site type	Status	Impacts from 3FM Project	Pre-construction Phase Measures	Construction Phase Measures
RMP DU019-038001	Signal Tower	Location approximate	No physical impacts. Road and traffic use will alter character	None	Archaeological monitoring and resolution of all landscaping works associated with 3FM in this adjacent area because the exact location of the Signal Tower is not confirmed
RPS 6796; DCIHR 19-09-006; NCEHD 3271	Electricity works/ Power Station	Standing	Loss of open area to east of former Electricity Generating Station Proximity of Area N requires protective mitigation measures during construction and operation due to poor condition of former Power Station building Change in character of area Loss of curtilage to former Power Station	Advance assessment of condition by conservation engineer and architect and any essential remedial works to prevent damage during works Construction Management Plan review and approval by Architect/ Engineering conservation Consideration of fencing design, road surfaces of access road, and access bridge from Precinct to Area N to absorb heritage importance of the Precinct area Design of boundary fencing/ treatment to be of high quality and consider impact (visual, noise) on future use and users of the adjacent Pigeon House Precinct lands – including Fort, Power Station, Hotel	Temporary protection works, if required following advance condition assessment Vibration monitoring as defined by Conservation Engineer Archaeological monitoring and resolution
ADCO 03	Buildings (GSI Laboratories)	Upstanding	To be demolished	Detailed archaeological survey prior to undertaking	Site specific boundary treatments which recognize the character of this location Removal of the formalisation of the IW/DCC construction access route Archaeological monitoring and resolution

Reference	Site type	Status	Impacts from 3FM Project	Pre-construction Phase Measures	Construction Phase Measures
ADCO 02	Jetty ('Sludge Jetty')	Upstanding	To be demolished	Detailed archaeological survey prior to undertaking	Archaeological monitoring and resolution Building conservation-led rehabilitation and rebuild of north wall of Pigeon House Harbour
ADCO STR-01	Timber structure	Upstanding	To be demolished	None	Archaeological monitoring and resolution
DCC Development Plan Land Use Zoning Objective	N75 Conservation Area		Use character will be altered. Severance and loss of coherence of historic Fort and Harbour area will be reinforced.	Conservation Strategy 2024 Policy 1 seeks integrated approach to management of cultural heritage under multiple ownership and management, Implementation of this policy	Coordination and collaboration with other parties with ownership and management responsibilities in this area. Monitoring of impacts with Risk Management Strategy to avoid construction impacts put in place during works.
3. GSW from Pigeon House Precinct to Poolbeg Lighthouse					
DCIHR 19-09-012	Landing Slip	Standing	None. Area N Main Access Bridge will traverse above site	Avoid impacts Detailed supplementary archaeological survey prior to undertaking. All survey data to be lodged in the Dublin Port Archives	Archaeological monitoring and resolution of ground and seabed activities

Reference	Site type	Status	Impacts from 3FM Project	Pre-construction Phase Measures	Construction Phase Measures
<p>RMP DU019-029002, DCIHR 19-09-010, RPS 6797, RPS 6798</p>	<p>Sea wall. Great South Wall to Poolbeg Lighthouse</p>	<p>Standing</p>	<p>Proposed signal junction at Pigeon House Rd and Shelly Banks Rd</p> <p>3 No. proposed crossings above GSW at proposed Area N. These will restrict potential for future access from Pigeon House Fort to eastern section of GSW (currently inaccessible)</p> <p>Area N – large new wharf to be constructed alongside and separate to GSW in river channel</p>	<p>Creation of a physical separation between the new berth and the GSW</p> <p>Area N designed to be reversible</p> <p>View corridor to be incorporated along length of inaccessible portion of GSW alongside area N</p> <p>New bridge design to be appropriate to the context and designed to be of high quality and reversible</p> <p>Bridges to avoid physical impact on historic GSW and associated features and ensure sufficient separation to provide visual legibility and clarity between GSW and new bridges as they cross over</p> <p>Design of boundary railings to allow for maximum transparency</p> <p>Detailed supplementary archaeological survey prior to undertaking</p> <p>All survey data to be lodged in the Dublin Port Archives</p> <p>Sample panel for conservation pointing, grouting and reconstruction works to be approved by Heritage team and DCC</p>	<p>Architect conservation inputs into the design elements of the Area N bridges</p> <p>Architect conservation supervision of the Area N bridges</p> <p>Archaeological monitoring and resolution of ground and seabed activities</p> <p>Rehabilitate/ make good the GSW deck surface along its length</p>

16.8.3.1 Pre-construction Phase measures

Archaeological Test Investigation is required in all locations along the GSW where impacts will occur, to verify the levels and to ensure that the levels assumed in design are correct and that impacts to the GSW are minimised.

Archaeological survey is required to supplement existing survey data of the NWQE, the GSW and Pigeon House Precinct where necessary, to create a permanent record of the principal standing remains prior to construction. Such archaeological survey will ensure metrically accurate data gathered using Laser-Scan or similar survey device/s to create both point cloud and measured line-drawing outputs. All data sets to be lodged with Dublin Port Archive and Dublin City Council, City Archaeologist's office.

16.8.3.2 Construction Phase measures

Land and Marine

Archaeological monitoring by competent and experienced maritime archaeologists licensed by DHLGH will be conducted of all ground disturbances, with the proviso to resolve fully any archaeological material observed at that point.

Archaeological monitoring by competent and experienced maritime archaeologists licensed by DHLGH of all dredging activities and associated seabed disturbance activities conducted within the development area will be carried out, with the proviso to resolve fully any material of archaeological significance observed at that point.

Vibration monitoring

Vibration monitoring during construction phase

Vibration Criteria Vibration standards for structural damage consider the magnitude of vibration in terms of Peak Particle Velocity (PPV). Guidance relevant to the protection of building structures is contained in the following documents:

- British Standard BS 7385: 1993: Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration, and
- British Standard BS 5228: 2009+A1 2014: Code of Practice for noise and vibration control on construction and open sites – Part 2: Vibration. Both standards contain the same guidance relating to building damage criteria.

The standards note that the risk of cosmetic damage to residential buildings starts at a Peak Particle Velocity (PPV) of 5mm/s².

Vibration monitoring to ensure minimum impact during construction is required as follows:

Location	No. of monitoring points	Vibration Limit
North Wall Quay Extension	East & West of SPAR bridge abutment	Vibration to ensure acceleration < 5mm/s ²
Great South Wall	At 20m c/c on North and South parapets within red line boundary	Vibration to ensure acceleration < 5mm/s ²
Pigeon House harbour walls	Five locations as directed	Vibration to ensure acceleration < 5mm/s ²
Pigeon House Hotel	Three locations to be agreed with DCC	Vibration to ensure acceleration < 5mm/s ²
Fever Hospital	Three locations to be agreed with lessor's engineer and DPC	Vibration to ensure acceleration < 5mm/s ²

Power Generation building	Five locations to be agreed with DPC	Vibration to ensure acceleration < 5mm/s ²
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Specification for rehabilitation of GSW

Appendix 16-6 provides a specification and method statement for rehabilitating the GSW parapet where it proposed to do so on DPC-owned lands.

Marine Heritage Management Measures

A Construction Environmental Management Plan (CEMP) will be finalised and will include detail in respect of every aspect of the works in order to minimise potential impacts and maximise potential benefits associated with the works.

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 Dublin Port Company for the duration of the relevant works.
- Retaining a Grade 1 Conservation architect. A RIAI Grade 1 (or equivalent), Conservation architect experienced in industrial and maritime architectural heritage will be retained by Dublin Port Company for the duration of the relevant works, to advise specifically in relation to works associated with the Great South Wall and Pigeon House precinct
- Retaining a conservation engineer. A conservation engineer experienced in industrial and maritime architectural heritage will be retained by Dublin Port Company for the duration of the relevant works, to advise specifically in relation to works associated with the Great South Wall and Pigeon House precinct.
- Archaeological licences will be required to conduct the on-site archaeological works. Licence applications require the inclusion of detailed method statements that 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 DHLGH, 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 that follows a prescribed format to confirm 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). It is confirmed that Dublin Port Company has confirmed that sufficient funds and other facilities as required will be made available to the project archaeologist to complete all reports required.
- An Archaeology Management Plan will be prepared by the archaeologist to prepare the protocols that ensure proper management and response to archaeological monitoring, recording and resolution that will be required in the course of the project.
- Archaeological monitoring will be carried out by suitably qualified and experienced maritime archaeological personnel licensed by the DHLGH. Archaeological monitoring is conducted during all terrestrial, inter-tidal/foreshore and seabed disturbances associated with the development. The

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 complimented 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 24 or 48-hour call-out response schedule, to deal with any archaeologically significant/potential material that is identified in the course of the seabed disturbance activities. The dive team and all in-water work will conform to the Port's safety protocols for Diving at Work.
- A site office and facilities will be provided by the Dublin Port Company on site for use by archaeologists.
- Secure wet storage facilities will be provided on site by the Dublin Port Company 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.
- All site work will be conducted in strict compliance and accord with Dublin Port Company's Health and Safety requirements.
- 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 reports will be particular to each licence granted. The reports 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 in terms of recording, conservation and storage.

These measures are subject to the approval of the National Monuments Service at the Department of Housing, Local Government and Heritage and the offices of the Dublin City Archaeologist and Built Heritage. DPC has and will continue to engage with the Department of Housing, Local Government and Heritage and the offices of the Dublin City Archaeologist and Built Heritage.

16.9 Residual Impacts

Residual impacts are described in the EPA Guidelines as the final or intended effects or the degree of environmental change that will occur after the proposed mitigation measures have been implemented or taken effect (EPA 2017).

16.9.1 Construction Phase

Once the mitigation measures have been implemented, there will be no significant residual impact on the architectural heritage resource, as a result of the Construction Phase of the Proposed Scheme.

16.9.2 Operational Phase

The mitigation measures set out in the Conservation Strategy aim to minimise the negative impacts of the 3FM project, as described in this Chapter. Notwithstanding these mitigation measures, residual impacts are anticipated, in particular within the Pigeon House Precinct area and associated with Area N and the three access bridges to this proposed new wharf. It has already been stated in the introduction to this chapter, that achieving the objectives of the DPC *Masterplan 2040* involves interventions to elements of DPC which are of cultural heritage significance. While the strategies set out aim to minimise adverse impacts, it will not be possible to mitigate all directly. Compensatory measures include the Maritime Village and quality landscaped active travel routes and new public park on the Poolbeg Peninsula. These will greatly enhance the environmental and amenity value of the Southern Port lands and add a new cultural and landscape layer to this Historic Urban Landscape. Archaeological surveying by competent and experienced maritime archaeologists licensed by DHLGH of Pigeon House harbour walls in the vicinity of the turning circle is recommended at the following intervals:-

1. Within 12 months of operation
2. After 6 years of operation

In order to confirm that the design modelling predicting no significant impact is consistent with the actual condition of the walls.

16.10 Conclusions

This EIAR Chapter 16 has identified, recorded and assessed the cultural heritage assets and potential impacts associated with the 3FM project, and benefits from a robust conservation strategy (*Conservation Strategy 2024*), which is a pre-planning document that identifies designated and non-designated assets and their significance together with policies for conservation preservation and activation. It also suggests a non-tangible overriding concept of the Maritime City as an overarching concept of the different Heritage Urban Landscapes, which applies to the Port Estate as a whole.

Operating to *Masterplan 2040*, the port is expected to expand to 73.8 million tonnes *per annum* on a constricted 262 Ha site, making Dublin Port the most intense Port in Europe in terms of T/Ha.

The heritage team comprising The Archaeological Diving Company (ADCO), Shaffrey Architects (Architectural and Urban Conservation), MOLA Architecture and Southgate Associates Conservation engineers, working with DPC's heritage team have sought to optimise development plans in relation to cultural heritage through the following measures:

- Minimising the direct impacts of the 3FM project in relation to heritage through a series of workshops while developing the Conservation Strategy for the port in general.
- Where interventions are inevitable, development has been required to follow policies of minimum intervention, legibility, and reversibility wherever feasible.
- Impacts on buried structures have been mitigated insofar as is reasonably practical within the confines of the brief, with policies of exposing, recording, monitoring and mitigation by careful consideration of measures prior to, during and post-construction, with a policy of rigorous recording and storage in the Port Archives.
- Opportunities have been sought to enhance and interpret Heritage by measures for landscape characterisation together with robust proposals for treatment of hard landscape surfaces, conservation and restoration of the GSW parapets with view corridors and waymarking proposals along the GSW.
- Opportunities for public engagement are optimised by offering three check areas for public interpretation.
- Constraints around Pigeon House Precinct have been carefully considered and the impact of Area N on the use of the harbour. Although no significant direct impacts are identified on the upstanding structures, there is a potentially negative impact on the archaeology of the buried fort. There will also be some negative impact on the heritage character of this area, which is already challenged due to the physical condition of structures outside DPC ownership, and the lack of legibility of this historic complex. No proposals are forthcoming for the precinct area that is outside the ownership of DPC.
- The 3FM project provides a new landmark and destination on the peninsula and the south city – a Maritime Village, forming a new accessible edge to the river on lands that are within the control of DPC. The Maritime Village presents a visible and attractive amenity to the city, while reinforcing the concept and spirit of place, or *Genius Loci*, identified in the conservation strategy. The Maritime Village offers berthing to visiting boats through the Stella Maris and St Patrick's Rowing Clubs, and preserves local seafaring traditions, contributing to the culture and communality of the Ringsend area.
- Active travel routes in the North and South Port will significantly enhance the pedestrian, cycling and recreational capacity and experience of the City, while strengthening Port /City integration.
- Preservation of opportunity for the long-term opening of Pigeon House Precinct and the GSW to the Public have been taken into account within the confines of the brief.
- Archaeological monitoring of ground and seabed disturbance activities will take place across the 3FM project area, ensuring that a robust record is maintained and that any new archaeological observations are resolved fully.

16.11 Cumulative Impacts

16.11.1 Projects in the Dublin Port area

Dublin Port Company has commissioned and published the *Conservation Strategy 2024* for the entire Port estate as a pre-planning document to the 3FM project. This involves a strong commitment to Heritage values across all of Dublin Port's projects, which deliver a coherent heritage strategy across all the phases of *Masterplan 2040*. As such, the first three projects in Table 16.9 also involved the advice of the Heritage team and add a positive contribution to the interpretation of Heritage on the site. The fourth project offers a significant contribution to Port-City integration. Consequently, the projects connect to provide a heritage landscape with an overall positive social and cultural cumulative impact.

Table 16.9 Cumulative Assessment of DPC projects with Heritage team inputs within the Port Estate

No.	Project Name	Cumulative Impact assessment
1	Alexandra Basin Redevelopment (ABR) – ABP Reg. Ref. PL29N.PA0034	Positive social and cultural cumulative impact
2	MP2 Reg. Ref. ABP-304888-19	Positive social and cultural cumulative impact
3	Alexander Quay West DCC Application 4585/23	Positive social and cultural cumulative impact
4	Liffey-Tolka Project, 1.4km pedestrian walkway and a 2-way cycle lane – DCC Ref. 3220/21	Positive social and cultural cumulative impact

The projects listed in Table 16.10 in the opinion of the Heritage team have no cumulative impact on the 3FM Project.

Table 16.10 Cumulative Assessment of other projects within the Port Estate

Project Name	Cumulative Impact assessment
T10 Link Road – Reg. Ref. 4894/22	No cumulative impact
Dublin Harbour Capital Dredging Project – Reg. Ref. Foreshore Application FS007164/DAS Application S0033-01	No cumulative impact
Dublin Port Maintenance Dredging Programme 2022–2029 – Reg. Ref. FS007132 / DAS Permit S0004-03	No cumulative impact
Open Cycle Gas Turbine (OCGT) and a generating plant. – Reg. Ref. PWSDZ3074/23 – done Q26	No cumulative impact
Underground Cable Programme is set to replace and upgrade five 220kV circuits – Reg. Ref.	No cumulative impact
Construction of a new 220kV gas insulated switchgear (GIS) Switchboard building – Reg. Ref. 4057/23.	No cumulative impact

Project Name	Cumulative Impact assessment
Planning permission for the continuation of use of an existing concrete batching plant and associated facilities. Reg. Ref. PWSDZ3469/22	No cumulative impact
Development at the Ringsend Wastewater Treatment Plan. Reg. Ref. 5319/22	No cumulative impact
Upgrade of the Ringsend Wastewater Treatment Plant (WwTP). Reg. Ref. PL29S.301798	No cumulative impact

16.11.2 Projects in the Greater Port Area

The projects listed in Table 16.11 in the opinion of the Heritage team have no cumulative impact on the 3FM project.

Table 16.11 Cumulative Assessment of projects in the Greater Port Area

Project Name	Cumulative Impact assessment
North Lotts & Grand Canal Dock Planning Scheme 2014- BP Ref. PL29N.ZD2011	No cumulative impact
Point Bridge and Dodder Bridge Reg. Ref.	No cumulative impact
Irish Water – Ringsend WwTP –Upgrade Project BP Ref. PL29S.301798	No cumulative impact
The Howth Yacht Club Marina Extension – Reg. Ref. DAS Permit Reg. No. S0010-01	No cumulative impact

A copy of Dublin Port Company's *Conservation Strategy 2024* will be issued to the above stakeholders in order to communicate the significance of the Port and its heritage.

16.11.3 Projects relating to Poolbeg West SDZ. BP Ref. PL29N.ZD2013

The projects listed in Table 16.12 in the opinion of the Heritage team have no direct cumulative impact on the 3 FM Project.

Table 16.12 Cumulative Assessment of projects relating to Poolbeg West SDZ

Project Name	Cumulative Impact assessment
Development that will be for mixed usage – Reg.Ref. PWSDZ3270/19	No cumulative impact
Development that will be for mixed usage – Reg.Ref. PWSDZ3207/21	No cumulative impact
Development that will be for mixed usage – Reg.Ref. PWSDZ4121/21	No cumulative impact
Development that will be for mixed usage – Reg.Ref. PWSDZ3406/22	No cumulative impact
Development that will be for mixed usage – PWSDZ3062/24	No cumulative impact

The 3FM project provides interpretation and access to the Port Estate, which will benefit adjoining residential developments and for which the 3 FM Project has been designed.

16.11.4 Offshore Wind Energy Projects

A proposal to locate a significant ‘Step-Down’ facility servicing the Codling Bank Offshore Wind Farm project is proposed in the future (Table 16.13). DPC has consented to allow the project to seek planning approval on DPC lands, located on the Berth 47A Hardstand immediately north of Pigeon House Harbour.

Table 16.13 Cumulative Assessment of Offshore Wind Projects within the Port Estate

Project Name	Cumulative Impact assessment
Codling Wind Park – Reg. Ref. FS007045	Impacts are discussed below

The building will need careful design to avoid a potential negative impact on the surrounding heritage landscape, avoiding the risk of dominating historic structures on the site. In addition, the provision of services to the site have to be carefully designed to avoid or limit physical impacts on the GSW and its associated historic quay walls. Excavation works may encounter buried levels of the GSW, Pigeon House Fort and associated horizons. Careful archaeological monitoring will be required. Avoidance of impact on the historic Harbour wall which forms this southern boundary to this site will require the access road and boundary fence to the offshore facility to avoid intervention of the Harbour wall, and ensure its legibility and integrity are maintained. Coordination of the design and layout of this facility with the wider redevelopment of the Pigeon House Precinct will help mitigate potential adverse cumulative impacts.

This project can be seen to be another contemporary iteration of the Poolbeg Peninsula being an expedient and strategic location for energy generating facilities, the Waste to Energy facility being the most recent.

Without prejudice to the outcome of the planning process, reference to Dublin Port’s *Conservation Strategy 2024* has been provided to inform the promoter’s design team of the significance of the curtilage of adjoining protected structures.

DPC’s Heritage team has advised the appointment of a conservation architect to ensure excellence of design.

The information and actions taken by the heritage team are likely to reduce any overall cumulative impact on built heritage.

In order to inform methodologies to minimise the impact from a Heritage perspective, drawings for the project are not yet available to the Heritage team for comment at the time of the EIAR production and therefore no definitive comment on cumulative heritage impact can be made.

Two other Offshore Wind Farm projects listed in Table 16.14 will have no cumulative impact on 3FM.

Table 16.14 Other Offshore Wind Projects outside the Port Estate

Project Name	Cumulative Impact assessment
Dublin Array Wind Farm – Reg. Ref. FS007188	No cumulative impact
Seastacks Wind Farm - Reg. Ref. FS007134	No cumulative impact

16.11.5 General note about smaller planning applications

A copy of Dublin Port Company's *Conservation Strategy 2024* will be issued to the above stakeholders in order to communicate the significance of the Port and its heritage.